STID 779

Quarterly Groundwater Monitoring Report
First Quarter 2001

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

JUN 11 2001

REVIEWED
9/27/01
AG

Prepared for

Mr. Paul Supple
ARCO Products Company

June 6, 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: June 6, 2001
Quarter: 1Q01

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: 48

WORK PERFORMED THIS QUARTER (First – 2001):

1. Submitted Fourth quarter 2000 groundwater monitoring report.
2. IT performed first quarter 2001 groundwater monitoring event on March 8-9, 2001.
3. Prepared fourth quarter 2000 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.

WORK PROPOSED FOR NEXT QUARTER (Second – 2001):

1. Prepare and submit first quarter 2001 groundwater monitoring and remedial system performance evaluation report.
2. IT will perform second 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.

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:	7.80 to 10.40	(Measure Feet)
Groundwater Gradient:	NA/NA	(Direction/Magnitude)
Period TPPH-g/Benzene/MtBE Removed:	0.04/ 0.00/ 0.02	(gallons)
Cumulative TPPH-g/Benzene/MtBE Removed:	1.01/ 0.04/ 0.13	(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 – First Quarter 2001
- Figure 3 – TPPH-g/Benzene/MtBE Concentration Map – First 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	73.8	1.6
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
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

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		06/04/98			9.35	22.76	<50	<0.30	<0.30	<0.30	<0.60	<10	2.0
(cont.)		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
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	0.6
		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
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
		06/14,15/99			11.25	21.29	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.4
		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
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

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)
E-1A	09/21,22/98			11.60	21.46	3,300	1.7	<0.50	29	3.6	52	1.8
(MW-12)	12/14,15/98			11.10	21.96	3,100	21	6.7	28	<5.0	140	1.0
(con't)	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
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
	06/14,15/99			9.54	20.92	Well Sampled Annually						
	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
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						

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-15 (cont.)	3/8,9/01			9.48	21.93	<50	<0.5	<0.5	<0.5	<0.5	63.8	2.6
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
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
	03/31-04/01/97			10.14	19.56	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	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
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

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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-21	06/25/97			10.83	17.89	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
(cont.)	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
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
	03/15/00			9.20	20.09	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.1
	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
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
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

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-24	06/04/98			12.00	22.38	<50	<0.30	<0.30	<0.30	<0.60	<10	0.8
(cont.)	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
MW-25	09/09,10/97	a		--	--	--	--	--	--	--	79	--
(cont.)	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	192.0	1.2
	12/14,15/00			11.74	22.38	<50	<50	<50	<50	<50	134.0	4.0
	3/8,9/01			10.53	23.59	<50	<50	<50	<50	<50	140.0	2.6
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
	06/25/97			12.94	20.77	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09,10/97			12.77	20.94	<50	<0.50	<0.50	<0.50	<0.50	<2.5	5.0
	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

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 stated to the right.
† = Well sampled without purging.
†† = ORC program at well was initiated on 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.

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
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
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
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
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
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
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
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
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
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

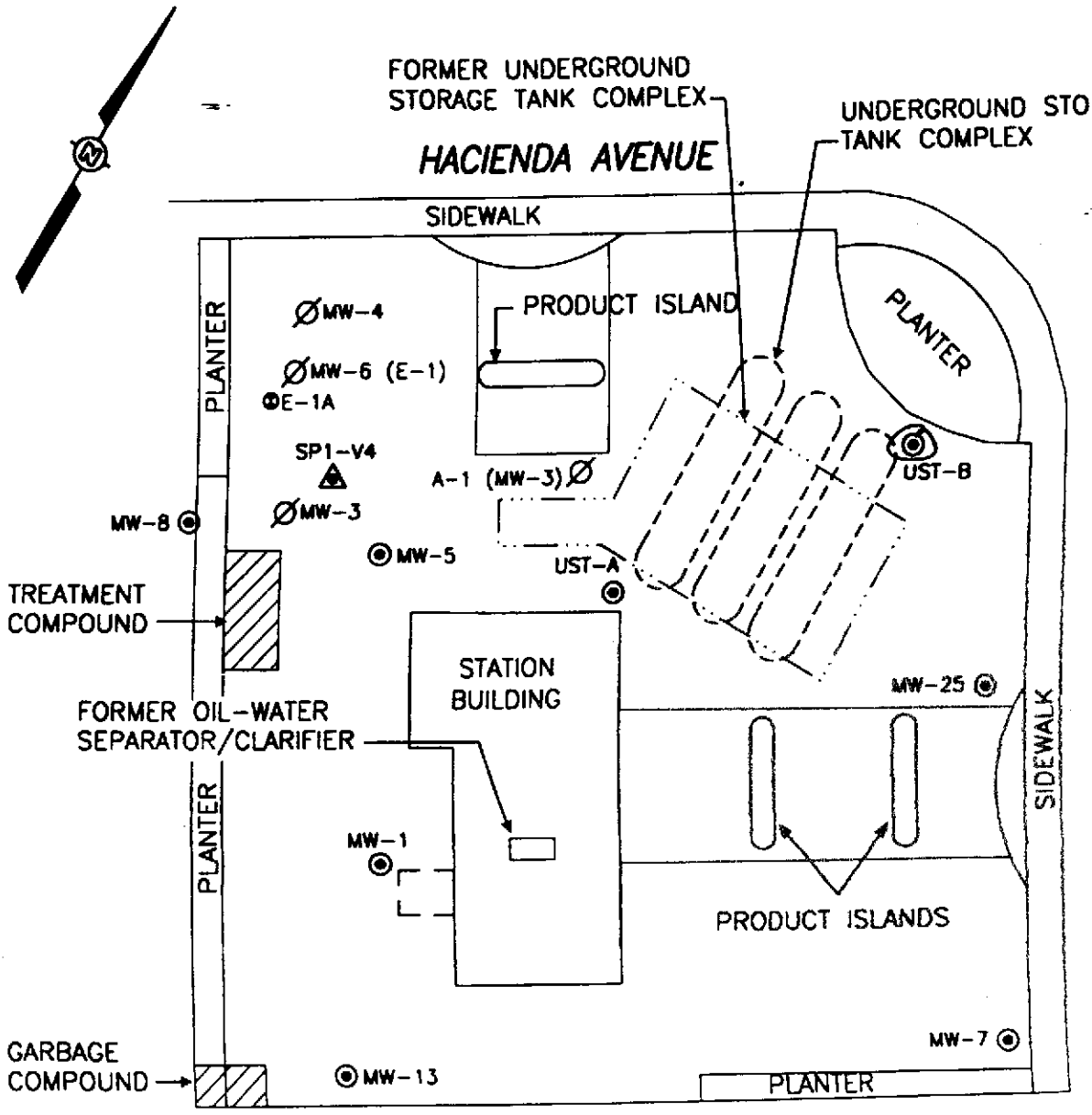
Table 3
Groundwater Analytical Data
Domestic Irrigation Wells

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
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. Wahlgren 3-9-00

LEGEND

- GROUNDWATER MONITORING WELL
- GROUNDWATER EXTRACTION WELL
- Ø 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
809628			K. Block 4-10-01

LEGEND

- ◉ GROUNDWATER MONITORING WELL
- △ DUAL COMPLETION AIR SPARGING/ SOIL VAPOR EXTRATION WELL
- Ø DESTROYED WELL
- ⊕ GROUNDWATER EXTRACTION WELL
- ■ DOMESTIC IRRIGATION WELL
- (23.06) GROUNDWATER ELEVATION (FT.–MSL); MEASURED 3-8-01
- GROUNDWATER ELEVATION CONTOUR (FT.–MSL)
- † WELL REMOVED FROM MONITORING PROGRAM

APPROXIMATE DIRECTION OR GROUNDWATER FLOW

APPROXIMATE GRADIENT = 0.003

SCALE 0 150 300

ARCO SERVICE STATION 0608

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

N:\cad\DWG\Arco0608\GWC.dwg Wed, 23/May/01 02:42pm lwahlgren

PROJECT NUMBER	APPROVED BY	CHECKED BY	DRAWN BY
809628			K. Black
		4-10-01	

LEGEND

- ◉ GROUNDWATER MONITORING WELL
- △ DUAL COMPLETION AIR SPARGING/ SOIL VAPOR EXTRATION WELL
- ∅ DESTROYED WELL
- ⊙ GROUNDWATER EXTRACTION WELL
- ▪ DOMESTIC IRRIGATION WELL
- 509 / <0.50 / 161 TPPH-G/BENZENE/MtBE CONCENTRATIONS IN GROUNDWATER (PARTS PER BILLION); SAMPLED 3/8-9/01
- (92.7) MtBE CONCENTRATION CONFIRMED BY EPA METHOD 8260
- NS NOT SAMPLED
- † WELL REMOVED FROM SAMPLING PROGRAM

VIA MANZANAS
POTRERO COURT
MW-20
MW-19 †
APARTMENTS
APARTMENTS
VIA ARRIBA
HESPERIAN BOULEVARD
SHOPS
RESTAURANT
VIA MEDIA
VIA MAGDALENA
CHURCH AND SCHOOL
17200
MW-17
<50 / <0.50 / <2.5
MW-14
MW-24 †
MW-21
<50 / <0.50 / <2.5
17197
NS
MW-18
<50 / <0.50 / <2.5
RESIDENTIAL
MW-26
<50 / <0.50 / <2.5
RESTAURANT
MW-9
<50 / <0.50 / <2.5
E-1A
370 / 1.78 / 76.3 (92.7)
17203
NS
17302
NS
17372
<50/<0.50/<2.5
MW-10
509 / <0.50 / 161
144 / <0.50 / 188
MW-8
MW-25
<50 / <0.50 / 140
MW-16
<50 / <0.50 / <2.5
633 ∅
SP-2/V-5 △
SP-1/V-4
∅ 590
MW-7 †
MW-5
<50 / <0.50 / 73.8
RESIDENTIAL
MW-22
<50 / <0.50 / <2.5
17349
<50 / <0.50 / 91.8 (98.3)
MW-15
<50 / <0.50 / 63.8
MW-11
<50 / <0.50 / <2.5
MW-13 †
17371
NS
VIA ENCINAS COURT
17393 ∅
634
NS
642
NS
17348
NS
RESIDENTIAL
SHOPS
675
NS
MW-23
<50 / <0.50 / <2.5
HACIENDA AVENUE
VIA ALAMO
VIA FLORES

SCALE
0 150 300

ARCO SERVICE STATION 0608

FIGURE 3
TPPH-g/BENZENE/MtBE CONCENTRATION MAP
FIRST QUARTER 2001
17601 HESPERIAN BLVD at HACIENDA AVE
SAN LORENZO, CALIFORNIA

N:\cad\DWG\Arco0608\CHEM.dwg Wed, 23/May/01 02:42pm 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

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

29 March, 2001

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

RE: Arco
Sequoia Report: MKC0292

Enclosed are the results of analyses for samples received by the laboratory on 03/12/01 12:02. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeff Smyly
Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

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

Pacific Environmental Group (Arco) 1921 Ringwood Avenue San Jose CA, 95131	Project: Arco Project Number: 821603 Project Manager: Shaw Garakani	**Reported:** 03/29/01 12:30

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
MW-5 (MKC0292-01) Water Sampled: 03/09/01 11:10 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C15003	03/15/01	03/15/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	73.8	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*96.0 %*		*70-130*		"	"	"	
MW-8 (MKC0292-02) Water Sampled: 03/09/01 11:00 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	**144**	50.0	ug/l	1	1C15003	03/15/01	03/15/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	**188**	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*91.0 %*		*70-130*		"	"	"	
MW-9 (MKC0292-03) Water Sampled: 03/09/01 10:40 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C15003	03/15/01	03/15/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*92.9 %*		*70-130*		"	"	"	

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	03/29/01 12:30

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
MW-10 (MKC0292-04) Water Sampled: 03/09/01 11:40 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	509	50.0	ug/l	1	1C16004	03/16/01	03/16/01	DHS LUFT	P-03
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	21.9	0.500	"	"	"	"	"	"	
Ethylbenzene	3.16	0.500	"	"	"	"	"	"	
Xylenes (total)	3.55	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	161	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*214 %*	*70-130*		"	"	"	"	*S-02*
MW-11 (MKC0292-05) Water Sampled: 03/09/01 10:15 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C15003	03/15/01	03/15/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*102 %*	*70-130*		"	"	"	"	
MW-14 (MKC0292-06) Water Sampled: 03/09/01 09:50 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C15003	03/15/01	03/15/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*96.3 %*	*70-130*		"	"	"	"	

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 821603	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	03/29/01 12:30

