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A Member of The IT Group

Quarterly Groundwater Monitoring Report
Third Quarter 1999

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

STID 779

RESPONDED 3/16/2000

Prepared for

Mr. Michael Whelan
ARCO Products Company

March 10, 2000

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Prepared by

IT Corporation
1921 Ringwood Avenue
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Project 330-006.2P

Shaw Garakani
Project Engineer

Debra J. Moser
Senior Geologist
CEG 1293

REGISTERED GEOLOGIST
DEBRA J. MOSER
No. 1293
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Date: March 10, 2000
Quarter: 3Q99

ARCO QUARTERLY GROUNDWATER MONITORING REPORT

Facility No.: 0608 Address: 17601 Hesperian Boulevard at Hacienda Avenue
San Lorenzo, California

ARCO Environmental Engineer: Michael Whelan
Consulting Co./Contact Person: IT Corporation (IT)/formerly Pacific Environmental Group, Inc. (PEG) – Debra J. Moser
Consultant Project No.: 330-006.2P
Primary Agency/Regulatory ID No.: Alameda County Health Care Services Agency
Monitoring Events Performed to Date: 42

WORK PERFORMED THIS QUARTER (Third - 1999):

1. Submitted second quarter 1999 groundwater monitoring report.
2. Performed third quarter 1999 groundwater monitoring event on September 15 and 16, 1999.
3. Prepared third quarter 1999 groundwater monitoring report.
4. Continued monthly payments to homeowners for not using domestic irrigation wells.
5. Continued homeowner quarterly monitoring results notification program.

WORK PROPOSED FOR NEXT QUARTER (Fourth – 1999):

1. Submit third quarter 1999 groundwater monitoring report.
2. Perform fourth quarter 1999 groundwater monitoring event.
3. Prepare fourth quarter 1999 groundwater monitoring report.
4. Continue monthly payments to homeowners for not using domestic irrigation wells.
5. Continue homeowner quarterly monitoring results notification program.

Current Phase of Project:	Monitoring	(Assmnt, Remed., etc.)
Frequency of Groundwater Sampling:	Quarterly	(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:	Natural Attenuation	(SVE/Sparge/FP Removal, etc.)
Approximate Depth to Groundwater:	9.98 to 12.70	(Measure Feet)
Groundwater Gradient:	West-Southwest	(Direction)
	0.003	(Magnitude)
Period TPPH-g/Benzene Removed:	0.0/0.0	(gallons)
Cumulative TPPH-g/Benzene Removed:	0.8/0.04	(gallons)

DISCUSSION:

- Please refer to PEG's *Quarterly Groundwater Monitoring Report – Fourth Quarter 1996* for historical groundwater elevation and analytical data.
- In a phone message dated June 9, 1998, the Alameda County Health Care Services Agency (ACHCSA) representative indicated the methyl tert-butyl ether (MtBE) Risk Assessment had been approved, and the site would be reviewed for case closure.
- As indicated in PEG's *Quarterly Groundwater Monitoring Report – Fourth Quarter 1998,* effective second quarter 1999, the frequency of groundwater monitoring has been reduced as follows:

  Wells MW-7, MW-13, MW-19, and MW-24 are removed from the monitoring program since they are located upgradient or crossgradient from the site, and the extent of the plume has been defined by other nearby monitoring wells. The frequency of groundwater sampling at Wells MW-14, MW-18, MW-21, MW-23, and MW-26 is reduced from quarterly to annually during the first quarter. These wells are either located crossgradient from the site, or the extent of the plume has been defined by other nearby monitoring wells.

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
- Figure 3 - TPPH-g/Benzene Concentration Map
- Attachment A - Field and Laboratory Procedures
- Attachment B - Certified Analytical Reports, Chain-of-Custody Documentation, and Field Data Sheets

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
Dr. Charles Lapin, ARCO Products Company, 444 South Flower Street, ALF 3470, Los Angeles, CA 90071

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	a	a	a	a	Quarterly
633H	a	a	a	a	Quarterly
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 (continued)
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
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, MtBE, and Dissolved Oxygen)

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
	09/15,16/1999		12.70	21.29	139	**<0.50**	<0.50	<0.50	<0.50	**184**	2.4
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	<5.0	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

Table 2 (continued)
Groundwater Elevation and Analytical Data
Groundwater Monitoring Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, MtBE, and Dissolved Oxygen)

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-8	09/09,10/97 a		--	--	--	--	--	--	--	48	--
(cont.)	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
	09/15,16/1999		11.65	21.14	<500	**<5.0**	<5.0	<5.0	<5.0	**2,380**	2.4
MW-9	03/13,15/96	32.11	7.65	24.46	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96		9.67	22.44	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28,29/96		10.78	21.33	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96		10.24	21.87	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31-04/01/97		9.95	22.16	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97		10.85	21.26	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09,10/97		10.87	21.24	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.0
	11/24,25/97		10.70	21.41	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.6
	03/19,20/98		8.63	23.48	<50	<0.50	<0.50	<0.50	<0.50	58	4.8
	06/04/98		9.35	22.76	<50	<0.30	<0.30	<0.30	<0.60	<10	2.0
	09/21,22/98		10.55	21.56	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.8
	12/14,15/98		9.98	22.13	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.2
	03/15,16/99		9.10	23.01	<50	<0.50	<0.50	<0.50	<0.50	<5.0	2.0
	06/14,15/99		10.32	21.79	<50	<0.50	<0.50	<0.50	<0.50	3.27	2.2
	09/15,16/1999		10.83	21.28	<50	<0.50	<0.50	<0.50	<0.50	<5.0	3.2
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

Table 2 (continued)
Groundwater Elevation and Analytical Data
Groundwater Monitoring Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, MtBE, and Dissolved Oxygen)

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-10	12/14/98		10.18	21.49	828	<1.0	<1.0	3.39	<1.0	152	0.4
(cont.)	03/15,16/99		9.30	22.37	910	17.6	1.3	5.24	<1.0	268	0.0
	06/14,15/99		10.57	21.10	643	<0.50	0.761	1.13	1.35	232	NM
	09/15,16/1999		11.03	20.64	655	**<1.25**	1.26	<1.25	<1.25	**315**	5.8
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
E-1A ††	03/13,14/96	33.06	10.35	22.71	2,700	38	<5.0	130	6.2	NA	NM
(MW-12)	05/28,29/96		11.50	21.56	1,400	410	18	55	5.5	NA	NM
	08/28/96		11.70	21.36	NS	NS	NS	NS	NS	NS	NM
	11/25,26/96		11.18	21.88	4,300	13	<5.0	100	20	220	NM
	03/31/97 †		12.65	20.41	1,900	7.9	<2.0	62	3.5	140	NM
	06/25/97		11.82	21.24	4,900	21	<5.0	53	6.8	160	NM
	09/09,10/97		11.85	21.21	3,200	9.0	<5.0	45	<5.0	85	2.0
	09/09,10/97 a		--	--	--	--	--	--	--	70	--
	11/24,25/97		11.75	21.31	2,000	10	<2.5	42	2.8	65	1.0
	03/19,20/98		9.65	23.41	11,000	1,300	<0.50	550	380	220	6.2
	06/04/98 b		10.47	22.59	4,500	3.3	0.92	41	4.0	51	1.5
	09/21,22/98		11.60	21.46	3,300	1.7	<0.50	29	3.6	52	1.8
	12/14,15/98		11.10	21.96	3,100	21	6.7	28	<5.0	140	1.0
	03/15,16/99		10.25	22.81	3,900	24.5	<20	41.2	<20	296	1.0
	06/14,15/99		11.47	21.59	**5,090**	**<5.0**	<5.0	6.01	<5.0	**234**	1.4

Table 2 (continued)
Groundwater Elevation and Analytical Data
Groundwater Monitoring Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, MtBE, and Dissolved Oxygen)

