Rec'd 1/3/02

Quarterly Groundwater Monitoring Report
Third Quarter 2001

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

SHD
779

Prepared for

Mr. Paul Supple
ARCO Products Company

December 22, 2001

Prepared by

IT Corporation
1921 Ringwood Avenue
San Jose, California 95131-1721

Project 821803 (330-006)

Shaw Garakani
Project Manager

Andrew Lehane
Senior Engineer
RCE 55798

REGISTERED PROFESSIONAL ENGINEER
ANDREW D. LEHANE
55798
EXP. 12/31/04
CIVIL
STATE OF CALIFORNIA

Date: December 22, 2001
Quarter: 3Q01

ARCO QUARTERLY GROUNDWATER MONITORING REPORT

Facility No.: 0608	Address: 17601 Hesperian Boulevard at Hacienda Avenue San Lorenzo, California
ARCO Environmental Engineer:	Paul Supple
Consulting Co./Contact Person:	IT Corporation (IT) – Shaw Garakani
Consultant Project No.:	821803 (330-006)
Primary Agency/Regulatory ID No.:	Alameda County Health Care Services Agency
Monitoring Events Performed to Date:	50

WORK PERFORMED THIS QUARTER (Third – 2001):

1. Submitted second quarter 2001 groundwater monitoring report.
2. IT performed third quarter 2001 groundwater monitoring event on September 26, 2001.
3. Prepared second quarter 2001 groundwater monitoring and remedial system performance evaluation report.
4. Continued monthly payments to homeowners for not using domestic irrigation wells.
5. Continued homeowner quarterly monitoring results notification program.
6. Continued operation and maintenance of the groundwater extraction and treatment (GWET) system.
7. ARCO completed expansion of the reserve below-grade remedial system piping during the service station remodeling activities.

WORK PROPOSED FOR NEXT QUARTER (Fourth – 2001):

1. Prepare and submit third quarter 2001 groundwater monitoring and remedial system performance evaluation report.
2. IT will perform fourth quarter 2001 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 results notification program.
6. Issue a report summarizing product line removal activities and findings.

Current Phase of Project:	Remediation/Monitoring	(Assmnt, Remed., etc.)
Frequency of Groundwater Sampling:	Quarterly-Annually	(Quarterly, etc.)
Frequency of Groundwater Monitoring:	Quarterly	(Monthly, etc.)
Is Free Product (FP) Present On-Site:	No	(Yes/No)
FP Recovered this Quarter:	None	(gallons)
Cumulative FP Recovered to Date:	None	(gallons)
Bulk Soil Removed This Quarter:	None	(cubic yards)
Bulk Soil Removed to Date:	200	(cubic yards)
Current Remediation Techniques:	GWET	(SVE/Sparge/FP Removal, etc.)
Approximate Depth to Groundwater:	9.66 to 12.70	(Measure Feet)
Groundwater Gradient:	NA/NA	(Direction/Magnitude)
Period TPPH-g/Benzene/MtBE Removed:	0.02/ 0.00/ 0.06	(gallons)
Cumulative TPPH-g/Benzene/MtBE Removed:	1.05/ 0.04/ 0.20	(gallons)

DISCUSSION:

- Please refer to Pacific Environmental Group, Inc.'s *Quarterly Groundwater Monitoring Report – Fourth Quarter 1996* for additional historical groundwater elevation and analytical data.
- Based on elevated concentrations of methyl tert-butyl ether (MtBE), the GWET system was reactivated on June 5, 2000. Performance evaluation of the GWET system is presented as Attachment C.

ATTACHMENTS:

- Table 1 - Groundwater Sampling Schedule
- Table 2 - Groundwater Elevation and Analytical Data – Groundwater Monitoring Wells
- Table 3 - Groundwater Analytical Data – Domestic Irrigation Wells
- Figure 1 – Site Map
- Figure 2 – Groundwater Elevation Contour Map – Third Quarter 2001
- Figure 3 – TPPH-g/Benzene/MtBE Concentration Map – Third Quarter 2001
- Attachment A – Field and Laboratory Procedures
- Attachment B – Certified Analytical Reports, Chain-of-Custody Documentation, and Field Data Sheets
- Attachment C – Remedial System Performance Evaluation
- Attachment D – Certified Analytical Reports, Chain-of-Custody Documentation, and Field Data Sheets for the Groundwater Extraction and Treatment System

cc: Mr. Amir K. Gholami, REHS, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway, Alameda, CA 94502
Mr. Ron Sykora/Mr. Robert L. Webster, David D. Bohannon Organization, 60 Hillsdale Mall, San Mateo, CA 94403
Mr. Chuck Headlee, Regional Water Quality Control Board - San Francisco Bay Region, 1515 Clay Street, Suite 1400, Oakland, CA 94612

Table 1
Groundwater Sampling Schedule

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

Well Number	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Sampling Frequency
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
MW-15	a	a	a	a	Quarterly
MW-16	a	a	a	a	Quarterly
MW-17	----------Destroyed----------				
MW-18	a				Annually
MW-19	----------Removed from Program----------				
MW-20	----------Destroyed----------				
MW-21	a				Annually
MW-22	a	a	a	a	Quarterly
MW-23	a				Annually
MW-24	----------Removed from Program----------				
MW-25	a	a	a	a	Quarterly
MW-26	a				Annually
Domestic Irrigation Wells					
590H	----------Destroyed----------				
633H	----------Destroyed----------				
634H	a	a	a	a	Quarterly
642H	a	a	a	a	Quarterly
675H	a	a	a	a	Quarterly
17197 VM	a	a	a	a	Quarterly

Table 1
Groundwater Sampling Schedule

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

Well Number	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Sampling Frequency
Domestic Irrigation Wells (cont.)					
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	a	a	a	a	Quarterly
17371 VM	a	a	a	a	Quarterly
17372 VM	a	a	a	a	Quarterly
17393 VM	----------	----------	Destroyed	----------	----------

a. Samples analyzed for TPPH-g, BTEX compounds, and MtBE according to EPA Methods 8015 (modified) and 8020.

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)	Ethyl-benzene (ppb)	Xylenes (ppb)	MtBE (ppb)	Dissolved Oxygen (ppm)
MW-5	††	03/13,14/96		33.99	9.75	24.24	1,600	30	<10	13	<10	NA	NM
		05/28,29/96			11.48	22.51	240	2.4	<0.50	<0.50	<0.50	NA	NM
		08/28/96			12.58	21.41	250	210	8.0	<1.0	<1.0	210	NM
		11/25,26/96			12.07	21.92	<500	<5.0	<5.0	<5.0	<5.0	280	NM
		03/31/97	†		12.42	21.57	<50	<0.50	<0.50	<0.50	<0.50	41	NM
		06/25/97			12.64	21.35	NS	NS	NS	NS	NS	NS	NM
		09/09,10/97			12.75	21.24	<50	<0.50	<0.50	<0.50	<0.50	19	NM
		11/24,25/97			12.60	21.39	<50	0.9	<0.50	<0.50	<0.50	23	1.4
		03/19,20/98			10.43	23.56	61	1.0	0.56	0.55	<0.50	75	1.2
		06/04/98			11.24	22.75	150	<0.30	<0.30	0.32	0.74	20	1.4
		09/21,22/98			12.45	21.54	110	0.59	<0.50	<0.50	<0.50	25	1.8
		12/14,15/98			11.85	22.14	<200	<2.0	<2.0	<2.0	<2.0	600	1.2
		03/15,16/99			11.05	22.94	50.9	<0.50	<0.50	<0.50	<0.50	211	1.0
		06/14,15/99			12.25	21.74	211	<0.50	<0.50	<0.50	<0.50	212	1.2
		09/15,16/99			12.70	21.29	139	<0.50	<0.50	<0.50	<0.50	184	2.4
		12/08,09/99			12.56	21.43	87.4	<0.50	<0.50	<0.50	<0.50	197	1.2
		03/15/00			10.10	23.89	82.4	<0.50	0.710	<0.50	0.579	906	1.2
		03/15/00	a		--	--	--	--	--	--	--	1,230	--
		06/13/00	b		12.44	21.55	96.7	<0.50	<0.50	<0.50	<0.50	551	2.0
		9/19,20/00			12.45	21.54	<50.0	<0.50	<0.50	<0.50	<0.50	51	2.2
		12/14,15/00			12.03	21.96	152.0	1.33	0.56	<0.50	<0.50	<2.50	1.0
		3/8,9/01			10.81	23.18	<50.0	<0.50	<0.50	<0.50	<0.50	73.6	1.6
		06/14/01			12.25	21.74	<50.0	<0.50	<0.50	<0.50	<0.50	47.0	1.8
		09/26/01			12.83	21.16	<50.0	<0.50	<0.50	<0.50	<0.50	270.0	2.0
MW-7		03/13,15/96		34.40	9.73	24.67	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
		05/28,29/96			11.60	22.80	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
		08/28,29/96			12.63	21.77	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
		11/25,26/96			12.10	22.30	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
		03/31-04/01/97			11.72	22.68	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
		06/25/97			12.98	21.42	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
		09/09,10/97			12.25	22.15	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.0
		11/24,25/97			12.57	21.83	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.0
		03/19,20/98			10.35	24.05	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.0
		06/04/98			11.30	23.10	<50	<0.30	<0.30	<0.30	<0.60	<10	0.7
		09/21,22/98			12.48	21.92	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.4
		12/14,15/98			11.90	22.50	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.2
		03/15,16/99			11.10	23.30	<50	<0.50	<0.50	<0.50	<0.50	<	0.0
		06/14,15/99			----------	----------	----------	Removed From Gauging and Sampling Program	----------	----------	----------	----------	----------
MW-8		03/13,14/96		32.79	8.90	23.89	670	5.1	<2.0	<2.0	<2.0	NA	NM
		05/28,29/96			10.58	22.21	490	<1.0	<1.0	0.91	0.91	NA	NM
		08/28/96			11.30	21.49	680	29	2.1	3.0	2.4	80	NM
		11/25/96			10.80	21.99	620	1.2	2.6	2.9	2.0	46	NM
		03/31-04/01/97			10.76	22.03	530	<1.0	1.7	2.0	3.8	380	NM
		06/25/97			11.65	21.14	480	6.7	0.69	0.8	0.71	88	NM
		09/09,10/97			11.67	21.12	570	57	<1.0	2.1	1.7	57	2.0
		09/09,10/97	a		--	--	--	--	--	--	--	48	--
		11/24,25/97			11.50	21.29	530	3.0	1.7	1.9	1.5	26	2.0
		03/19,20/98			9.40	23.39	440	1.4	<0.50	<0.50	3.7	140	2.2
		06/03/98			10.25	22.54	360	2.2	1.2	1.8	1.0	47	0.3
		09/21,22/98			11.37	21.42	380	<2.5	<2.5	<2.5	<2.5	620	0.0
		12/14,15/98			10.80	21.99	<50	<0.50	<0.50	<0.50	<0.50	1,600	0.0
		03/15,16/99			10.00	22.79	<500	<5.0	<5.0	<5.0	<5.0	625	0.0
		06/14,15/99			11.17	21.62	166	<0.50	<0.50	<0.50	<0.50	141	NM
		09/15,16/99			11.65	21.14	<500	<5.0	<5.0	<5.0	<5.0	2,380	2.4
		12/08,09/99			11.48	21.31	213	<0.50	<0.50	<0.50	<0.50	4,160	2.8
		03/15/00			9.38	23.41	133	<0.50	3.44	<0.50	0.548	1,350	2.2
		03/15/00	a		--	--	--	--	--	--	--	1,980	--
		06/13/00	b		11.93	20.86	227	<0.50	<0.50	<0.50	<0.50	657	1.0
		9/19,20/2000			11.46	21.33	191	1.7	3.2	<0.50	1.2	160	1.0
		12/14,15/00			10.97	21.82	243	<0.50	<0.50	<0.50	<0.50	243	2.0
		3/8,9/01			9.80	22.99	144	<0.50	<0.50	<0.50	<0.50	188	3.0
		06/14/01			11.22	21.57	150	3.2	0.75	<0.50	1.0	230	3.4
		09/26/01			10.80	21.99	140	<0.50	0.58	<0.50	1.9	170	0.6

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)	Ethyl-benzene (ppb)	Xylenes (ppb)	MtBE (ppb)	Dissolved Oxygen (ppm)
MW-9	03/13,15/96		32.11	7.65	24.46	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96			9.67	22.44	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28,29/96			10.78	21.33	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			10.24	21.87	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31-04/01/97			9.95	22.16	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97			10.85	21.26	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09,10/97			10.87	21.24	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.0
	11/24,25/97			10.70	21.41	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.6
	03/19,20/98			8.63	23.48	<50	<0.50	<0.50	<0.50	<0.50	58	4.8
	06/04/98			9.35	22.76	<50	<0.30	<0.30	<0.30	<0.60	<10	2.0
	09/21,22/98			10.55	21.56	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.8
	12/14,15/98			9.98	22.13	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.2
	03/15,16/99			9.10	23.01	<50	<0.50	<0.50	<0.50	<0.50	<5.0	2.0
	06/14,15/99			10.32	21.79	<50	<0.50	<0.50	<0.50	<0.50	3.27	2.2
	09/15,16/99			10.83	21.28	<50	<0.50	<0.50	<0.50	<0.50	<5.0	3.2
	12/08,09/99			10.70	21.41	<50	<0.50	<0.50	<0.50	<0.50	<5.0	2.6
	03/15/00			8.58	23.53	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	06/13/00	b		10.48	21.63	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	9/19,20/00			10.53	21.58	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	12/14,15/00			10.35	21.76	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.0
	3/8,9/01			9.05	23.06	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.6
	06/14/01			10.33	21.78	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.6
	09/26/01			10.82	21.29	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.8
MW-10 ††	03/13,14/96		31.67	7.78	23.89	870	35	<5.0	5.2	7.0	NA	NM
	05/29/96			10.00	21.67	800	<1.0	<1.0	<1.0	<1.0	NA	NM
	08/28/96			10.93	20.74	NS	NS	NS	NS	NS	NS	NM
	11/25,26/96			10.45	21.22	1,100	6.0	4.9	3.8	9.5	200	NM
	03/31/97	†		10.15	21.52	160	<0.50	<0.50	<0.50	<0.50	140	NM
	06/25/97			10.99	20.68	800	4.2	1.4	1.5	1.4	170	NM
	09/09,10/97			11.08	20.59	950	<1.2	3.3	2.5	3.7	240	2.0
	09/09,10/97	a		--	--	--	--	--	--	--	210	--
	11/24,25/97			10.85	20.82	920	5.7	6.7	<5.0	<5.0	160	2.4
	11/24,25/97			--	--	--	--	--	--	--	160	--
	03/19/98			8.78	22.89	330	1.7	<0.50	<0.50	<0.50	130	1.0
	06/04/98			9.59	22.08	680	<0.30	4.8	2.3	8.6	79	0.0
	09/21,22/98			10.77	20.90	650	<0.50	<0.50	3.5	1.3	99	0.0
	12/14/98			10.18	21.49	828	<1.0	<1.0	3.39	<1.0	152	0.4
	03/15,16/99			9.30	22.37	910	17.6	1.3	5.24	<1.0	268	0.0
	06/14,15/99			10.57	21.10	643	<0.50	0.761	1.13	1.35	232	NM
	09/15,16/99			11.03	20.64	655	<1.25	1.26	<1.25	<1.25	315	5.8
	12/08,09/99			10.88	20.79	898	5.7	1.29	<1.0	<1.0	236	5.6
	03/15/00			8.68	22.99	459	<1.0	<1.0	<1.0	<1.0	266	2.2
	03/15/00	a		--	--	--	--	--	--	--	342	--
	06/13/00	b		10.85	20.82	617	6.82	2.77	3.07	1.92	437	1.0
	9/19,20/00			10.70	20.97	527	<0.50	0.86	0.99	1.19	413	2.2
	12/14,15/00			10.35	21.32	456	10.50	1.01	0.60	<0.50	145	4.0
	3/8,9/01			9.12	22.55	509	<0.50	21.90	3.16	3.55	161	3.2
	06/14/01			10.55	21.12	710	9.20	2.60	<0.50	1.50	290	3.0
	09/26/01			10.98	20.69	580	<0.50	1.60	1.50	1.60	250	2.6
MW-11	03/13,14/96		32.54	8.60	23.94	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96			10.55	21.99	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			11.52	21.02	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			11.00	21.54	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31-04/01/97			10.88	21.66	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97			11.65	20.89	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09,10/97			11.75	20.79	80	<0.50	<0.50	<0.50	0.65	<2.5	2.0
	11/24,25/97			11.50	21.04	<50	<0.50	<0.50	<0.50	<0.50	3.8	2.4
	03/19/98			9.43	23.11	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	06/03/98			10.27	22.27	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.8
	09/21,22/98			11.43	21.11	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.0
	12/14/98			10.85	21.69	<50	<0.50	<0.50	<0.50	<0.50	<2.0	1.4
	03/15,16/99			10.05	22.49	<50	<0.50	<0.50	<0.50	<0.50	<5.0	1.2

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)	Ethyl-benzene (ppb)	Xylenes (ppb)	MtBE (ppb)	Dissolved Oxygen (ppm)
MW-11	06/14,15/99			11.25	21.29	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.4
(cont.)	09/15/99			11.68	20.86	<50	<0.50	<0.50	<0.50	<0.50	<5.0	3.4
	12/08,09/99			11.53	21.01	<50	<0.50	<0.50	<0.50	<0.50	<5.0	1.0
	03/15/00			9.32	23.22	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.7
	06/13/00	b		11.05	21.49	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.0
	9/19,20/00			11.37	21.17	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	3/8,9/01			11.00	21.54	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.0
	3/8,9/01			9.78	22.76	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.0
	06/14/01			11.23	21.31	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.4
	09/26/01			11.70	20.84	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.6
E-1A ††	03/13,14/96		33.06	10.35	22.71	2,700	38	<5.0	130	6.2	NA	NM
(MW-12)	05/28,29/96			11.50	21.56	1,400	410	18	55	5.5	NA	NM
	08/28/96			11.70	21.36	NS	NS	NS	NS	NS	NS	NM
	11/25,26/96			11.18	21.88	4,300	13	<5.0	100	20	220	NM
	03/31/97	†		12.65	20.41	1,900	7.9	<2.0	62	3.5	140	NM
	06/25/97			11.82	21.24	4,900	21	<5.0	53	6.8	160	NM
	09/09,10/97			11.85	21.21	3,200	9.0	<5.0	45	<5.0	85	2.0
	09/09,10/97	a		--	--	--	--	--	--	--	70	--
	11/24,25/97			11.75	21.31	2,000	10	<2.5	42	2.8	65	1.0
	03/19,20/98			9.65	23.41	11,000	1,300	<0.50	550	380	220	6.2
	06/04/98	b		10.47	22.59	4,500	3.3	0.92	41	4.0	51	1.5
	09/21,22/98			11.60	21.46	3,300	1.7	<0.50	29	3.6	52	1.8
	12/14,15/98			11.10	21.96	3,100	21	6.7	28	<5.0	140	1.0
	03/15,16/99			10.25	22.81	3,900	24.5	<20	41.2	<20	296	1.0
	06/14,15/99			11.47	21.59	5,090	<5.0	<5.0	6.01	<5.0	234	1.4
	09/15,16/99			11.90	21.16	2,200	7.93	<5.0	10.50	<5.0	142	3.2
	12/08,09/99			11.75	21.31	1,490	6.57	1.36	9.21	<1.25	364	NM
	03/15/00			9.52	23.54	4,430	26.1	<10.0	15.3	<10.0	786	1.8
	03/15/00	a		--	--	--	--	--	--	--	908	--
	06/13/00	b		22.31	10.75	262	9.52	0.584	0.535	<0.5	534	3.4
	9/19,20/00			23.15	9.91	143	1.01	<0.50	<0.50	<0.50	76	2.8
	12/14,15/00			NA	NA	181	<0.50	<0.50	0.789	<0.50	100	1.4
	3/8,9/01			23.80	9.26	370	1.78	<0.50	0.765	<0.50	76	1.6
	06/14/01			21.10	11.96	180	<0.50	<0.50	0.54	<0.50	100	2.6
	09/26/01			19.95	13.11	<50.0	<0.50	<0.50	<0.50	<0.50	210	1.8
MW-13	03/13,15/96		35.42	10.90	24.52	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28,29/96			12.90	22.52	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			13.89	21.53	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			13.41	22.01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31-04/01/97			13.11	22.31	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97			13.98	21.44	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09,10/97			14.09	21.33	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	11/24,25/97			13.90	21.52	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	03/19,20/98			11.80	23.62	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.8
	06/04/98			12.63	22.79	<50	<0.30	<0.30	<0.30	<0.60	<10	1.3
	09/21,22/98			13.77	21.65	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.8
	12/14,15/98			13.28	22.14	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	03/15,16/99	b		12.48	22.94	<50	<0.50	<0.50	<0.50	<0.50	<5.0	2.2
	06/14,15/99			---------- Removed From Gauging and Sampling Program ----------								
MW-14	03/13,15/96		30.46	6.63	23.83	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96			8.83	21.63	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			9.83	20.63	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			9.33	21.13	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31-04/01/97			9.04	21.42	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97			9.94	20.52	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09,10/97			10.08	20.38	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	11/24,25/97			9.78	20.68	<50	<0.50	<0.50	<0.50	<0.50	2.9	2.6
	03/19/98			7.92	22.54	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.8
	06/03/98			8.52	21.94	<50	<0.50	<0.50	<0.50	<0.50	<0.50	4.1
	09/21,22/98			9.72	20.74	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.8
	12/14/98			9.15	21.31	<50	<0.50	<0.50	<0.50	<0.50	<2.0	2.8
	03/15,16/99			8.20	22.26	<50	<0.50	<0.50	<0.50	<0.50	<5.0	2.6