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
MW-15 (MKC0292-07) Water Sampled: 03/09/01 09:10 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C15003	03/15/01	03/15/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	**63.8**	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*91.7 %*		*70-130*		"	"	"	
MW-16 (MKC0292-08) Water Sampled: 03/09/01 08:50 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C15003	03/15/01	03/15/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*94.5 %*		*70-130*		"	"	"	
MW-18 (MKC0292-09) Water Sampled: 03/09/01 08:30 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C15003	03/15/01	03/15/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*97.1 %*		*70-130*		"	"	"	

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	03/29/01 12:30

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
MW-21 (MKC0292-10) Water Sampled: 03/09/01 08:15 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C15003	03/15/01	03/15/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*91.0 %*	*70-130*		"	"	"	"	
MW-22 (MKC0292-11) Water Sampled: 03/09/01 07:50 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C15003	03/15/01	03/15/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*102 %*	*70-130*		"	"	"	"	
MW-23 (MKC0292-12) Water Sampled: 03/09/01 09:30 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C16004	03/16/01	03/16/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*89.6 %*	*70-130*		"	"	"	"	

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	03/29/01 12:30

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
MW-25 (MKC0292-13) Water Sampled: 03/09/01 07:15 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C15001	03/15/01	03/15/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	140	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*104 %*		*70-130*		"	"	"	
MW-26 (MKC0292-14) Water Sampled: 03/09/01 07:30 Received: 03/12/01 12:02									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C15001	03/15/01	03/15/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
ethyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*104 %*		*70-130*		"	"	"	

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Pacific Environmental Group (Arco) 1921 Ringwood Avenue San Jose CA, 95131	Project: Arco Project Number: 821803 Project Manager: Shaw Garakani	**Reported:** 03/29/01 12:30

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 1C15001 - EPA 5030B [P/T]										
Blank (1C15001-BLK1)				Prepared & Analyzed: 03/15/01						
Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
Surrogate: a,a,a-Trifluorotoluene	*10.3*		"	*10.0*		*103*	*70-130*			
LCS (1C15001-BS1)				Prepared & Analyzed: 03/15/01						
Purgeable Hydrocarbons	227	50.0	ug/l	250		90.8	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.50*		"	*10.0*		*95.0*	*70-130*			
Matrix Spike (1C15001-MS1)	**Source: MKC0292-11**			Prepared & Analyzed: 03/15/01						
Purgeable Hydrocarbons	220	50.0	ug/l	250	ND	74.2	60-140			
Surrogate: a,a,a-Trifluorotoluene	*11.6*		"	*10.0*		*116*	*70-130*			
Matrix Spike Dup (1C15001-MSD1)	**Source: MKC0292-11**			Prepared & Analyzed: 03/15/01						
Purgeable Hydrocarbons	211	50.0	ug/l	250	ND	70.6	60-140	4.18	25	
Surrogate: a,a,a-Trifluorotoluene	*10.9*		"	*10.0*		*109*	*70-130*			
Batch 1C15003 - EPA 5030B [P/T]										
Blank (1C15003-BLK1)				Prepared & Analyzed: 03/15/01						
Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
Surrogate: a,a,a-Trifluorotoluene	*9.09*		"	*10.0*		*90.9*	*70-130*			

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Pacific Environmental Group (Arco) 1921 Ringwood Avenue San Jose CA, 95131	Project: Arco Project Number: 821803 Project Manager: Shaw Garakani	**Reported:** 03/29/01 12:30

Notes and Definitions

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

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22 March, 2001

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

RE: Arco
Sequoia Report: MKC0247

Enclosed are the results of analyses for samples received by the laboratory on 03/09/01 10:29. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Wayne Stevenson
Client Services Manager

CA ELAP Certificate #1210

Sequoia Analytical

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

Project: Arco
Project Number: Arco 608
Project Manager: Shaw Garakani

Reported:
03/22/01 10:30

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
17372VM	MKC0247-01	Water	03/08/01 11:00	03/09/01 10:29
17349VM	MKC0247-02	Water	03/08/01 11:30	03/09/01 10:29
E-1A	MKC0247-03	Water	03/08/01 12:05	03/09/01 10:29

Sequoia Analytical - Morgan Hill

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.

Wayne Stevenson, Client Services Manager

Sequoia Analytical

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Pacific Environmental Group (Arco) 1921 Ringwood Avenue San Jose CA, 95131	Project: Arco Project Number: Arco 608 Project Manager: Shaw Garakani	**Reported:** 03/22/01 10:30

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
17372VM (MKC0247-01) Water Sampled: 03/08/01 11:00 Received: 03/09/01 10:29									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C14003	03/14/01	03/14/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*93.3 %*	*70-130*		"	"	"	"	
17349VM (MKC0247-02) Water Sampled: 03/08/01 11:30 Received: 03/09/01 10:29									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C14003	03/14/01	03/14/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	91.8	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*90.2 %*	*70-130*		"	"	"	"	
E-1A (MKC0247-03) Water Sampled: 03/08/01 12:05 Received: 03/09/01 10:29									
Purgeable Hydrocarbons	370	50.0	ug/l	1	1C14003	03/14/01	03/14/01	DHS LUFT	P-01
Benzene	1.78	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	0.765	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	76.3	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*98.8 %*	*70-130*		"	"	"	"	

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

Project: Arco
Project Number: Arco 608
Project Manager: Shaw Garakani

Reported:
03/22/01 10:30

MTBE Confirmation by EPA Method 8260A

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
17349VM (MKC0247-02) Water Sampled: 03/08/01 11:30 Received: 03/09/01 10:29									
Methyl tert-butyl ether	98.3	5.00	ug/l	5	1C19023	03/16/01	03/16/01	EPA 8260A	
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*70-130*		"	"	"	"	
E-1A (MKC0247-03) Water Sampled: 03/08/01 12:05 Received: 03/09/01 10:29									
Methyl tert-butyl ether	92.7	5.00	ug/l	5	1C19023	03/16/01	03/16/01	EPA 8260A	
Surrogate: 1,2-Dichloroethane-d4		*92.6 %*	*70-130*		"	"	"	"	

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

Project: Arco
Project Number: Arco 608
Project Manager: Shaw Garakani

Reported:
03/22/01 10:30

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 1C14003 - EPA 5030B [P/T]										
Blank (1C14003-BLK1)				Prepared & Analyzed: 03/14/01						
Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
Surrogate: a,a,a-Trifluorotoluene	*9.56*		"	*10.0*		*95.6*	*70-130*			
LCS (1C14003-BS1)				Prepared & Analyzed: 03/14/01						
Benzene	7.90	0.500	ug/l	10.0		79.0	70-130			
Toluene	8.87	0.500	"	10.0		88.7	70-130			
Ethylbenzene	9.81	0.500	"	10.0		98.1	70-130			
Xylenes (total)	28.7	0.500	"	30.0		95.7	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.11*		"	*10.0*		*91.1*	*70-130*			
Matrix Spike (1C14003-MS1)	Source: MKC0247-01			Prepared & Analyzed: 03/14/01						
Benzene	7.72	0.500	ug/l	10.0	ND	77.2	60-140			
Toluene	8.69	0.500	"	10.0	ND	86.9	60-140			
Ethylbenzene	9.59	0.500	"	10.0	ND	95.9	60-140			
Xylenes (total)	28.4	0.500	"	30.0	ND	94.7	60-140			
Surrogate: a,a,a-Trifluorotoluene	*9.63*		"	*10.0*		*96.3*	*70-130*			
Matrix Spike Dup (1C14003-MSD1)	Source: MKC0247-01			Prepared & Analyzed: 03/14/01						
Benzene	7.85	0.500	ug/l	10.0	ND	78.5	60-140	1.67	25	
Toluene	8.72	0.500	"	10.0	ND	87.2	60-140	0.345	25	
Ethylbenzene	9.50	0.500	"	10.0	ND	95.0	60-140	0.943	25	
Xylenes (total)	28.1	0.500	"	30.0	ND	93.7	60-140	1.06	25	
Surrogate: a,a,a-Trifluorotoluene	*9.38*		"	*10.0*		*93.8*	*70-130*			

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

Project: Arco
Project Number: Arco 608
Project Manager: Shaw Garakani

Reported:
03/22/01 10:30

MTBE Confirmation by EPA Method 8260A - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1C19023 - EPA 5030B P/T										
Blank (1C19023-BLK1)				Prepared & Analyzed: 03/16/01						
Methyl tert-butyl ether	ND	1.00	ug/l							
Surrogate: 1,2-Dichloroethane-d4	*10.9*		"	*10.0*		*109*	*70-130*			
LCS (1C19023-BS1)				Prepared & Analyzed: 03/16/01						
Methyl tert-butyl ether	9.15	1.00	ug/l	10.0		91.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	*11.9*		"	*10.0*		*119*	*70-130*			
Matrix Spike (1C19023-MS1)	Source: MKC0247-02			Prepared & Analyzed: 03/16/01						
Methyl tert-butyl ether	147	5.00	ug/l	50.0	98.3	97.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	*9.97*		"	*10.0*		*99.7*	*70-130*			
Matrix Spike Dup (1C19023-MSD1)	Source: MKC0247-02			Prepared & Analyzed: 03/16/01						
Methyl tert-butyl ether	193	5.00	ug/l	50.0	98.3	189	70-130	27.1	25	Q-01
Surrogate: 1,2-Dichloroethane-d4	*10.8*		"	*10.0*		*108*	*70-130*			

Sequoia Analytical

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

Pacific Environmental Group (Arco) 1921 Ringwood Avenue San Jose CA, 95131	Project: Arco Project Number: Arco 608 Project Manager: Shaw Garakani	**Reported:** 03/22/01 10:30

Notes and Definitions

P-01	Chromatogram Pattern: Gasoline C6-C12
Q-01	The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
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 801803
Division of AtlanticRichfieldCompany

Task Order No. 24152000

Chain of Custody

ARCO Facility no. 608
City (Facility) 17601 HESPERIAN BLVD
Project manager (Consultant) SHAW GARAKANI
ARCO engineer MIKE WHELAN
Telephone no. (ARCO)
Telephone no. (Consultant) 408) 4537300
Fax no. (Consultant) 408) 4379526
Consultant name IT GROUP
Address (Consultant) 921 RINGWOOD AVE. SAN JOSE CA

Laboratory name: SEQUOIA
Contract number:
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 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 ☐		
*17337WY		3		W		4	HCL	3801	11:00		X											
*17349WY		↓		↓		↓	↓	↓	11:30		↓											
EIA									12:05													

Special detection Limit/reporting: MKC0247

Special QA/QC

Remarks: *RUN 8260 MTBE CONFIRMATION ON HOMEOWNER WELLS WITH HITS ≥35PPb

Lab number

Condition of sample:

Temperature received:

	Date	Time			
Relinquished by sampler [signature]	3801	1620	Received by W Sanchez	3-9-01	959
Relinquished by W Sanchez	3/9-01	10:29	Received by CKH (MAI)	3/9/01	
Relinquished by			Received by laboratory	Date	Time

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

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

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FIELD REPORT

DEPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 82/803 LOCATION: 17601 Hesperian Blvd DATE: 3-8-01

CLIENT/STATION NO.: ARCO FIELD TECHNICIAN: Ronald E. Koontz DAY OF WEEK: THU

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	Second Depth to Water (feet) TOB/TOC	SEPARATE-PHASE HYDROCARBONS (SPH): SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	COLOR: Fresh / Weathered / Gas / Oil	VISCOSITY: Lite / Medium / Heavy	LIQUID REMOVED (gallons): SPH / H_2O
	MW5		-	-	-	-	-	14.00	10.40 / 10.40	10.81 / 10.81					
	MW7								N/A						
	MW8		-	-	-	-	-	22.00	8.98 / 8.98	9.80 / 9.80					
	MW9		-	-	-	-	-	19.00	8.58 / 8.50	9.05 / 9.05					
	MW10		-	-	-	-	-	22.00	8.50 / 8.50	9.12 / 9.12					
	MW11		-	-	-	-	-	19.00	9.37 / 9.37	9.78 / 9.78					
	MW13								N/A						
	MW14		-	-	-	-	-	24.00	7.80 / 7.80	8.10 / 8.10					
	MW15		-	-	-	-	-	24.00	9.03 / 9.03	9.48 / 9.48					

Comments: _____

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FIELD REPORT

DEPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 821803 LOCATION: 1760 Hesperian Blvd DATE: 3-8-01