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	11/24,25/97		Well Inaccessible								
(cont.)	03/19/98		9.15	22.26	<50	<0.50	<0.50	<0.50	<0.50	5.3	2.2
	06/04/98		Well Inaccessible								
	09/21,22/98		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		Well Inaccessible								
	06/14,15/99		Well Inaccessible								
	09/15, 16/99		Well Inaccessible								
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
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

Table 2 (continued)
Groundwater Elevation and Analytical Data
Groundwater Monitoring Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, MtBE, and Dissolved Oxygen)

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	09/09,10/97		13.46	20.92	<50	<0.50	<0.50	<0.50	<0.50	<2.5	5.0
(cont.)	11/24,25/97		13.25	21.13	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/19,20/98		11.32	23.06	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.8
	06/04/98		12.00	22.38	<50	<0.30	<0.30	<0.30	<0.60	<10	0.8
	09/21,22/98		13.13	21.25	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.4
	12/14,15/98		12.53	21.85	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.2
	03/15,16/99		11.58	22.80	<50	<0.50	<0.50	<0.50	<0.50	<5.0	0.0
	06/14,15/99		---------- Removed From Gauging and Sampling Program ----------								
MW-25	03/13,14/96	34.12	9.61	24.51	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28,29/96		11.30	22.82	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28,29/96		12.32	21.80	<50	<0.50	<0.50	<0.50	<0.50	51	NM
	11/25/96		11.83	22.29	<50	<0.50	<0.50	<0.50	<0.50	110	NM
	03/31-04/01/97		11.55	22.57	<50	<0.50	<0.50	<0.50	<0.50	39	NM
	06/25/97		14.57	19.55	<50	<0.50	<0.50	<0.50	<0.50	49	NM
	09/09,10/97		12.45	21.67	<50	<0.50	<0.50	<0.50	<0.50	78	1.0
	09/09,10/97 a		--	--	--	--	--	--	--	79	--
	11/24,25/97		12.30	21.82	<50	<0.50	<0.50	<0.50	<0.50	130	0.0
	03/19,20/98		10.18	23.94	<50	<0.50	<0.50	<0.50	<0.50	96	1.8
	06/04/98		11.00	23.12	<50	<0.30	<0.30	<0.30	<0.60	44	0.8
	09/21,22/98		12.13	21.99	<50	<0.50	<0.50	<0.50	<0.50	150	0.4
	12/14,15/98		11.60	22.52	<50	<0.50	<0.50	<0.50	<0.50	44	1.0
	03/15,16/99		10.78	23.34	<50	<0.50	<0.50	<0.50	<0.50	26.6	2.0
	06/14,15/99		11.97	22.15	<50	<0.50	<0.50	<0.50	<0.50	98.9	2.2
	09/15,16/1999		12.34	21.78	<50	<0.50	<0.50	<0.50	<0.50	66.4	NM
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

Table 2 (continued)
Groundwater Elevation and Analytical Data
Groundwater Monitoring Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, MtBE, and Dissolved Oxygen)

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-26	12/14,15/98		11.83	21.88	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.0
(cont.)	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 ----------						

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.

Table 3
Groundwater Analytical Data
Domestic Irrigation Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, MtBE, and Dissolved Oxygen)

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
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
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
	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
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

Table 3 (continued)
Groundwater Analytical Data
Domestic Irrigation Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, MtBE, and Dissolved Oxygen)

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)
	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
642 H	03/31/97	NS	NS	NS	NS	NS	NS	NM
(cont.)	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
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
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
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

Table 3 (continued)
Groundwater Analytical Data
Domestic Irrigation Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, MtBE, and Dissolved Oxygen)

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

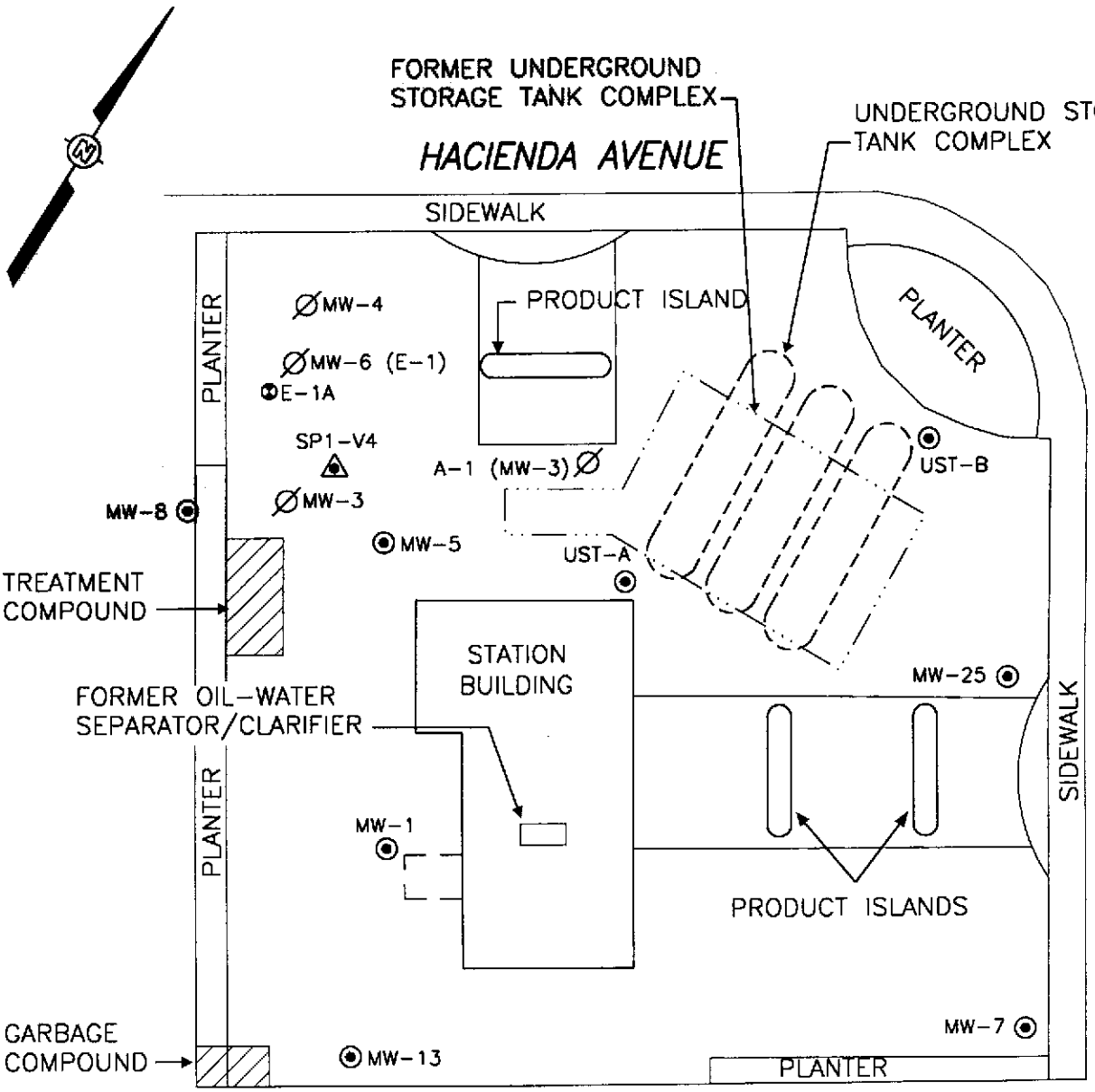
Well Address	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MtBE (ppb)	Dissolved Oxygen (ppm)
17349 VM	09/09/97	--	--	--	--	--	34 c	NM
(cont.)	11/24/97	240	<1.0	1.1	<1.0	1.4	53	2.4
	11/24/97	--	--	--	--	--	33 c†	NM
	03/19/98	1,300	14	<0.50	<0.50	1.2	250	1.0
	03/19/98	--	--	--	--	--	27 c	NM
	06/03/98	860	8.7	<0.50	0.7	8.0	38	4.9
	07/29/98	860	20	2.1	<1.2	<1.2	27	NM
	07/29/98	--	--	--	--	--	25 c	NM
	09/21/98	200	<0.50	<0.50	<0.50	14	14	5.2
	12/14/98	254	<0.50	6.92	0.604	1.58	21.7	1.0
	03/15/99	172	1.35	<0.50	<0.50	<0.50	24.2	3.6
	06/14/99	91	<0.50	3.53	<0.50	<0.50	88.3	2.8
	09/15/99 a	133	<0.50	<0.50	<0.50	<0.50	**184**	2.2
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
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
	07/29/98	--	--	--	--	--	1,100 c	NM
	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
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

Table 3 (continued)
Groundwater Analytical Data
Domestic Irrigation Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, MtBE, and Dissolved Oxygen)

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)
17393 VM	11/26/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
(cont.)	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.
ŧ = 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.
Note: Homeowners are contacted 1 week prior to sampling event.