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)	Ethyl-benzene (ppb)	Xylenes (ppb)	MtBE (ppb)	Dissolved Oxygen (ppm)
MW-14	06/14,15/99			9.54	20.92	Well Sampled Annually						
(cont.)	09/15/99			9.98	20.48	Well Sampled Annually						
	12/08,09/99			9.84	20.62	Well Sampled Annually						
	03/15/00			7.78	22.68	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.6
	06/13/00	b		9.45	21.01	Well Sampled Annually						
	9/19,20/00			9.68	20.78	Well Sampled Annually						
	12/14,15/00			9.14	21.32	Well Sampled Annually						
	3/8,9/01			8.10	22.36	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.0
	06/14/01			9.51	20.95	Well Sampled Annually						
	09/26/01			9.96	20.50	Well Sampled Annually						
MW-15	03/13,15/96		31.41	8.13	23.28	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28,29/96			10.30	21.11	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			11.30	20.11	<50	<0.50	<0.50	<0.50	<0.50	5.3	NM
	11/25/96			10.83	20.58	<50	<0.50	<0.50	<0.50	<0.50	12	NM
	03/31-04/01/97			10.45	20.96	<50	<0.50	<0.50	<0.50	<0.50	7.2	NM
	06/25/97			11.39	20.02	<50	<0.50	<0.50	<0.50	<0.50	7.0	NM
	09/09,10/97			11.50	19.91	Well Inaccessible						
	11/24,25/97					Well Inaccessible						
	03/19/98			9.15	22.26	<50	<0.50	<0.50	<0.50	<0.50	5.3	2.2
	06/04/98			NM		Well Inaccessible						
	09/21,22/98			NM		Well Inaccessible						
	12/14/98			10.63	20.78	<50	<0.50	<0.50	<0.50	<0.50	48.2	1.8
	03/15,16/99			NM		Well Inaccessible						
	06/14,15/99			NM		Well Inaccessible						
	09/15, 16/99			NM		Well Inaccessible						
	12/08,09/99			11.28	20.13	<50	<0.5	<0.5	<0.5	<0.5	167.0	NM
	03/15/00			9.03	22.38	<50	<0.5	<0.5	<0.5	<0.5	82.1	1.5
	03/15/00	a		--	--	--	--	--	--	--	105	--
	06/13/00	b		10.96	20.45	<50	<0.5	0.703	<0.5	0.870	69.8	2.0
	9/19,20/00			11.10	20.31	<50	<0.5	<0.5	<0.5	<0.5	156.0	2.2
	12/14,15/00			NM	NA	Well Inaccessible						
	3/8,9/01			9.48	21.93	<50	<0.5	<0.5	<0.5	<0.5	63.8	2.6
	06/14/01			10.95	20.46	<50	<0.5	<0.5	<0.5	<0.5	26.0	3.0
	09/26/01			11.38	20.03	<50	<0.5	<0.5	<0.5	<0.5	17.0	1.2
MW-16	03/13/96		31.39	8.62	22.77	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96			10.90	20.49	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			11.84	19.55	<50	<0.50	<0.50	<0.50	<0.50	89	NM
	11/25/96			11.32	20.07	<50	<0.50	<0.50	<0.50	<0.50	66	NM
	03/31-04/01/97			11.06	20.33	<50	<0.50	<0.50	<0.50	<0.50	49	NM
	06/25/97			11.92	19.47	<50	<0.50	<0.50	<0.50	<0.50	59	NM
	09/09,10/97			12.03	19.36	<50	<0.50	<0.50	<0.50	<0.50	63	3.0
	09/09,10/97	a		--	--	--	--	--	--	--	86	--
	11/24,25/97			11.76	19.63	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.0
	03/19/98			9.80	21.59	<50	<0.50	<0.50	<0.50	<0.50	8.4	3.0
	06/03/98			10.55	20.84	<50	<0.50	<0.50	<0.50	<0.50	22	1.6
	09/21,22/98			11.77	19.62	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.2
	12/14/98			11.20	20.19	<50	<0.50	<0.50	<0.50	<0.50	25	1.0
	03/15,16/99			10.30	21.09	<50	<0.50	<0.50	<0.50	<0.50	<5.0	3.6
	06/14,15/99			11.55	19.84	<50	<0.50	<0.50	<0.50	<0.50	3.13	3.4
	09/15/99			11.99	19.40	<50	<0.50	<0.50	<0.50	<0.50	8.70	3.8
	12/08,09/99			11.80	19.59	<50	<0.50	<0.50	<0.50	<0.50	10.1	2.4
	03/15/00			9.55	21.84	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	06/13/00	b		11.64	19.75	<50	<0.50	0.517	<0.50	0.603	6.29	1.0
	9/19,20/00			11.64	19.75	<50	<0.50	<0.50	<0.50	<0.50	5.01	2.0
	12/14,15/00			11.25	20.14	<50	<0.50	<0.50	<0.50	<0.50	6.14	2.0
	3/8,9/01			10.01	21.38	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	06/14/01			11.47	19.92	<50	<0.50	<0.50	<0.50	<0.50	2.5	2.6
	09/26/01			11.93	19.46	<50	<0.50	<0.50	<0.50	<0.50	3.8	1.8
MW-17				Well Destroyed								
MW-18	03/13/96		29.70	7.53	22.17	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96			9.88	19.82	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			10.82	18.88	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			10.18	19.52	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM

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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)	Ethyl-benzene (ppb)	Xylenes (ppb)	MtBE (ppb)	Dissolved Oxygen (ppm)
MW-18	03/31-04/01/97			10.14	19.56	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
(cont.)	06/25/97			10.94	18.76	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09,10/97			11.00	18.70	<50	<0.50	<0.50	<0.50	<0.50	<2.5	4.0
	11/24,25/97			10.65	19.05	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.4
	03/19/98			8.95	20.75	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	06/03/98			9.57	20.13	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.8
	09/21,22/98			10.80	18.90	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.2
	12/14/98			10.18	19.52	<50	<0.50	<0.50	<0.50	<0.50	<2.0	2.6
	03/15,16/99			9.20	20.50	<50	<0.50	<0.50	<0.50	<0.50	<5.0	1.0
	06/14,15/99			10.60	19.10	Well Sampled Annually						
	09/15/99			10.96	18.74	Well Sampled Annually						
	12/08,09/99			10.79	18.91	Well Sampled Annually						
	03/15/00			8.80	20.90	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/13/00	b		10.60	19.10	Well Sampled Annually						
	9/19,20/00			10.63	19.07	Well Sampled Annually						
	12/14,15/00			10.39	19.31	Well Sampled Annually						
	3/8,9/01			9.03	20.67	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.4
	06/14/01			10.40	19.30	Well Sampled Annually						
	09/26/01			10.91	18.79	Well Sampled Annually						
MW-19	03/13/96		29.02	7.06	21.96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96			9.42	19.60	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			10.33	18.69	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			9.67	19.35	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31-04/01/97			9.65	19.37	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97			10.41	18.61	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09,10/97			10.47	18.55	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.0
	11/24,25/97			10.35	18.67	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.6
	03/19/98			8.67	20.35	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/03/98			9.15	19.87	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.2
	09/21,22/98			10.28	18.74	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.6
	12/14/98			9.70	19.32	<50	<0.50	<0.50	0.588	0.647	<2.0	2.4
	03/15,16/99			Well Inaccessible								
	06/14,15/99			Removed From Gauging and Sampling Program								
MW-20				Well Destroyed								
MW-21	03/13/96		28.72	7.58	21.14	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28,29/96			9.85	18.87	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			10.75	17.97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			10.00	18.72	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31-04/01/97			10.03	18.69	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97			10.83	17.89	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09,10/97			10.90	17.82	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	11/24,25/97			10.50	18.22	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	03/19/98			9.08	19.64	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.08
	06/03/98			9.57	19.15	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.6
	09/21,22/98			10.75	17.97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.4
	12/14/98			10.11	18.61	<50	<0.50	<0.50	<0.50	<0.50	<2.0	0.6
	03/15,16/99			9.10	19.62	<50	<0.50	<0.50	<0.50	<0.50	<5.0	1.0
	06/14,15/99			10.58	18.14	Well Sampled Annually						
	09/15/99			10.93	17.79	Well Sampled Annually						
	12/08,09/99			10.70	18.02	Well Sampled Annually						
	03/15/00			8.95	19.77	<50	<0.50	<0.50	<0.50	<0.50	<5.0	1.3
	06/13/00	b		10.97	17.75	Well Sampled Annually						
	9/19,20/00			10.66	18.06	Well Sampled Annually						
	12/14,15/00			10.30	18.42	Well Sampled Annually						
	3/8,9/01			9.00	19.72	<50	<0.50	<0.50	<0.50	<0.50	<5.0	2.4
	06/14/01			10.40	18.32	Well Sampled Annually						
	09/26/01			10.75	17.97	Well Sampled Annually						
MW-22	03/13/96		29.29	7.83	21.46	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96			10.33	18.96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			11.28	18.01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			10.61	18.68	<50	<0.50	<0.50	<0.50	<0.50	3.0	NM
	12/30/96			10.61	18.68	NA	NA	NA	NA	NA	3.3	NM
	03/31-04/01/97			10.56	18.73	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97			11.51	17.78	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09,10/97			11.45	17.84	<50	<0.50	<0.50	<0.50	<0.50	3.4	1.0
	11/24,25/97			11.08	18.21	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.6
	03/19/98			9.40	19.89	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	06/03/98			10.00	19.29	<50	<0.50	<0.50	<0.50	<0.50	0.87	3.2
	09/21,22/98			11.27	18.02	<50	<0.50	<0.50	<0.50	<0.50	2.1	2.8
	12/14/98			10.65	18.64	<50	<0.50	<0.50	<0.50	<0.50	<2.0	2.4
	03/15,16/99			9.67	19.62	<50	<0.50	<0.50	<0.50	<0.50	<5.0	2.4
	06/14,15/99			11.06	18.23	<50	<0.50	<0.50	<0.50	<0.50	5.05	1.0
	09/15/99	a		11.46	17.83	<50	<0.50	<0.50	<0.50	<0.50	49.2	1.2
	12/08,09/99			11.25	18.04	<50	<0.50	<0.50	<0.50	<0.50	17.9	1.4

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)	Ethyl-benzene (ppb)	Xylenes (ppb)	MtBE (ppb)	Dissolved Oxygen (ppm)
MW-22	03/15/00			9.20	20.09	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.1
(cont.)	06/13/00	b		11.06	18.23	<50	<0.50	<0.50	<0.50	<0.50	6.85	1.0
	9/19,20/00			11.12	18.17	<50	<0.50	<0.50	<0.50	<0.50	3.18	1.8
	12/14,15/00			10.85	18.44	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	3/8,9/01			9.43	19.86	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.8
	06/14/01			10.98	18.31	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.2
	09/26/01			11.41	17.88	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.0
MW-23	03/13/96		30.99	9.13	21.86	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96			11.37	19.62	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			12.31	18.68	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			11.76	19.23	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31-04/01/97			11.56	19.43	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97			12.39	18.60	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09,10/97			12.53	18.46	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	11/24,25/97			12.13	18.86	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	03/19/98			10.22	20.77	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.4
	06/03/98			11.03	19.96	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.3
	09/21,22/98			12.31	18.68	<50	<0.50	0.54	1.9	<0.50	<2.5	2.2
	12/14/98			11.67	19.32	<50	<0.50	<0.50	<0.50	<0.50	<2.0	2.0
	03/15,16/99			10.82	20.17	<50	<0.50	<0.50	<0.50	<0.50	<5.0	2.6
	06/14,15/99			12.08	18.91	---------- Well Sampled Annually ----------						
	09/15/99			12.48	18.51	---------- Well Sampled Annually ----------						
	12/08,09/99			12.29	18.70	---------- Well Sampled Annually ----------						
	03/15/00			10.04	20.95	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.2
	06/13/00	b		11.95	19.04	---------- Well Sampled Annually ----------						
	9/19,20/00			12.15	18.84	---------- Well Sampled Annually ----------						
	12/14,15/00			12.25	18.74	---------- Well Sampled Annually ----------						
	3/8,9/01			10.49	20.50	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.6
	06/14/01			11.97	19.02	---------- Well Sampled Annually ----------						
	09/26/01			12.40	18.59	---------- Well Sampled Annually ----------						
MW-24	03/13,15/96		34.38	10.10	24.28	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96			12.25	22.13	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			13.28	21.10	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			12.71	21.67	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31-04/01/97			12.50	21.88	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97			13.38	21.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09,10/97			13.46	20.92	<50	<0.50	<0.50	<0.50	<0.50	<2.5	5.0
	11/24,25/97			13.25	21.13	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/19,20/98			11.32	23.06	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.8
	06/04/98			12.00	22.38	<50	<0.30	<0.30	<0.30	<0.60	<10	0.8
	09/21,22/98			13.13	21.25	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.4
	12/14,15/98			12.53	21.85	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.2
	03/15,16/99			11.58	22.80	<50	<0.50	<0.50	<0.50	<0.50	<5.0	0.0
	06/14,15/99			---------- Removed From Gauging and Sampling Program ----------								
MW-25	03/13,14/96		34.12	9.61	24.51	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28,29/96			11.30	22.82	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28,29/96			12.32	21.80	<50	<0.50	<0.50	<0.50	<0.50	51	NM
	11/25/96			11.83	22.29	<50	<0.50	<0.50	<0.50	<0.50	110	NM
	03/31-04/01/97			11.55	22.57	<50	<0.50	<0.50	<0.50	<0.50	39	NM
	06/25/97			14.57	19.55	<50	<0.50	<0.50	<0.50	<0.50	49	NM
	09/09,10/97			12.45	21.67	<50	<0.50	<0.50	<0.50	<0.50	78	1.0
	09/09,10/97	a		--	--	--	--	--	--	--	79	--
	11/24,25/97			12.30	21.82	<50	<0.50	<0.50	<0.50	<0.50	130	0.0
	03/19,20/98			10.18	23.94	<50	<0.50	<0.50	<0.50	<0.50	96	1.8
	06/04/98			11.00	23.12	<50	<0.30	<0.30	<0.30	<0.60	44	0.8
	09/21,22/98			12.13	21.99	<50	<0.50	<0.50	<0.50	<0.50	150	0.4
	12/14,15/98			11.60	22.52	<50	<0.50	<0.50	<0.50	<0.50	44	1.0
	03/15,16/99			10.78	23.34	<50	<0.50	<0.50	<0.50	<0.50	26.6	2.0
	06/14,15/99			11.97	22.15	<50	<0.50	<0.50	<0.50	<0.50	98.9	2.2
	09/15,16/1999			12.34	21.78	<50	<0.50	<0.50	<0.50	<0.50	66.4	NM
	12/08,09/99			12.25	21.87	<50	<0.50	<0.50	<0.50	<0.50	55.5	0.0
	03/15/00			10.16	23.96	<50	<0.50	<0.50	<0.50	<0.50	154	1.0
	03/15/00	a		--	--	--	--	--	--	--	206	--
	06/13/00	b		11.72	22.40	<50	<0.50	<0.50	<0.50	<0.50	77.7	1.0
	9/19,20/00			12.08	22.04	<50	1	<0.50	<0.50	<0.50	192	1.2
	12/14,15/00			11.74	22.38	<50	<0.50	<0.50	<0.50	<0.50	134	4.0
	3/8,9/01			10.53	23.59	<50	<0.50	<0.50	<0.50	<0.50	140	2.6
	06/14/01			11.95	22.17	<50	<0.50	<0.50	<0.50	<0.50	150	2.6
	09/26/01			12.22	21.90	<50	<0.50	<0.50	<0.50	<0.50	84	1.0
		c	33.81	0.00	33.81							
MW-26	03/13,15/96		33.71	9.38	24.33	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96			11.57	22.14	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28,29/96			12.55	21.16	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			12.03	21.68	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31-04/01/97			11.84	21.87	<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
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)	Ethyl-benzene (ppb)	Xylenes (ppb)	MtBE (ppb)	Dissolved Oxygen (ppm)
	06/25/97		12.94	20.77	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
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	23.16	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.6
	06/04/98		11.22	22.49	<50	<0.30	<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	——— Well Sampled Annually ———						
	09/15/99		12.70	21.01	——— Well Sampled Annually ———						
	12/08,09/99		12.57	21.14	——— Well Sampled Annually ———						
	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	——— Well Sampled Annually ———						
	9/19,20/00		12.38	21.33	——— Well Sampled Annually ———						
	12/14,15/00		11.88	21.83	——— Well Sampled Annually ———						
	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	——— Well Sampled Annually ———						
	09/26/01		12.70	21.01	——— Well Sampled Annually ———						

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. = Depths 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)	Ethyl-benzene (ppb)	Xylenes (ppb)	MtBE (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	63.8	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)	Ethyl-benzene (ppb)	Xylenes (ppb)	MtBE (ppb)	Dissolved Oxygen (ppm)
634 H	06/03/98 e	NS	NS	NS	NS	NS	NS	NM
(cont.)	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
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
	09/09/97 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
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)	MtBE (ppb)	Dissolved Oxygen (ppm)
675 H	12/14/00 f	NS	NS	NS	NS	NS	NS	NM
(cont.)	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
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
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
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)	MtBE (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
	03/15/00 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
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
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	*	NM
	03/31/97	430	<1.0	2.7	<1.0	1.0	57	c	NM
	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	NM
	09/09/97	380	6.0	1.4	0.98	<0.50	38		3.0
	09/09/97	--	--	--	--	--	34	c	NM
	11/24/97	240	<1.0	1.1	<1.0	1.4	53		2.4
	11/24/97	--	--	--	--	--	33	c†	NM
	03/19/98	1,300	14	<0.50	<0.50	1.2	250		1.0
	03/19/98	--	--	--	--	--	27	c	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)	MtBE (ppb)		Dissolved Oxygen (ppm)
17349 VM	06/03/98	860	8.7	<0.50	0.7	8.0	38		4.9
(cont.)	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	52	0.53	<0.50	<0.50	<0.50	49.0		1.8
	09/26/01	--	--	--	--	--	54.0	c	
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
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
	03/19/98	--	--	--	--	--	1,400	c	NM
	06/03/98	<50	<0.50	<0.50	<0.50	<0.50	16,000		1.8
	07/29/98	<200	<2.0	<2.0	<2.0	<2.0	940		NM

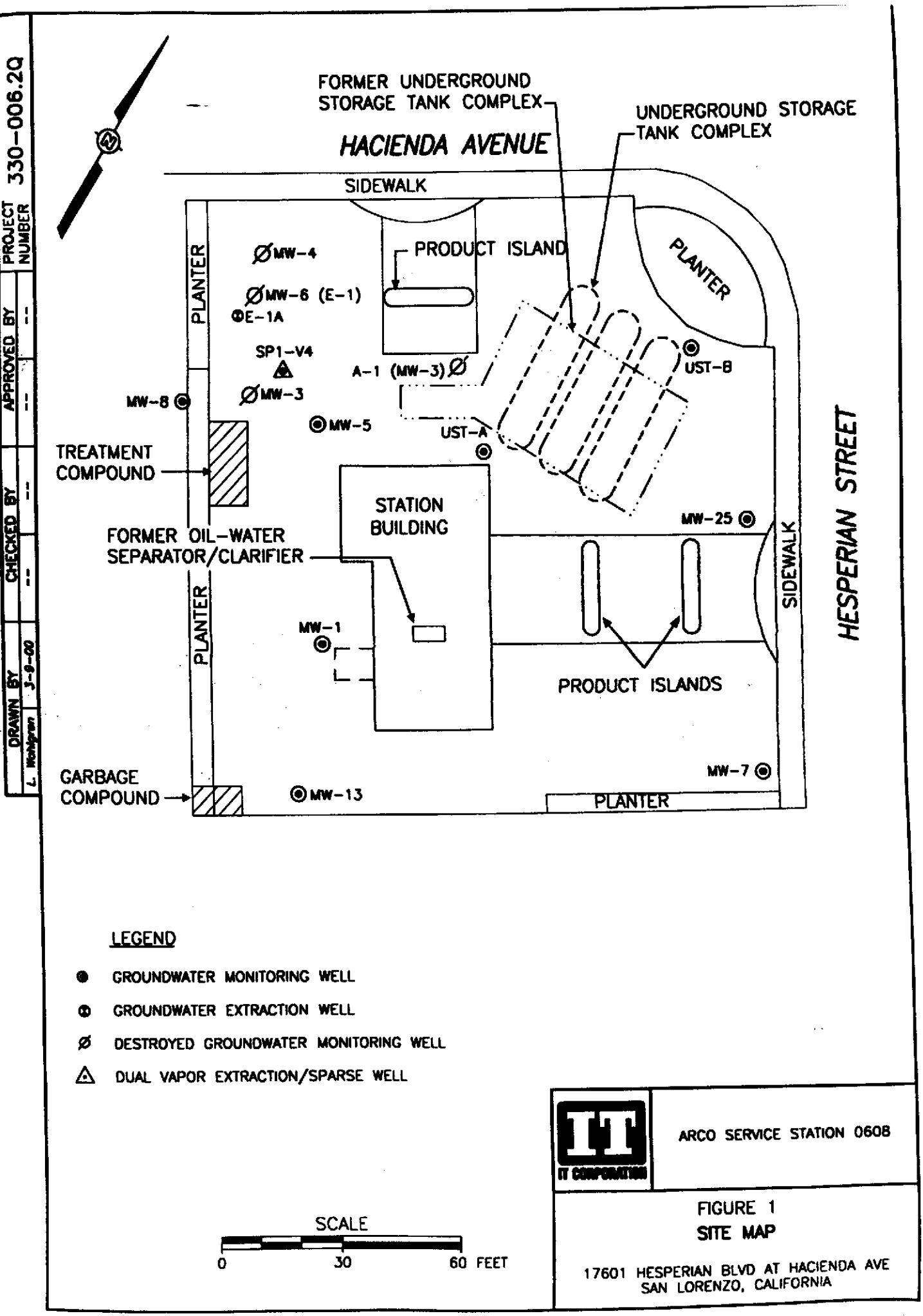
Table 3
Groundwater Analytical Data
Domestic Irrigation Wells