CLIENT/STATION NO.: ARCO FIELD TECHNICIAN: Bernie Reitz DAY OF WEEK: THU

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	Second Depth to Water (feet) TOB/TOC	SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	SEPARATE-PHASE HYDROCARBONS (SPH) COLOR: Fresh	Weathered	Gas	Oil	VISCOSITY: Lite	Medium	Heavy	LIQUID REMOVED (gallons) SPH / H_2O
	MW-16		-	-	-	-		23.00	9.58 / 9.58	10.01 / 10.01										
	MW-18		-	-	-	-		23.00	8.70 / 8.70	9.03 / 9.03										
	MW-19								NA											
	MW-21		-	-	-	-		22.00	8.97 / 8.97	9.00 / 9.00										
	MW-22		-	-	-	-		22.00	9.10 / 9.10	9.43 / 9.43										
	MW-23		-	-	-	-		22.00	10.20 / 10.20	10.49 / 10.49										
	MW-24								NA											
	MW-25		-	-	-	-	-	21.00	10.03 / 10.03	10.53 / 10.53										
	MW-26		-	-	-	-		20.00	10.33 / 10.33	10.78 / 10.78										

Comments:

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 7601 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 10.40 = 3.60 x Gal/Linear Foot .66 = 2.37 x Number of Casings 3 = Calculated Purge 7.12

DATE PURGED: 3 9 01 START: 11:55 END (2400 hr): ——— PURGED BY: PE

DATE SAMPLED: 3 9 01 START: 11:10 END (2400 hr): ——— SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
11:59	0.25	7.06	1330	643	Cloudy	light	Faint
11:03	4.6	7.23	1340	646	Cloudy	light	Faint
11:07	6.75	7.23	1330	644	Cloudy	light	Faint

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: _____
- ☑ Centrifugal Pump: _____
- ☐ Other: _____
- ☐ Airlift Pump: _____
- ☐ Dedicated: _____

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: D-38803-
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW5	3-901	11:10	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: D.O.: 1.6

SIGNATURE: _____

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FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 17601 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 22.00 DTW 8.98 = 13.02 Gal/Linear Foot .38 = 4.94 x Number of Casings 3 = Calculated Purge 14.84

DATE PURGED: 3 9 01 START: 10:46 END (2400 hr): ——— PURGED BY: PE

DATE SAMPLED: 3 9 01 START: 10:00 END (2400 hr): ——— SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
10:49	5	6.90	1460	66.7	Clear	Mod	Taint
10:52	10	7.09	1450	66.9	Clear	Mod	Taint
10:55	15	7.11	1450	67.2	Clear	Mod	Taint

Color: Clear, Cloudy, Yellow, Brown
Turbidity: None, Low, Moderate, High
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: D.SP03.
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW8	3-9-01	11:00	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 3.0

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 1900 DTW 850 = 10.5 x Gal/Linear Foot .3899 x Number of Casings 3 = Calculated Purge 11.97

DATE PURGED: 3 9 01 START: 10:30 END (2400 hr): ——— PURGED BY: PE

DATE SAMPLED: 3 9 01 START: 10:40 END (2400 hr): ——— SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
10:33	4	7.11	1400	67.1	Cloudy	Mod	None
10:36	8	7.14	1390	67.3	Cloudy	Mod	None
10:39	12	7.00	1370	66.7	Cloudy	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: _____
- ☐ Airlift Pump: _____
- ☒ Centrifugal Pump: _____
- ☐ Dedicated: _____
- ☐ Other: _____

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: D-5903
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW9	3-9-01	10:40	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 2.0

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 22.00 DTW 8.00 = 13.5 x Gal/Linear Foot .38 = 5.13 x Number of Casings 3 = Calculated Purge 15.39

DATE PURGED: 3 9 01 START: 11:25 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3 9 01 START: 11:40 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
11:29	5	7.24	1350	67.8	Cloudy	Mod	Mod
11:32	10	7.20	1320	67.0	Cloudy	Mod	Mod
11:35	15	7.25	1320	67.1	Cloudy	Mod	Mod

Color: 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: _____
- ☐ Other: _____
- ☐ Airlift Pump: _____
- ☐ Dedicated: _____

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: 13003
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW10	3-901	11:40	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 32

SIGNATURE: _____

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FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 1760 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 19.00 DTW 9.37 = 9.63 x Gal/Linear Foot .38 = 3.65 x Number of Casings 3 = Calculated Purge 10.94

DATE PURGED: 3/9/01 START: 10:00 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3/9/01 START: 10:16 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
10:03	3.5	7.43	1420	62.2	Cloudy	Mod	Mod
10:06	7	7.46	1430	63.9	Cloudy	Mod	Mod
10:09	10.5	7.49	1440	64.6	Cloudy	Mod	Mod

Color: 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: _____
- ☐ Air lift Pump _____
- ☒ Centrifugal Pump: _____
- ☐ Dedicated: _____
- ☐ Other: _____

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

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW 11	3.9.01	1016	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 3.0

SIGNATURE: _____

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FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 1760 Hesperian Blvd WELL ID #: MW-14

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 2400 DTW 7.80 = 16.2 x Gal/Linear Foot .38 = 6.15 x Number of Casings 3 = Calculated Purge 18.40

DATE PURGED: 3 9 01 START: 9:35 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3 9 01 START: 9:50 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
9:38	6	7.23	1410	60.6	Cloudy	Light	None
9:42	12	7.18	1450	63.4	Cloudy	Light	None
9:46	18	7.23	1480	65.7	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
MW14	3-9-01	9:50	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 3.0

SIGNATURE: _____

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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 24.00 DTW 9.03 = 14.97 x Gal/Linear Foot .38 = 5.68 x Number of Casings 3 = Calculated Purge 17.04

DATE PURGED: 3 9 01 START: 8:57 END (2400 hr): — PURGED BY: PE

DATE SAMPLED: 3 9 01 START: 9:10 END (2400 hr): — SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
9:01	55	7.65	1260	59.5	Cloudy	Mod	Mod
9:04	11	7.68	1240	59.9	Cloudy	Mod	None
9:09	165	7.67	1300	61.4	Cloudy	Mod	None

Color: Clear, Brown, Yellow, Grey
Turbidity: NTU 0-100, 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
MW15-3-901	9:10	3	40ml	VOA	HCL	GAS-BTEX-MTBE	

REMARKS: Pg. 26.

SIGNATURE: _____

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FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 7601 HESPERIAN BLVD WELL ID #: MW-16

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 23.00 DTW 9.68 = 13.32 x Gal/Linear Foot .38 = 5.09 x Number of Casings 3 = Calculated Purge 15.09

DATE PURGED: 3/9/01 START: 8:38 END (2400 hr): — PURGED BY: PE

DATE SAMPLED: 3/9/01 START: 8:50 END (2400 hr): — SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
8:41	5	7.02	1180	60.1	Cloudy	Mod	None
8:44	10	7.03	1200	61.8	Cloudy	Mod	None
8:47	15	7.01	1200	61.9	Cloudy	Mod	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: _____
- ☒ 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
MW16	3-9-01	8:50	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 2.4

SIGNATURE: _____

the i group

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 7601 Hesperian Blvd WELL ID #: MW-18

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 22.05 DTW 8.70 = 13.3 x Gal/Linear Foot .38 = 5.05 x Number of Casings 3 = Calculated Purge 15.16

DATE PURGED: 3 9 01 START: 8:18 END (2400 hr): ——— PURGED BY: PE

DATE SAMPLED: 3 9 01 START: 8:30 END (2400 hr): ——— SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
8:21	5	7.16	1420	613	Cloudy	Mod	Mod
8:24	10	7.18	1440	629	Cloudy	Mod	Mod
8:27	15	7.17	1420	636	Cloudy	Mod	Mod

Color: Colorless, 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: Pipes
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW18	3-9-01	8:30	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 1.4

SIGNATURE: _____

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FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 1760 Hesperian Blvd WELL ID #: MW-21

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 20.00 TW 8.47 = 13.53 x Gal/Linear Foot .38 = 5.14 x Number of Casings 3 = Calculated Purge 15.42

DATE PURGED: 3 9 01 START: 8:00 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3 9 01 START: 8:15 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
8:04	5	7.11	1320	59.1	Clear	Mod	Mod
8:07	10	7.13	1330	61.0	Clear	Mod	Mod
8:10	16	7.13	1340	61.9	Clear	Mod	Mod

Pumped dry Yes (No)

Color: Cobalt 5-100, 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: _____ ☐ Air Lift Pump: _____
- ☑ Centrifugal Pump: _____ ☐ Dedicated: _____
- ☐ Other: _____

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: D-500
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW21	3-9-01	8:15	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 2.4

SIGNATURE: _____

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FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 1760 Hesperian Blvd WELL ID #: MW-22

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 20.00 DTW 9.12 = 10.88 x Gal/Linear Foot .38 = 4.89 x Number of Casings 3 = Calculated Purge 14.68

DATE PURGED: 3 9 01 START: 7:35 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3 9 01 START: 7:50 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
7:39	4.75	7.10	2960	55.9	Cloudy	Mod	Mod
7:42	9.5	7.09	1460	58.6	Cloudy	Mod	Mod
7:46	14.25	7.08	1390	59.7	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: _____
- ☐ Air Lift 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
MW22	3-9-01	7:50	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: 2.8

SIGNATURE: _____

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FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION: 17601 Hesperian Blvd WELL ID #: MW-23

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 22.00 DTW 10.20 11.8 x Gal/Linear Foot .38 = 4.48 x Number of Casings 3 = Calculated Purge 13.45

DATE PURGED: 3 9 01 START: 9:17 END (2400 hr): —— PURGED BY: PE

DATE SAMPLED: 3 9 01 START: 9:30 END (2400 hr): —— SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
9:20	4.5	7.66	1400	59.1	Cloudy	Mod	None
9:23	9	7.63	1410	60.8	Cloudy	Mod	None
9:26	13.5	7.40	1440	62.0	Cloudy	Light	None

Pumped dry Yes (No)

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ______ TOB/TOC

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

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

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-23	3-9-01	9:30	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: [illegible]

SIGNATURE: [signature]

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FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 1760 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 21.00 DTW 10.03 = 10.97 x Gal/Linear Foot .38 = 1.80 x Number of Casings 3 = Calculated Purge 5.59

DATE PURGED: 3 9 01 START: 7:00 END (2400 hr): ——— PURGED BY: PE

DATE SAMPLED: 3 9 01 START: 7:15 END (2400 hr): ——— SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
7:03	1.75	7.06	1370	57.6	Cloudy	Light	Odor
7:06	3.5	7.08	1390	58.7	Cloudy	Light	Odor
7:09	5.25	7.08	1400	58.6	Cloudy	Light	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 _____

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	3-9-01	7:15	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 2.0

SIGNATURE: _____

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FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 1760 Hesperian Blvd WELL ID #: MW-26

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 20.00 DTW 10.33 = 9.67 x Gal/Linear Foot 17 = 1.64 x Number of Casings 3 = Calculated Purge 4.93

DATE PURGED: 3 9 01 START: 7:17 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3 9 01 START: 7:30 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
7:20	1.5	7.10	1380	59.0	Cloudy	Mod	None
7:23	3	7.10	1390	59.4	Cloudy	Mod	None
7:26	4.5	7.09	1400	59.8	Cloudy	Mod	None

Pumped dry Yes (No)

Color: Gray, Clear, Brown, Yellow | Turbidity: 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
MW26	3-9-01	7:30	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 2.6

SIGNATURE: _____

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FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

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

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: 3 01 START: _____ END (2400 hr): ~~_____~~ PURGED BY: PE

DATE SAMPLED: 3 80 1 START: 12:05 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 7.05 1430 602 Cloudy Mod Fuel

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

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

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
~~MW-~~ ElkA	3-80 1		3	40ml	VOA	HCL	Gas-BTEX-MTBE

REMARKS: DO: 1.6

SIGNATURE: _____

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FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 17601 Hesperian Blvd WELL ID #: ~~Mw~~-17349

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

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: 3/01 START:_____ END (2400 hr):_____ PURGED BY: PE

DATE SAMPLED: 3/01 START: 11:30 END (2400 hr):_____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 2 5°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 7.33 1200 582 Clear Light None

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

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

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
~~Mw~~ 17349 DU	3/01	11:30	3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 1.8 11:15 ⇒ 11:22
Purge 55 Gal

SIGNATURE: _____

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FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 821803 LOCATION 7601 HESPERIAN Blvd WELL ID #: ~~MW~~ 17370 VM

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: 3/01 START: _____ END (2400 hr): ~~_____~~ PURGED BY: PE

DATE SAMPLED: 3/01 START: 11:00 END (2400 hr): ~~_____~~ SAMPLED BY: PE

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

Pumped dry Yes / No

Color: 1-100, Clear, Cloudy, Yellow, Gray, Brown; NTU: 0-200, Heavy, Moderate, Light, Trace; Odor: Strong, Moderate, Faint, None

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC	7.11	1270	59.1	Clear	Light	None

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

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

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
~~MW~~ 17370VM	3-801		3	40ml	VOA	HCL	GAS-BTEX-MTBE

REMARKS: DO: 2.4

SIGNATURE: _____

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ARCO Products Company 801803 **Task Order No.** 2415200
Division of AtlanticRichfieldCompany