PROJECT NUMBER 330-006.2Q

DRAWN BY	CHECKED BY	APPROVED 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

SANJOSE/ N:\cad\Drawings\330\006\Sitemap.dwg Mon, 17/Jan/00 04:22pm lwahlgren

DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
L. Wahlgren 3-9-00			330-006.2P

LEGEND

- MW-7 ⊙ GROUNDWATER MONITORING WELL
- SP-1/V-4 △ DUAL COMPLETION AIR SPARGING/SOIL VAPOR EXTRACTION WELL
- MW-20 ⌀ DESTROYED WELL
- E-1A ■ GROUNDWATER EXTRACTION WELL
- 590H ■ DOMESTIC IRRIGATION WELL
- (20.48) GROUNDWATER ELEVATION IN (FT-MSL); 9-15-99
- 21.0 GROUNDWATER ELEVATION CONTOUR (FT-MSL);
- * WELL INACCESSIBLE
- ** REMOVED FROM GAUGING AND SAMPLING PROGRAM

APPROXIMATE DIRECTION OR GROUNDWATER FLOW

APPROXIMATE GRADIENT = 0.003

VIA MANZANAS
POTRERO COURT
MW-20 ⌀
MW-19 **
APARTMENTS
APARTMENTS
VIA ARRIBA
SHOPS
HESPERIAN BOULEVARD
RESTAURANT
VIA MEDIA
VIA MAGDALENA
VIA FLORES
CHURCH AND SCHOOL
17200VM
MW-17 ⌀
(20.48) MW-14
MW-24 **
RESIDENTIAL
MW-26 (21.61)
RESTAURANT
MW-21 (17.79)
17197VM ■
MW-18 (18.74)
17203VM ■
17302VM ■
17372VM ■
MW-9 (21.28)
(21.16) E-1A
(21.78) MW-25
(21.14) MW-8
MW-5 (21.29)
MW-7 **
SP-1/V-4 △
590H ■
MW-13 **
18.0
19.0
20.0
21.0
(19.40) MW-16
633H ■
(20.64) MW-10
SP-2/V-5 △
MW-15 *
MW-11 (20.86)
17349VM ■
17371VM ■
MW-22 (17.83)
VIA ENCINAS COURT
17348VE ■
17393VM ⌀
634H ■
642
675H ■
MW-23 (18.51)
HACIENDA AVENUE
RESIDENTIAL
SHOPS
VIA ALAMO

SCALE
0 150 300

IT CORPORATION

ARCO SERVICE STATION 0608

FIGURE 2
GROUNDWATER ELEVATION CONTOUR MAP

17601 HESPERIAN BLVD AT HACIENDA AVE
SAN LORENZO, CALIFORNIA

SANJOSE/CADD: \\Sjosn1\VOL1\Drawings\360\014\Sjgwc.dwg Mon, 23/Aug/99 11:02am kblack

PROJECT NUMBER 330-006.2P
APPROVED BY
CHECKED BY
DRAWN BY J-9-00
L. Wohlgren

VIA MANZANAS
VIA MEDIA
VIA FLORES
VIA MAGDALENA
VIA ARRIBA
POTRERO COURT
VIA ENCINAS COURT
HACIENDA AVENUE
VIA ALAMO
HESPERIAN BOULEVARD

APARTMENTS
APARTMENTS
SHOPS
RESTAURANT
CHURCH AND SCHOOL
RESIDENTIAL
RESIDENTIAL
RESTAURANT
SHOPS
RESIDENTIAL

MW-20 Ø
MW-19†
MW-21**
MW-22 <50 / <0.5
MW-18**
MW-17 Ø
MW-14**
MW-24†
MW-26**
MW-16 <50 / <0.5
MW-15*
MW-10 655 / <1.25
MW-8 <500 / <5
MW-9 <50 / <0.5
E-1A 2,200 / 7.93
MW-25 <50 / <0.5
SP-1/V-4
SP-2/V-5
MW-5 130 / <0.5
MW-7†
MW-13†
MW-11 <50 / <0.5
MW-23**

17197 <50 / <0.5
17203 NS
17302 NS
17372 <50 / <0.5
633H <50 / <0.5
17349 133 / <0.5
17371
17348 NS
17393 Ø
675 NS
634 NS
642 <50 / <0.5
590 NS

LEGEND

MW-7 ⊙ GROUNDWATER MONITORING WELL

SP-1/V-4 △ DUAL COMPLETION AIR SPARGING/SOIL VAPOR EXTRACTION WELL

MW-20 Ø DESTROYED WELL

E-1A ■ GROUNDWATER EXTRACTION WELL

590H ■ DOMESTIC IRRIGATION WELL

<50 / <0.5 TPPH-g/BENZENE CONCENTRATION IN GROUNDWATER (PARTS PER BILLION); SAMPLED 9-15-99 AND 9-16-99

NS NOT SAMPLED

* WELL INACCESSIBLE

** WELL SAMPLED ANNUALLY

† WELL REMOVED FROM GAUGING AND SAMPLING PROGRAM

MtBE 2380 in MW8

APPROXIMATE DIRECTION OR GROUNDWATER FLOW

SCALE
0 150 300

IT CORPORATION

ARCO SERVICE STATION 0608

FIGURE 3
TPPH-g/BENZENE CONCENTRATION MAP

17601 HESPERIAN BLVD AT HACIENDA AVE
SAN LORENZO, CALIFORNIA

SANJOSE/CADD: \\Sjosn1\VOL1\Drawings\360\014\Sjgwc.dwg Mon, 23/Aug/99 11:02am kblock

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

1551 Industrial Road
San Carlos, CA 94070-4111
(650) 232-9600
FAX (650) 232-9612

OCT 07 1999

September 30, 1999

Mike Wheilan
Pacific Environmental Group/IT
1921 Ringwood Ave.
San Jose, CA 95131

RE: Arco(1)/L909159

Dear Mike Wheilan:

Enclosed are the results of analyses for sample(s) received by the laboratory on September 16, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Tim Costello
Lab Director

CA ELAP Certificate Number I-2360

Sequoia Analytical

1551 Industrial Road
San Carlos, CA 94070-4111
(650) 232-9600
FAX (650) 232-9612

Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/15/99
921 Ringwood Ave.	Project Number:	Arco 330-006.2P, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/30/99

ANALYTICAL REPORT FOR L909159

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
33H	L909159-01	Water	9/15/99
42H	L909159-02	Water	9/15/99
7197VM	L909159-03	Water	9/15/99
17349VM	L909159-04	Water	9/15/99
17372VM	L909159-05	Water	9/15/99
MW9	L909159-06	Water	9/15/99
MW11	L909159-07	Water	9/15/99
MW16	L909159-08	Water	9/15/99
MW22	L909159-09	Water	9/15/99