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

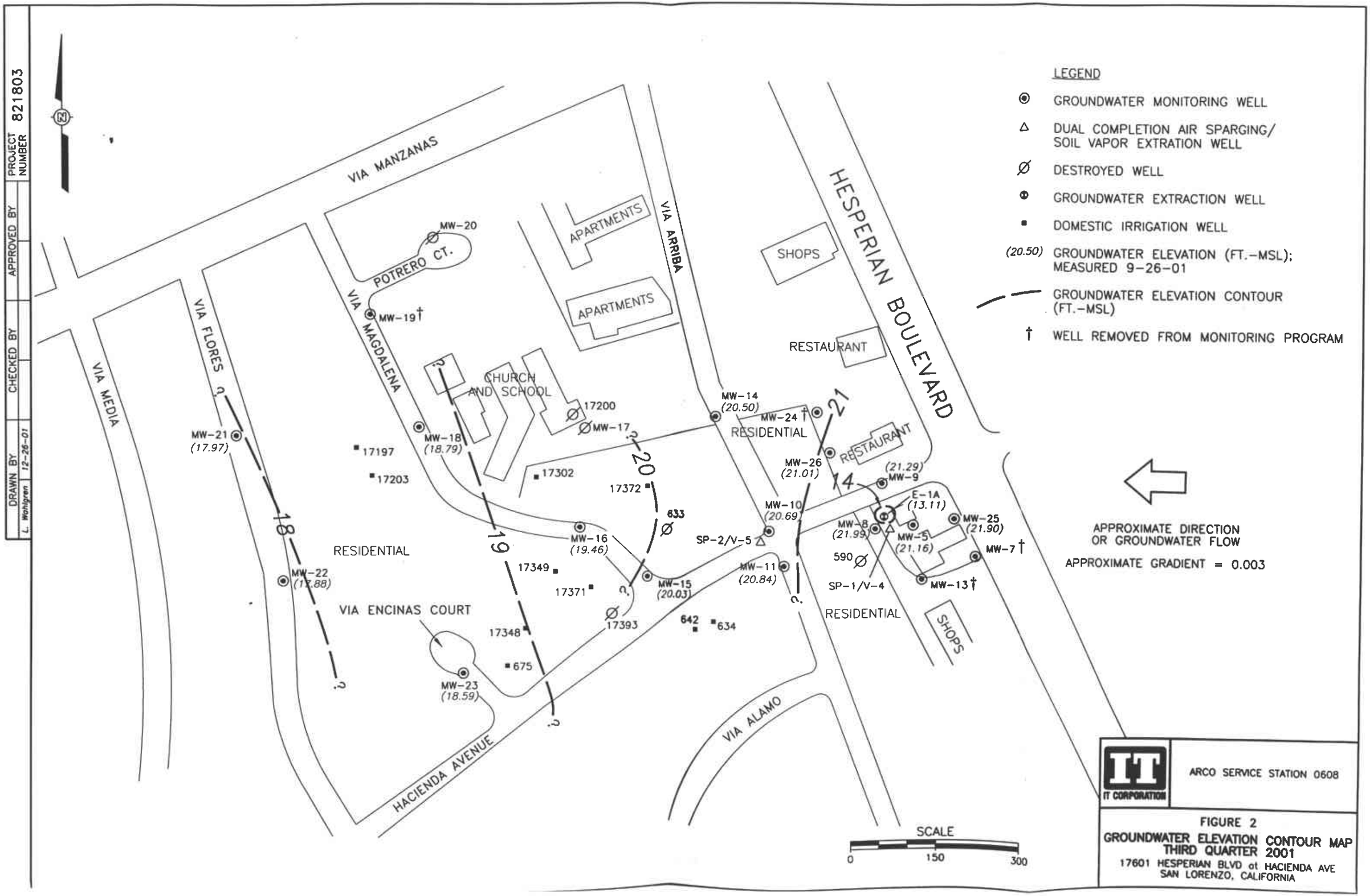
Well Address	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MtBE (ppb)		Dissolved Oxygen (ppm)
17372 VM	07/29/98	--	--	--	--	--	1,100	c	NM
(cont.)	09/21/98	<50	<0.50	<0.50	<0.50	<0.50	200		1.6
	09/21/98	--	--	--	--	--	360	c	NM
	12/14/98	<50	<0.50	0.823	<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
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 ber billion
H = Hacienda Avenue
VM = Via Magdalena
VE = Via Encinas
< = Less than laboratory detection limit stated to the right.
* = MtBE data maybe anamolous; 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


PROJECT NUMBER 330-006.2Q
APPROVED BY --
CHECKED BY --
DRAWN BY L. Hohlgren 3-9-00
FORMER UNDERGROUND STORAGE TANK COMPLEX
UNDERGROUND STORAGE TANK COMPLEX
HACIENDA AVENUE
SIDEWALK
PLANTER
MW-4
PRODUCT ISLAND
PLANTER
MW-6 (E-1)
E-1A
SP1-V4
A-1 (MW-3)
UST-B
MW-8
MW-3
MW-5
UST-A
TREATMENT COMPOUND
STATION BUILDING
MW-25
FORMER OIL-WATER SEPARATOR/CLARIFIER
SIDEWALK
HESPERIAN STREET
MW-1
PRODUCT ISLANDS
PLANTER
GARBAGE COMPOUND
MW-13
MW-7
PLANTER
LEGEND
GROUNDWATER MONITORING WELL
GROUNDWATER EXTRACTION WELL
DESTROYED GROUNDWATER MONITORING WELL
DUAL VAPOR EXTRACTION/SPARSE WELL
SCALE
0
30
60 FEET
IT CORPORATION
ARCO SERVICE STATION 0608
FIGURE 1
SITE MAP
17601 HESPERIAN BLVD AT HACIENDA AVE
SAN LORENZO, CALIFORNIA

PROJECT NUMBER	APPROVED BY	CHECKED BY	DRAWN BY
821803			L. Wahlgren 12-26-01



LEGEND

- ◉ GROUNDWATER MONITORING WELL
- △ DUAL COMPLETION AIR SPARGING/ SOIL VAPOR EXTRATION WELL
- Ø DESTROYED WELL
- ⊕ GROUNDWATER EXTRACTION WELL
- ■ DOMESTIC IRRIGATION WELL
- (20.50) GROUNDWATER ELEVATION (FT.–MSL); MEASURED 9–26–01
- GROUNDWATER ELEVATION CONTOUR (FT.–MSL)
- † WELL REMOVED FROM MONITORING PROGRAM

IT CORPORATION

ARCO SERVICE STATION 0608

FIGURE 2
GROUNDWATER ELEVATION CONTOUR MAP
THIRD QUARTER 2001
17601 HESPERIAN BLVD at HACIENDA AVE
SAN LORENZO, CALIFORNIA

DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
L. Wahlgren 12-26-01			821803

LEGEND

- GROUNDWATER MONITORING WELL
- △ DUAL COMPLETION AIR SPARGING/ SOIL VAPOR EXTRATION WELL
- ∅ DESTROYED WELL
- GROUNDWATER EXTRACTION WELL
- ▪ DOMESTIC IRRIGATION WELL
- 140 / <0.50 / 170 TPPH-G/BENZENE/MtBE by EPA 8020 (MtBE by 8260) CONCENTRATIONS IN GROUNDWATER (PARTS PER BILLION); SAMPLED 9-26-01
- NS NOT SAMPLED
- * WELL SAMPLED ANNUALLY IN FIRST QUARTER
- † WELL REMOVED FROM SAMPLING PROGRAM

VIA MANZANAS
POTRERO COURT
MW-20
MW-19 †
VIA MAGDALENA
APARTMENTS
APARTMENTS
VIA ARRIBA
SHOPS
HESPERIAN BOULEVARD
RESTAURANT
CHURCH AND SCHOOL
17200
MW-17
MW-14 *
MW-24 †
RESIDENTIAL
MW-26 *
RESTAURANT
MW-9 <50 / <0.50 / <2.5
E-1A <50 / <0.50 / 210
MW-25 <50 / <0.50 / 84
MW-5 <50 / <0.50 / 270
MW-7 †
MW-13 †
SHOPS
VIA MEDIA
MW-21 *
17197 NS
MW-18 *
17203 NS
VIA FLORES
17302 NS
17372 <50 / <0.50 / <2.5
MW-10 580 / <0.50 / 250
140 / <0.50 / 170
MW-8
MW-16 <50 / <0.50 / 3.8
633 ∅
SP-2/V-5 △
SP-1/V-4 ∅ 590
RESIDENTIAL
MW-22 <50 / <0.50 / <2.5
17349 52 / 0.53 / 49 (54)
MW-15 <50 / <0.50 / 17
MW-11 <50 / <0.50 / <2.5
17371 NS
VIA ENCINAS COURT
17393 ∅
634 NS
642 NS
17348 NS
675 NS
MW-23 *
HACIENDA AVENUE
VIA ALAMO
RESIDENTIAL
SHOPS
GW
SCALE
0 150 300

IT CORPORATION

ARCO SERVICE STATION 0608

FIGURE 3

TPPH-g/BENZENE/MtBE CONCENTRATION MAP
THIRD QUARTER 2001

17601 HESPERIAN BLVD at HACIENDA AVE
SAN LORENZO, CALIFORNIA

/ N:\cad\DWG\Arco0608\CHEM.dwg Wed, 26/Dec/01 11:06am lwahlgren

ATTACHMENT A

FIELD AND LABORATORY PROCEDURES

ATTACHMENT A
FIELD AND LABORATORY PROCEDURES

Sampling Procedures

The sampling procedure for each well consists first of measuring the water level and checking for the presence of separate-phase hydrocarbons (SPH), using either an electronic indicator and a clear Teflon® bailer, or an oil-water interface probe. Wells not containing SPH are then purged of approximately three casing volumes of water (or to dryness) using a centrifugal pump, gas displacement pump, or bailer. Equipment used for the current sampling event is noted on the attached field data sheets. During purging, temperature, pH, and electrical conductivity are monitored in order to document that these parameters are stable prior to collecting samples. After purging, water levels are allowed to partially recover. Groundwater samples are collected using a Teflon® bailer, placed into appropriate EPA-approved containers, labeled, logged onto chain-of-custody documents, and transported on ice to a California State-certified laboratory.

Analytical Procedures

Laboratory. The groundwater samples were analyzed for the presence of total purgeable petroleum hydrocarbons; benzene, toluene, ethylbenzene, and xylenes; and methyl tert-butyl ether. The analyses were performed according to EPA Methods 8015 (modified) and 8020, utilizing a purge-and-trap extraction technique. Final detection was by gas chromatography using flame- and photo-ionization detectors. The methods of analysis for the groundwater samples are documented in the certified analytical report. The certified analytical report, chain-of-custody documentation, and field data sheets are presented as Attachment B.

Field. Dissolved oxygen is measured in the field utilizing Hydac AccuVac test kit.

ATTACHMENT B

CERTIFIED ANALYTICAL REPORTS, CHAIN-OF-CUSTODY DOCUMENTATION, AND FIELD DATA SHEETS

Sequoia
Analytical

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11 October, 2001

Don Watenpaugh
Pacific Environmental Group (Arco)
1921 Ringwood Avenue
San Jose, CA 95131

RE: Facility 0608, San Lorenzo
Sequoia Report: MKI0588

Enclosed are the results of analyses for samples received by the laboratory on 09/27/01 10:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

James Hartley
Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

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Pacific Environmental Group (Arco)
1921 Ringwood Avenue
San Jose CA, 95131

Project: Facility 0608, San Lorenzo
Project Number: Task # 821803
Project Manager: Don Watenpaugh

Reported:
10/11/01 09:11

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-5	MKI0588-01	Water	09/26/01 12:50	09/27/01 10:45
MW-8	MKI0588-02	Water	09/26/01 11:45	09/27/01 10:45
MW-9	MKI0588-03	Water	09/26/01 11:30	09/27/01 10:45
MW-10	MKI0588-04	Water	09/26/01 12:00	09/27/01 10:45
MW-11	MKI0588-05	Water	09/26/01 11:15	09/27/01 10:45
MW-15	MKI0588-06	Water	09/26/01 10:05	09/27/01 10:45
MW-16	MKI0588-07	Water	09/26/01 10:25	09/27/01 10:45
MW-22	MKI0588-08	Water	09/26/01 09:50	09/27/01 10:45
MW-25	MKI0588-09	Water	09/26/01 12:20	09/27/01 10:45
E-1A	MKI0588-10	Water	09/26/01 13:00	09/27/01 10:45
17372 VM	MKI0588-11	Water	09/26/01 10:40	09/27/01 10:45
17349 VM	MKI0588-12	Water	09/26/01 11:00	09/27/01 10:45

Sequoia Analytical - Morgan Hill

James Hartley, Project Manager

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

Sequoia Analytical

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	10/11/01 09:11

Total Purgeable Hydrocarbons (C6-C10) by 8015B and BTEX and MTBE by 8021A

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5 (MKI0588-01) Water Sampled: 09/26/01 12:50 Received: 09/27/01 10:45									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	1J03003	10/03/01	10/03/01	8015B/8021A	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**270**	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*96.5 %*	*70-130*		"	"	"	"	
MW-8 (MKI0588-02) Water Sampled: 09/26/01 11:45 Received: 09/27/01 10:45									
Gasoline Range Organics (C6-C10)	**140**	50	ug/l	1	1J02002	10/02/01	10/02/01	8015B/8021A	P-01
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	**0.58**	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	**1.9**	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**170**	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*104 %*	*70-130*		"	"	"	"	
MW-9 (MKI0588-03) Water Sampled: 09/26/01 11:30 Received: 09/27/01 10:45									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	1J02002	10/02/01	10/02/01	8015B/8021A	
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: a,a,a-Trifluorotoluene		*92.3 %*	*70-130*		"	"	"	"	

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	10/11/01 09:11

Total Purgeable Hydrocarbons (C6-C10) by 8015B and BTEX and MTBE by 8021A

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-10 (MKI0588-04) Water Sampled: 09/26/01 12:00 Received: 09/27/01 10:45									
Gasoline Range Organics (C6-C10)	**580**	50	ug/l	1	1J03003	10/03/01	10/03/01	8015B/8021A	P-03
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	**1.6**	0.50	"	"	"	"	"	"	
Ethylbenzene	**1.5**	0.50	"	"	"	"	"	"	
Xylenes (total)	**1.6**	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**250**	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*105 %*	*70-130*		"	"	"	"	
MW-11 (MKI0588-05) Water Sampled: 09/26/01 11:15 Received: 09/27/01 10:45									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	1J02002	10/02/01	10/02/01	8015B/8021A	
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: a,a,a-Trifluorotoluene		*96.7 %*	*70-130*		"	"	"	"	
MW-15 (MKI0588-06) Water Sampled: 09/26/01 10:05 Received: 09/27/01 10:45									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	1J02002	10/02/01	10/02/01	8015B/8021A	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**17**	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*97.3 %*	*70-130*		"	"	"	"	

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	10/11/01 09:11

Total Purgeable Hydrocarbons (C6-C10) by 8015B and BTEX and MTBE by 8021A

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-16 (MKI0588-07) Water Sampled: 09/26/01 10:25 Received: 09/27/01 10:45									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	1J02002	10/02/01	10/02/01	8015B/8021A	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**3.8**	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*95.0 %*	*70-130*		"	"	"	"	
MW-22 (MKI0588-08) Water Sampled: 09/26/01 09:50 Received: 09/27/01 10:45									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	1J02002	10/02/01	10/02/01	8015B/8021A	
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: a,a,a-Trifluorotoluene		*98.9 %*	*70-130*		"	"	"	"	
MW-25 (MKI0588-09) Water Sampled: 09/26/01 12:20 Received: 09/27/01 10:45									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	1J03003	10/03/01	10/03/01	8015B/8021A	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**84**	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*93.6 %*	*70-130*		"	"	"	"	

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1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	10/11/01 09:11

Total Purgeable Hydrocarbons (C6-C10) by 8015B and BTEX and MTBE by 8021A

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
E-1A (MKI0588-10) Water Sampled: 09/26/01 13:00 Received: 09/27/01 10:45									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	1J03003	10/03/01	10/03/01	8015B/8021A	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**210**	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*89.8 %*		*70-130*		"	"	"	
17372 VM (MKI0588-11) Water Sampled: 09/26/01 10:40 Received: 09/27/01 10:45									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	1J02003	10/02/01	10/02/01	8015B/8021A	
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: a,a,a-Trifluorotoluene		*98.9 %*		*70-130*		"	"	"	
17349 VM (MKI0588-12) Water Sampled: 09/26/01 11:00 Received: 09/27/01 10:45									
Gasoline Range Organics (C6-C10)	**52**	50	ug/l	1	1J02003	10/02/01	10/02/01	8015B/8021A	P-03
Benzene	**0.53**	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**49**	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*101 %*		*70-130*		"	"	"	

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	10/11/01 09:11

MTBE by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
17349 VM (MKI0588-12) Water Sampled: 09/26/01 11:00 Received: 09/27/01 10:45									
Methyl tert-butyl ether	54	1.0	ug/l	1	1J08030	10/08/01	10/08/01	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*94.5 %*	*70-130*		"	"	"	"	

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1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	10/11/01 09:11

Total Purgeable Hydrocarbons (C6-C10) by 8015B and BTEX and MTBE by 8021A - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J02002 - EPA 5030B [P/T]										
Blank (1J02002-BLK1)				Prepared & Analyzed: 10/02/01						
Gasoline Range Organics (C6-C10)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*9.30*		"	*10.0*		*93.0*	*70-130*			
LCS (1J02002-BS1)				Prepared & Analyzed: 10/02/01						
Benzene	9.24	0.50	ug/l	10.0		92.4	70-130			
Toluene	9.60	0.50	"	10.0		96.0	70-130			
Ethylbenzene	9.85	0.50	"	10.0		98.5	70-130			
Xylenes (total)	29.7	0.50	"	30.0		99.0	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.86*		"	*10.0*		*98.6*	*70-130*			
LCS (1J02002-BS2)				Prepared & Analyzed: 10/02/01						
Gasoline Range Organics (C6-C10)	224	50	ug/l	250		89.6	70-130			
Surrogate: a,a,a-Trifluorotoluene	*8.93*		"	*10.0*		*89.3*	*70-130*			
Matrix Spike (1J02002-MS1)		**Source: MKI0588-02**		Prepared & Analyzed: 10/02/01						
Gasoline Range Organics (C6-C10)	500	50	ug/l	550	140	65.5	60-140			
Benzene	14.0	0.50	"	6.60	ND	212	60-140			QM-07
Toluene	40.1	0.50	"	39.7	0.58	99.5	60-140			
Ethylbenzene	9.79	0.50	"	9.20	ND	106	60-140			
Xylenes (total)	45.2	0.50	"	46.1	1.9	93.9	60-140			
Surrogate: a,a,a-Trifluorotoluene	*10.9*		"	*10.0*		*109*	*70-130*			
Matrix Spike Dup (1J02002-MSD1)		**Source: MKI0588-02**		Prepared & Analyzed: 10/02/01						
Gasoline Range Organics (C6-C10)	535	50	ug/l	550	140	71.8	60-140	6.76	25	
Benzene	14.4	0.50	"	6.60	ND	218	60-140	2.82	25	QM-07
Toluene	40.2	0.50	"	39.7	0.58	99.8	60-140	0.249	25	
Ethylbenzene	9.88	0.50	"	9.20	ND	107	60-140	0.915	25	
Xylenes (total)	46.4	0.50	"	46.1	1.9	96.5	60-140	2.62	25	
Surrogate: a,a,a-Trifluorotoluene	*10.7*		"	*10.0*		*107*	*70-130*			

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1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	10/11/01 09:11

Total Purgeable Hydrocarbons (C6-C10) by 8015B and BTEX and MTBE by 8021A - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J02003 - EPA 5030B [P/T]										
Blank (1J02003-BLK1)				Prepared & Analyzed: 10/02/01						
Gasoline Range Organics (C6-C10)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*9.27*		"	*10.0*		*92.7*	*70-130*			
LCS (1J02003-BS1)				Prepared & Analyzed: 10/02/01						
Benzene	9.01	0.50	ug/l	10.0		90.1	70-130			
Toluene	9.62	0.50	"	10.0		96.2	70-130			
Ethylbenzene	10.2	0.50	"	10.0		102	70-130			
Xylenes (total)	30.3	0.50	"	30.0		101	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.48*		"	*10.0*		*94.8*	*70-130*			
LCS (1J02003-BS2)				Prepared & Analyzed: 10/02/01						
Gasoline Range Organics (C6-C10)	259	50	ug/l	250		104	70-130			
Surrogate: a,a,a-Trifluorotoluene	*11.0*		"	*10.0*		*110*	*70-130*			
Matrix Spike (1J02003-MS1)		**Source: MKI0560-01**		Prepared & Analyzed: 10/02/01						
Gasoline Range Organics (C6-C10)	459	50	ug/l	550	ND	83.5	60-140			
Benzene	8.96	0.50	"	6.60	ND	136	60-140			
Toluene	32.0	0.50	"	39.7	ND	80.6	60-140			
Ethylbenzene	7.00	0.50	"	9.20	ND	76.1	60-140			
Xylenes (total)	42.6	0.50	"	46.1	ND	92.4	60-140			
Surrogate: a,a,a-Trifluorotoluene	*9.89*		"	*10.0*		*98.9*	*70-130*			
Matrix Spike Dup (1J02003-MSD1)		**Source: MKI0560-01**		Prepared & Analyzed: 10/02/01						
Gasoline Range Organics (C6-C10)	542	50	ug/l	550	ND	98.5	60-140	16.6	25	
Benzene	10.1	0.50	"	6.60	ND	153	60-140	12.0	25	QM-07
Toluene	37.0	0.50	"	39.7	ND	93.2	60-140	14.5	25	
Ethylbenzene	8.83	0.50	"	9.20	ND	96.0	60-140	23.1	25	
Xylenes (total)	45.8	0.50	"	46.1	ND	99.3	60-140	7.24	25	
Surrogate: a,a,a-Trifluorotoluene	*12.0*		"	*10.0*		*120*	*70-130*			