Chain of Custody

ARCO Facility no. 608	City (Facility) 17601 Hesperian Blvd	Project manager (Consultant) SHAW GARAKANI	Laboratory name SEQUOIA
ARCO engineer MIKE WHELAN	Telephone no. (ARCO)	Telephone no. (Consultant) (408) 453 7300	Fax no. (Consultant) (408) 437 9526
Consultant name IT GROUP		Address (Consultant) 1921 Ringwood Ad. San Jose CA	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 ☐		
*17372VH		3		W		4	HCL	3801	11:00		X											
*17349VH		↓		↓		↓	↓	↓	11:30		↓											
E-1A		↓		↓		↓	↓	↓	12:05		↓											

Method of shipment

Special detection Limit/reporting

Special QA/QC

Remarks
*RUN 8260 MTBE CONFIRMATION ON HOMEOWNER WELLS WITH HITS ≥ 35 PPB

Lab number

Condition of sample:		Temperature received:	
Relinquished by sampler [signature]	Date 3801 Time 1620	Received by	
Relinquished by	Date Time	Received by	
Relinquished by	Date Time	Received by laboratory	Date Time

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

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant
APC-3292 (2-91)

ARCO Products Company — Division of AtlanticRichfieldCompany

821803 **Task Order No.** 24152.00

Chain of Custody

ARCO Facility no. 608	City (Facility) 7601 Hesperian Blvd	Project manager (Consultant) Shaw Garakani	Laboratory name Sequoia
ARCO engineer Mike Whelan	Telephone no. (ARCO)	Telephone no. (Consultant) 408/453-7300	Fax no. (Consultant) 408/437-9526	Contract number
Consultant name LT Group	Address (Consultant) 921 Kingwood Ave. San Jose CA		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 M602/8020/8015	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 ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
MW5		3		W		Y	HCl	3901	11:10		X											
MW8									11:00													
MW9									10:40													
MW10									11:40													
MW11									10:15													
MW14									9:50													
MW15									9:10													
MW16									8:50													
MW18									8:30													
MW21									8:15													
MW22									7:50													
MW23									9:30													
MW25									7:15													
MW26									7:30													

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	Date 3901	Time 15:00	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

WELL SAMPLING REQUEST

SAMPLING PROTOCOL								
Project No.	**Station #**	**Project Name**	**SEQUENCE**	**Project Manager** **Approval**	**Date/s**	**Laboratory:**		**Client Engineer:**
809628	608	17601 Hesperian, San Lorenzo	1Q01	Shaw Garakani		**Sequoia**	24152 00	Mike Whelan

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	D.O. before purge on all wells
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	sample MW-15 early to avoid cars -
MW-16	6		QLY/QLY	MtBE/GAS/BTEX	TOB/TOC	23		3"	YES	may be inaccessible due to
MW-18	5		**QLY/ANNUAL 1Q**	MtBE/GAS/BTEX	TOB/TOC	22		3"	YES	Dahman's car (633 Hacienda)
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

SAMPLING PROTOCOL							
Project No.	Station #	Project Name	SEQUENCE	Project Manager Approval	Date/s	Laboratory:	Client Engineer:
809628	608	17601 Hesperian San Lorenzo	1Q01	Shaw Garakani		Sequoia 24152 00	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				SEE ATTACHED CONTACT FORM.
		633 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC	well destroyed 9/15				SAMPLE HOMEOWNER WELLS ON
Mrs Albright		634 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					Thursday, March 8
Ms. Corregedor		642 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					
Mr/Mrs Roberts		675 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					**Instruct Sequoia to run 8260 MtBE
Mr Luehrs		17348 Via Encinas	QLY	GAS/BTEX/MtBE	TOB/TOC					confirmation on homeowner wells
Mr. Gordin		17197 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					with hits > 35 ppb.
Cavalry Church		17200 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC	Well Paved Over				
Mrs. Gomez		17203 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					
Mr/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					
Mr. 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.				

Arco Work Request

First Quarter 2001

Project Number: 821803

Address	Contact	Quarter	PumpCondition	DateContacted	Notes
17197 Via Magdalena	[illegible]	1Q01	non-operational	28-Feb-01	well is down but Alex may be able to get it working - please check / Pump Down / Alex not at home / no access
17203 Via Magdalena	[illegible]	1Q01	non-operational	06-Mar-01	okay to sample - needs new pump / Need pump / no access
17302 Via Magdalena	[illegible]	1Q01	non-operational	28-Feb-01	Well still broken - Do not sample
17348 Via Encinas	[illegible]	1Q01	non-operational	06-Mar-01	sample in the morning / Pump not working
17349 Via Magdalena	[illegible]	1Q01	operational	28-Feb-01	sample anytime OK
17371 Via Magdalena	[illegible]	1Q01	operational	28-Feb-01	Do not sample
17372 Via Magdalena	[illegible]	1Q01	operational	28-Feb-01	sample anytime OK
17393 Via Magdalena	[illegible]	1Q01	non-operational		Well abandoned 7/97
590 Hacienda	[illegible]	1Q01	operational		Well destroyed (9/15/00)
633 Hacienda	[illegible]	1Q01	operational		Well destroyed (9/15/00)

Address	Contact	Quarter	PumpCondition	DateContacted	Notes
675 Hacienda					
		1Q01	operational	06-Mar-01	please try to get contact info during site visit - number disconnected
675 Hacienda					
		1Q01	non-operational	06-Mar-01	left message - needs holding tank and power to the motor

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 December 5, 2000 to March 24, 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, 2000. The permit will be effective through May 14, 2001. A request for a renewal of the discharge permit was submitted March 30, 2001.

Migration Control

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

groundwater elevation map (Figure 2) and the TPPH-g, benzene, and MtBE concentrations map (Figure 3) from the current quarterly groundwater monitoring event with those from previous monitoring events. **Considering the above, IT concluded that the operation of the GWET system was influencing migration of the impacted plume.**

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	Mass Removed			
	12/5/00 to 3/24/01		Cumulative	
Analyte	(lbs)	(gal)	(lbs)	(gal)
Groundwater Extraction				
TPPH-g	0.22	0.04	6.17	1.01
Benzene	0.000	0.00	0.31	0.04
MtBE*	0.14	0.02	0.93	0.13

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 GWE system was 60 percent operational during the reporting period. Down time was due to regular system maintenance, bag filter high pressure alarm and a faulty system autodialer. During the reporting period, the GWE system discharged treated groundwater at an average flow rate of approximately 2.1 gallons per minute (gpm) for a period discharge of 192,330 gallons Treatment system analytical data are presented in Table C-2.

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.

Table C-1 (continued)

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 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	1,030,086	178,986	4.3	45	0.18	1.17	1.4	0.009	0.07	N/A	N/A	N/A	1.5
06/19/92	4,712	0	1,229,960	199,874	3.9	ND	N/A	1.17	ND	0.001	0.07	N/A	N/A	N/A	1.5
07/14/92	5,001	52	1,291,201	61,241	3.5	97	0.02	1.19	25.0	0.006	0.08	N/A	N/A	N/A	1.5
08/18/92	N/A	N/A	1,410,018	118,817	N/A	ND	N/A	1.19	ND	0.012	0.09	N/A	N/A	N/A	1.5
09/15/92	6,298	N/A	1,535,640	125,622	3.1	ND	N/A	1.19	ND	0.000	0.09	N/A	N/A	N/A	1.5
10/16/92	7,012	4	1,651,623	115,983	2.7	ND	N/A	1.19	ND	0.000	0.09	N/A	N/A	N/A	1.5
11/18/92	7,809	0	1,768,076	116,453	2.4	ND	N/A	1.19	ND	0.000	0.09	N/A	N/A	N/A	1.5
12/17/92	8,502	0	1,864,300	96,224	2.3	96	0.04	1.23	7.7	0.003	0.09	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	3.6	530	0.42	2.67	27	0.024	0.20	N/A	N/A	N/A	3.3
06/04/93	11,734	1	2,543,500	94,340	3.0	170	0.28	2.94	5.2	0.013	0.21	N/A	N/A	N/A	3.7
07/20/93	12,573	24	2,689,697	146,197	2.9	200	0.23	3.17	12	0.010	0.22	N/A	N/A	N/A	4.0
08/16/93	13,219	0	2,791,366	101,669	2.6	150	0.15	3.32	4.9	0.007	0.23	N/A	N/A	N/A	4.1
09/13/93	13,888	0	2,884,736	93,370	2.3	80	0.09	3.41	2.2	0.003	0.23	N/A	N/A	N/A	4.3
10/08/93	14,485	1	2,951,737	67,001	1.9	ND	0.02	3.43	ND	0.001	0.24	N/A	N/A	N/A	4.3
11/19/93	15,494	0	3,036,032	84,295	1.4	ND	0.00	3.43	ND	0.000	0.24	N/A	N/A	N/A	4.3
12/21/93	16,260	0	3,113,565	77,533	1.7	73	0.02	3.45	3.5	0.001	0.24	N/A	N/A	N/A	4.3
01/18/94	16,939	0	3,190,900	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	3,478,910	60,373	2.0	230	0.09	3.63	8.3	0.004	0.25	N/A	N/A	N/A	4.5
06/14/94	19,680	57	3,518,608 a	39,698	2.0	230	0.08	3.71	12	0.003	0.25	N/A	N/A	N/A	4.6
07/14/94	20,145	35	3,574,408 b	55,800	2.0	270	0.12	3.83	6.9	0.004	0.26	N/A	N/A	N/A	4.8
08/17/94	20,920	5	51,260 c	91,580 c	2.0	ND	0.10	3.93	1.8	0.003	0.26	N/A	N/A	N/A	4.9
09/12/94	21,549	0	120,910	69,650	1.8	ND	0.00	3.90	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	23,080	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

Table C-1 (continued)

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 Carbon Loading (%)	
02/06/95		24,926	9	499,690	90,950	2.1	100	0.04	4.19	2.4	0.001	0.28	N/A	N/A	N/A	5.2	
03/02/95		25,465	6	569,180	69,490	2.1	ND	0.03	4.22	ND	0.001	0.28	N/A	N/A	N/A	5.3	
04/04/95		26,253	1	672,510	103,330	2.2	290	0.12	4.34	6.6	0.003	0.28	N/A	N/A	N/A	5.4	
05/02/95		26,924	0	760,350	87,840	2.2	240	0.19	4.54	7.1	0.005	0.29	N/A	N/A	N/A	5.7	
06/05/95		27,721	2	848,810	88,460	1.9	ND	0.09	4.62	ND	0.003	0.29	N/A	N/A	N/A	5.8	f
07/06/95		28,464	0	921,260	72,450	1.6	270	0.08	4.71	2.4	0.001	0.29	N/A	N/A	N/A	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	976,600	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	53.3	700	0.02	4.88	7.2	0.000	0.29	361	0.01	0.01	N/A	g
07/08/00		30,352	4	1,131,560	151,760	3.3	133	0.53	5.40	5.1	0.008	0.30	272	0.40	0.41	N/A	g
08/07/00		30,955	16	1,228,240	96,680	2.7	144	0.11	5.51	2.8	0.003	0.30	126	0.16	0.57	N/A	g
09/08/00		31,528	25	1,306,300	78,060	2.3	261	0.13	5.65	2.7	0.002	0.30	120	0.08	0.65	N/A	g
10/10/00		32,230	9	1,393,820	87,520	2.1	114	0.14	5.78	ND	0.001	0.31	ND	0.04	0.69	N/A	g
11/07/00		32,880	3	1,472,930	79,110	2.0	128	0.08	5.86	ND	0.000	0.31	98.6	0.03	0.73	N/A	g
12/05/00		33,516	5	1,548,840	75,910	2.0	167	0.09	5.96	0.775	0.000	0.31	104	0.06	0.79	N/A	g
01/04/01		33,924	43	1,595,340	46,500	1.9	ND	0.03	5.99	ND	0.000	0.31	86.8	0.04	0.83	N/A	g
02/06/01		34,556	20	1,672,330	76,990	2.0	203	0.07	6.05	0.572	0.000	0.31	80.5	0.05	0.88	N/A	g
03/08/01		34,776	70	1,698,860	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
REPORTING PERIOD:				**12/5/00 - 3/24/01**													
TOTAL GALLONS EXTRACTED:				**5,372,618**													
PERIOD GALLONS EXTRACTED:				**192,330**													
AVERAGE PERIOD FLOW RATE (gpm):				**2.1**													
PERIOD PERCENT OPERATIONAL:				**60%**													
TOTAL POUNDS REMOVED:									**6.17**			**0.31**			**0.93**		
TOTAL GALLONS REMOVED:									**1.01**			**0.04**			**0.13**		
PERIOD POUNDS REMOVED:								**0.22**			**0.000**			**0.14**			
PERIOD GALLONS REMOVED:								**0.04**			**0.000**			**0.02**			

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 estimated using isotherm of 8 percent by weight.
g. Unable to predict Primary carbon loading for MtBE, because the MtBE loading prior to 6/5/00 is unknown.