Sequoia Analytical

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Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/15/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2P, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/30/99

Sample Description: **633H**
Laboratory Sample Number: **L909159-01**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090112	9/23/99	9/23/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	**5.65**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*97.2*	%	

Sequoia Analytical

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San Carlos, CA 94070-4111
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Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/15/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2P, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/30/99

Sample Description: **642H**
Laboratory Sample Number: **L909159-02**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090112	9/23/99	9/23/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*96.7*	%	

Sequoia Analytical

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Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/15/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2P, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/30/99

Sample Description: **17197VM**
Laboratory Sample Number: **L909159-03**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090112	9/23/99	9/23/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*98.3*	%	

Sequoia Analytical

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Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/15/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2P, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/30/99

Sample Description: **17349VM**
Laboratory Sample Number: **L909159-04**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090118	9/24/99	9/24/99		50.0	**133**	ug/l	1
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	**177**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*87.2*	*%*	
MTBE by EPA Method 8260A								
Methyl tert-butyl ether	9090136	9/29/99	9/29/99		10.0	**184**	ug/l	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	*76.0-114*		*94.8*	*%*	

Sequoia Analytical

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Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/15/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2P, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Whelan	Reported: 9/30/99

Sample Description: **17372VM**
Laboratory Sample Number: **L909159-05**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090112	9/23/99	9/23/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*91.4*	*%*	

Sequoia Analytical

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Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/15/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2P, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/30/99

Sample Description: **MW9**
Laboratory Sample Number: **L909159-06**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090112	9/23/99	9/23/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*100*	%	

Sequoia Analytical

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Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/15/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2P, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/30/99

Sample Description: **MW11**
Laboratory Sample Number: **L909159-07**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090112	9/23/99	9/23/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*91.3*	*%*	

Sequoia Analytical

1551 Industrial Road
San Carlos, CA 94070-4111
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FAX (650) 232-9612

Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/15/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2P, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/30/99

Sample Description: **MW16**
Laboratory Sample Number: **L909159-08**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090118	9/24/99	9/24/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	**8.70**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*92.6*	*%*	

Sequoia Analytical

1551 Industrial Road
San Carlos, CA 94070-4111
(650) 232-9600
FAX (650) 232-9612

Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/15/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2P, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/30/99

Sample Description: **MW22**
Laboratory Sample Number: **L909159-09**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090112	9/23/99	9/24/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	**43.3**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*91.9*	%	
MTBE by EPA Method 8260A								
Methyl tert-butyl ether	9090136	9/29/99	9/29/99		2.00	**49.2**	ug/l	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	*76.0-114*		*106*	%	

Sequoia Analytical

1551 Industrial Road
San Carlos, CA 94070-4111
(650) 232-9600
FAX (650) 232-9612

Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/15/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2P, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/30/99

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 9090112	**Date Prepared: 9/23/99**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**9090112-BLK1**									
Purgeable Hydrocarbons as Gasoline	9/23/99			**ND**	ug/l	**50.0**				
Benzene	"			**ND**	"	**0.500**				
Toluene	"			**ND**	"	**0.500**				
Ethylbenzene	"			**ND**	"	**0.500**				
Xylenes (total)	"			**ND**	"	**0.500**				
Methyl tert-butyl ether	"			**ND**	"	**5.00**				
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*9.17*	"	*70.0-130*	*91.7*			
LCS	**9090112-BS1**									
Benzene	9/23/99	10.0		8.73	ug/l	70.0-130	87.3			
Toluene	"	10.0		8.64	"	70.0-130	86.4			
Ethylbenzene	"	10.0		8.80	"	70.0-130	88.0			
Xylenes (total)	"	30.0		26.2	"	70.0-130	87.3			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*8.55*	"	*70.0-130*	*85.5*			
LCS	**9090112-BS2**									
Purgeable Hydrocarbons as Gasoline	9/23/99	250		220	ug/l	70.0-130	88.0			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*8.19*	"	*70.0-130*	*81.9*			
Matrix Spike	**9090112-MS1**	**L909159-01**								
Benzene	9/23/99	10.0	ND	8.99	ug/l	60.0-140	**89.9**			
Toluene	"	10.0	ND	8.85	"	60.0-140	**88.5**			
Ethylbenzene	"	10.0	ND	8.96	"	60.0-140	**89.6**			
Xylenes (total)	"	30.0	ND	26.6	"	60.0-140	**88.7**			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*9.85*	"	*70.0-130*	*98.5*			
Matrix Spike Dup	**9090112-MSD1**	**L909159-01**								
Benzene	9/23/99	10.0	ND	8.01	ug/l	60.0-140	**80.1**	25.0	**11.5**	
Toluene	"	10.0	ND	7.88	"	60.0-140	**78.8**	25.0	**11.6**	
Ethylbenzene	"	10.0	ND	7.93	"	60.0-140	**79.3**	25.0	**12.2**	
Xylenes (total)	"	30.0	ND	23.8	"	60.0-140	**79.3**	25.0	**11.2**	
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*10.1*	"	*70.0-130*	*101*			
Batch: 9090118	**Date Prepared: 9/24/99**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**9090118-BLK1**									
Purgeable Hydrocarbons as Gasoline	9/24/99			**ND**	ug/l	**50.0**				
Benzene	"			**ND**	"	**0.500**				
Toluene	"			**ND**	"	**0.500**				
Ethylbenzene	"			**ND**	"	**0.500**				
Xylenes (total)	"			**ND**	"	**0.500**				

Sequoia Analytical

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San Carlos, CA 94070-4111
(650) 232-9600
FAX (650) 232-9612

Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/15/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2P, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/30/99

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Blank (continued)	**9090118-BLK1**									
Methyl tert-butyl ether	9/24/99			**ND**	ug/l	**5.00**				
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*9.86*	"	*70.0-130*	*98.6*			
LCS	**9090118-BS1**									
Benzene	9/24/99	10.0		9.51	ug/l	70.0-130	95.1			
Toluene	"	10.0		8.95	"	70.0-130	89.5			
Ethylbenzene	"	10.0		9.11	"	70.0-130	91.1			
Xylenes (total)	"	30.0		26.8	"	70.0-130	89.3			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*9.33*	"	*70.0-130*	*93.3*			
LCS	**9090118-BS2**									
Purgeable Hydrocarbons as Gasoline	9/24/99	250		252	ug/l	70.0-130	101			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*11.3*	"	*70.0-130*	*113*			
Matrix Spike	**9090118-MS1**		**L909105-07**							
Purgeable Hydrocarbons as Gasoline	9/24/99	250	ND	244	ug/l	60.0-140	**97.6**			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*9.86*	"	*70.0-130*	*98.6*			
Matrix Spike Dup	**9090118-MSD1**		**L909105-07**							
Purgeable Hydrocarbons as Gasoline	9/24/99	250	ND	256	ug/l	60.0-140	**102**	25.0	**4.41**	
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*10.0*	"	*70.0-130*	*100*			

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Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/15/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2P, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/30/99

MTBE by EPA Method 8260A/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 9090136	**Date Prepared: 9/29/99**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**9090136-BLK1**									
Methyl tert-butyl ether	9/29/99			**ND**	ug/l	**2.00**				
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*47.8*	"	*76.0-114*	*95.6*			
Blank	**9090136-BLK2**									
Methyl tert-butyl ether	9/29/99			**ND**	ug/l	**2.00**				
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*53.8*	"	*76.0-114*	*108*			
LCS	**9090136-BS1**									
Methyl tert-butyl ether	9/29/99	50.0		40.3	ug/l	70.0-130	80.6			
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*49.9*	"	*76.0-114*	*99.8*			
LCS	**9090136-BS2**									
Methyl tert-butyl ether	9/29/99	50.0		44.1	ug/l	70.0-130	88.2			
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*53.7*	"	*76.0-114*	*107*			
Matrix Spike	**9090136-MS1**		**L909253-02**							
Methyl tert-butyl ether	9/29/99	50.0	ND	38.9	ug/l	60.0-140	**77.8**			
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*52.2*	"	*76.0-114*	*104*			
Matrix Spike Dup	**9090136-MSD1**		**L909253-02**							
Methyl tert-butyl ether	9/29/99	50.0	ND	41.2	ug/l	60.0-140	**82.4**	25.0	**5.74**	
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*51.8*	"	*76.0-114*	*104*			