Sequoia Analytical

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	10/11/01 09:11

Total Purgeable Hydrocarbons (C6-C10) by 8015B and BTEX and MTBE by 8021A - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J03003 - EPA 5030B [P/T]										
Blank (1J03003-BLK1)				Prepared & Analyzed: 10/03/01						
Gasoline Range Organics (C6-C10)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*9.44*		"	*10.0*		*94.4*	*70-130*			
LCS (1J03003-BS1)				Prepared & Analyzed: 10/03/01						
Benzene	8.95	0.50	ug/l	10.0		89.5	70-130			
Toluene	9.32	0.50	"	10.0		93.2	70-130			
Ethylbenzene	9.80	0.50	"	10.0		98.0	70-130			
Xylenes (total)	30.1	0.50	"	30.0		100	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.38*		"	*10.0*		*93.8*	*70-130*			
LCS (1J03003-BS2)				Prepared & Analyzed: 10/03/01						
Gasoline Range Organics (C6-C10)	223	50	ug/l	250		89.2	70-130			
Surrogate: a,a,a-Trifluorotoluene	*11.1*		"	*10.0*		*111*	*70-130*			
Matrix Spike (1J03003-MS1)		**Source: MKI0606-01**		Prepared & Analyzed: 10/03/01						
Gasoline Range Organics (C6-C10)	507	50	ug/l	550	ND	92.2	60-140			
Benzene	9.48	0.50	"	6.60	ND	144	60-140			QM-07
Toluene	33.7	0.50	"	39.7	ND	84.6	60-140			
Ethylbenzene	7.76	0.50	"	9.20	ND	84.3	60-140			
Xylenes (total)	45.0	0.50	"	46.1	0.52	96.5	60-140			
Surrogate: a,a,a-Trifluorotoluene	*9.89*		"	*10.0*		*98.9*	*70-130*			
Matrix Spike Dup (1J03003-MSD1)		**Source: MKI0606-01**		Prepared & Analyzed: 10/03/01						
Gasoline Range Organics (C6-C10)	554	50	ug/l	550	ND	101	60-140	8.86	25	
Benzene	9.87	0.50	"	6.60	ND	150	60-140	4.03	25	QM-07
Toluene	37.4	0.50	"	39.7	ND	93.9	60-140	10.4	25	
Ethylbenzene	8.93	0.50	"	9.20	ND	97.1	60-140	14.0	25	
Xylenes (total)	47.6	0.50	"	46.1	0.52	102	60-140	5.62	25	
Surrogate: a,a,a-Trifluorotoluene	*12.0*		"	*10.0*		*120*	*70-130*			

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	10/11/01 09:11

MTBE 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 1J08030 - EPA 5030B P/T										
Blank (1J08030-BLK1)				Prepared & Analyzed: 10/08/01						
Methyl tert-butyl ether	ND	1.0	ug/l							
Surrogate: 1,2-Dichloroethane-d4	*8.81*		"	*10.0*		*88.1*	*70-130*			
LCS (1J08030-BS1)				Prepared & Analyzed: 10/08/01						
Methyl tert-butyl ether	7.92	1.0	ug/l	10.0		79.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	*8.73*		"	*10.0*		*87.3*	*70-130*			
Matrix Spike (1J08030-MS1)		**Source: MKJ0158-01**		Prepared & Analyzed: 10/08/01						
Methyl tert-butyl ether	96.3	10	ug/l	100	ND	95.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	*10.0*		"	*10.0*		*100*	*70-130*			
Matrix Spike Dup (1J08030-MSD1)		**Source: MKJ0158-01**		Prepared & Analyzed: 10/08/01						
Methyl tert-butyl ether	95.0	10	ug/l	100	ND	94.3	70-130	1.36	25	
Surrogate: 1,2-Dichloroethane-d4	*9.39*		"	*10.0*		*93.9*	*70-130*			

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	10/11/01 09:11

Notes and Definitions

P-01	Chromatogram Pattern: Gasoline C6-C10
P-03	Chromatogram Pattern: Unidentified Hydrocarbons C6-C10
QM-07	The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

WELL SAMPLING REQUEST

MPLING PROTOCOL

oject No.	Station #	Project Name	SEQUENCE	Project Manager	Approval	Date/s	Laboratory:	Client Engineer:
321805 809628			4Q00				Sequoia 24152 00	Mike Wheilan

Well Number	Sampling Order	Sample I.D.	Gauge/Sample Frequency	Analyses	TOB TOC	Well Depth	Top of Screen	Casing Diameter	Well goes Dry?	Comments
MW-5	16		QLY/QLY	MtBE/GAS/BTEX	TOB/TOC	14		4"	YES	Please repair or replace
MW-7	15		--	**Removed from Program**	--	19		3"	NO	missing or broken locks, j-plugs,
MW-8	17		QLY/QLY	MtBE/GAS/BTEX	TOB/TOC	22		3"	NO	slip caps, lid bolts ect. Please
MW-9	14		QLY/QLY	MtBE/GAS/BTEX	TOB/TOC	19		3"	YES	note any repairs performed or that
MW-10	18		QLY/QLY	MtBE/GAS/BTEX	TOB/TOC	22		3"	YES	need to be performed.
MW-11	10		QLY/QLY	MtBE/GAS/BTEX	TOB/TOC	19		3"	YES	
MW-13	9		--	**Removed from Program**	--	23.5		3"	YES	
MW-14	8		**QLY/ANNUAL 1Q**	MtBE/GAS/BTEX	TOB/TOC	24		3"	YES	
MW-15	7		QLY/QLY	MtBE/GAS/BTEX	TOB/TOC	24		3"	YES	
MW-16	6		QLY/QLY	MtBE/GAS/BTEX	TOB/TOC	23		3"	YES	
MW-18	5		**QLY/ANNUAL 1Q**	MtBE/GAS/BTEX	TOB/TOC	22		3"	YES	
MW-19	4		--	**Removed from Program**	--	22		3"	YES	
MW-21	3		**QLY/ANNUAL 1Q**	MtBE/GAS/BTEX	TOB/TOC	22		3"	YES	
MW-22	2		QLY/QLY	MtBE/GAS/BTEX	TOB/TOC	22		3"	YES	
MW-23	1		**QLY/ANNUAL 1Q**	MtBE/GAS/BTEX	TOB/TOC	22		3"	YES	
MW-24	11		--	**Removed from Program**	--	20		2"	YES	
MW-25	12		QLY/QLY	MtBE/GAS/BTEX	TOB/TOC	21		2"	YES	
MW-26	13		**QLY/ANNUAL 1Q**	MtBE/GAS/BTEX	TOB/TOC	20		2"	YES	
E-1A	19		QLY/QLY	MtBE/GAS/BTEX	TOB/TOC	26		?	YES	

WELL SAMPLING REQUEST

AMPLING PROTOCOL								
Project No.	Station #	Project Name	SEQUENCE	Project Manager	Approval	Date/s	Laboratory:	Client Engineer:
809628	608	17601 Hesperian San Lorenzo	4Q00	Shaw Garakani			Sequoia 22340	Mike Whelan

Well Number	Ideal Sampling Order	Sample I.D.	Sampling Frequency	Analyses	TOB TOC	Well Depth	Casing Diameter	Top of Screen	Well goes Dry?	Comments
		590 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					well destroyed 9/15
		633 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					well destroyed 9/15
Mrs Albright		634 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					
s. Corregedor		642 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					
/Mrs Roberts		675 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					
Mr Luehrs		17348 Via Encinas	QLY	GAS/BTEX/MtBE	TOB/TOC					
r. Gordin (?)		17197 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					
valry Church		17200 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					well paved over
s. Gomez (?)		17203 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					
Mrs Johanson		17302 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					
Mr. Kast		17349 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					
Mr. Manry		17371 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					
Ir. Pimental		17372 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					
Mr. Whaley		17393 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					well abandoned 7/97

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FIELD REPORT

DEPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No. : 021803 LOCATION: 17008 Hesperian Blvd San Lorenzo DATE: 9-26-01

CLIENT/STATION NO. : 0808 FIELD TECHNICIAN: Deon E. R[illegible] DAY OF WEEK: WED

PROBE TYPE/ID No.
- [ ] Oil/Water IF/
- [ ] H_2O level indicator
- [ ] Other:

Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	Total Depth (feet)	First Depth to Water (feet) TOB/TOC (TOC circled)	Second Depth to Water (feet) TOB/TOC (TOB circled)	SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	Color: Fresh	Weathered	Gas	Oil	Viscosity: Lite	Medium	Heavy	Liquid Removed (gallons) SPH / H_2O
	MW5		-	-	-	-	-		12.30 / 12.30	12.83 / 12.83										
	MW7																			
	MW8																			
	MW9		-	-	-	-	-		10.08 / 10.08	10.82 / 10.82										
	MW10		-	-	-	-	-		10.35 / 10.35	10.98 / 10.98										
	MW11		-	-	-	-	-		11.05 / 11.05	11.70 / 11.70										
	MW13																			
	MW14		-	-	-	-	-		9.66 / 9.66	9.96 / 9.96										
	MW16		-	-	-	-	-		10.92 / 10.92	11.38 / 11.38										

Comments:

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FIELD REPORT

DEPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 821803 LOCATION: 1700 [illegible] Blvd, [illegible] DATE: 9-26-01

CLIENT/STATION NO.: 0008 FIELD TECHNICIAN: DE DAY OF WEEK: WED

PROBE TYPE/ID No.
- ☐ Oil/Water IF/
- ☐ H_2O level indicator
- ☐ Other:

Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	Total Depth (feet)	First Depth to Water (feet) TOB/TOC (TOC circled)	Second Depth to Water (feet) TOB/TOC (TOB circled)	SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	Color: Fresh	Weathered	Gas	Oil	Viscosity: Lite	Medium	Heavy	Liquid Removed (gallons) SPH / H_2O
	MW-16		-	-	-	-	-		11.60 / 11.60	11.93 / 11.93										
	MW18		-	-	-	-	-		10.60 / 10.60	10.91 / 10.91										
	MW-19																			
	MW21		-	-	-	-	-		10.22 / 10.22	10.75 / 9.75										
	MW22		-	-	-	-	-	21.72	11.10 / 11.10	11.41 / 11.41										
	MW23		-	-	-	-	-		12.10 / 12.10	12.40 / 12.40										
	MW24																			
	MW25		-	-	-	-	-		11.05 / 11.05	12.22 / 12.22										
	MW26		-	-	-	-	-		12.25 / 12.25	12.70 / 12.70										
	EW-1A		-	-	-	-	-			19.95 Draw Down										

Comments:

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION: 17601 Hesperian Blvd WELL ID #: MW-5

CLIENT/STATION No.: Arco - 608 FIELD TECHNICIAN: Pedro E. Ruiz

WELL INFORMATION

Depth to Liquid: ______ TOB ______ TOC
Depth to water: ______ TOB ______ TOC
Total depth: ______ TOB ______ TOC
Date: ______ Time (2400): ______

Probe Type and I.D. #
☐ Oil/Water interface ______
☐ Electronic indicator ______
☐ Other; ______

CASING DIAMETER	GAL/ LINEAR FT.
☐ 2	0.17
☑ 3	0.38
☐ 4	0.66
☐ 4.5	0.83
☐ 5	1.02
☐ 6	1.5
☐ 8	2.6

SAMPLE TYPE
☑ Groundwater
☐ Duplicate
☐ Extraction well
☐ Trip blank
☐ Field blank
☐ Equipment blank
☐ Other; ______

TD 14.00 DTW 12.30 = 1.7 x Gal/Linear Foot .66 .38 = .646 x Number of Casings 3 = Calculated Purge 3.36

DATE PURGED: 9-26-01 START: 12:40 END (2400 hr): —— PURGED BY: PE
DATE SAMPLED: 9-26-01 START: 12:50 END (2400 hr): —— SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
12:43	1	6.95	1050	72.2	Cloudy	Light	None
12:46	2	6.95	1050	72.4	Cloudy	Light	None

Pumped dry (Yes) No @ 2 gal

COLOR: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
TURBIDITY: NTU 0-200, Heavy, Moderate, Light, Trace
ODOR: Strong, Moderate, Faint, None

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ______ TOB/TOC

PURGING EQUIPMENT/I.D. #
☐ Bailer: ______
☑ Centrifugal Pump: ______
☐ Other: ______
☐ Airlift Pump: ______
☐ Dedicated: ______

SAMPLING EQUIPMENT/I.D. #
☑ Bailer: Dispos.
☐ Dedicated: ______
☐ Other: ______

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW5	9-26-01	12:50	3	40ml	VOA	HCL	Gas-BTEX-MTBE

REMARKS: D = .20

SIGNATURE: [signature]

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FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 1760 HESPERIAN Blvd WELL ID #: MW - 8

CLIENT/STATION No.: Arco - 608 FIELD TECHNICIAN: PEDRO E. Ruiz

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: _____ Time (2400): _____

Probe Type and I.D. #
- ☐ Oil/Water interface _____
- ☐ Electronic indicator _____
- ☐ Other; _____

CASING DIAMETER		GAL/ LINEAR FT.
☐ 2		0.17
☑ 3		0.38
☐ 4		0.66
☐ 4.5		0.83
☐ 5		1.02
☐ 6		1.5
☐ 8		2.6

SAMPLE TYPE
- ☑ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other; _____

TD 21.82 DTW 10.80 / 11.02 x Gal/Linear Foot .38 = 4.18 x Number of Casings 3 = Calculated Purge 12.54

DATE PURGED: 9/26/01 START: 11:35 END (2400 hr): _____ PURGED BY: JE

DATE SAMPLED: 9/26/01 START: 11:45 END (2400 hr): _____ SAMPLED BY: JE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
11:38	4.26	7.10	1040	70.6	Cloudy	Light	None
11:41	8.5	7.12	1020	71.8	Cloudy	Light	None
11:44	12.75	7.07	1000	71.9	Cloudy	Light	None

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

Pumped dry Yes / (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: _____
- ☑ Centrifugal Pump: _____
- ☐ Airlift Pump: _____
- ☐ Dedicated: _____
- ☐ Other: _____

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: Disp
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW8	9-26-01	11:45	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO.

SIGNATURE: _____

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FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION: 7601 Hesperian Blvd WELL ID #: MW-9

CLIENT/STATION No.: Arco - 608 FIELD TECHNICIAN: Pedro E. Ruiz

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: _____ Time (2400): _____

Probe Type and I.D. #
- ☐ Oil/Water interface _____
- ☐ Electronic indicator _____
- ☐ Other; _____

CASING DIAMETER		GAL/ LINEAR FT.
☐ 2		0.17
☑ 3		0.38
☐ 4		0.66
☐ 4.5		0.83
☐ 5		1.02
☐ 6		1.5
☐ 8		2.6

SAMPLE TYPE
- ☑ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other; _____

TD 18.41 - DTW 10.28 = 8.13 x Gal/Linear Foot .38 = 3.08 x Number of Casings 3 = Calculated Purge 9.24

DATE PURGED: 9/26/01 START: 11:18 END (2400 hr): — PURGED BY: PE

DATE SAMPLED: 9/26/01 START: 11:30 END (2400 hr): — SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
11:21	3	7.16	1030	72.5	Cloudy	Mod	Mod
11:24	6	7.11	905	72.8	Cloudy	Mod	Mod
11:27	9	7.10	903	72.8	Cloudy	Mod	Mod

Pumped dry Yes / No

Cobalt 0-100: Clear, Cloudy, Yellow, Brown
NTU 0-200: Heavy, Moderate, Light, Trace
Strong, Moderate, Faint, None

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: _____
- ☐ Airlift Pump: _____
- ☑ Centrifugal Pump: _____
- ☐ Dedicated: _____
- ☐ Other: _____

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: Disp.
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-9	9-26-01	11:30	3	40ml	VOA	HCL	Gas-BTEX-MTBE

REMARKS: DO: 1.8

SIGNATURE: _____

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FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION: 7601 Hesperian Blvd WELL ID #: MW-10

CLIENT/STATION No.: Arco - 608 FIELD TECHNICIAN: Pedro E. Ruiz

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: _____ Time (2400): _____

Probe Type and I.D. #
- ☐ Oil/Water interface _____
- ☐ Electronic indicator _____
- ☐ Other; _____

CASING DIAMETER		GAL/ LINEAR FT.
☐ 2	.....	0.17
☑ 3	.....	0.38
☐ 4	.....	0.66
☐ 4.5	.....	0.83
☐ 5	.....	1.02
☐ 6	.....	1.5
☐ 8	.....	2.6

SAMPLE TYPE
- ☑ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other; _____

TD 20.89 DTW 10.35 = 10.54 x Gal/Linear Foot .38 = 4.76 x Number of Casings 3 = Calculated Purge 14.29

DATE PURGED: 9/26/01 START: 11:50 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 9/26/01 START: 12:00 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
11:53	4.75	7.01	1010	73.2	Cloudy	Mod	Faint
11:56	9.5	6.97	950	70.2	Cloudy	Light	Faint
11:59	14.25	6.98	951	71.4	Cloudy	Light	Faint

Pumped dry Yes (No)

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: _____
- ☐ Airlift Pump: _____
- ☒ Centrifugal Pump: _____
- ☐ Dedicated: _____
- ☐ Other: _____

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: Disp.
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW10	9-2001	12:00	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 2.6

SIGNATURE: _____

the igroup

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 7601 Hesperian Blvd WELL ID #: MW-11

CLIENT/STATION No.: Arco - 608 FIELD TECHNICIAN: Pedro E. Ruiz

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: _____ Time (2400): _____

Probe Type and I.D. #
- ☐ Oil/Water interface _____
- ☐ Electronic indicator _____
- ☐ Other; _____

CASING DIAMETER		GAL/ LINEAR FT.
☐ 2	———	0.17
☑ 3	———	0.38
☐ 4	———	0.66
☐ 4.5	———	0.83
☐ 5	———	1.02
☐ 6	———	1.5
☐ 8	———	2.6

SAMPLE TYPE
- ☑ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other; _____

TD 19.01 - DTW 11.05 = 7.96 x Gal/Linear Foot .38 = 2.9 x Number of Casings 3 = Calculated Purge 8.8

DATE PURGED: 9/26/01 START: 11:03 END (2400 hr): ——— PURGED BY: PE

DATE SAMPLED: 9/26/01 START: 11:15 END (2400 hr): ——— SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
11:00	3	7.19	1020	69.9	Clear	Mod	None
11:09	6	7.10	1030	69.2	Clear	Mod	None
11:12	9	7.08	1020	68.7	Clear	Mod	None

Cobalt 0-100: Clear, Cloudy, Yellow, Brown
NTU 0-200: Heavy, Moderate, Light, Trace
Strong, Moderate, Faint, None

Pumped dry Yes / No

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: _____
- ☑ Centrifugal Pump: _____
- ☐ Other: _____
- ☐ Airlift Pump: _____
- ☐ Dedicated: _____

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: Disp.
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW11	9-26-01	11:15	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: 9:10

SIGNATURE: _____

the igroup

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 1760 Hesperian Blvd WELL ID #: MW-15

CLIENT/STATION No.: Arco - 608 FIELD TECHNICIAN: Pedro E. Ruiz

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: _____ Time (2400): _____

Probe Type and I.D. #
- ☐ Oil/Water interface _____
- ☐ Electronic indicator _____
- ☐ Other; _____

CASING DIAMETER		GAL/ LINEAR FT.
☐ 2	———	0.17
☑ 3	———	0.38
☐ 4	———	0.66
☐ 4.5	———	0.83
☐ 5	———	1.02
☐ 6	———	1.5
☐ 8	———	2.6

SAMPLE TYPE
- ☑ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other; _____

TD 23.68 DTW 10.92 - 10.70 x Gal/Linear Foot .38 = .484 x Number of Casings 3 = Calculated Purge 1.454

DATE PURGED: 9/26/01 START: 9:55 END (2400 hr): ——— PURGED BY: PE

DATE SAMPLED: 9/26/01 START: 10:06 END (2400 hr): ——— SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
9:58	4.75	7.04	953	66.6	Clear	light	None
10:01	9.5	7.01	955	66.7	Clear	light	None
10:04	14.26	7.00	957	66.8	Clear	light	None

Pumped dry Yes (No)

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: _____
- ☑ Centrifugal Pump: _____
- ☐ Other: _____
- ☐ Airlift Pump: _____
- ☐ Dedicated: _____

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: Disposable
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW15	9-26-01	10:05	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 1.2

SIGNATURE:

the i group

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 7604 Hesperian Blvd WELL ID #: MW-10