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

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.)									
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
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
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
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

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-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
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
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

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.)									
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

TPPH = Total purgeable petroleum hydrocarbons
MtBE = Methyl tert Butyl Ether
COD = Chemical oxygen demand
TSS = Total suspended solids
ppb = Parts per billion
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

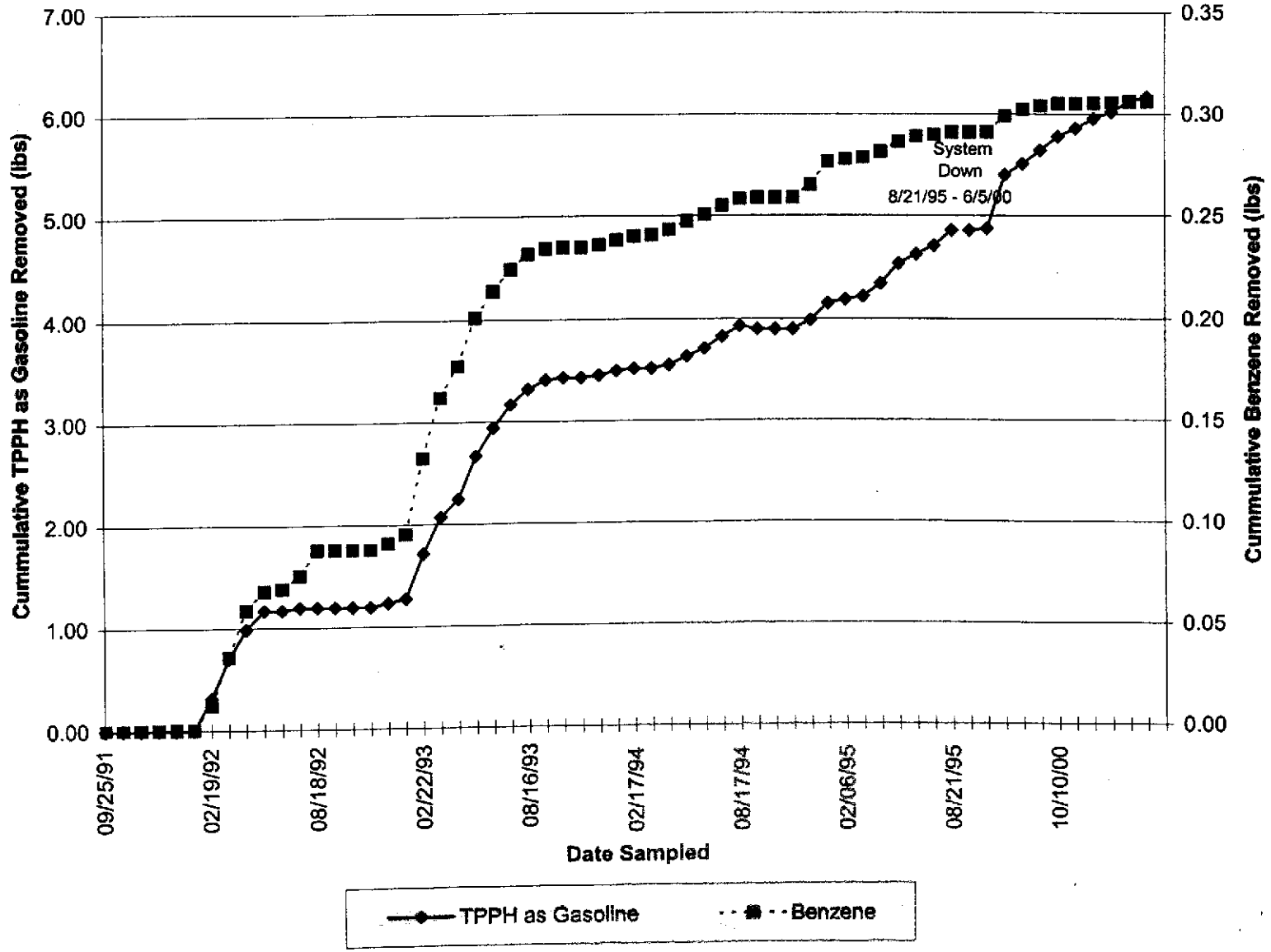


Figure C-2
Groundwater Extraction System Concentration Trend
TPPH-g and Benzene

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

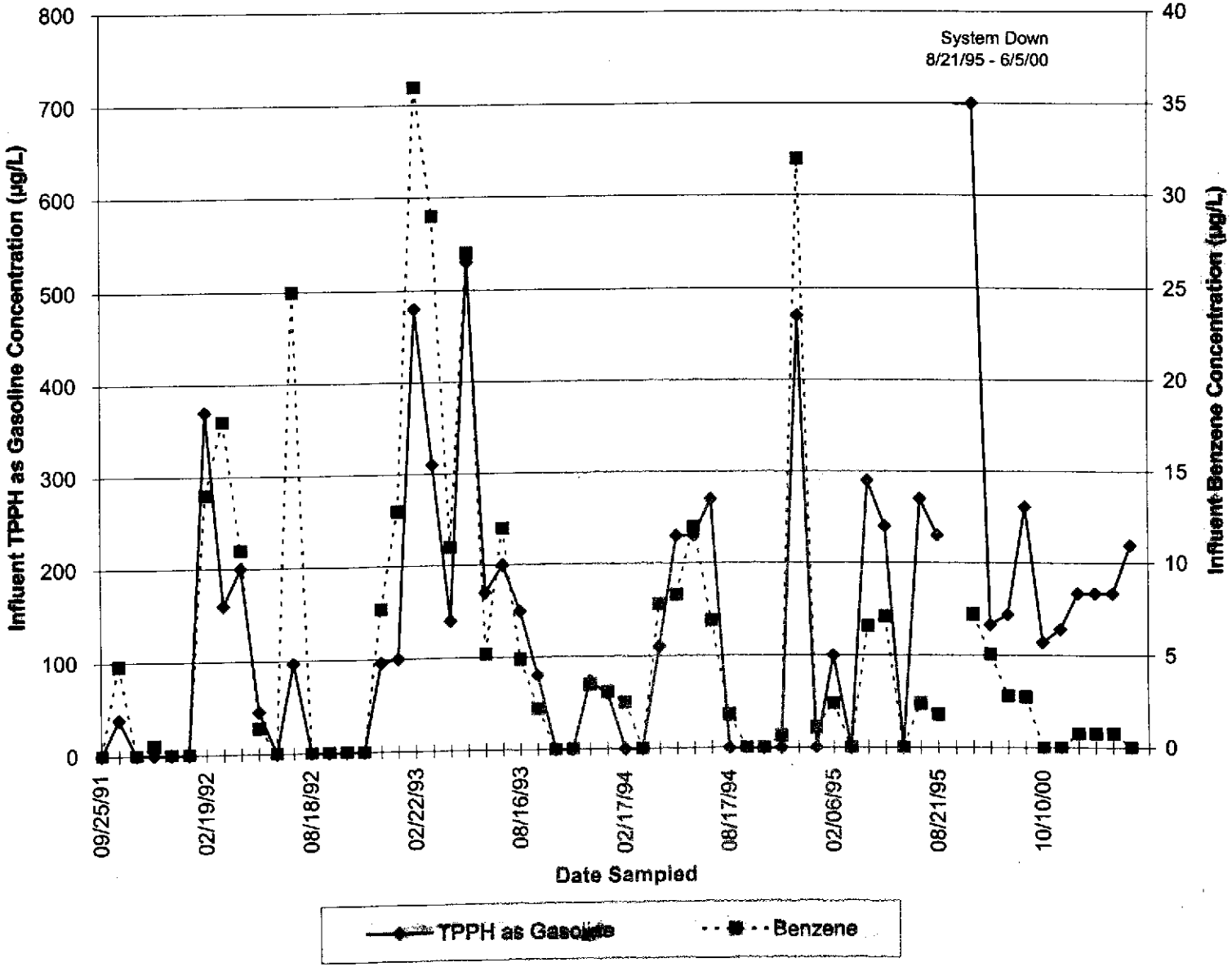
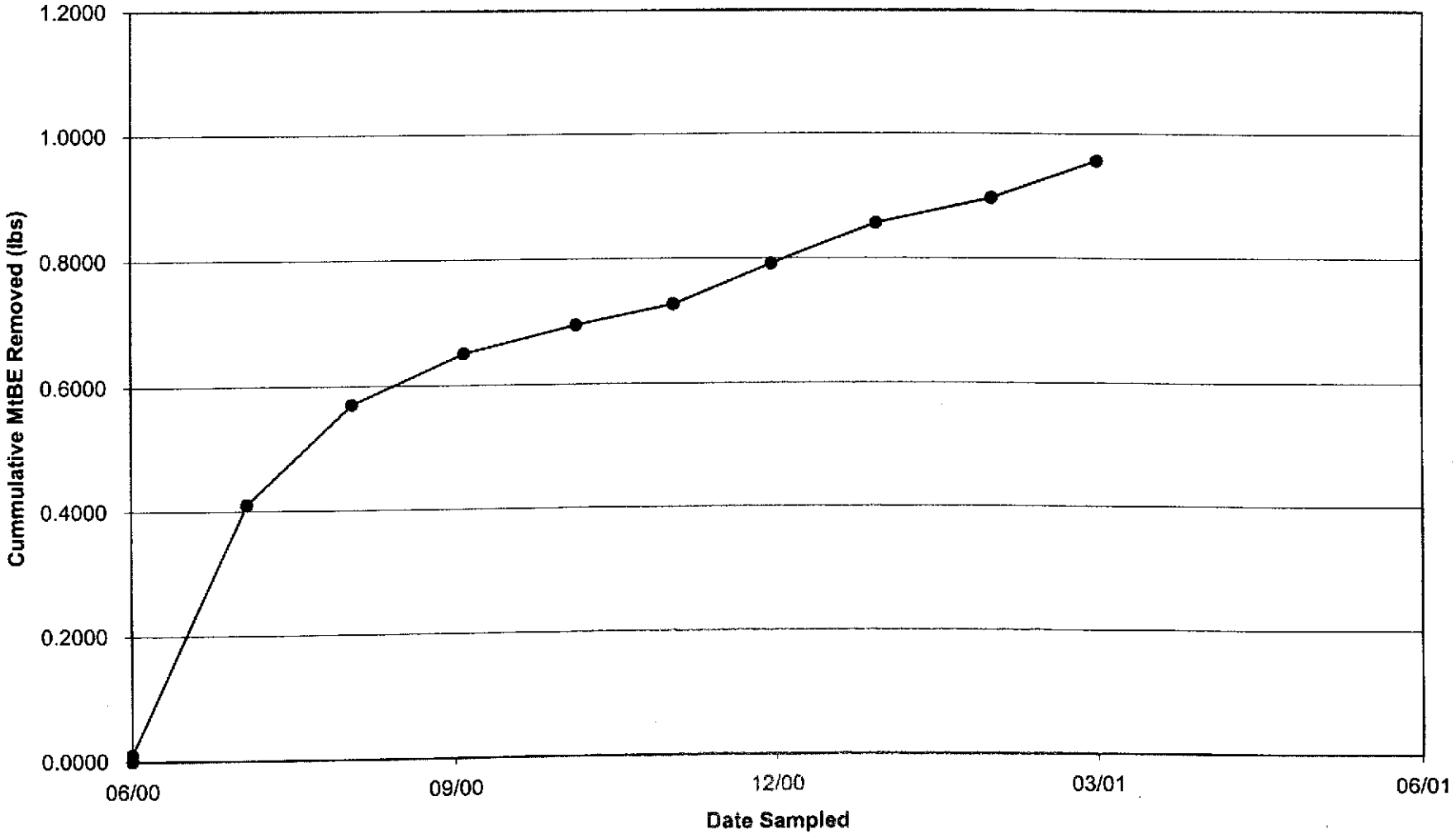


Figure C-3
Groundwater Extraction System Mass Removal Trend
MtBE

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



ATTACHMENT D

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

Sequoia
Analytical

885 Jarvis Drive
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www.sequoialabs.com

22 March, 2001

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

RE: Arco
Sequoia Report: MKC0222

Enclosed are the results of analyses for samples received by the laboratory on 03/09/01 10:27. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Wayne Stevenson
Client Services Manager