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Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/15/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2P, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/30/99

Notes and Definitions

#	Note
1	Chromatogram Pattern: Unidentified Hydrocarbons C6-C12
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
Recov.	Recovery
RPD	Relative Percent Difference

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG plm
REC. BY (PRINT)

WORKORDER: 9109159
DATE OF LOG-IN: 091799

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present / (Absent) Intact / Broken*
2. Custody Seal #: Put in Remarks Section
3. Chain-of-Custody: (Present) / Absent*
4. Traffic Reports or Packing List: Present / (Absent)
5. Airbill: Airbill / ~~Sticker~~ Present / (Absent)
6. Airbill #:
7. Sample Tags: (Present) / Absent
   Sample Tags #s: (Listed) / Not Listed on Chain-of-Custody
8. Sample Condition: (Intact) / Broken* / Leaking*
9. Does information on custody reports, traffic reports and sample tags agree? (Yes) / No*
10. Proper Preservatives used: (Yes) / No*
11. Date Rec. at Lab: 091799
12. Time Rec. at Lab: 1205
13. Temp Rec. at Lab: 7°C

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
01	A-5	633H	VOA (3)	Wtr.	091599	Headspace (?)
02		642H				
03		17197 VM				
04		17349 VM				
05		17372 VM				
06		MW9				
07		11				
08		16				
09		22				

091799

Circled, contact Project Manager and attach record of resolution.

Revision 6/18/97
SCFORMS XLS

ARCO Products Company
Division of AtlanticRichfieldCompany

3300602P **Task Order No.** 24150200

Chain of Custody

ARCO Facility no. 6608	City (Facility) 1760 HESPERIAN BLVD SAN LORENZO	Project manager (contractor) TOM GRAHAM	Laboratory name SEQUOIA
ARCO engineer MIKE WHELAN	Telephone no. (ARCO)	Telephone no. (Consultant) 408) 453-7300	Fax no. (Consultant) 408) 453-0452
Consultant name PACIFIC ENVIRONMENTAL GROUP	Address (Consultant) 1921 RINGWOOD AV. SAN JOSE CA 95131		Contract number

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH EPA M602/8020/8015 MTBE	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐
*633H		3	01	ⓦ		4	HCL	9-15-99	10:40		X									
*642H			02						11:40											
*17197VM			03						11:25											
*17349VM			04						11:05											
*17332VM			05						10:20											
MW9			06						12:40											
MW11			07						12:25											
MW16			08						12:10											
MW12			09						11:55											

Special detection Limit/reporting

Special QA/QC

Remarks: *RUN EPA 8260 ON THIS WELL W/ MTBE GRATER THAN 35 PPB

Lab number 1909159

Turnaround time

Priority Rush 1 Business Day

Rush 2 Business Days

Expedited 5 Business Days

Standard 10 Business Days ⊙

Condition of sample:

Temperature received:

	Date	Time		Date	Time
Relinquished by sampler	9-15-99	15:00	Received by	9-16-99	13:38
Relinquished by	9/16/99	1800	Received by	9/16/99	1800
Relinquished by	Date	Time	Received by laboratory (DC)	Date 091799	Time 1205

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

Sequoia Analytical

1551 Industrial Road
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OCT 07 1999

September 29, 1999

Shaw Garakani
Pacific Environmental Group/IT
1921 Ringwood Ave.
San Jose, CA 95131

RE: Arco(1)/L909158

Dear Shaw Garakani:

Enclosed are the results of analyses for sample(s) received by the laboratory on September 16, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

W. Stevenson

for Tim Costello
Lab Director

CA ELAP Certificate Number I-2360

Sequoia Analytical

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Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/16/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2Q, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/29/99

ANALYTICAL REPORT FOR L909158

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW5	L909158-01	Water	9/16/99
MW8	L909158-02	Water	9/16/99
MW10	L909158-03	Water	9/16/99
MW25	L909158-04	Water	9/16/99
E-1A	L909158-05	Water	9/16/99

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Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/16/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2Q, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/29/99

Sample Description: **MW5**
Laboratory Sample Number: **L909158-01**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090121	9/27/99	9/27/99		50.0	**139**	ug/l	l
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	**184**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*88.0*	%	

Sequoia Analytical

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Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/16/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2Q, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/29/99

Sample Description: **MW8**
Laboratory Sample Number: **L909158-02**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090121	9/27/99	9/27/99		500	ND	ug/l	
Benzene	"	"	"		5.00	ND	"	
Toluene	"	"	"		5.00	ND	"	
Ethylbenzene	"	"	"		5.00	ND	"	
Xylenes (total)	"	"	"		5.00	ND	"	
Methyl tert-butyl ether	"	"	"		50.0	**2380**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*81.9*	%	

Sequoia Analytical

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Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/16/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2Q, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/29/99

Sample Description: **MW25**
Laboratory Sample Number: **L909158-04**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090130	9/28/99	9/28/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	**66.4**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*90.2*	%	

Sequoia Analytical

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Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/16/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2Q, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/29/99

Sample Description: **E-1A**
Laboratory Sample Number: **L909158-05**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090121	9/27/99	9/28/99		500	**2200**	ug/l	1
Benzene	"	"	"		5.00	**7.93**	"	
Toluene	"	"	"		5.00	ND	"	
Ethylbenzene	"	"	"		5.00	**10.5**	"	
Xylenes (total)	"	"	"		5.00	ND	"	
Methyl tert-butyl ether	"	"	"		50.0	**142**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*75.3*	%	

Sequoia Analytical

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Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/16/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2Q, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/29/99

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 9090121	**Date Prepared: 9/27/99**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**9090121-BLK1**									
Purgeable Hydrocarbons as Gasoline	9/27/99			**ND**	ug/l	**50.0**				
Benzene	"			**ND**	"	**0.500**				
Toluene	"			**ND**	"	**0.500**				
Ethylbenzene	"			**ND**	"	**0.500**				
Xylenes (total)	"			**ND**	"	**0.500**				
Methyl tert-butyl ether	"			**ND**	"	**5.00**				
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*9.60*	"	*70.0-130*	*96.0*			
LCS	**9090121-BS1**									
Benzene	9/27/99	10.0		9.04	ug/l	70.0-130	90.4			
Toluene	"	10.0		8.46	"	70.0-130	84.6			
Ethylbenzene	"	10.0		8.68	"	70.0-130	86.8			
Xylenes (total)	"	30.0		25.5	"	70.0-130	85.0			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*8.81*	"	*70.0-130*	*88.1*			
LCS	**9090121-BS2**									
Purgeable Hydrocarbons as Gasoline	9/27/99	250		256	ug/l	70.0-130	102			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*10.7*	"	*70.0-130*	*107*			
Matrix Spike	**9090121-MS1**		**L909161-08**							
Benzene	9/27/99	10.0	ND	9.13	ug/l	60.0-140	**91.3**			
Toluene	"	10.0	ND	8.48	"	60.0-140	**84.8**			
Ethylbenzene	"	10.0	ND	8.70	"	60.0-140	**87.0**			
Xylenes (total)	"	30.0	ND	25.5	"	60.0-140	**85.0**			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*9.10*	"	*70.0-130*	*91.0*			
Matrix Spike Dup	**9090121-MSD1**		**L909161-08**							
Benzene	9/27/99	10.0	ND	9.29	ug/l	60.0-140	**92.9**	25.0	**1.74**	
Toluene	"	10.0	ND	8.76	"	60.0-140	**87.6**	25.0	**3.25**	
Ethylbenzene	"	10.0	ND	8.82	"	60.0-140	**88.2**	25.0	**1.37**	
Xylenes (total)	"	30.0	ND	25.8	"	60.0-140	**86.0**	25.0	**1.17**	
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*8.61*	"	*70.0-130*	*86.1*			
Batch: 9090130	**Date Prepared: 9/28/99**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**9090130-BLK1**									
Purgeable Hydrocarbons as Gasoline	9/28/99			**ND**	ug/l	**50.0**				
Benzene	"			**ND**	"	**0.500**				
Toluene	"			**ND**	"	**0.500**				
Ethylbenzene	"			**ND**	"	**0.500**				
Xylenes (total)	"			**ND**	"	**0.500**				