CLIENT/STATION No.: Arco - 608 FIELD TECHNICIAN: Pedro E. Ruiz

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: _____ Time (2400): _____

Probe Type and I.D. #
- ☐ Oil/Water interface _____
- ☐ Electronic indicator _____
- ☐ Other; _____

CASING DIAMETER		GAL/ LINEAR FT.
☐ 2		0.17
☑ 3		0.38
☐ 4		0.66
☐ 4.5		0.83
☐ 5		1.02
☐ 6		1.5
☐ 8		2.6

SAMPLE TYPE
- ☑ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other; _____

TD 23.51 - DTW 11.50 = 10.01 x Gal/Linear Foot .38 = 3.80 x Number of Casings 3 = Calculated Purge 11.41

DATE PURGED: 9/26/01 START: 10:11 END (2400 hr): — PURGED BY: PE

DATE SAMPLED: 9/26/01 START: 10:25 END (2400 hr): — SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 2 5°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
10:14	3.75	7.02	957	67.1	Cloudy	Light	None
10:17	—	7.02	957	68.3	Cloudy	Light	None
10:20	—	7.09	960	68.7	Cloudy	Light	None

Pumped dry Yes / (No)

Cobalt 0-100: Clear, Cloudy, Yellow, Brown
NTU 0-200: Heavy, Moderate, Light, Trace
Strong, Moderate, Faint, None

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: _____
- ☐ Airlift Pump: _____
- ☑ Centrifugal Pump: _____
- ☐ Dedicated: _____
- ☐ Other: _____

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: Disp.
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW10-092601	9-2601	10:25	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 1.8

SIGNATURE: _____

the i group

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 7601 Hesperian Blvd WELL ID #: MW-02

CLIENT/STATION No.: Arco - 608 FIELD TECHNICIAN: Pedro E. Ruiz

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: _____ Time (2400): _____

Probe Type and I.D. #
- ☐ Oil/Water interface _____
- ☐ Electronic indicator _____
- ☐ Other; _____

CASING DIAMETER		GAL/ LINEAR FT.
☐	2	0.17
☑	3	0.38
☐	4	0.66
☐	4.5	0.83
☐	5	1.02
☐	6	1.5
☐	8	2.6

SAMPLE TYPE
- ☑ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other; _____

TD 21.72 DTW 11.10 = 10.62 x Gal/Linear Foot .38 = 4.03 x Number of Casings 3 = Calculated Purge 12.10

DATE PURGED: 9/26/01 START: 9:36 END (2400 hr): ——— PURGED BY: PE

DATE SAMPLED: 9/26/01 START: 9:50 END (2400 hr): ——— SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
9:39	4	7.03	902	66.8	Clear	Med	None
9:42	8	7.09	904	66.5	Clear	Med	None
9:45	12	7.15	902	66.8	Clear	Med	None

Cobalt 0-100: Clear, Cloudy, Yellow, Brown
NTU 0-200: Heavy, Moderate, Light, Trace
Strong, Moderate, Faint, None

Pumped dry Yes / (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: _____
- ☐ Airlift Pump: _____
- ☑ Centrifugal Pump: _____
- ☐ Dedicated: _____
- ☐ Other: _____

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: Disp.
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW02	9-26-2001	9:50	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: D.O. 1.0

SIGNATURE:

the Groundwater

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION: 7601 Hesperian Blvd WELL ID #: MW-25

CLIENT/STATION No.: Arco - 608 FIELD TECHNICIAN: Pedro E. Ruiz

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: _____ Time (2400): _____

Probe Type and I.D. #
- ☐ Oil/Water interface _____
- ☐ Electronic indicator _____
- ☐ Other; _____

CASING DIAMETER		GAL/ LINEAR FT.
☐	2	0.17
☑	3	0.38
☐	4	0.66
☐	4.5	0.83
☐	5	1.02
☐	6	1.5
☐	8	2.6

SAMPLE TYPE
- ☑ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other; _____

TD 2100 DTW 11.05 = 9.95 x Gal/Linear Foot .38 = 3.78 x Number of Casings 3 = Calculated Purge 11.34

DATE PURGED: 9/26/01 START: 12:05 END (2400 hr): ——— PURGED BY: PE

DATE SAMPLED: 9/26/01 START: 1220 END (2400 hr): ——— SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 2 5°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
1208	3.76	7.00	954	69.9	Cloudy	Mod	None
12:12	3.5	7.16	9510	70.4	Cloudy	Mod	None
12:15	11.26	7.15	958	70.3	Cloudy	Mod	None

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

Pumped dry Yes / (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: _____
- ☐ Airlift Pump: _____
- ☑ Centrifugal Pump: _____
- ☐ Dedicated: _____
- ☐ Other: _____

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: Disp.
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW25	9-26-01	1220	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO. 10

SIGNATURE:

the Groundwater

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 1760 Hesperian Blvd WELL ID #: E1-A

CLIENT/STATION No.: Arco - 608 FIELD TECHNICIAN: Pedro E. Ruiz

WELL INFORMATION

Depth to Liquid:_____ TOB_____ TOC
Depth to water:_____ TOB_____ TOC
Total depth:_____ TOB_____ TOC
Date:_____ Time (2400):_____

Probe Type and I.D. #
- ☐ Oil/Water interface_____
- ☐ Electronic indicator_____
- ☐ Other;_____

CASING DIAMETER		GAL/ LINEAR FT.
☐	2	0.17
☑	3	0.38
☐	4	0.66
☐	4.5	0.83
☐	5	1.02
☐	6	1.5
☐	8	2.6

SAMPLE TYPE
- ☑ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other;_____

TD_____ - DTW 4.96 = _____ x Gal/Linear Foot .38 = _____ x Number of Casings 3 = Calculated Purge_____

DATE PURGED: 9/26/01 START:_____ END (2400 hr):_____ PURGED BY: PE

DATE SAMPLED: 9/26/01 START: 13:00 END (2400 hr):_____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR

Pumped dry Yes / No

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: 4.95 TOB/TOC 7.07 1010 7.07 Cloudy Light Faint

PURGING EQUIPMENT/I.D. #
- ☐ Bailer:_____
- ☐ Airlift Pump:_____
- ☑ Centrifugal Pump:_____
- ☐ Dedicated:_____
- ☐ Other:_____

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: Disp.
- ☐ Dedicated:_____
- ☐ Other:_____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
E1-A	9-26-01	13:00	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 1.8

SIGNATURE:

the Source group

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION: 17601 HESPERIAN Blvd WELL ID #: 1737DW

CLIENT/STATION No.: ARCO - 608 FIELD TECHNICIAN: PEDRO E. RUIZ

WELL INFORMATION

Depth to Liquid: ______ TOB ______ TOC

Depth to water: ______ TOB ______ TOC

Total depth: ______ TOB ______ TOC

Date: ______ Time (2400): ______

Probe Type and I.D. #
- ☐ Oil/Water interface ______
- ☐ Electronic indicator ______
- ☐ Other; ______

CASING DIAMETER	GAL/ LINEAR FT.
☐ 2	0.17
☑ 3	0.38
☐ 4	0.66
☐ 4.5	0.83
☐ 5	1.02
☐ 6	1.5
☐ 8	2.6

SAMPLE TYPE
- ☑ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other; ______

TD ______ - DTW ______ = ______ x Gal/Linear Foot .38 = ______ x Number of Casings 3 = Calculated Purge ______

DATE PURGED: 9-2001 START: ______ END (2400 hr): ——— PURGED BY: PE

DATE SAMPLED: 9-2001 START: 10:40 END (2400 hr): ——— SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 2 5°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR

Pumped dry Yes / No

COLOR: Cobalt 0-100, Clear, Cloudy, Yellow, Brown — TURBIDITY: NTU 0-200, Heavy, Moderate, Light, Trace — ODOR: Strong, Moderate, Faint, None

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ______ TOB/TOC 734 | 898 | 672 | Clear | Light | None

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: ______
- ☑ Centrifugal Pump: ______
- ☐ Other: ______
- ☐ Airlift Pump: ______
- ☐ Dedicated: ______

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: Dispos.
- ☐ Dedicated: ______
- ☒ Other: GRAB.

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
~~MW~~ 1737DW	9-2001	10:40	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: D:22

SIGNATURE: [signature]

the group

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 7601 Hesperian Blvd WELL ID #: MW-1734MW

CLIENT/STATION No.: Arco - 608 FIELD TECHNICIAN: Pedro E. Ruiz

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: _____ Time (2400): _____

Probe Type and I.D. #
- ☐ Oil/Water interface _____
- ☐ Electronic indicator _____
- ☐ Other; _____

CASING DIAMETER		GAL/ LINEAR FT.
☐ 2		0.17
☑ 3		0.38
☐ 4		0.66
☐ 4.5		0.83
☐ 5		1.02
☐ 6		1.5
☐ 8		2.6

SAMPLE TYPE
- ☑ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other; _____

TD _____ - DTW _____ = _____ x Gal/Linear Foot .38 = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: 9/26/01 START: _____ END (2400 hr): ——— PURGED BY: PE

DATE SAMPLED: 9/26/01 START: 11:00 END (2400 hr): ——— SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR

Pumped dry Yes / No

Cobalt 0-100, Clear, Cloudy, Yellow, Brown | NTU 0-200, Heavy, Moderate, Light, Trace | Strong, Moderate, Faint, None

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC 7.03 9.30 68.7 Clear Mod None

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: _____
- ☐ Airlift Pump: _____
- ☒ Centrifugal Pump: _____
- ☐ Dedicated: _____
- ☐ Other: _____

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: Disp.
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-1734MW	9-26-01	11:00	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 1.8 Pump out 60 Gal

SIGNATURE: _____

the igroup

ARCO Products Company Division of AtlanticRichfieldCompany — 821803 — Task Order No. 24152.00 — **Chain of Custody**

ARCO Facility no. 0808	City (Facility) 17601 Hesperian Blvd.	Project manager (Consultant) Don Wattenpaugh	Laboratory name SEQUOIA
ARCO engineer Mike Whelan	Telephone no. (ARCO) 510 675 8280	Telephone no. (Consultant) 408/453-7300	Fax no. (Consultant) 408/437-9500	Contract number
Consultant name IT Group	Address (Consultant) 1921 Ringwood Ave. San Jose CA 95131			Method of shipment

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH EPA MTBE	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ VOA ☐ Semi VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
Mw5		3		W		Y	HCl	9/26/01	10:00		X											
Mw8									11:45													
Mw9									11:30													
Mw10									12:00													
Mw11									11:15													
Mw15									10:05													
Mw16									10:25													
Mw22									9:50													
Mw25									10:20													
EIA									13:00													
17372MW									10:40													
17349MW									11:00													

Remarks: * Run EPA 8020 on this wells w/ MTBE Greater than 35 ppb

Special detection Limit/reporting

Special QA/QC

Lab number

Turnaround time
- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☒

Condition of sample:

Temperature received:

Relinquished by sampler	Date 9/26/01	Time 16:00	Received by
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory / Date / Time

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant

ATTACHMENT C

REMEDIAL SYSTEM PERFORMANCE EVALUATION

ATTACHMENT C
REMEDIAL SYSTEM PERFORMANCE EVALUATION

REMEDIAL SYSTEM PERFORMANCE EVALUATION

Remedial action consisting of groundwater extraction and treatment (GWET) was initiated at the site on September 26, 1991 and was deactivated on August 21, 1995 with approval from the Alameda County Health Care Services Agency (ACHCSA). The GWET system was reactivated June 5, 2000 to address elevated concentrations of metyl tert-butyl ether (MtBE). Remedial objectives from the GWET system at this site include: (1) migration control of the impacted groundwater plume and (2) MtBE mass reduction. To evaluate GWET system performance, IT monitored well water levels, instantaneous and average extraction flow rates. IT also sampled the influent between carbon vessels and the effluent of the treatment system for total purgeable petroleum hydrocarbons as gasoline (TPPH-g); benzene, toluene, ethylbenzene, xylene (BTEX compounds); and Methyl tert Butyl Ether (MtBE) on a monthly basis. Treatment system effluent is also analyzed for chemical oxygen demand, total suspended solids, and pH as requested by the Oro Loma Sanitary District. A brief description and a performance evaluation of the GWE system from June 9, 2001 to September 5, 2001 are presented below.

Description

The GWET system is comprised of an extraction well (E-1A) containing an electric submersible pump, and three 1,200-pound granular activated carbon (GAC) vessels to treat the influent groundwater stream before it is discharged into the sanitary sewer. The carbon vessels are arranged in a series, with valves to permit bed order rotation to maximize the useful life of the GAC. This allows for the rotation of the carbon vessels after the carbon in the primary vessel has been renewed. Sample ports are located at the treatment system influent, effluent, and the mid-points between the carbon vessels. Treatment system effluent is discharged into the sanitary sewer system in accordance with Permit No. SDP-037, issued by the Oro Loma Sanitary District on May 15, 2001. The permit will be effective through May 14, 2002. During June and July 2001, reserve remedial piping was installed across the site in conjunction with the station remodeling and upgrade activities.

Migration Control

Progress toward meeting the migration control objective is evaluated by a comparison of the

groundwater elevation map (Figure 2 of the Quarterly Groundwater Monitoring Report) and the TPPH-g, benzene, and MtBE concentrations map (Figure 3 of the Quarterly Groundwater Monitoring Report) from the current quarterly groundwater monitoring event with those from previous monitoring events. Upon completing the above comparisons, IT concludes that the operation of the GWET system influenced the migration of the impacted plume during the current quarter.

Mass Reduction

Progress toward meeting the mass reduction objective is determined by evaluating GWET system mass removal data and the concentration trends in nearby groundwater monitoring wells. GWE system operational data are collected monthly. The system flow and influent sample analysis data are used to estimate mass removal values. Performance data for the GWET system are presented in Table C-1. GWET system certified analytical reports, chain-of-custody documentation, and field data sheets are presented as Attachment D of this report. Progress toward site remediation is presented in the following table.

Technology / Analyte	Mass Removed 6/09/01 to 9/05/01 (lbs)	(gal)	Cumulative (lbs)	(gal)
Groundwater Extraction				
TPPH-g	0.12	0.02	6.39	1.05
Benzene	0.001	0.00	0.31	0.04
MtBE*	0.45	0.06	1.48	0.20

lbs = Pounds
gal = Gallons
TPPH-g = Total purgeable petroleum hydrocarbons calculated as gasoline
* = MtBE was not calculated prior to 06/15/00

Graphs of TPPH-g and benzene mass removal rates and concentrations versus time are shown on Figures C-1 and C-2, respectively. Graphical presentations of MtBE mass removal rate and concentration versus time are shown on Figures C-3 and C-4, respectively.

Groundwater Extraction System Operational Data

The GWET system was approximately 41 percent operational during the reporting period. Down time was due to regular system maintenance, automatic system shut down resulting from excess sediment built up in the filter, and shut down of the system resulting from the service station remodeling project from June 24 to August 14, 2001. When operating during the reporting period, the GWE system discharged treated groundwater at an average flow rate of approximately 2.0 gallons per minute (gpm) for a period discharge of 97,340 gallons. Treatment system analytical data are presented in Table C-2.

During the reporting period, IT continued the biologic growth control procedure, by adding

hydrogen peroxide to the extraction well on a monthly basis, and back-washing the GAC vessels on as needed basis.

During this quarter, the GWE system was in compliance with all conditions stipulated in the discharge permit, including pH, total suspended solids, and chemical oxygen demand. Operation and maintenance field data sheets and certified analytical reports are presented as Attachment D of this report.

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Groundwater Extraction System Performance Data

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

Influent Sample Date	Hour Meter Reading (hours)	System Down Time (%)	Volume Reading (gallons)	Net Volume (gallons)	Average Flow (gpm)	TPPH as Gasoline: Influent Concentration (µg/L)	TPPH as Gasoline: Net Removed (pounds)	TPPH as Gasoline: Removed To Date (pounds)	Benzene: Influent Concentration (µg/L)	Benzene: Net Removed (pounds)	Benzene: Removed To Date (pounds)	MtBE: Influent Concentration (µg/L)	MtBE: Net Removed (pounds)	MtBE: Removed To Date (pounds)	Primary MtBE Carbon Loading (%)
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	1,030,066	178,966	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	1,651,823	115,883	2.7	ND	N/A	1.19	ND	0.000	0.09	N/A	N/A	N/A	1.5
11/16/92	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	98	0.04	1.23	7.7	0.003	0.09	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	3.8	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	15,464	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	3,190,900	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
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	3,476,910	58,373	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	3.90	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	3.90	ND	0.000	0.26	N/A	N/A	N/A	4.9
11/15/94	23,060	0	280,840	68,960	1.7	ND	0.00	3.90	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	589,180	89,490	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	0.10	4.44	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	4.52	ND	0.003	0.29	N/A	N/A	N/A	5.8 f

Groundwater Extraction System Performance Data

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

Influent Sample Date		Hour Meter Reading (hours)	System Down Time (%)	Volume Reading (gallons)	Net Volume (gallons)	Average Flow (gpm)	TPPH as Gasoline: Influent Concentration (µg/L)	TPPH as Gasoline: Net Removed (pounds)	TPPH as Gasoline: Removed To Date (pounds)	Benzene: Influent Concentration (µg/L)	Benzene: Net Removed (pounds)	Benzene: Removed To Date (pounds)	MtBE: Influent Concentration (µg/L)	MtBE: Net Removed (pounds)	MtBE: Removed To Date (pounds)	Primary MtBE Carbon Loading (%)	
07/06/95		28,464	0	921,260	72,450	1.8	270	0.08	4.71	2.4	0.001	0.29	N/A	N/A	N/A	N/A	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	N/A	g
06/05/00	e	29,592	N/A	976,800	N/A	N/A	700	N/A	4.86	7.2	N/A	0.29	361	N/A	0.00	N/A	g
06/05/00		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	i	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	1,698,860	26,530	2.0	219	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	74.6	0.04	6.21	ND	0.000	0.31	97.6	0.02	0.95	N/A	g
05/04/01		35,716	1	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	1.8	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
REPORTING PERIOD:					6/9/01 - 9/5/01												
TOTAL GALLONS EXTRACTED:					5,608,498												
PERIOD GALLONS EXTRACTED:					97,340												
TOTAL POUNDS REMOVED:								6.39			0.31				1.48		
TOTAL GALLONS REMOVED:								1.05			0.04				0.20		
AVERAGE PERIOD FLOW RATE (gpm):					2.0												
PERIOD PERCENT OPERATIONAL:					41% h												
PERIOD POUNDS REMOVED:								0.12			0.001				0.45		
PERIOD GALLONS REMOVED:								0.02			0.000				0.06		

TPPH	= Total purgeable petroleum hydrocarbons
gpm	= Gallons per minute
µg/L	= Micrograms per liter
N/A	= Not available or not applicable
ND	= Not detected above detection limit
NS	= Not sampled
†	= Assume same concentration as prior sampling event

Densities: Gasoline = 6.1 lbs/gallon; Benzene = 7.34 lbs/gallon.
MtBE not quantified prior to 6/5/00

a. Totalizer broken; volume estimated from hourmeter and flow rate.
b. Volume estimated from hourmeter and instantaneous flow rate.
c. Sewer totalizer replaced July 28, 1994; volume discharged estimated between July 14 and 28, 1994 at 2.0 gpm.
d. GWE system temporarily shut down August 21, 1995.
e. GWE system restarted June 5, 2000.
f. Prior to June 5, 2000 primary carbon loading for benzene estimated using isotherm of 8 percent by weight.
g. Cannot predict Primary carbon MtBE loading because MtBE wasn't tracked prior to 6/5/00.
h. System down during construction to main sewer line from approx. 6/25/01; restarted 8/14/01.