CA ELAP Certificate #1210

Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
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FAX (408) 782-6308
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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: Arco 608/821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	03/22/01 10:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Infl	MKC0222-01	Water	03/08/01 13:00	03/09/01 10:27
Mid-1	MKC0222-02	Water	03/08/01 13:05	03/09/01 10:27
Mid-2	MKC0222-03	Water	03/08/01 13:15	03/09/01 10:27
Effl	MKC0222-04	Water	03/08/01 13:25	03/09/01 10:27

Wayne Stevenson, Client Services Manager

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: Arco 608/821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	03/22/01 10:47

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 (MKC0222-01) Water Sampled: 03/08/01 13:00 Received: 03/09/01 10:27									
Purgeable Hydrocarbons	**219**	50.0	ug/l	1	1C12004	03/12/01	03/12/01	DHS LUFT	P-01
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	**6.16**	0.500	"	"	"	"	"	"	
Ethylbenzene	**1.21**	0.500	"	"	"	"	"	"	
Xylenes (total)	**0.682**	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	**81.0**	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*158 %*	*70-130*		"	"	"	"	*S-02*
Mid-1 (MKC0222-02) Water Sampled: 03/08/01 13:05 Received: 03/09/01 10:27									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C12004	03/12/01	03/12/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
ylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*98.1 %*	*70-130*		"	"	"	"	
Mid-2 (MKC0222-03) Water Sampled: 03/08/01 13:15 Received: 03/09/01 10:27									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C12004	03/12/01	03/12/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*98.0 %*	*70-130*		"	"	"	"	

Sequoia Analytical

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: Arco 608/821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	03/22/01 10:47

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 (MKC0222-04) Water Sampled: 03/08/01 13:25 Received: 03/09/01 10:27									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1C12004	03/12/01	03/12/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*97.2 %*		*70-130*	"	"	"	"	

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: Arco 608/821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	03/22/01 10:47

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 1C12004 - EPA 5030B [P/T]										
Blank (1C12004-BLK1)				Prepared & Analyzed: 03/12/01						
Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
Surrogate: a,a,a-Trifluorotoluene	*9.76*		"	*10.0*		*97.6*	*70-130*			
LCS (1C12004-BS1)				Prepared & Analyzed: 03/12/01						
Purgeable Hydrocarbons	218	50.0	ug/l	250		87.2	70-130			
Surrogate: a,a,a-Trifluorotoluene	*14.5*		"	*10.0*		*145*	*70-130*			*S-03*
Matrix Spike (1C12004-MS1)		**Source: MKC0239-01**		Prepared & Analyzed: 03/12/01						
Purgeable Hydrocarbons	228	50.0	ug/l	250	ND	91.2	60-140			
Surrogate: a,a,a-Trifluorotoluene	*15.1*		"	*10.0*		*151*	*70-130*			*S-03*
Matrix Spike Dup (1C12004-MSD1)		**Source: MKC0239-01**		Prepared & Analyzed: 03/12/01						
Purgeable Hydrocarbons	206	50.0	ug/l	250	ND	82.4	60-140	10.1	25	
Surrogate: a,a,a-Trifluorotoluene	*14.7*		"	*10.0*		*147*	*70-130*			*S-03*

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: Arco 608/821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	03/22/01 10:47

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 1C14013 - General Preparation										
Blank (1C14013-BLK1)				Prepared & Analyzed: 03/12/01						
Total Suspended Solids	ND	10.0	mg/l							
Duplicate (1C14013-DUP1)		Source: MKC0180-03		Prepared & Analyzed: 03/12/01						
Total Suspended Solids	ND	10.0	mg/l		ND			0	20	
Batch 1C20032 - General Preparation										
Blank (1C20032-BLK1)				Prepared & Analyzed: 03/20/01						
Chemical Oxygen Demand	ND	20.0	mg/l							
LCS (1C20032-BS1)				Prepared & Analyzed: 03/20/01						
Chemical Oxygen Demand	94.2	20.0	mg/l	100		94.2	80-120			
'atrix Spike (1C20032-MS1)		Source: MKC0327-01		Prepared & Analyzed: 03/20/01						Q-02
Chemical Oxygen Demand	157	20.0	mg/l	100	109	48.0	75-125			
Matrix Spike Dup (1C20032-MSD1)		Source: MKC0327-01		Prepared & Analyzed: 03/20/01						Q-02
Chemical Oxygen Demand	157	20.0	mg/l	100	109	48.0	75-125	0	20	

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: Arco 608/821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	03/22/01 10:47

Notes and Definitions

P-01	Chromatogram Pattern: Gasoline C6-C12
Q-02	The spike recovery for this quality control sample is outside of the established control limits due to interference from the sample matrix. However, the accuracy of the data was validated by a laboratory control sample which was within acceptance limits.
S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.
S-03	The surrogate recovery for this sample is outside of established control limits. Review of associated QC indicates the recovery for this surrogate does not represent an out-of-control condition.
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 — 8201803 Task Order No.

Chain of Custody

ARCO Facility no. 608 | City (Facility) 17601 Hesperian Blvd | Project manager (Consultant) Shaw Garakani | Laboratory name Sequoia

ARCO engineer Mike Whelan | Telephone no. (ARCO) | Telephone no. (Consultant) (408) 4537300 | Fax no. (Consultant) (408) 4379526 | Contract number

Consultant name IT Group | Address (Consultant) 1921 Ringwood Av. 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
INTL	1	3		W		Y	HCL	3801	13:00		X											
MID-1	2	↓		↓		↓	↓		13:05		↓											
MID2	3	↓		↓		↓	↓		13:15		↓											
EFFL	4	5		↓		↓	H2SO4/NP/HCL		13:25		↓										X	X

Method of shipment

Special detection Limit/reporting

Special QA/QC

Remarks

Lab number: NKC0222

Turnaround time:
Priority Rush 1 Business Day
Rush 2 Business Days
Expedited 5 Business Days
Standard 10 Business Days — X

Condition of sample: | Temperature received:

Relinquished by sampler: [signature] | Date 3801 | Time 16:20 | Received by: W Sonnecher 3-8-01 9:59

Relinquished by: W Sonnecher | Date 3/9-01 | Time 10:28 | Received by: [signature] (MH) 3/9/01

Relinquished by | Date | Time | Received by laboratory | Date | Time

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

APPC-3292 (2-91)

Sequoia Analytical

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21 February, 2001

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

RE: Arco
Sequoia Report: MKB0160

Enclosed are the results of analyses for samples received by the laboratory on 02/07/01 14:43. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

for Wayne Stevenson
Client Services Manager

CA ELAP Certificate #1210

Sequoia Analytical

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

Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	02/21/01 14:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
INFL	MKB0160-01	Water	02/06/01 09:10	02/07/01 14:43
MID 1	MKB0160-02	Water	02/06/01 09:15	02/07/01 14:43
MID 2	MKB0160-03	Water	02/06/01 09:20	02/07/01 14:43
EFFL	MKB0160-04	Water	02/06/01 09:25	02/07/01 14:43

Sequoia Analytical - Morgan Hill

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

Wayne Stevenson, Client Services Manager

Sequoia Analytical

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	02/21/01 14:31

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 (MKB0160-01) Water Sampled: 02/06/01 09:10 Received: 02/07/01 14:43									
Purgeable Hydrocarbons	**203**	50.0	ug/l	1	1B08003	02/08/01	02/08/01	DHS LUFT	P-03
Benzene	**0.572**	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	**0.513**	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	**80.5**	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*91.2 %*	*70-130*		"	"	"	"	
MID 1 (MKB0160-02) Water Sampled: 02/06/01 09:15 Received: 02/07/01 14:43									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1B09003	02/08/01	02/08/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*87.2 %*	*70-130*		"	"	"	"	
MID 2 (MKB0160-03) Water Sampled: 02/06/01 09:20 Received: 02/07/01 14:43									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1B09004	02/09/01	02/09/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*86.9 %*	*70-130*		"	"	"	"	

Sequoia Analytical

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	02/21/01 14:31

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 (MKB0160-04) Water Sampled: 02/06/01 09:25 Received: 02/07/01 14:43									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1B09004	02/09/01	02/09/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*83.9 %*	*70-130*		"	"	"	"	

Sequoia Analytical

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	02/21/01 14:31

Conventional Chemistry Parameters by APHA/EPA Methods

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
EFFL (MKB0160-04) Water Sampled: 02/06/01 09:25 Received: 02/07/01 14:43									
Chemical Oxygen Demand	ND	20.0	mg/l	1	1B15030	02/16/01	02/16/01	EPA 410.4	
Total Suspended Solids	**10.7**	10.0	"	"	1B12029	02/09/01	02/12/01	EPA 160.2	

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 821803	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Gurakani	02/21/01 14:31

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 1B08003 - EPA 5030B [P/T]										
Blank (1B08003-BLK1)				Prepared & Analyzed: 02/08/01						
Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
Surrogate: a,a,a-Trifluorotoluene	*8.38*		"	*10.0*		*83.8*	*70-130*			
LCS (1B08003-BS1)				Prepared & Analyzed: 02/08/01						
Purgeable Hydrocarbons	246	50.0	ug/l	250		98.4	70-130			
Surrogate: a,a,a-Trifluorotoluene	*12.8*		"	*10.0*		*128*	*70-130*			
Matrix Spike (1B08003-MS1)	**Source: MKB0175-02**			Prepared & Analyzed: 02/08/01						
urgeable Hydrocarbons	269	50.0	ug/l	250	ND	108	60-140			
Surrogate: a,a,a-Trifluorotoluene	*12.5*		"	*10.0*		*125*	*70-130*			
Matrix Spike Dup (1B08003-MSD1)	**Source: MKB0175-02**			Prepared & Analyzed: 02/08/01						
Purgeable Hydrocarbons	215	50.0	ug/l	250	ND	86.0	60-140	22.3	25	
Surrogate: a,a,a-Trifluorotoluene	*12.7*		"	*10.0*		*127*	*70-130*			
Batch 1B09004 - EPA 5030B [P/T]										
Blank (1B09004-BLK1)				Prepared & Analyzed: 02/09/01						
Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
Surrogate: a,a,a-Trifluorotoluene	*9.59*		"	*10.0*		*95.9*	*70-130*			

Sequoia Analytical

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23 January, 2001

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

RE: Arco
Sequoia Report: MKA0087

Enclosed are the results of analyses for samples received by the laboratory on 01/04/01 10:44. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Wayne Stevenson
Client Services Manager

CA ELAP Certificate #1210

Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 809628	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	01/23/01 10:35

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
INFL	MKA0087-01	Water	01/04/01 06:39	01/04/01 10:44
Mid-1	MKA0087-02	Water	01/04/01 06:36	01/04/01 10:44
Mid-2	MKA0087-03	Water	01/04/01 06:34	01/04/01 10:44
EFFL	MKA0087-04	Water	01/04/01 06:30	01/04/01 10:44

Sequoia Analytical - Morgan Hill

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.

Wayne Stevenson, Client Services Manager

Sequoia Analytical

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

Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 809628	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	01/23/01 10:35

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 (MKA0087-01) Water Sampled: 01/04/01 06:39 Received: 01/04/01 10:44									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1A09010	01/09/01	01/09/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	86.8	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*89.5 %*	*70-130*		"	"	"	"	
Mid-1 (MKA0087-02) Water Sampled: 01/04/01 06:36 Received: 01/04/01 10:44									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1A10002	01/10/01	01/10/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*94.3 %*	*70-130*		"	"	"	"	
Mid-2 (MKA0087-03) Water Sampled: 01/04/01 06:34 Received: 01/04/01 10:44									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1A09011	01/09/01	01/09/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*96.9 %*	*70-130*		"	"	"	"	

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 809628	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	01/23/01 10:35

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 (MKA0087-04) Water Sampled: 01/04/01 06:30 Received: 01/04/01 10:44									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1A10002	01/10/01	01/10/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*93.3 %*		*70-130*		"	"	"	

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 809628	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	01/23/01 10:35

Conventional Chemistry Parameters by APHA/EPA Methods

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
EFFL (MKA0087-04) Water Sampled: 01/04/01 06:30 Received: 01/04/01 10:44									
Chemical Oxygen Demand	ND	20.0	mg/l	1	IA18015	01/17/01	01/18/01	EPA 410.4	
Total Suspended Solids	ND	10.0	"	"	IA11013	01/10/01	01/11/01	EPA 160.2	

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 809628	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	01/23/01 10:35