Sequoia Analytical

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Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/16/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2Q, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/29/99

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Blank (continued)	**9090130-BLK1**									
Methyl tert-butyl ether	9/28/99			**ND**	ug/l	**5.00**				
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*9.49*	"	*70.0-130*	*94.9*			
LCS	**9090130-BS1**									
Benzene	9/28/99	10.0		8.19	ug/l	70.0-130	81.9			
Toluene	"	10.0		8.08	"	70.0-130	80.8			
Ethylbenzene	"	10.0		8.18	"	70.0-130	81.8			
Xylenes (total)	"	30.0		24.4	"	70.0-130	81.3			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*8.50*	"	*70.0-130*	*85.0*			
LCS	**9090130-BS2**									
Purgeable Hydrocarbons as Gasoline	9/28/99	250		229	ug/l	70.0-130	91.6			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*8.15*	"	*70.0-130*	*81.5*			
Matrix Spike	**9090130-MS1**		**L909158-04**							
Purgeable Hydrocarbons as Gasoline	9/28/99	250	ND	220	ug/l	60.0-140	**88.0**			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*9.03*	"	*70.0-130*	*90.3*			
Matrix Spike Dup	**9090130-MSD1**		**L909158-04**							
Purgeable Hydrocarbons as Gasoline	9/28/99	250	ND	223	ug/l	60.0-140	**89.2**	25.0	**1.35**	
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*8.69*	"	*70.0-130*	*86.9*			

Sequoia Analytical

1551 Industrial Road
San Carlos, CA 94070-4111
(650) 232-9600
FAX (650) 232-9612

Pacific Environmental Group/IT	Project:	Arco(1)	Sampled: 9/16/99
1921 Ringwood Ave.	Project Number:	Arco 330-006.2Q, 0608	Received: 9/16/99
San Jose, CA 95131	Project Manager:	Mike Wheilan	Reported: 9/29/99

Notes and Definitions

#	Note
1	Chromatogram Pattern: Unidentified Hydrocarbons C6-C12
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
Recov.	Recovery
RPD	Relative Percent Difference

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT): PM

WORKORDER: L909158
DATE OF LOG-IN: 091799

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present / (Absent) Intact / Broken*
2. Custody Seal #: Put in Remarks Section
3. Chain-of-Custody: (Present) / Absent*
4. Traffic Reports or Packing List: Present / (Absent)
5. Airbill: Airbill / Sticker Present / (Absent)
6. Airbill #: ———
7. Sample Tags: (Present) / Absent
   Sample Tags #s: (Listed) / Not Listed on Chain-of-Custody
8. Sample Condition: (Intact) / Broken* / Leaking*
9. Does information on custody reports, traffic reports and sample tags agree? (Yes) / No*
10. Proper Preservatives used: (Yes) / No*
11. Date Rec. at Lab: 091799
12. Time Rec. at Lab: 1205
13. Temp Rec. at Lab: 7°C

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
01	A-C	MW5	VOA (3)	Lq.	091699	
02	↓	8	↓	↓	↓	
03		10				
04		25				
05	↓	E-1A				

091291

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

Revision 6/18/97
SCFORMS.XLS

ARCO Products Company — Division of AtlanticRichfieldCompany — **Chain of Custody**

Task Order No. 23100620 — 2/15200

ARCO Facility no. 0608	City (Facility) 1760 Hesperian Blvd San Lorenzo	Project manager (Consultant) Deeno Shaw Gaekwad	Laboratory name Sequoia
ARCO engineer Mike Whelan	Telephone no. (ARCO)	Telephone no. (Consultant) 408/453-7300	Fax no. (Consultant) 408/453-0450
Consultant name Pacific Environmental Group	Address (Consultant) 1921 Ringwood Ave San Jose CA 95131		Contract number

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH EPA 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 ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
MW5	01	3		W		Y	HCl	9/16/99	9:15		X											
MW8	02								9:25													
MW10	03								9:40													
MW25	04								9:55													
E-1A	05	↓		↓		↓	↓	↓	10:30		↓											

Special detection Limit/reporting: 0.5 4 27

Special QA/QC

Remarks

Lab number 1909158

Turnaround time

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

Condition of sample:

Temperature received:

	Date	Time		Date	Time
Relinquished by sampler	9-16-99	12:00	Received by	9-16-99	1321
Relinquished by			Received by	9/16/99	1800
Relinquished by	9/16/99	1800	Received by laboratory (SC)	091799	1205

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

APC-3292 (2-91)

FIELD SERVICES / O & M REQUEST

SITE INFORMATION FORM

Project #: 330-006.2P

Station #: 0608

Site Address: 17601 Hesperian Blvd. San Lorenzo, California

County: Alameda

Project Manager: Shaw Garakani

Requestor: Kurt Lueneburger

Client: Arco

☐ 1st time visit

☐ 1st ☐ 2nd ☒ 3rd ☐ 4th

☐ Monthly

☐ Semi-Monthly

☐ Weekly

☐ One time Event

☐ Other._____

Client P.O.C.: M. Whelan.

Date of Request: 3Q99

Ideal Field Date: 9/15,16

Purge water 3295 GAL

Budget Hrs._____

Actual Hrs._____

Mob de Mob_____

Total Wells_____

Prefield contacts: All Homeowners are to be contacted 1-2 weeks in advance of arrival.

Field Tasks: For General Description

Quarterly Monitoring Event. Measure TOB/TOC, and DO. Purge all wells, irrigation wells for at least 15 minutes before sampling. Also record time when purging starts and when purging is stopped. **Instruct Sequoia to run EPA 8260 on homeowner wells with MtBE greater than 35 ppb.** Attempt to sample all homeowner wells and if wells are non-operational, note the problem as best as you can and what it would take to repair pump/well. Sample homeowner wells on **September 15, 1999. Note: the sample frequency for some of the wells has been reduced. See attached sample protocol.**

WA#24152 00

Comments, remarks, from Field Staff (include problems encountered

TASK Completed per ATTACH protocol.

Completed by: _____ Date: 9-15-16-99

Checked by: _____

WELL SAMPLING REQUEST

SAMPLING PROTOCOL								
Project No.	Station #	Project Name	SEQUENCE	Project Manager	Approval	Date/s	Laboratory:	Client Engineer:
330-006.2P	608	17601 Hesperian San Lorenzo	3Q99	Shaw Garakani			Sequoia 24152 00	Mike Wheilan

Well Number	Ideal Sampling Order	Sample I.D.	Sampling Frequency	Analyses	TOB TOC	Well Depth	Casing Diameter	Top of Screen	Well goes Dry?	Comments
Mr/Mrs Silva		590 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					SEE ATTACHED CONTACT FORM.
Mr. Dahmann		633 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					SAMPLE HOMEOWNER WELLS ON
Mrs Albright		634 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					WEDNESDAY, SEPTEMBER 15
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. Schrag		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 Toles		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.