Equations: Net Dissolved TPH-g Removed [pounds] = TPH-g concentration, [ug/L] x net volume (gallon) x density of gasoline [pound/gallon]
(Net dissolved TPH-g removed is calculated by averaging influent concentrations)

Table C-2
Treatment System Analytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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

Date Sampled	TPPH as Gasoline (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)
INFL (influent to primary carbon)									
09/26/91	38	4.8	0.6	1.6	1.1	NS	NS	NS	NA
10/22/91	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
11/22/91	<30	0.5	<0.3	<0.3	<0.3	NS	NS	NS	NA
12/19/91	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
01/16/91	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
02/19/92	370	14	0.34	14	2.4	NS	NS	NS	NA
03/17/92	160	18	0.32	0.56	1.6	NS	NS	NS	NA
04/15/92	200	11	<0.3	7.3	0.77	NS	NS	NS	NA
05/14/92	45	1.4	<0.3	<0.3	<0.3	NS	NS	NS	NA
06/19/92	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
07/14/92	97	25	<0.5	8.5	<0.5	NS	NS	NS	NA
08/18/92	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
09/15/92	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
10/16/92	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
11/18/92	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
12/17/92	96	7.7	13	0.56	9.7	NS	NS	NS	NA
01/18/93	100	13	6.6	1.1	11	NS	NS	NS	NA
02/22/93	480	36	29	4.9	96	NS	NS	NS	NA
03/15/93	310	29	14	4.9	55	NS	NS	NS	NA
04/09/93	140	11	2.8	2.6	17	NS	NS	NS	NA
05/13/93	530	27	12	18	96	NS	NS	NS	NA
06/04/93	170	5.2	1.6	2.5	23	NS	NS	NS	NA
07/20/93	200	12	0.91	8.2	29	NS	NS	NS	NA
08/16/93	150	4.9	0.63	2.9	15	NS	NS	NS	NA
09/13/93	80	2.2	<0.5	<0.5	4.8	NS	NS	NS	NA
10/08/93	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
11/19/93	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
12/21/93	73	3.5	<0.5	1.9	8.4	NS	NS	NS	NA
01/18/94	60	3.1	<0.5	3.2	4.3	NS	NS	NS	NA
02/17/94	<50	2.5	<0.5	2.1	3.1	NS	NS	NS	NA
03/15/94	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
04/21/94	110	7.8	<1.0	9.6	<1.0	NS	NS	NS	NA
05/13/94	230	8.3	<0.5	14	6.0	NS	NS	NS	NA
06/14/94	230	12	<0.5	16	1.5	NS	NS	NS	NA
07/14/94	270	6.9	<0.5	15	1.9	NS	NS	NS	NA
08/18/94	<50	1.8	<0.5	1.5	<0.5	NS	NS	NS	NA
09/12/94	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
10/18/94	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
11/05/94	<50	0.66	<0.5	2.6	<0.5	NS	NS	NS	NA
12/05/94	470	32	0.59	29	6.2	NS	NS	NS	NA
01/04/95	<50	1.1	<0.50	1.4	<0.50	NS	NS	NS	NA
02/06/95	100	2.4	1.1	1.2	2.8	NS	NS	NS	NA
03/02/95	<50	<0.50	<0.50	<0.50	<0.50	NS	NS	NS	NA
04/04/95	290	6.6	<0.50	10	1.7	NS	NS	NS	NA
05/02/95	240	7.1	<0.50	3.2	1.6	NS	NS	NS	NA
06/05/95	<50	<0.50	<0.50	<0.50	<0.50	NS	NS	NS	NA
07/06/95	270	2.4	<0.50	7.6	1.0	NS	NS	NS	NA
08/21/95	230	1.8	<0.50	1.6	0.9	NS	NS	NS	NA
06/05/00	700	7.24	<1.00	2.11	<1.00	361	NS	NS	NA
07/08/00	133	5.09	0.598	<0.500	<0.500	272	NS	NS	NA
08/10/00	144	2.80	<0.500	1.04	<0.500	126	NS	NS	NA

Table C-2
Treatment System Analytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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

Date Sampled	TPPH as Gasoline (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)
INFL (influent to primary carbon) (cont.)									
09/08/00	261	2.74	0.826	0.626	<0.500	120	NS	NS	NA
10/10/00	114	<0.500	1.68	0.843	<0.500	<2.50	NS	NS	NA
11/07/00	128	<0.500	<0.500	<0.500	<0.500	98.6	NS	NS	NA
12/05/00	167	0.775	<0.500	<0.500	<0.500	104	NS	NS	NA
01/04/01	<50.0	<0.500	<0.500	<0.500	<0.500	86.8	NS	NS	NA
02/06/01	203	0.572	<0.500	0.513	<0.500	80.5	NS	NS	NA
03/08/01	219	<0.500	6.16	1.21	0.682	81.0	NS	NS	NA
04/18/01	74.5	<0.500	<0.500	<0.500	<0.500	97.5	NS	NS	NA
05/04/01	63.3	<0.500	<0.500	<0.500	<0.500	93.2	NS	NS	NA
06/09/01	64	<0.50	<0.50	<0.50	<0.50	71	NS	NS	NA
07/05/01	100	<0.50	2.5	<0.50	<0.50	430	NS	NS	NA
08/14/01	290	2.2	3.5	<1.0	<1.0	870	NS	NS	NA
09/05/01	<100	<1.0	<1.0	<1.0	<1.0	340	NS	NS	NA
10/05/01	<50	<0.50	<0.50	<0.50	<0.50	150	NS	NS	NA
MID-1 (between primary and secondary carbons)									
09/26/91	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
10/22/91	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
12/19/91	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
01/16/91	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
02/19/92	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
03/17/92	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
04/15/92	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
05/14/92	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
06/19/92	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
07/14/92	NS	NS	NS	NS	NS	NS	NS	NS	NA
08/18/92	NS	NS	NS	NS	NS	NS	NS	NS	NA
09/15/92	NS	NS	NS	NS	NS	NS	NS	NS	NA
10/16/92	NS	NS	NS	NS	NS	NS	NS	NS	NA
11/18/92	NS	NS	NS	NS	NS	NS	NS	NS	NA
12/17/92	NS	NS	NS	NS	NS	NS	NS	NS	NA
01/18/93	NS	NS	NS	NS	NS	NS	NS	NS	NA
02/22/93	NS	NS	NS	NS	NS	NS	NS	NS	NA
03/15/93	NS	NS	NS	NS	NS	NS	NS	NS	NA
04/09/93	NS	NS	NS	NS	NS	NS	NS	NS	NA
05/13/93	NS	NS	NS	NS	NS	NS	NS	NS	NA
06/04/93	NS	NS	NS	NS	NS	NS	NS	NS	NA
07/14/94	ND	ND	ND	ND	ND	NS	NS	NS	NA
08/17/94	NS	NS	NS	NS	NS	NS	NS	NS	NA
09/12/94	NS	NS	NS	NS	NS	NS	NS	NS	NA
10/18/94	NS	NS	NS	NS	NS	NS	NS	NS	NA
11/05/94	NS	NS	NS	NS	NS	NS	NS	NS	NA
12/05/94	NS	NS	NS	NS	NS	NS	NS	NS	NA
01/04/95	NS	NS	NS	NS	NS	NS	NS	NS	NA
02/06/95	NS	NS	NS	NS	NS	NS	NS	NS	NA
03/02/95	NS	NS	NS	NS	NS	NS	NS	NS	NA
06/05/00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA
07/08/00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA
08/10/00	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NS	NS	NA
09/08/00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA
10/10/00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA
11/07/00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA
12/05/00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA

Table C-2
Treatment System Analytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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

Date Sampled	TPPH as Gasoline (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)
MID-1 (cont.)									
01/04/01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA
02/06/01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA
03/08/01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA
04/18/01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA
05/04/01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA
06/09/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NS	NS	NA
07/05/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NS	NS	NA
08/14/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NS	NS	NA
09/05/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NS	NS	NA
10/05/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NS	NS	NA
MID-2 (between secondary and teriary carbons)									
06/05/00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA
07/08/00	NS	NS	NS	NS	NS	NS	NS	NS	NA
09/08/00	NS	NS	NS	NS	NS	NS	NS	NS	NA
10/10/00	NS	NS	NS	NS	NS	NS	NS	NS	NA
11/07/00	NS	NS	NS	NS	NS	NS	NS	NS	NA
12/05/00	NS	NS	NS	NS	NS	NS	NS	NS	NA
01/04/01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA
02/06/01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA
03/08/01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA
04/18/01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA
05/04/01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	NA
06/09/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NS	NS	NA
07/05/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NS	NS	NA
08/14/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NS	NS	NA
09/05/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NS	NS	NA
10/05/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NS	NS	NA
EFFL (effluent to sewer)									
09/26/91	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
10/22/91	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
11/22/91	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
12/19/91	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
01/16/91	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
02/19/92	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
03/17/92	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
04/15/92	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
05/14/92	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
06/19/92	<30	<0.3	<0.3	<0.3	<0.3	NS	NS	NS	NA
07/14/92	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
08/18/92	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
09/15/92	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
10/16/92	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
11/18/92	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
12/17/92	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
01/18/93	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
02/22/93	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
03/15/93	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
04/09/93	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
05/13/93	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
06/04/93	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA

Table C-2
Treatment System Analytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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

Date Sampled	TPPH as Gasoline (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)
EFFL (effluent to sewer) (cont.)									
07/20/93	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
08/16/93	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
09/13/93	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
10/08/93	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
11/19/93	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
12/21/93	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
01/18/94	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
02/17/94	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
03/15/94	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
04/21/94	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
05/13/94	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
06/14/94	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
07/14/94	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
08/17/94	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
09/12/94	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
10/18/94	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
11/05/94	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
12/05/94	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NA
01/04/95	<50	<0.50	<0.50	<0.50	<0.50	NS	NS	NS	NA
02/06/95	<50	<0.50	<0.50	<0.50	<0.50	NS	NS	NS	NA
03/02/95	<50	<0.50	<0.50	<0.50	<0.50	NS	NS	NS	NA
04/04/95	<50	<0.50	<0.50	<0.50	<0.50	NS	NS	NS	NA
05/02/95	<50	<0.50	<0.50	<0.50	<0.50	NS	NS	NS	NA
06/05/95	<50	<0.50	<0.50	<0.50	<0.50	NS	NS	NS	NA
07/06/95	<50	<0.50	<0.50	<0.50	<0.50	NS	NS	NS	NA
08/21/95	<50	<0.50	<0.50	<0.50	<0.50	NS	NS	NS	NA
06/05/00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NS	NS	7.19
06/12/00	<50.0	NS	NS	NS	NS	NS	NS	NS	NA
07/08/00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	32.1	<10.0	7.08
08/10/00	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	23.4	<10.0	6.67
09/08/00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	29.2	<10.0	6.82
10/10/00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	<20.0	<10.0	7.25
11/07/00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	<20.0	<10.0	7.24
12/05/00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	44.0	<10.0	7.48
01/04/01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	<20.0	<10.0	7.00
02/06/01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	<20.0	10.7	7.03
03/08/01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	<20.0	<10.0	7.04
04/18/01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	28.5	<10.0	7.06
05/04/01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	<20.0	<10.0	7.31
06/09/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	34	<10	7.05
07/05/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	<20	<10	7.10
08/14/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	<20	14	7.09
09/05/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	70	<10	7.07
10/05/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	55	<10	6.89

TPPH = Total purgeable petroleum hydrocarbons
MtBE = Methyl tert Butyl Ether
COD = Chemical oxygen demand
TSS = Total suspended solids
µg/L = Micrograms per liter
mg/L = Miligrams per liter
< = Denotes minimum laboratory detection limit.
NA = Not applicable or not available
NS = Not sampled
ND = Not detected

Figure C-1

Groundwater Extraction System Mass Removal Trend

TPPH-g and Benzene

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

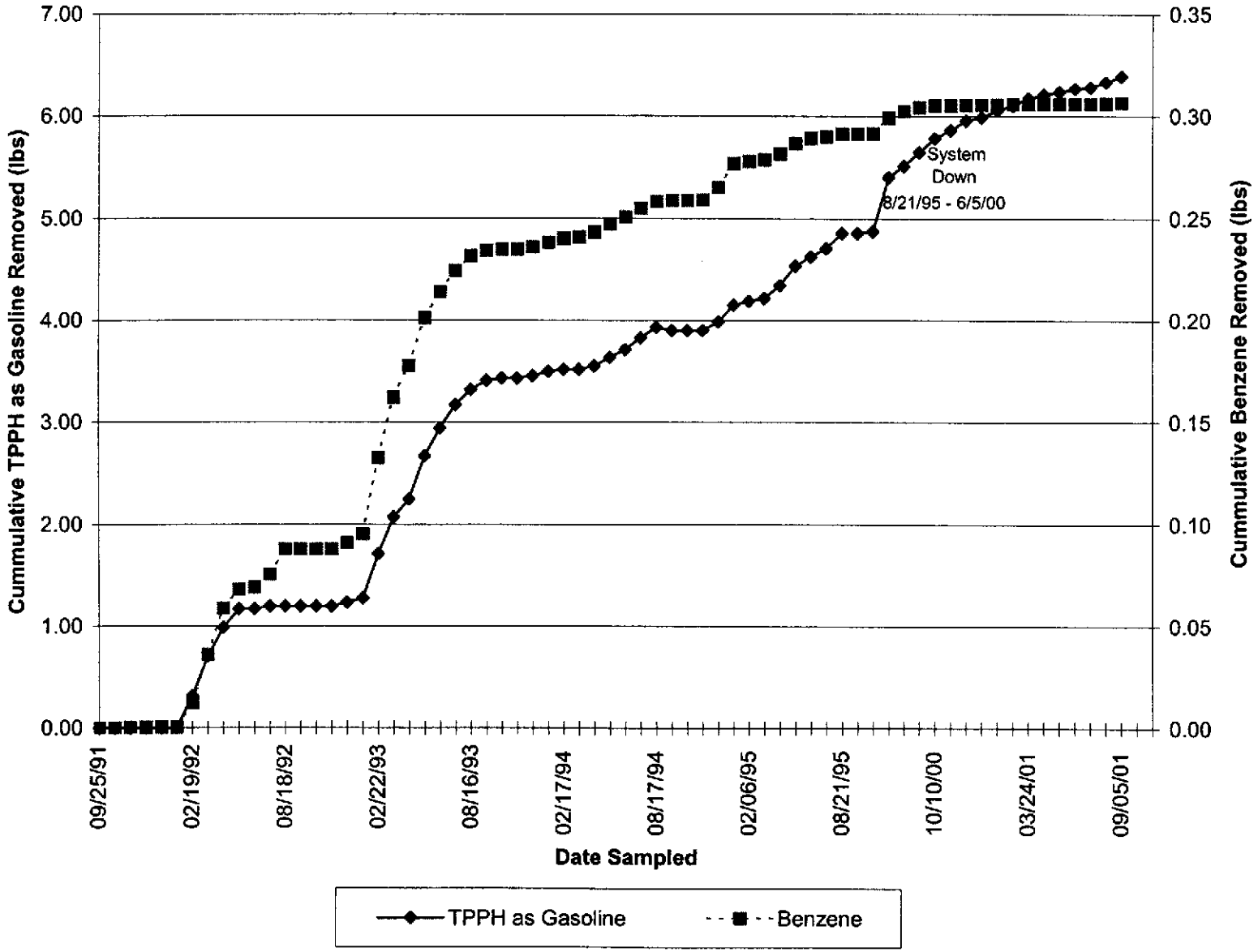


Figure C-2

Groundwater Extraction System Concentration Trend

TPPH-g and Benzene

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

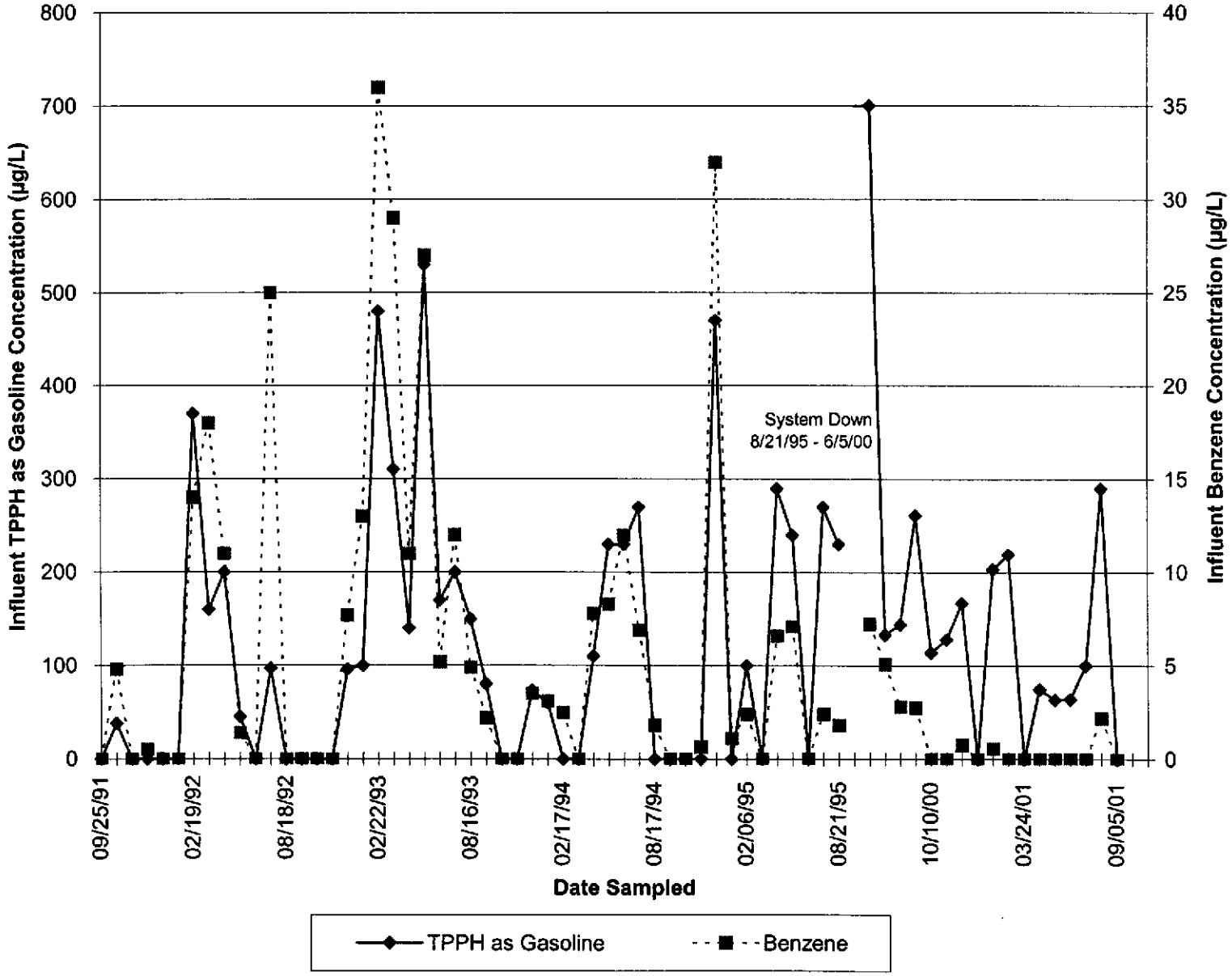
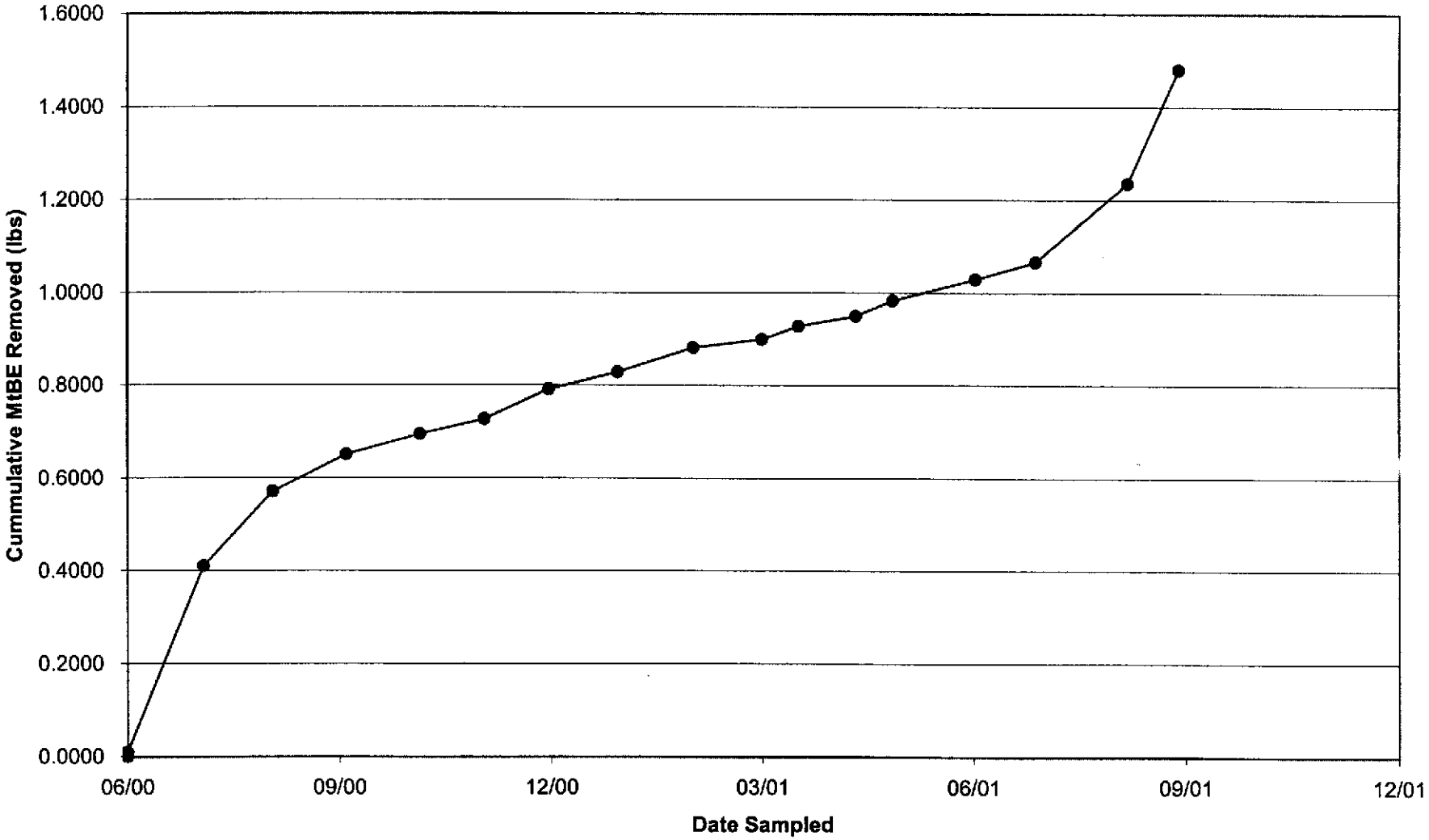