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 1A09010 - EPA 5030B [P/T]										
Blank (1A09010-BLK1)				Prepared & Analyzed: 01/09/01						
Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
Surrogate: a,a,a-Trifluorotoluene	*7.75*		"	*10.0*		*77.5*	*70-130*			
LCS (1A09010-BS1)				Prepared & Analyzed: 01/09/01						
Purgeable Hydrocarbons	238	50.0	ug/l	250		95.2	70-130			
Surrogate: a,a,a-Trifluorotoluene	*13.2*		"	*10.0*		*132*	*70-130*			*S-02*
Matrix Spike (1A09010-MS1)	**Source: MKA0092-02**			Prepared & Analyzed: 01/09/01						
Purgeable Hydrocarbons	251	50.0	ug/l	250	ND	100	60-140			
Surrogate: a,a,a-Trifluorotoluene	*12.8*		"	*10.0*		*128*	*70-130*			
Matrix Spike Dup (1A09010-MSD1)	**Source: MKA0092-02**			Prepared & Analyzed: 01/09/01						
Purgeable Hydrocarbons	245	50.0	ug/l	250	ND	98.0	60-140	2.42	25	
Surrogate: a,a,a-Trifluorotoluene	*12.1*		"	*10.0*		*121*	*70-130*			
Batch 1A09011 - EPA 5030B [P/T]										
Blank (1A09011-BLK1)				Prepared & Analyzed: 01/09/01						
Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
Surrogate: a,a,a-Trifluorotoluene	*10.2*		"	*10.0*		*102*	*70-130*			

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 809628	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	01/23/01 10:35

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 1A09011 - EPA 5030B [P/T]										
LCS (1A09011-BS1)				Prepared & Analyzed: 01/09/01						
Purgeable Hydrocarbons	209	50.0	ug/l	250		83.6	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.06*		"	*10.0*		*90.6*	*70-130*			
Matrix Spike (1A09011-MS1)		**Source: MKA0100-07**		Prepared & Analyzed: 01/09/01						
Purgeable Hydrocarbons	209	50.0	ug/l	250	ND	83.6	60-140			
Surrogate: a,a,a-Trifluorotoluene	*9.27*		"	*10.0*		*92.7*	*70-130*			
Matrix Spike Dup (1A09011-MSD1)		**Source: MKA0100-07**		Prepared & Analyzed: 01/09/01						
Purgeable Hydrocarbons	206	50.0	ug/l	250	ND	82.4	60-140	1.45	25	
Surrogate: a,a,a-Trifluorotoluene	*9.31*		"	*10.0*		*93.1*	*70-130*			
Batch 1A10002 - EPA 5030B [P/T]										
Blank (1A10002-BLK1)				Prepared & Analyzed: 01/10/01						
Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
Surrogate: a,a,a-Trifluorotoluene	*9.49*		"	*10.0*		*94.9*	*70-130*			
LCS (1A10002-BS1)				Prepared & Analyzed: 01/10/01						
Purgeable Hydrocarbons	248	50.0	ug/l	250		99.2	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.19*		"	*10.0*		*91.9*	*70-130*			
Matrix Spike (1A10002-MS1)		**Source: MKA0089-10**		Prepared & Analyzed: 01/10/01						
Purgeable Hydrocarbons	258	50.0	ug/l	250	ND	103	60-140			
Surrogate: a,a,a-Trifluorotoluene	*9.99*		"	*10.0*		*99.9*	*70-130*			

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 809628	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	01/23/01 10:35

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 1A10002 - EPA 5030B [P/T]										
Matrix Spike Dup (1A10002-MSD1)		**Source: MKA0089-10**		Prepared & Analyzed: 01/10/01						
Purgeable Hydrocarbons	256	50.0	ug/l	250	ND	102	60-140	0.778	25	
Surrogate: a,a,a-Trifluorotoluene	*9.60*		"	*10.0*		*96.0*	*70-130*			

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 809628	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	01/23/01 10:35

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 1A11013 - General Preparation										
Blank (1A11013-BLK1)				Prepared: 01/10/01	Analyzed: 01/11/01					
Total Suspended Solids	ND	10.0	mg/l							
Duplicate (1A11013-DUP1)		Source: MKA0146-03		Prepared: 01/10/01	Analyzed: 01/11/01					
Total Suspended Solids	72.0	10.0	mg/l		64.6			10.8	20	
Batch 1A18015 - General Preparation										
Blank (1A18015-BLK1)				Prepared: 01/17/01	Analyzed: 01/18/01					
Chemical Oxygen Demand	ND	20.0	mg/l							
LCS (1A18015-BS1)				Prepared: 01/17/01	Analyzed: 01/18/01					
Chemical Oxygen Demand	87.6	20.0	mg/l	100		87.6	80-120			
Matrix Spike (1A18015-MS1)		Source: MKA0087-04		Prepared: 01/17/01	Analyzed: 01/18/01					
Chemical Oxygen Demand	163	20.0	mg/l	100	ND	163	75-125			O-02
Matrix Spike Dup (1A18015-MSD1)		Source: MKA0087-04		Prepared: 01/17/01	Analyzed: 01/18/01					
Chemical Oxygen Demand	123	20.0	mg/l	100	ND	123	75-125	28.0	20	O-02

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Pacific Environmental Group (Arco)	Project: Arco	
1921 Ringwood Avenue	Project Number: 809628	**Reported:**
San Jose CA, 95131	Project Manager: Shaw Garakani	01/23/01 10:35

Notes and Definitions

O-02	Due to matrix interference, the sample cannot be accurately quantitated. The reported result is estimated.
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

Chain of Custody

Task Order No. 00008000

ARCO Facility no.	0608
City (Facility)	San Leandro
ARCO engineer	Mike Whelan
Telephone no. (ARCO)	
Consultant name	IT Corp
Address (Consultant)	1921 Ringwood ave
Project manager (Consultant)	Shaw Caratani
Telephone no. (Consultant)	408 453 7300
Fax no. (Consultant)	408 437 9582
Laboratory name	SeQuoia
Contract number	
Method of shipment	
Special detection Limit/reporting	MKA0087
Special QA/QC	
Remarks	
Lab 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	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM5030	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
1	EFFL	3		X		X	HCL	1/4/01	0939		X											
2	MID-1	3		X					0936		X											
3	MID-2	3		X					0934		X											
4	EFFL	3		X					0930		X											
	EFFL	1		X			NP		0930													X
	EFFL	1		X			H_2SO_4		0930												X	X

Condition of sample:

Relinquished by sampler		Date 1/4/01	Time 903
Relinquished by		Date 1/4/01	Time
Relinquished by		Date	Time

Temperature received:

Received by		1/4/01	925
Received by		1/4/01	1044
Received by laboratory	Date	Time	

Turnaround time

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

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

92 (2-91)

Work Order #_____

FIELD SERVICES / ROUTINE O&M REQUEST

Request Frequency:Monthly

Identification

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.:	Mike Whelan
Revision Date:	March 27, 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,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 2 and 4

Field Technician Response:

Completed by:_____ Date: 3.24.01
Arrival time:_____ Departure time:_____
Sample this visit?:_____ Engineer contacted?_____

Date:_____

Groundwater Extraction & Treatment System
ARCO Service Station 0608
17601 Hesperian Boulevard
821803 (00008000)
March 27, 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 (Monthly)

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

ELECTRIC METER READING (kw hrs)	21064	HOUR METER READING (hrs)	3508.83

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
TOTALIZER (gallons)		1741170
FILTER INLET PRESSURE (psig)		(ideal range: 8 to 12 psig) 10 psi
CARBON #1 INLET PRESSURE (psig)		(ideal range: 5 to 9 psig) 7 psi
CARBON #2 INLET PRESSURE (psig)		(ideal range: 1 to 4 psig) 0 psi
DISCHARGE PRESSURE (psig)		(ideal range: 0 to 2 psig) 0

PART B: COMMENTS High Pressure on Filter

Psps at start up 6.5 psps - Pumping 5.6
Re Program #'s to the Auto Dialer
Check Proper Operation.

Pedro

FIELD SERVICES / O&M REQUEST

Work Order # 6825

SITE INFORMATION FORM

Identification

Project # 821803 (00008000)

Station # ARCO 608

Site Address: 17601 Hesperian Blvd. San Lorenzo CA

County:

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 2/27/01

Ideal field date(s): Week of 3/5/01

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)

[illegible]
Please Perform Monthly [illegible] and sampling this
week of 3/5/01. [illegible]
we need to get analyticals [illegible]
[illegible]

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

TASK Completed

☐ Samples taken ☐ Samples not required ☐ Soil Vapor ☐ Groundwater

☐ Weekly ☐ Semi-Monthly ☐ Monthly ☐ Quarterly ☐ Semi-Annual

PACIIFIC ENVIRONMENTAL GROUP, INC.

Completed by: [illegible] Date: [illegible]

Checked by:

White Copy - Originator Yellow Copy - O & M Tech Pink Copy - File

Work Order #_____

FIELD SERVICES / ROUTINE O&M REQUEST

Identification **Request Frequency:Monthly**

Project #	821803 (0809628)
Station #	0608
Site Address:	17601 Hesperian Blvd @ Hacienda Avenue
County:	Alameda
Project Manager:	Shaw Garakani
Requestor:	Don Waterpaugh
Technician:	Pedro Ruiz
Client:	ARCO
Client P.O.C.:	Mike Whelan
Revision Date:	January 31, 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,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 2 and 4

Field Technician Responsibilities:

Completed by:_____ Date: 3-8-01
Arrival time:_____ Departure time:_____
Sample this visit?:_____ Engineer contacted?_____

Date:_____

Groundwater Extraction & Treatment System
ARCO Service Station 0608
17601 Hesperian Boulevard
821803 (00008000)
January 5, 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 (Monthly)

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

ELECTRIC METER READING (kw hrs)	21757	HOUR METER READING (hrs)	347760

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
TOTALIZER (gallons)	1698310	1698800
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) 4
DISCHARGE PRESSURE (psig)		(ideal range: 0 to 2 psig) 0

3-9-01
170196
10
6
5
0

PART B: COMMENTS High Pressure on Filter
Security Cable at the pump - E-1A
Swap, Due To Corrosion, Re-Attach Cable & Secure Clamps

PART C: WELL DATA (Monthly)

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

WELL	DTW (TOB)	TOTALIZER (gallons)	FLOWRATE (gpm)	COMMENTS/ ADJUSTMENTS
E-1A	2150 ⇒ 2380			
UST-A	10.85 TOC 11.05 TOB	N/A 11.14 TD	N/A	
UST-B	10.20 TOC 10.80 TOB	N/A 11.23 TD	N/A	
DEEP	10.00/10.62	N/A	N/A	
Shallow	9.95/10.48			

PART D: SAMPLING (Monthly)

SAMPLE	ANALYSIS		COMPLETED
INFLUENT	TPH-gasoline, BTEX compounds, MtBE	13:00	PS
EFFLUENT	TPH-gasoline, BTEX compounds, MtBE COD, TSS	13:25	PS
MID-1	TPH-gasoline, BTEX compounds, MtBE	13:05	PS
MID-2	TPH-gasoline, BTEX compounds, MtBE	13:15	PS

PART E: READINGS (Monthly)

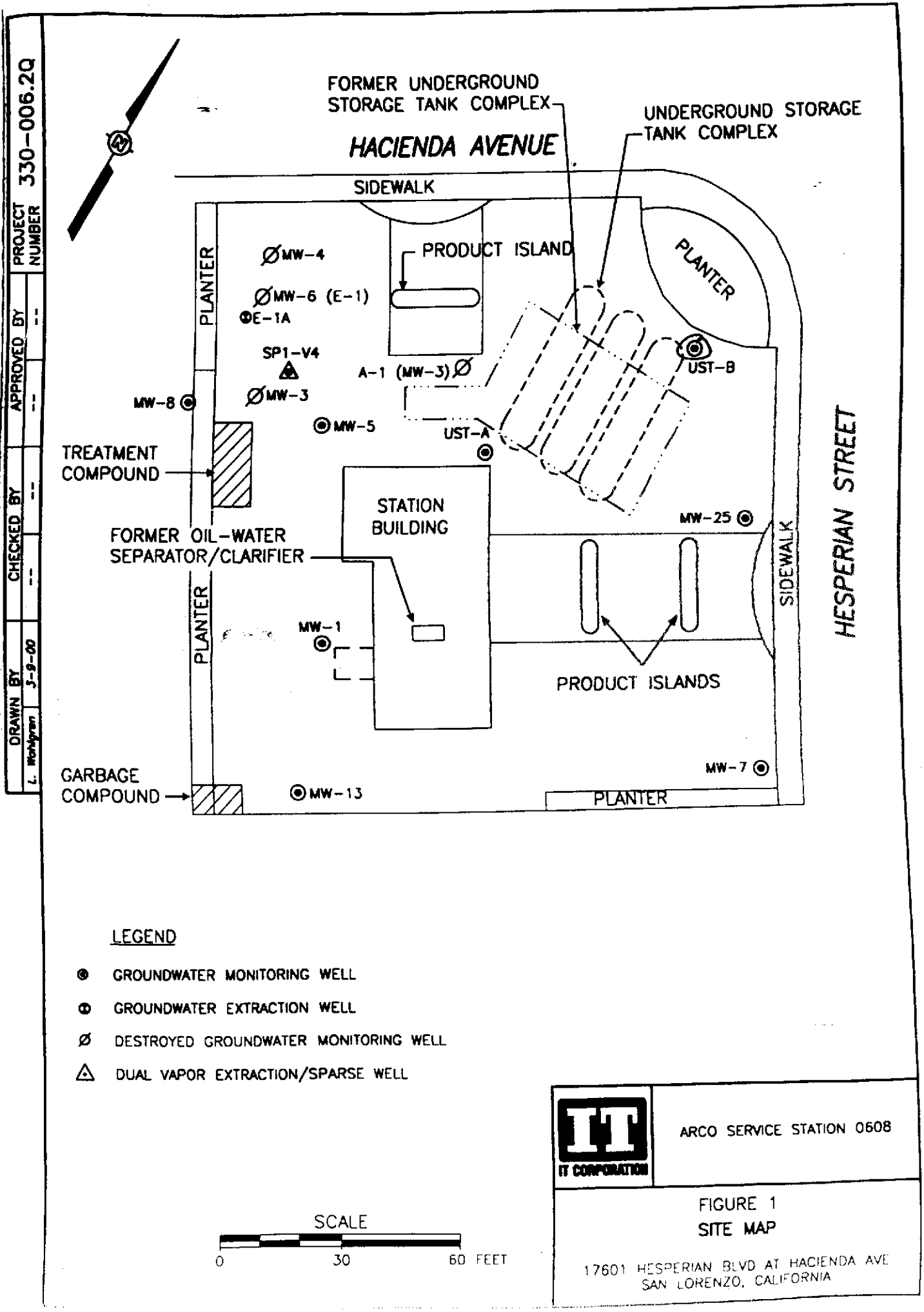
	TEMP (^{O}F)	CONDUCTIVITY (umhos)	pH (units)	DISSOLVED OXYGEN (ppm)
EFFLUENT	57.0	1290	7.04	1.4