WELL SAMPLING REQUEST

SAMPLING PROTOCOL								
Project No.	Station #	Project Name	SEQUENCE	Project Manager Approval	Date/s	Laboratory:		Client Engineer:
330-006.2P	608	17601 Hesperian, San Lorenzo	3Q99	Shaw Garakani		Sequoia	24152 00	Mike Wheilan

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

WELL SAMPLING REQUEST

SAMPLING PROTOCOL							
Project No.	Station #	Project Name	SEQUENCE	Project Manager Approval	Date/s	Laboratory:	Client Engineer:
330-006.2P	608	17601 Hesperian San Lorenzo	3Q98	Shaw Garakani		Sequoia 22340	Mike Wheilan

Well Number	Ideal Sampling Order	Sample I.D.	Sampling Frequency	Analyses	TOB TOC	Well Depth	Casing Diameter	Top of Screen	Well goes Dry?	Comments
Mr/Mrs Silva		590 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					NO ANSWER.
Mr. Dahmann		633 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					
Mrs Albright		634 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					
Ms. Corregedor		642 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					
Mr/Mrs Roberts		675 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					Not operational
Mr Luehrs		17348 Via Encinas	QLY	GAS/BTEX/MtBE	TOB/TOC					Not operational.
Mr. Schrag		17197 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					
Cavalry Church		17200 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					
Mrs Toles		17203 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					Not working.
Mr/Mrs Johanson		17302 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					Not working
Mr. Kast		17349 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					OKAY TO SAMPLE ANYTIME
Mr. Manry		17371 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					
Mr. Pimental		17372 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					SAMPLE IN THE AFTERNOON
Mr. Whaley		17393 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					

Summary of Domestic Wells Sampling Contacts
ARCO Service Station #0608
17601 Hesperian, San Lorenzo

CALL AT LEAST ONE WEEK IN ADVANCE OF EVENT EACH QUARTER
Document with copy of this log in project file
DOCUMENT EVENT WITH A SAMPLING FORM FROM ALL HOMES WHETHER SAMPLED OR NOT!!!!!!!!!!!!!!!

Quarter calling for	Address	Contact Name Phone #	Date Contacted	Pump Assessment	Notes
AUG 27 98	590 Hacienda	Mr.& Mrs. Silva (510) 276-1534		operational	Need homeowmer there to sample. Well in backyard.
SEP 18 98					Knock first. Sample early-mid morn. Well in backyard.
1Q99					3/3 No Answer. 3/9 No Answer. 3/12 No Answer.
2Q99					Knock first. Sample in the morning.
3Q99					9/9- No answer, Message left that we would try to contact them about sampling on Wednesday 9/8,10,13- No answer NO ANSWER / NO ONE HOME

AUG 27 98	633 Hacienda	Mr. Dahmann (510) 276-3860		operational	Well redeveloped with new pump as of 10/7/94. No access unless someone is home.
SEP 18 98					Well redeveloped with new pump as 10/7/94. Okay to sample anytime.
1Q99					3/3 No answer. 3/9 No Answer. 3/12 No Answer. He has no message machine.
2Q99					Okay to sample anytime.
3Q99					9/8,9,10,13- No answer

AUG 27 98	642 Hacienda	Ms. Corregedor (510) 481-1063	Don't Call Not authorized	operational	Won't allow access.
SEP 18 98					Message 09/14-16/98. Unable to be contacted.
1Q99					Contacted 3/3. Okay to sample anytime.
2Q99					Okay to sample anytime
3Q99					Okay to sample anytime

AUG 27 98	675 Hacienda	Mr. & Mrs. Roberts (510) 276-7389		non-operational	Okay to enter 1st shed on the right (must use entry gate @ right side of house) to obtain sample, if not home. PLEASE LOCK GATE ON YOUR WAY OUT!!!.
SEP 18 98					Message 09/14-16/98. Unable to be contacted.
1Q99					3/10 Message. Okay to sample anytime.
2Q99					Okay to sample anytime
3Q99					Okay to sample anytime Pump is not operational

AUG 27 98	17348 Via Encinas	Mr. Luehrs (510)278-9059		non operational	Ok to enter backyard and grab bailer sample if resident not home; KNOCK FIRST.
SEP 18 98					Attempt to sample in the morning on Sep. 21st. Knock first so that the dog can be leashed
1Q99					3/10 message. Okay to sample before 11:30 on March 15.
2Q99					Sample between 8 and 11 am in the morning. Knock first so that dog can be leashed.
3Q99					Sample between 8 and 11 am in the morning. Knock first so that dog can be leashed. Pump is not operational

AUG 27 98	17197 Via Magdalena	Mr. Schrag (510) 278-1904		operational	Grab sample off hose bib on front porch. Call him before heading to site to turn on hose bib to purge.
SEP 18 98					Ok to sample anytime.
1Q99					3/3. Okay to sample anytime.
2Q99					Okay to sample anytime
3Q99					Okay to sample anytime

AUG 27 98	17200 Via Magdalena	Cavalry Church (510) 278-2555	not need call	non-operational	**Well destroyed. Has been built over with a classroom**

AUG 27 98	17203 Via Magdalena	Mrs. Toles (510)276-6797		operational	AFTER 10AM ONLY!!! OK to enter back yard and sample if not home; KNOCK FIRST! Pump not working.
SEP 18 98					Okay to enter anytime. Pump not working 2Q98 possibly due to an obstruction. If pump does not work 3Q98, then let homeowner know so that she can get somebody to fix it.
1Q99					3/3. Okay to sample anytime.
2Q99					Sample after 10am.
3Q99					Sample anytime Pump is not operational

AUG 27 98	17302 Via Magdalena	Mr. & Mrs. Johanson (510) 278-5987		non-operational	Foot valve broken--no pressure & not holding it's prime. Call before next sampling to see if fixed.
SEP 18 98					Pump still non-operational. Foot valve is not the problem. Has not been fixed due to lack of funds.
1Q99					3/3. Owner said that the well is non-operational and needs a new pump. Has not had the money to replace it. Not authorized to enter property or sample.
2Q99					Well still broken. Do not sample.
3Q99					Well still broken. Do not sample.

AUG 27 98	17349 Via Magdalena	Mr. Kast (510)278-1263		operational	OK to enter back yard and sample if not home; well shed in back yard; KNOCK FIRST!.
SEP 18 98					Ok to enter backyard and sample anytime
1Q99					3/3. Okay to sample anytime.
2Q99					Okay to sample anytime.
3Q99					Okay to sample anytime.

AUG 27 98	17371 Via Magdalena	Mr. Manry (510) 317-9724	Don't Call Not authorized	operational	Won't allow access.
SEP 18 98					won't allow access (past attempts). No answer, 9/14-16/98.
1Q99					3/3 No Answer. 3/9 No Answer. 3/12 No Answer. Won't allow access in past attempts.
2Q99					Unable to contact. Won't allow access in past attempts.
3Q99					Don't sample. Well not working

AUG 27 98	17372 Via Magdalena	Mr. Pimental (510) 278-6304		operational	Authorization to enter & start anytime. Sampled from hose bib in back yard; resident is usually using the hose when you get there. CALL FIRST!
SEP 18 98					Okay to sample anytime. Sampled from hose bib in backyard.
1Q99					3/3. Okay to sample anytime.
2Q99					Okay to sample anytime.
3Q99					Okay to sample anytime.

AUG 27 98	17393 Via Magdalena	Mr.James Whaley (510) 278-5576	Don't Call well cov'd over	non-operational	~~Pump disassembled~~ & well covered over. No access due to new fence. WELL ABANDONED 7/97!

FIELD REPORT

DEPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 330-006.20 LOCATION: 17601 HESPERIAN DATE: 9-15-99

CLIENT/STATION NO.: ARCO/0608 FIELD TECHNICIAN: PEDRO E RUIZ DAY OF WEEK: WED.