Figure C-3
Groundwater Extraction System Mass Removal Trend
MtBE

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



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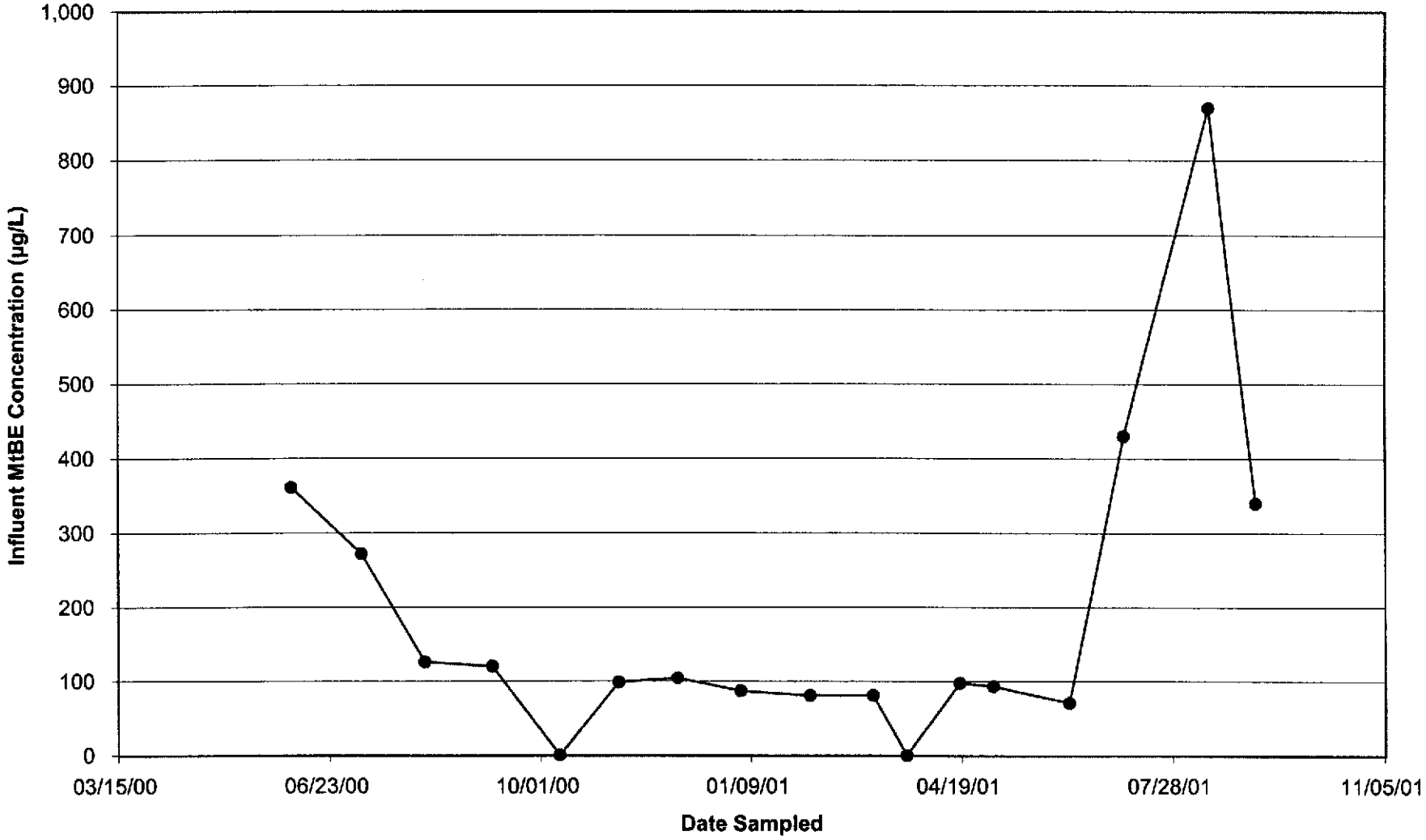
10/22/01

Figure C-4
Groundwater Extraction System Concentration Trend
MtBE

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



ATTACHMENT D

CERTIFIED ANALYTICAL REPORTS, CHAIN-OF-CUSTODY DOCUMENTATION, AND FIELD DATA SHEETS FOR GROUNDWATER EXTRACTION AND TREATMENT SYSTEM

Sequoia
Analytical

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

24 September, 2001

Don Watenpaugh
Pacific Environmental Group (Arco)
1921 Ringwood Avenue
San Jose, CA 95131

RE: Facility 0608, San Lorenzo
Sequoia Report: MKI0135

Enclosed are the results of analyses for samples received by the laboratory on 09/06/01 18:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

James Hartley
Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

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Morgan Hill, CA 95037
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www.sequoialabs.com

Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	09/24/01 17:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Influent	MKI0135-01	Water	09/05/01 08:05	09/06/01 18:35
Mid-1	MKI0135-02	Water	09/05/01 08:10	09/06/01 18:35
Mid-2	MKI0135-03	Water	09/05/01 08:15	09/06/01 18:35
Effluent	MKI0135-04	Water	09/05/01 08:20	09/06/01 18:35

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

James Hartley, Project Manager

Sequoia Analytical

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Morgan Hill, CA 95037
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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	09/24/01 17:26

Total Purgeable Hydrocarbons (C6-C10) by DHS LUFT and BTEX and MTBE by 8015B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Influent (MKI0135-01) Water Sampled: 09/05/01 08:05 Received: 09/06/01 18:35									
Gasoline Range Organics (C6-C10)	ND	100	ug/l	2	1I14003	09/14/01	09/14/01	DHS LUFT/8015B	R-05
Benzene	ND	1.0	"	"	"	"	"	"	R-05
Toluene	ND	1.0	"	"	"	"	"	"	R-05
Ethylbenzene	ND	1.0	"	"	"	"	"	"	R-05
Xylenes (total)	ND	1.0	"	"	"	"	"	"	R-05
Methyl tert-butyl ether	**340**	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*89.8 %*	*70-130*		"	"	"	"	
Mid-1 (MKI0135-02) Water Sampled: 09/05/01 08:10 Received: 09/06/01 18:35									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	1I12002	09/12/01	09/12/01	DHS LUFT/8015B	
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: a,a,a-Trifluorotoluene		*94.2 %*	*70-130*		"	"	"	"	
Mid-2 (MKI0135-03) Water Sampled: 09/05/01 08:15 Received: 09/06/01 18:35									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	1I12002	09/12/01	09/12/01	DHS LUFT/8015B	
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: a,a,a-Trifluorotoluene		*96.6 %*	*70-130*		"	"	"	"	

Sequoia Analytical

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	09/24/01 17:26

Total Purgeable Hydrocarbons (C6-C10) by DHS LUFT and BTEX and MTBE by 8015B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Effluent (MKI0135-04) Water Sampled: 09/05/01 08:20 Received: 09/06/01 18:35									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	1112002	09/12/01	09/12/01	DHS LUFT/8015B	
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: a,a,a-Trifluorotoluene		*93.8 %*		*70-130*	"	"	"	"	

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	09/24/01 17:26

Conventional Chemistry Parameters by APHA/EPA Methods

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Effluent (MKI0135-04) Water Sampled: 09/05/01 08:20 Received: 09/06/01 18:35									
Chemical Oxygen Demand	**70**	20	mg/l	1	1121040	09/20/01	09/20/01	EPA 410.4	
Total Suspended Solids	ND	10	"	"	1112032	09/11/01	09/12/01	EPA 160.2	

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	09/24/01 17:26

Total Purgeable Hydrocarbons (C6-C10) by DHS LUFT and BTEX and MTBE by 8015B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1I12002 - EPA 5030B [P/T]										
Blank (1I12002-BLK1)				Prepared & Analyzed: 09/12/01						
Gasoline Range Organics (C6-C10)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*8.83*		"	*10.0*		*88.3*	*70-130*			
LCS (1I12002-BS1)				Prepared & Analyzed: 09/12/01						
Benzene	9.40	0.50	ug/l	10.0		94.0	70-130			
Toluene	9.05	0.50	"	10.0		90.5	70-130			
Ethylbenzene	9.29	0.50	"	10.0		92.9	70-130			
ylenes (total)	27.7	0.50	"	30.0		92.3	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.15*		"	*10.0*		*91.5*	*70-130*			
LCS (1I12002-BS2)				Prepared & Analyzed: 09/12/01						
Gasoline Range Organics (C6-C10)	253	50	ug/l	250		101	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.0*		"	*10.0*		*100*	*70-130*			
Batch 1I14003 - EPA 5030B [P/T]										
Blank (1I14003-BLK1)				Prepared & Analyzed: 09/14/01						
Gasoline Range Organics (C6-C10)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*9.39*		"	*10.0*		*93.9*	*70-130*			

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	09/24/01 17:26

Total Purgeable Hydrocarbons (C6-C10) by DHS LUFT and BTEX and MTBE by 8015B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1I14003 - EPA 5030B [P/T]										
LCS (1I14003-BS1)				Prepared & Analyzed: 09/14/01						
Benzene	10.2	0.50	ug/l	10.0		102	70-130			
Toluene	10.3	0.50	"	10.0		103	70-130			
Ethylbenzene	10.6	0.50	"	10.0		106	70-130			
Xylenes (total)	31.4	0.50	"	30.0		105	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.74*		"	*10.0*		*97.4*	*70-130*			
LCS (1I14003-BS2)				Prepared & Analyzed: 09/14/01						
Gasoline Range Organics (C6-C10)	231	50	ug/l	250		92.4	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.3*		"	*10.0*		*103*	*70-130*			

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	09/24/01 17:26

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 1I12032 - General Preparation										
Blank (1I12032-BLK1)				Prepared: 09/11/01 Analyzed: 09/12/01						
Total Suspended Solids	ND	10	mg/l							
Duplicate (1I12032-DUP1)	Source: MKI0068-01			Prepared: 09/11/01 Analyzed: 09/12/01						
Total Suspended Solids	ND	10	mg/l		ND				20	
Batch 1I21040 - General Preparation										
Blank (1I21040-BLK1)				Prepared & Analyzed: 09/20/01						
Chemical Oxygen Demand	ND	20	mg/l							
LCS (1I21040-BS1)				Prepared & Analyzed: 09/20/01						
Chemical Oxygen Demand	103	20	mg/l	100		103	80-120			
Matrix Spike (1I21040-MS1)	Source: MKI0135-04			Prepared & Analyzed: 09/20/01						
Chemical Oxygen Demand	148	20	mg/l	100	70	78.0	75-125			
Matrix Spike Dup (1I21040-MSD1)	Source: MKI0135-04			Prepared & Analyzed: 09/20/01						
Chemical Oxygen Demand	154	20	mg/l	100	70	84.0	75-125	3.97	20	

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Don Watenpaugh	09/24/01 17:26

Notes and Definitions

R-05	The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
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

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28 August, 2001

Shaw Garakani
Pacific Environmental Group (Arco)
1921 Ringwood Avenue
San Jose, CA 95131

RE: Facility 0608, San Lorenzo
Sequoia Report: MKH0305

Enclosed are the results of analyses for samples received by the laboratory on 08/15/01 13:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

James Hartley
Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	08/28/01 12:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
INFL	MKH0305-01	Water	08/14/01 12:20	08/15/01 13:20
Mid-1	MKH0305-02	Water	08/14/01 12:29	08/15/01 13:20
Mid-2	MKH0305-03	Water	08/14/01 12:35	08/15/01 13:20
EFFL	MKH0305-04	Water	08/14/01 12:25	08/15/01 13:20

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	08/28/01 12:26

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
INFL (MKH0305-01) Water Sampled: 08/14/01 12:20 Received: 08/15/01 13:20									
Purgeable Hydrocarbons	**290**	100	ug/l	2	1H17004	08/17/01	08/17/01	DHS LUFT	P-03
Benzene	**2.2**	1.0	"	"	"	"	"	"	
Toluene	**3.5**	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**870**	25	"	10	"	"	08/17/01	"	M-03
Surrogate: a,a,a-Trifluorotoluene		*108 %*		*70-130*		"	*08/17/01*	"	
Mid-1 (MKH0305-02) Water Sampled: 08/14/01 12:29 Received: 08/15/01 13:20									
Purgeable Hydrocarbons	ND	50	ug/l	1	1H17004	08/17/01	08/17/01	DHS LUFT	
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: a,a,a-Trifluorotoluene		*102 %*		*70-130*		"	"	"	
Mid-2 (MKH0305-03) Water Sampled: 08/14/01 12:35 Received: 08/15/01 13:20									
Purgeable Hydrocarbons	ND	50	ug/l	1	1H17004	08/17/01	08/17/01	DHS LUFT	
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: a,a,a-Trifluorotoluene		*99.8 %*		*70-130*		"	"	"	

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	08/28/01 12:26

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
EFFL (MKH0305-04) Water Sampled: 08/14/01 12:25 Received: 08/15/01 13:20									
Purgeable Hydrocarbons	ND	50	ug/l	1	1H17004	08/17/01	08/17/01	DHS LUFT	
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: a,a,a-Trifluorotoluene		*72.6 %*		*70-130*	"	"	"	"	

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	08/28/01 12:26

Conventional Chemistry Parameters by APHA/EPA Methods

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
EFFL (MKH0305-04) Water Sampled: 08/14/01 12:25 Received: 08/15/01 13:20									
Chemical Oxygen Demand	ND	20	mg/l	1	1H23022	08/21/01	08/23/01	EPA 410.4	
Total Suspended Solids	**14**	10	"	"	1H17025	08/16/01	08/17/01	EPA 160.2	

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	08/28/01 12:26

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1H17004 - EPA 5030B [P/T]										
Blank (1H17004-BLK1)				Prepared & Analyzed: 08/17/01						
Purgeable Hydrocarbons	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	"							
Surrogate: a,a,a-Trifluorotoluene	*9.87*		"	*10.0*		*98.7*	*70-130*			
LCS (1H17004-BS1)				Prepared & Analyzed: 08/17/01						
Benzene	10.7	0.50	ug/l	10.0		107	70-130			
Toluene	10.3	0.50	"	10.0		103	70-130			
Ethylbenzene	10.4	0.50	"	10.0		104	70-130			
Xylenes (total)	30.1	0.50	"	30.0		100	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.70*		"	*10.0*		*97.0*	*70-130*			
LCS (1H17004-BS2)				Prepared & Analyzed: 08/17/01						
Purgeable Hydrocarbons	180	50	ug/l	250		72.0	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.4*		"	*10.0*		*104*	*70-130*			
Matrix Spike (1H17004-MS1)		Source: MKH0278-02		Prepared & Analyzed: 08/17/01						
Purgeable Hydrocarbons	183	50	ug/l	250	ND	73.2	60-140			
Surrogate: a,a,a-Trifluorotoluene	*10.2*		"	*10.0*		*102*	*70-130*			
Matrix Spike Dup (1H17004-MSD1)		Source: MKH0278-02		Prepared & Analyzed: 08/17/01						
Purgeable Hydrocarbons	188	50	ug/l	250	ND	75.2	60-140	2.70	25	
Surrogate: a,a,a-Trifluorotoluene	*10.4*		"	*10.0*		*104*	*70-130*			

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	08/28/01 12:26

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 1H17025 - General Preparation										
Blank (1H17025-BLK1)				Prepared: 08/16/01 Analyzed: 08/17/01						
Total Suspended Solids	ND	10	mg/l							
Duplicate (1H17025-DUP1)		Source: MKH0305-04		Prepared: 08/16/01 Analyzed: 08/17/01						
Total Suspended Solids	15.7	10	mg/l		14			11.4	20	
Batch 1H23022 - General Preparation										
Blank (1H23022-BLK1)				Prepared: 08/21/01 Analyzed: 08/23/01						
Chemical Oxygen Demand	ND	20	mg/l							
LCS (1H23022-BS1)				Prepared: 08/21/01 Analyzed: 08/23/01						
Chemical Oxygen Demand	91.2	20	mg/l	100		91.2	80-120			
Matrix Spike (1H23022-MS1)		Source: MKH0360-01		Prepared: 08/21/01 Analyzed: 08/23/01						
Chemical Oxygen Demand	139000	20000	mg/l	100	180000	-41000	75-125			QM-07
Matrix Spike Dup (1H23022-MSD1)		Source: MKH0360-01		Prepared: 08/21/01 Analyzed: 08/23/01						
Chemical Oxygen Demand	139000	20000	mg/l	100	180000	-41000	75-125	0.00	20	QM-07

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	08/28/01 12:26

Notes and Definitions

M-03	This result is from a second dilution of the sample. An initial result was reported from a previous dilution of the sample necessary to report other analytes in a different range.
P-03	Chromatogram Pattern: Unidentified Hydrocarbons C6-C12
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

Items for Project Manager Review

LabNumber	Analysis		Analyte	Exception
				Default Report (not modified)
1H23022-MS1	COD-410.4	W	Chemical Oxygen Demand	Spike less than MDL
1H23022-MS1	COD-410.4	W	Chemical Oxygen Demand	QM-07
1H23022-MS1	COD-410.4	W	Chemical Oxygen Demand	Exceeds lower control limit
1H23022-MSD1	COD-410.4	W	Chemical Oxygen Demand	Spike less than MDL
1H23022-MSD1	COD-410.4	W	Chemical Oxygen Demand	QM-07
1H23022-MSD1	COD-410.4	W	Chemical Oxygen Demand	Exceeds lower control limit
MKH0305-01	TPH-G/B/M2		Purgeable Hydrocarbons	P-03
MKH0305-01	TPH-G/B/M2		Methyl tert-butyl ether	M-03

Sequoia Analytical

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24 July, 2001

Shaw Garakani
Pacific Environmental Group (Arco)
1921 Ringwood Avenue
San Jose, CA 95131

RE: Facility 0608, San Lorenzo
Sequoia Report: MKG0085

Enclosed are the results of analyses for samples received by the laboratory on 07/06/01 13:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

James Hartley
Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

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Pacific Environmental Group (Arco)
1921 Ringwood Avenue
San Jose CA, 95131

Project: Facility 0608, San Lorenzo
Project Number: Task # 821803
Project Manager: Shaw Garakani

Reported:
07/24/01 17:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
INFL	MKG0085-01	Water	07/05/01 07:40	07/06/01 13:10
MID-1	MKG0085-02	Water	07/05/01 07:50	07/06/01 13:10
MID-2	MKG0085-03	Water	07/05/01 07:55	07/06/01 13:10
EFFL	MKG0085-04	Water	07/05/01 07:45	07/06/01 13:10

Sequoia Analytical - Morgan Hill

James Hartley, Project Manager

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

Sequoia Analytical

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	Reported:
San Jose CA, 95131	Project Manager: Shaw Garakani	07/24/01 17:24

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
INFL (MKG0085-01) Water Sampled: 07/05/01 07:40 Received: 07/06/01 13:10									
Purgeable Hydrocarbons	100	50	ug/l	1	1G16004	07/16/01	07/16/01	DHS LUFT	P-03
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	2.5	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	430	5.0	"	2	"	"	07/02/01	"	A-01,M-03
Surrogate: a,a,a-Trifluorotoluene		*94.2 %*	*70-130*		"	"	*07/16/01*	"	
MID-1 (MKG0085-02) Water Sampled: 07/05/01 07:50 Received: 07/06/01 13:10									
Purgeable Hydrocarbons	ND	50	ug/l	1	1G12003	07/12/01	07/12/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
yl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*90.7 %*	*70-130*		"	"	"	"	
MID-2 (MKG0085-03) Water Sampled: 07/05/01 07:55 Received: 07/06/01 13:10									
Purgeable Hydrocarbons	ND	50	ug/l	1	1G12003	07/12/01	07/12/01	DHS LUFT	
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: a,a,a-Trifluorotoluene		*89.3 %*	*70-130*		"	"	"	"	

Sequoia Analytical

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FAX (408) 782-6308
www.sequoialabs.com

Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	Reported:
San Jose CA, 95131	Project Manager: Shaw Garakani	07/24/01 17:24

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
EFFL (MKG0085-04) Water Sampled: 07/05/01 07:45 Received: 07/06/01 13:10									
Purgeable Hydrocarbons	ND	50	ug/l	1	1G12003	07/12/01	07/12/01	DHS LUFT	
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: a,a,a-Trifluorotoluene		*91.3 %*	*70-130*		"	"	"	"	

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Pacific Environmental Group (Arco) 1921 Ringwood Avenue San Jose CA, 95131	Project: Facility 0608, San Lorenzo Project Number: Task # 821803 Project Manager: Shaw Garakani	**Reported:** 07/24/01 17:24

Conventional Chemistry Parameters by APHA/EPA Methods

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
EFFL (MKG0085-04) Water Sampled: 07/05/01 07:45 Received: 07/06/01 13:10									
Total Suspended Solids	ND	10	mg/l	1	1G11037	07/10/01	07/24/01	EPA 160.2	

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Pacific Environmental Group (Arco) 1921 Ringwood Avenue San Jose CA, 95131	Project: Facility 0608, San Lorenzo Project Number: Task # 821803 Project Manager: Shaw Garakani	**Reported:** 07/24/01 17:24

Conventional Chemistry Parameters by APHA/EPA Methods

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
EFFL (MKG0085-04) Water Sampled: 07/05/01 07:45 Received: 07/06/01 13:10									
Chemical Oxygen Demand	ND	20	mg/l	1	1070329	07/13/01	07/13/01	EPA 410.4	