PART F: SYSTEM MAINTENANCE I (Monthly)

NUMBER OF SPARE FILTERS ON SITE?	14	CHANGE FILTERS? (if necessary)	YES
PUMP AMP DRAW	5.8	H202 injection well EA-1 (if necessary)	
SWEEP ENCLOSURE	N/A		

PART G: SYSTEM MAINTENANCE II (Quarterly)

TEST ALARM SWITCHES		BACKFLUSH CARBONS	
CLEAN TOTALIZERS			


PROJECT NUMBER 330-006.2Q
APPROVED BY --
CHECKED BY --
DRAWN BY L. Montgomery 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-3
MW-8
MW-5
UST-A
TREATMENT COMPOUND
STATION BUILDING
MW-25
FORMER OIL-WATER SEPARATOR/CLARIFIER
HESPERIAN STREET
SIDEWALK
PLANTER
MW-1
PRODUCT ISLANDS
MW-7
GARBAGE COMPOUND
MW-13
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

ARCO Pro ts Company Division of AtlanticRichfieldCompany

8021803 **Task Order No.**

Chain of Custody

ARCO Facility no.	608
City (Facility)	17601 HESPERIAN BLVD
Project manager (Consultant)	SHAW GARAKANI
ARCO engineer	MIKE WHELAN
Telephone no. (ARCO)	
Telephone no. (Consultant)	408) 4537300
Fax no. (Consultant)	408) 4379526
Consultant name	IT GROUP
Address (Consultant)	1921 RINGWOOD AV. SAN JOSE CA
Laboratory name	SEQUOIA
Contract number	
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 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	3801	13:00		X											
MID1		↓		↓		↓	↓		13:05		↓											
MID2		↓					H2SO4		13:15													
EFFL		5					NP/HCL		13:25		↓										X	X

Special detection Limit/reporting

Special QA/QC

Remarks

Lab number

Condition of sample:		Temperature received:	
Relinquished by sampler [signature]	Date 3801 Time 16:20	Received by	
Relinquished by	Date Time	Received by	
Relinquished by	Date Time	Received by laboratory	Date Time

Turnaround time

Priority Rush 1 Business Day ☐

Rush 2 Business Days ☐

Expedited 5 Business Days ☐

Standard 10 Business Days ☑

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

APC 3292 (2-91)

Work Order #_____

FIELD SERVICES / ROUTINE O&M REQUEST

Identification **Request Frequency: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.:	Mike Whelan
Revision Date:	January 31, 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,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 2 and 4

Field Technician Response:

Completed by: Pedro Ruiz Date: 2/6/01
Arrival time:_____ Departure time:_____
Sample this visit?: yes Engineer contacted? yes

Date:_____

Groundwater Extraction & Treatment System
ARCO Service Station 0608
17601 Hesperian Boulevard
821803 (00008000)
January 5, 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 (Monthly)

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

ELECTRIC METER READING (kw hrs)	21611	HOUR METER READING (hrs)	3455640

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
TOTALIZER (gallons)	1672110	1672330
FILTER INLET PRESSURE (psig)		(ideal range: 8 to 12 psig) 10 psi
CARBON #1 INLET PRESSURE (psig)		(ideal range: 5 to 9 psig) 7 psi
CARBON #2 INLET PRESSURE (psig)		(ideal range: 1 to 4 psig) 4 psi
DISCHARGE PRESSURE (psig)		(ideal range: 0 to 2 psig) 0

PART B: COMMENTS System was Down Upon Arrival Due to High Pressure on Filter Bag. Data Diver was Not Reseted.

PART C: WELL DATA (Monthly)

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

			FLOWRATE (gpm)	COMMENTS/ ADJUSTMENTS
E-1A	ToB	18.30 22.70			DRAW DOWN
UST-A	ToC ToB	11.11 11.25	N/A	N/A	
UST-B	ToC ToB	11.17 11.30	N/A	N/A	
SP1-[redacted]	ToC ToB	11.00 11.50 } Shallow	N/A	N/A	
V-4	ToC ToB	10.97 11.01 } DEEP			

PART D: SAMPLING (Monthly)

SAMPLE	ANALYSIS		COMPLETED
INFLUENT	TPH-gasoline, BTEX compounds, MtBE	9:10	RE
EFFLUENT	TPH-gasoline, BTEX compounds, MtBE COD, TSS	9:25	RE
MID-1	TPH-gasoline, BTEX compounds, MtBE	9:15	RE
MID-2	TPH-gasoline, BTEX compounds, MtBE	9:20	RE

PART E: READINGS (Monthly)

	TEMP (°F)	CONDUCTIVITY (umhos)	pH (units)	DISSOLVED OXYGEN (ppm)
EFFLUENT	506	1010	7.03	2.2

PART F: SYSTEM MAINTENANCE I (Monthly)

NUMBER OF SPARE FILTERS ON SITE?	15	CHANGE FILTERS? (if necessary)	YES
PUMP AMP DRAW	60.5	H202 injection well .EA-1 (if necessary)	
SWEEP ENCLOSURE	YES		

PART G: SYSTEM MAINTENANCE II (Quarterly)

TEST ALARM SWITCHES		BACKFLUSH CARBONS	
CLEAN TOTALIZERS			

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

Division of AtlanticRichfieldCompany

Chain of Custody

ARCO Facility no.	0608
City (Facility)	17601 Hesperian Blvd San Lorenzo
Project manager (Consultant)	Shaw Garakani
Laboratory name	Sequoia
ARCO engineer	Mike Whelan
Telephone no. (ARCO)	
Telephone no. (Consultant)	408) 453 7300
Fax no. (Consultant)	408) 437 9526
Contract number	
Consultant name	IT Group
Address (Consultant)	1921 Ringwood Av San Jose CA 95131

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 [X] 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
IWFL		3		W		4	HCL	2-6-01	9:10		X	X										
MI01		↓		↓		↓	↓	↓	9:15		↓	↓										
MI02		↓		↓		↓	↓	↓	9:20		↓	↓										
EFFL		6		↓		↓	HCL/HNO3 H2SO4	↓	9:25		↓	↓									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 [X]

Condition of sample:

Temperature received:

	Date	Time		Date	Time
Relinquished by sampler [signature]	2-6-01	13:10	Received by		
Relinquished by			Received by		
Relinquished by			Received by laboratory		

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

APC-3292 (2-91)

Work Order #_____

FIELD SERVICES / ROUTINE O&M REQUEST

Identification **Request Frequency:Monthly**

Project #	809628 (330-006) 00008000
Station #	0608
Site Address:	17601 Hesperian Blvd @ Hacienda Avenue
County:	Alameda
Project Manager:	Shaw Garakani
Requestor:	Don Watenpaugh
Client:	ARCO
Client P.O.C.:	Mike Whelan
Revision Date:	December 20, 2000
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,C,F)	Semi-Monthly				
GWE (D,E)	Monthly†				
GWE (G)	Quarterly				

† = sampling to be performed

Definition of frequencies:
weekly = NA
monthly = once a month on week 2
quarterly = on months 3,6,9,12
semi-monthly = twice a month on week 2 and 4

Field Technician Response:

Completed by: MG Date: 1/4/01
Arrival time: 8:00 Departure time: 8:00
Sample this visit?: Yes Engineer contacted? Yes

Date: 1/4/01

Groundwater Extraction & Treatment System
ARCO Service Station 0608
17601 Hesperian Boulevard
809628 (330-006-20)
December 20, 2000

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? Yes (if no, specify reason in comments)

ELECTRIC METER READING (kw hrs)	21202	HOUR METER READING (hrs)	33924

MEASUREMENT	ON ARRIVAL	ON DEPARTURE
TOTALIZER (gallons)	1595340	
FILTER INLET PRESSURE (psig)	11	(ideal range: 8 to 12 psig) 7
CARBON #1 INLET PRESSURE (psig)	7	(ideal range: 5 to 9 psig) 7
CARBON #2 INLET PRESSURE (psig)	6	(ideal range: 1 to 4 psig) 6
DISCHARGE PRESSURE (psig)	1	(ideal range: 0 to 2 psig) 1

PART B: COMMENTS 7:15 Turned syst. off To wire high Level alarm switch, 7:33 Turned syst. Back on.

1/4/01

PART C: WELL DATA (Semi-Monthly)

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

WELL	DTW (TOB)	TOTALIZER (gallons)	FLOWRATE (gpm)	COMMENTS/ ADJUSTMENTS
E-1A	21.6	n/a	n/a	no meter @ well
UST-A	Dry @ 11.2	N/A	N/A	
UST-B	Dry @ 11.7	N/A	N/A	
SP1-V4	11.95, 12.02	N/A	N/A	

TD: 13.0

PART D: SAMPLING (Monthly)

SAMPLE	ANALYSIS	COMPLETED
INFLUENT	TPH-gasoline, BTEX compounds, MtBE	6:39
EFFLUENT	TPH-gasoline, BTEX compounds, MtBE COD, TSS, H_2SO_4 Plastic NP	6:30
MID-1	TPH-gasoline, BTEX compounds, MtBE	6:36
MID-2	TPH-gasoline, BTEX compounds, MtBE	6:34

PART E: READINGS (Monthly)

	TEMP (°F)	CONDUCTIVITY (umhos)	pH (units)	DISSOLVED OXYGEN (ppm)
EFFLUENT	49.7	1391	7.0	3

PART F: SYSTEM MAINTENANCE I (Semi-Monthly)

NUMBER OF SPARE FILTERS ON SITE?	~15	CHANGE FILTERS? (if necessary)	yes
PUMP AMP DRAW	5.7	H202 injection well EA-1 (if necessary)	no
SWEEP ENCLOSURE	✓		

PART G: SYSTEM MAINTENANCE II (Quarterly)

TEST ALARM SWITCHES		BACKFLUSH CARBONS	
CLEAN TOTALIZERS			

Chain of Custody

ARCO Products Company Division of AtlanticRichfieldCompany

Task Order No. 00008000

ARCO Facility no.	6608
City (Facility)	San Lorenzo
ARCO engineer	Mike Whelan
Telephone no. (ARCO)	
Consultant name	IT Corp
Project manager (Consultant)	Shaw Garakani
Telephone no (Consultant)	408 453 7300
Fax no (Consultant)	408 437 9526
Address (Consultant)	1921 Ringswood Ave
Laboratory name	Sequoia
Contract number	
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 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	Metals VOA	CAM Metals EPA 6010/7000 TTLC/STLC	Lead Org/DHS Lead EPA 7420/7421	COD	TSS
Inf-1		3		X		Y	HCL	1/4/01	1037		X											
Mid-1		3		X					1126		X											
Mid-2		3		X					1041		X											
Eff-1		3		X					1050		X											
Eff-1		1		X			NP		1130													X
Eff-1		1		X			[illegible]		1150												X	

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 1/4/01 Time 1030

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