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	07/24/01 17:24

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1G12003 - EPA 5030B [P/T]										
Blank (1G12003-BLK1)				Prepared & Analyzed: 07/12/01						
Purgeable Hydrocarbons	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	"							
Surrogate: a,a,a-Trifluorotoluene	*9.73*		"	*10.0*		*97.3*	*70-130*			
LCS (1G12003-BS1)				Prepared & Analyzed: 07/12/01						
Benzene	9.37	0.50	ug/l	10.0		93.7	70-130			
Toluene	9.96	0.50	"	10.0		99.6	70-130			
Ethylbenzene	9.71	0.50	"	10.0		97.1	70-130			
Xylenes (total)	29.2	0.50	"	30.0		97.3	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.59*		"	*10.0*		*95.9*	*70-130*			
LCS (1G12003-BS2)				Prepared & Analyzed: 07/12/01						
Purgeable Hydrocarbons	260	50	ug/l	250		104	70-130			
Surrogate: a,a,a-Trifluorotoluene	*13.2*		"	*10.0*		*132*	*70-130*			*S-02*
Matrix Spike (1G12003-MS1)	Source: MKG0087-01			Prepared & Analyzed: 07/12/01						
Purgeable Hydrocarbons	227	50	ug/l	250	ND	90.8	60-140			
Surrogate: a,a,a-Trifluorotoluene	*12.6*		"	*10.0*		*126*	*70-130*			
Matrix Spike Dup (1G12003-MSD1)	Source: MKG0087-01			Prepared & Analyzed: 07/12/01						
Purgeable Hydrocarbons	292	50	ug/l	250	ND	117	60-140	25.0	25	
Surrogate: a,a,a-Trifluorotoluene	*12.6*		"	*10.0*		*126*	*70-130*			

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Pacific Environmental Group (Arco)
1921 Ringwood Avenue
San Jose CA, 95131

Project: Facility 0608, San Lorenzo
Project Number: Task # 821803
Project Manager: Shaw Garakani

Reported:
07/24/01 17:24

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1G16004 - EPA 5030B [P/T]										
Blank (1G16004-BLK1)				Prepared & Analyzed: 07/16/01						
Purgeable Hydrocarbons	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	"							
Surrogate: a,a,a-Trifluorotoluene	*9.96*		"	*10.0*		*99.6*	*70-130*			
LCS (1G16004-BS1)				Prepared & Analyzed: 07/16/01						
Benzene	10.6	0.50	ug/l	10.0		106	70-130			
Toluene	10.5	0.50	"	10.0		105	70-130			
Ethylbenzene	10.5	0.50	"	10.0		105	70-130			
nes (total)	32.0	0.50	"	30.0		107	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.87*		"	*10.0*		*98.7*	*70-130*			
LCS (1G16004-BS2)				Prepared & Analyzed: 07/16/01						
Purgeable Hydrocarbons	218	50	ug/l	250		87.2	70-130			
Surrogate: a,a,a-Trifluorotoluene	*13.8*		"	*10.0*		*138*	*70-130*			*S-02*
Matrix Spike (1G16004-MS1)		Source: MKG0088-01		Prepared & Analyzed: 07/16/01						
Purgeable Hydrocarbons	212	50	ug/l	250	ND	84.8	60-140			
Surrogate: a,a,a-Trifluorotoluene	*12.7*		"	*10.0*		*127*	*70-130*			
Matrix Spike Dup (1G16004-MSD1)		Source: MKG0088-01		Prepared & Analyzed: 07/16/01						
Purgeable Hydrocarbons	210	50	ug/l	250	ND	84.0	60-140	0.948	25	
Surrogate: a,a,a-Trifluorotoluene	*12.7*		"	*10.0*		*127*	*70-130*			

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	Reported:
San Jose CA, 95131	Project Manager: Shaw Garakani	07/24/01 17:24

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 1G11037 - General Preparation										
Blank (1G11037-BLK1)				Prepared: 07/10/01 Analyzed: 07/24/01						
Total Suspended Solids	ND	10	mg/l							
Duplicate (1G11037-DUP1)			Source: MKG0085-04	Prepared: 07/10/01 Analyzed: 07/24/01						
Total Suspended Solids	ND	10	mg/l		ND				20	

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Pacific Environmental Group (Arco)
1921 Ringwood Avenue
San Jose CA, 95131

Project: Facility 0608, San Lorenzo
Project Number: Task # 821803
Project Manager: Shaw Garakani

Reported:
07/24/01 17:24

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
Batch 1070329 - General Preparation										
Blank (1070329-BLK1)				Prepared & Analyzed: 07/13/01						
Chemical Oxygen Demand	ND	20	mg/l							
LCS (1070329-BS1)				Prepared & Analyzed: 07/13/01						
Chemical Oxygen Demand	250	20	mg/l	250		100	80-120			
Matrix Spike (1070329-MS1)	Source: P106557-02			Prepared & Analyzed: 07/13/01						
Chemical Oxygen Demand	552	20	mg/l	500	88	92.8	75-125			
Matrix Spike Dup (1070329-MSD1)	Source: P106557-02			Prepared & Analyzed: 07/13/01						
Chemical Oxygen Demand	621	20	mg/l	500	88	107	75-125	11.8	20	

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Pacific Environmental Group (Arco)	Project: Facility 0608, San Lorenzo	
1921 Ringwood Avenue	Project Number: Task # 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	07/24/01 17:24

Notes and Definitions

A-01	mtbe was prepared on 7/12/01.
M-03	Sample was analyzed at a second dilution.
P-03	Chromatogram Pattern: Unidentified Hydrocarbons C6-C12
S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.
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

ARCO Products Company Division of AtlanticRichfieldCompany 8021803 **Task Order No.**

Chain of Custody

ARCO Facility no. 0608 | City (Facility) 17601 Hesperian Blvd | Project manager (Consultant) Shaw Garakani | Laboratory name Sequoia

ARCO engineer Paul Supple | Telephone no. (ARCO) | Telephone no. (Consultant) 408/453-7300 | Fax no. (Consultant) 408/437-9526 | Contract number

Consultant name 11 Group | Address (Consultant) 1921 Ringwood Ave San Jose CA

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH EPA M602/8020/8015 MTBE	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ VOA ☐ Semi VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org/DHS ☐ Lead EPA 7420/7421 ☐	COD	TSS
INFL		3		W		4	HCL	7-5-01	7:40		X											
M101		↓		↓			↓	↓	7:50		↓											
M102		↓		↓			↓	↓	7:55		↓											
EFFL		5		↓			HCL w/ H2SO4	↓	7:45		↓										X	X

Method of shipment

Special detection Limit/reporting

Special QA/QC

Remarks

Lab number MKG0085

Turnaround time
- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☒

Condition of sample:

Temperature received:

Relinquished by	Date	Time	Received by	Date	Time
Relinquished by sampler [signature]	7-5-01	16:00	SEQ WHS	7/6	9:20
Relinquished by WHS	7/6	1310	[signature]	7/6/01	1310
Relinquished by			Received by laboratory		

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant (2-91)

Work Order #_____

FIELD SERVICES / ROUTINE O&M REQUEST

Identification

Request Frequency:Semi-Monthly

Project #	821803 (00008000)
Station #	0608
Site Address:	17601 Hesperian Blvd @ Hacienda Avenue
County:	Alameda
Project Manager:	Shaw Garakani
Requestor:	Don Watenpaugh
Technician:	Pedro Ruiz
Client:	ARCO
Client P.O.C.:	Paul Supple
Revision Date:	June 14, 2001
Laboratory:	Sequoia Analytical

Site Remedial Technologies:

Groundwater Extraction (GWE)	X

Complete attached Data Sheets as prescribed in the following table:

Scheduling Table

Data Sheet Section(s)/Parameter(s)	Frequency					
GWE (A, B)	Semi-Monthly					
GWE (C, D, E, F)	Monthly †					
GWE (G)	Quarterly					

† = sampling to be performed

Definition of frequencies:
weekly = N/A
monthly = once a month on week 1
quarterly = on months 3, 6, 9, 12
semi-monthly = twice a month on week 1 and 3

Field Technician Responsibilities:

Completed by: _____ Date: 9/21/01
Arrival time: _____ Departure time: _____
Sample this visit?: _____ Engineer contacted? _____

Date: _____

Groundwater Extraction & Treatment System
ARCO Service Station 0608
17601 Hesperian Boulevard
821803 (0000000)
June 14, 2001

System Description:

Groundwater Pumps

Well			Control	Depth to Water
E-1A	Electric	3"	panel	23.9'

Carbon Vessels: Three ASC-1,200
Filter: Rosedale P2 25 micron

PART A: SYSTEM DATA (Semi-Monthly)

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

ELECTRIC METER READING ~~(kw-hrs)~~ Hrs	376058	HOUR METER READING (hrs)	376058

MEASUREMENTS	ON ARRIVAL	ON DEPARTURE
TOTALIZER (gallons)		201190
FILTER INLET PRESSURE (psig)		(ideal range: 8 to 12 psig) 10
CARBON #1 INLET PRESSURE (psig)		(ideal range: 5 to 9 psig) 5
CARBON #2 INLET PRESSURE (psig)		(ideal range: 1 to 4 psig) 3
DISCHARGE PRESSURE (psig)		(ideal range: 0 to 2 psig) 0

PART B: COMMENTS

Swept Compound.
Repair with MW-25 Cut Down Casing Bend, Due to Construction It will need to Extend Casing & pour Concrete inside Box

PART C: WELL DATA (Monthly)

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

WELL				
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		
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)

	TEMP (^{o}F)	CONDUCTIVITY (umhos)	pH (units)	DISSOLVED OXYGEN (ppm)
EFFLUENT	65.1	1030	6.99	1.0

PART F: SYSTEM MAINTENANCE I (Monthly)

NUMBER OF SPARE FILTERS ON SITE?		CHANGE FILTERS? (if necessary)	
PUMP AMP DRAW		H202 injection well EA-1 (if necessary)	
SWEEP ENCLOSURE	YES		

PART G: SYSTEM MAINTENANCE II (Quarterly)

TEST ALARM SWITCHES		BACKFLUSH CARBONS	
CLEAN TOTALIZERS			

Work Order #_____

FIELD SERVICES / ROUTINE O&M REQUEST

Identification **Request Frequency:Semi-Monthly**

Project #	821803 (00008000)
Station #	0608
Site Address:	17601 Hesperian Blvd @ Hacienda Avenue
County:	Alameda
Project Manager:	Shaw Garakani
Requestor:	Don Watenpaugh
Technician:	Pedro Ruiz
Client:	ARCO
Client P.O.C.:	Paul Supple
Revision Date:	June 14, 2001
Laboratory:	Sequoia Analytical

Site Remedial Technologies:

Groundwater Extraction (GWE)	X

Complete attached Data Sheets as prescribed in the following table:

Scheduling Table

GWE (A, B)	Semi-Monthly				
GWE (C, D, E, F)	Monthly †				
GWE (G)	Quarterly				

† = sampling to be performed

Definition of frequencies:
weekly = N/A
monthly = once a month on week 1
quarterly = on months 3, 6, 9, 12
semi-monthly = twice a month on week 1 and 3

Field Technician Response:

Completed by:_____ Date: 9:501
Arrival time:_____ Departure time:_____
Sample this visit?:_____ Engineer contacted?_____

Date: 9-5-01

Groundwater Extraction & Treatment System
ARCO Service Station 0608
17601 Hesperian Boulevard
821803 (00008000)
June 14, 2001

System Description:

Groundwater Pumps

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

Carbon Vessels: Three ASC-1,200
Filter: Rosedale P2 25 micron

PART A: SYSTEM DATA (Semi-Monthly)

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

ELECTRIC METER READING (kw hrs)	22477	HOUR METER READING (hrs)	372188

MEASUREMENTS	ON ARRIVAL	ON DEPARTURE
TOTALIZER (gallons)	1977050	
FILTER INLET PRESSURE (psig)	20 psi	(ideal range: 8 to 12 psig) 8
CARBON #1 INLET PRESSURE (psig)	5 psi	(ideal range: 5 to 9 psig) 5
CARBON #2 INLET PRESSURE (psig)	5 psi	(ideal range: 1 to 4 psig) 5
DISCHARGE PRESSURE (psig)	0	(ideal range: 0 to 2 psig) 0

PART B: COMMENTS CHECK WELL CONDITION ON MW-1, MW-5, MW-7, MW-13, MW-25

MW-25 CASING BEND @ 10" BELOW GRADE, CASING NEED TO BE FIX & EXTEND UP. PUT A NEW 2" LOCK ON WELL

PART C: WELL DATA (Monthly) 9501

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

WELL				
E-1A	17.90 TOB 19.90 TOB	DRAW DOWN		
UST-A	Dry 11.40 TOB	N/A	N/A	
UST-B	Dry 11.90 TOB	N/A	N/A	
SP1-V4	Shallow 10.80 TOC 11.90 TD	N/A	N/A	
	DEEP 18.85 TOC 19.05 TD			

PART D: SAMPLING (Monthly)

INFLUENT	TPH-gasoline, BTEX compounds, MtBE 8:05	
EFFLUENT	TPH-gasoline, BTEX compounds, MtBE COD, TSS 8:20	
MID-1	TPH-gasoline, BTEX compounds, MtBE 8:10	
MID-2	TPH-gasoline, BTEX compounds, MtBE 8:15	

PART E: READINGS (Monthly)

	TEMP (°F)	CONDUCTIVITY (umhos)	pH (units)	DISSOLVED OXYGEN (ppm)
EFFLUENT	63.4	1040	7.07	7.0

PART F: SYSTEM MAINTENANCE I (Monthly)

NUMBER OF SPARE FILTERS ON SITE?	30	CHANGE FILTERS? (if necessary)	YES
PUMP AMP DRAW	6.1 A 5.5	H202 injection well EA-1 (if necessary)	NA
SWEEP ENCLOSURE	4		

PART G: SYSTEM MAINTENANCE II (Quarterly)

TEST ALARM SWITCHES	4	BACKFLUSH CARBONS	NA
CLEAN TOTALIZERS	4		

ARCO Products Company ◆ 821803 **Task Order No.**

Division of AtlanticRichfieldCompany

Chain of Custody

ARCO Facility no. 0608	City (Facility) 1760 Hesperian Blvd	Project manager (Consultant) Don Waterbaugh	Laboratory name Sequoia
ARCO engineer Paul Supple	Telephone no. (ARCO) Sunlorenzo	Telephone no. (Consultant) (408) 453-7300	Fax no. (Consultant) (408) 437-9526
Consultant name IT Group	Address (Consultant) 1921 Ringwood Ave. San Jose CA 95131		Contract number

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH EPA M602/8020/8015 MTBE	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ VOA ☐ Semi VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐	COD	TSS
INFL		3		W		Y	HCL	9.5.01	8:05		X											
MID1		↓		↓		↓	↓	↓	8:10		↓											
MID2		↓		↓		↓	↓	↓	8:15		↓											
EFFL		5		↓		↓	HCL NP H2SO4	↓	8:20		↓										X	X

Method of shipment

Special detection Limit/reporting

Special QA/QC

Remarks

Lab number

Turnaround time

- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☒

Condition of sample:		Temperature received:	
Relinquished by sampler [signature]	Date 9.5.01 Time 14:00	Received by	
Relinquished by	Date Time	Received by	
Relinquished by	Date Time	Received by laboratory	Date Time

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant

FIELD SERVICES / O&M REQUEST

Work Order # 5911

SITE INFORMATION FORM

Identification

Project # 821803 (00008000)

Station # ARCO 608

Site Address: 1260 Hesperian
San Lorenzo, CA

County: Alameda

Project Manager: Shaw G

Requestor: Don W

Client: ARCO

Project Type

- ☐ 1st Time Visit
- ☐ Quarterly
  - ☐ 1st ☐ 2nd ☐ 3rd ☐ 4th
- ☐ Monthly
- ☐ Semi-Monthly
- ☐ Weekly
- ☐ One time event
- ☐ Other: _____

Client P.O.C.: _____

Date of Request 8/17/01

Ideal field date(s): next visit

Check Appropriate Category

Budget Hrs. _____

Actual Hrs. _____

Mob de Mob _____

Field Tasks: For General Description

circle one:
Priority: 1. (emergency, must be done within 24 hrs); 2. (next visit); 3. (when available)

Replace missing J-Caps and slip caps on wells.
Check condition of on-site wells.

Comments, remarks, etc. from Field Staff (include problems encountered and out-of-scope work)

Install 1" Caps on MW-25
Slip Cap on UST A; UST-B

☐ Samples taken ☐ Samples not required ☐ Soil Vapor ☐ Groundwater
☐ Weekly ☐ Semi-Monthly ☐ Monthly ☐ Quarterly ☐ Semi-Annual

PACIFIC ENVIRONMENTAL GROUP, INC.

Completed by: _____ Date: 9-5-01

Checked by: _____

Work Order #_____

FIELD SERVICES / ROUTINE O&M REQUEST

Identification

Request Frequency:Semi-Monthly

Project #	821803 (00008000)
Station #	0608
Site Address:	17601 Hesperian Blvd @ Hacienda Avenue
County:	Alameda
Project Manager:	Shaw Garakani
Requestor:	Don Watenpaugh
Technician:	Pedro Ruiz
Client:	ARCO
Client P.O.C.:	Paul Supple
Revision Date:	June 14, 2001
Laboratory:	Sequoia Analytical

Site Remedial Technologies:

Groundwater Extraction (GWE)	X

Complete attached Data Sheets as prescribed in the following table:

Scheduling Table

Data Sheet Section(s) / Part(s) To be Completed		Budgeted Hrs	Actual Hrs	Mob-de-Mob	Completed
GWE (A, B)	Semi-Monthly				
GWE (C, D, E, F)	Monthly †				
GWE (G)	Quarterly				

† = sampling to be performed

Definition of frequencies:

weekly = N/A

monthly = once a month on week 1

quarterly = on months 3, 6, 9, 12

semi-monthly = twice a month on week 1 and 3

Field Technician Response:

Completed by: _____ Date: 8-29-01

Arrival time: _____ Departure time: _____

Sample this visit?: _____ Engineer contacted? _____

Date: _____

Groundwater Extraction & Treatment System
ARCO Service Station 0608
17601 Hesperian Boulevard
821803 (00008000)
June 14, 2001

System Description:

Groundwater Pumps

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

Carbon Vessels: Three ASC-1,200
Filter: Rosedale P2 25 micron

PART A: SYSTEM DATA (Semi-Monthly)

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

ELECTRIC METER READING (kw hrs)	22365	HOUR METER READING (hrs)	370542

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
TOTALIZER (gallons)		1961650
FILTER INLET PRESSURE (psig)		(ideal range: 8 to 12 psig) 10 psi
CARBON #1 INLET PRESSURE (psig)		(ideal range: 5 to 9 psig) 7
CARBON #2 INLET PRESSURE (psig)		(ideal range: 4 to 4 psig) 6
DISCHARGE PRESSURE (psig)		(ideal range: 0 to 2 psig) 0

PART B: COMMENTS _____

Work Order #_____

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Field Technician Response:

Completed by: _____ Date: 8/4/01
Arrival time: _____ Departure time: _____
Sample this visit?: _____ Engineer contacted? _____

Date: 8/14/01

Groundwater Extraction & Treatment System
ARCO Service Station 0608
17601 Hesperian Boulevard
821803 (00008000)
June 14, 2001

System Description:

Groundwater Pumps

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

Carbon Vessels: Three ASC-1,200
Filter: Rosedale P2 25 micron

PART A: SYSTEM DATA (Semi-Monthly)

System on upon arrival? Down (if no, specify reason in comments) Re-start

ELECTRIC METER READING (kw hrs)	22158	HOUR METER READING (hrs)	368219

MEASUREMENTS	ON ARRIVAL	ON DEPARTURE
TOTALIZER (gallons)	1928250	1928510
FILTER INLET PRESSURE (psig)	30	(ideal range: 8 to 12 psig) 8
CARBON #1 INLET PRESSURE (psig)	8	(ideal range: 5 to 9 psig) 6
CARBON #2 INLET PRESSURE (psig)	7	(ideal range: 1 to 4 psig) 5
DISCHARGE PRESSURE (psig)	0	(ideal range: 0 to 2 psig) 0

PART B: COMMENTS Clean out Compound lots of Gravel & Concrete, Clean out Extraction Well Box lots of Dirt & Gravel Need cut & trim pipe to install a Valve for Compound Drain. Need to install a 4" slip cap on Ust A & 4" Treat Cap on Ust B

PART C: WELL DATA (Monthly)

8.14.01

* ALLOW SYSTEM TO RUN 1 HOUR BEFORE OBTAINING DTW READINGS

WELL	DTW [illegible] (feet)	TOTALIZER (gallons)	FLOWRATE (gpm)	COMMENTS/ ADJUSTMENTS
E-1A	17.70 / 22.15 } TOB	Dead Down		
UST-A	TOC TOB 10.60 10.38	N/A Dry	N/A	Missing 4" slip cap.
UST-B	TOC TOB 11.30 11.87	N/A Dry	N/A	Missing 4" screw cap
SP1-V4	10.65 TOC 10.25 TOB	N/A 19.20 TD	N/A	

10.35 TOC 11.38
12.15 TOB

Install new 2" cap.

PART D: SAMPLING (Monthly)

SAMPLES	ANALYSIS	COMPLETED
INFLUENT	TPH-gasoline, BTEX compounds, MtBE 10:20	RE
EFFLUENT	TPH-gasoline, BTEX compounds, MtBE COD, TSS 10:25	RE
MID-1	TPH-gasoline, BTEX compounds, MtBE 10:29	RE
MID-2	TPH-gasoline, BTEX compounds, MtBE 10:35	RE

PART E: READINGS (Monthly)

	TEMP (°F)	CONDUCTIVITY (umhos)	pH (units)	DISSOLVED OXYGEN (ppm)
EFFLUENT	67.0	1000	7.09	1.0

PART F: SYSTEM MAINTENANCE I (Monthly)

NUMBER OF SPARE FILTERS ON SITE?	25	CHANGE FILTERS? (if necessary)	yes
PUMP AMP DRAW	6.4	H2O2 injection well EA-1 (if necessary)	NA
SWEEP ENCLOSURE	yes		

PART G: SYSTEM MAINTENANCE II (Quarterly)

TEST ALARM SWITCHES		BACKFLUSH CARBONS	
CLEAN TOTALIZERS			