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

Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	Total Depth (feet)	First Depth to Water (feet) TOB/TOC	Second Depth to Water (feet) TOB/TOC	SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	SERARATE-PHASE HYDROCARBONS (SPH) COLOR: Fresh	Weathered	Gas	Oil	VISCOSITY: Lite	Medium	Heavy	LIQUID REMOVED (gallons) SPH / H_2O
	MW5	9:56	-	O	-	-	-		10.30 / 10.30	12.90 / 12.90										
	~~MW7~~																			
	MW8	9:59	-	-	-	-	-		10.80 / 10.80	11.85 / 11.85										
	MW9	9:49	-	-	-	-	-		10.30 / 10.30	10.85 / 10.85										
	MW10	9:41	-	-	-	-	-		10.10 / 10.10	11.03 / 11.03										
	MW11	9:37	-	-	-	-	-		11.27 / 11.27	11.68 / 11.68										
	~~MW13~~																			
	MW14	9:35	-	-	-	-	-		9.73 / 9.73	9.98 / 9.98										
	MW15								N/A											

Comments:

MW-15 VAN PARK ON TOP OF WELL.
9.15-9.16-99 NOT ACCESS INTO WELL

FIELD REPORT

DEPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 330-006.2P LOCATION: 1760 HESPERIAN BLVD. DATE: 9-15-99

CLIENT/STATION NO.: ARCO/0608 FIELD TECHNICIAN: SAN LEANDRO Edgar E. Rai DAY OF WEEK: WED

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

Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	Total Depth (feet)	First Depth to Water (feet) TOB/TOC	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
	MW-16	9:31	-	-	-	-	-		11.59 / 11.57	11.99 / 11.99										
	~~MW-17~~																			
	MW-18	9:29	-	-	-	-	-		10.67 / 10.69	10.96 / 10.96										
	~~MW-19~~																			
	~~MW-20~~																			
	MW-21	9:26	-	-	-	-	-		10.90 / 10.90	10.93 / 10.93										
	MW-22	9:24	-	-	-	-			11.20 / 11.20	11.46 / 11.46										
	MW-23	9:20	-	-	-	-	-		12.20 / 12.20	10.98 / 10.98										
	EI-A	10:03	-	-	-	O	-		10.05 / 10.05	11.90 / 11.90										

Comments: _____

FIELD REPORT

DEPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 330-006.2 LOCATION: 17601 HESPERIAN BLVD (SAN LORENZO) DATE: 9-15-99

CLIENT/STATION NO.: ARCO/ XXXX FIELD TECHNICIAN: KEDRO DAY OF WEEK: WED.

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

Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	Total Depth (feet)	First Depth to Water (feet) TOB/TOC	Second Depth to Water (feet) TOB/TOC	SERARATE-PHASE HYDROCARBONS (SPH) SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	COLOR: Fresh	COLOR: Weathered	COLOR: Gas	COLOR: Oil	VISCOSITY: Lite	VISCOSITY: Medium	VISCOSITY: Heavy	LIQUID REMOVED (gallons) SPH / H_2O
	~~MW-27~~																			
	MW-25	9:53	-	-	-	-	-		10.87 / 11.87	12.31 / 12.31										
	MW-26	9:15	-	-	-	-	-		12.25 / 12.25	12.78 / 12.70										

Comments: _____

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2P LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW-5

CLIENT/STATION No.: ARCO / 0608 FIELD TECHNICIAN: PEDRO E. RUIZ

WELL INFORMATION

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

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

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

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

TD 14.00 - DTW 12.30 = 1.7 x Gal/Linear Foot 0.38 = 1.10 x Number of Casings 3 = Calculated Purge 3.30

DATE PURGED: 9-16-99 START: 10:32 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 9-16-99 START: 10:45 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
10:35	1	6.73	1000	650	Cloudy	Mod	Faint
10:38	2	6.74	1000	660	Cloudy	Mod	Faint
10:41	3	6.75	1000	662	Cloudy	Mod	Faint

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

Pumped dry Yes (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

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

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: 15-17
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-5	9-16-99	10:45	3	40ml	VOA	HCl	BTEX

REMARKS: DO: 0.69 Steel Riser Hand Bail HDC

SIGNATURE: _____

PACIFIC ENVIRONMENTAL GROUP, INC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2P LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW-8

CLIENT/STATION No.: ARCO / 0608 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 10.82 = 11.18 x Gal/Linear Foot 0.38 = 4.24 x Number of Casings 5 = Calculated Purge 12.74

DATE PURGED: 9-16-99 START: 9:12 END (2400 hr): — PURGED BY: PE

DATE SAMPLED: 9-16-99 START: 9:25 END (2400 hr): — SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
9:15	4.25	7.12	1080	64.2	Clear	light	None
9:17	8.5	6.92	1010	65.0	Clear	light	None
9:19	12.75	6.89	1010	65.9	Clear	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: _____
- ☐ Airlift Pump: _____
- ☐ Centrifugal Pump: _____
- ☐ Dedicated: _____
- ☐ Other: _____

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

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-8	9-16-99	9:25	3	40ml	VOA	HCl	BTEX

REMARKS: DO: 2.4

SIGNATURE: _____

PACIFIC ENVIRONMENTAL GROUP, INC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2D LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW-9

CLIENT/STATION No.: ARCO/0608 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 10.29 = 8.7 x Gal/Linear Foot 0.38 = 3.30 x Number of Casings 3 = Calculated Purge 9.91

DATE PURGED: 9/5/99 START: 12:29 END (2400 hr): _____ PURGED BY: RE

DATE SAMPLED: 9/5/99 START: 12:40 END (2400 hr): _____ SAMPLED BY: RE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
12:32	3.05	7.10	9.36	69.0	Clear	Mod	None
12:35	6.05	7.00	9.34	69.3	Clear	Mod	None
12:38	9.76	7.07	9.36	69.6	Clear	Mod	None

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

Pumped dry Yes (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D.

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

SAMPLING EQUIPMENT/I.D.

- ☑ Bailer: 15-6
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-9	9/6/99	12:40	3	40ml	VOA	HCl	BTEX

REMARKS: DO: 3.2

SIGNATURE: _____

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2P LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW-10

CLIENT/STATION No.: ARCO/0608 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 10.40 = 11.6 x Gal/Linear Foot 0.38 = 4.40 x Number of Casings 3 = Calculated Purge 13.20

DATE PURGED: 9-16-99 START: 9:28 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 9-16-99 START: 9:40 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
9:31	4.5	7.28	949	64.5	Clear	Mod	Mod
9:33	9	7.09	949	65.2	Clear	Mod	Mod
9:36	13.5	6.92	951	65.6	Clear	Light	Mod

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

Pumped dry Yes / (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

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

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: 15-14
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-10	9-16-99	9:40	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: DO: 5.8

SIGNATURE: _____

PACIFIC ENVIRONMENTAL GROUP, INC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2P LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW-11

CLIENT/STATION No.: ARCO / 0608 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 11.27 = 7.73 x Gal/Linear Foot 0.38 = 2.93 x Number of Casings 3 = Calculated Purge 8.8

DATE PURGED: 9/5/99 START: 12:13 END (2400 hr): — PURGED BY: PE

DATE SAMPLED: 9/5/99 START: 12:25 END (2400 hr): — SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
12:16	3	7.14	9.12	68.2	Cloudy	Mod	Mod
12:17	6	7.00	8.90	67.8	Cloudy	Mod	Mod
12:20	9	7.13	886	668	Clear	Mod	Mod

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

Pumped dry Yes / No

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

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

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: 15-7
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-11	9/5/99	12:25	3	40ml	VOA	HCl	BTEX

REMARKS: DO: 3.4

SIGNATURE: _____

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2P LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW-10

CLIENT/STATION No.: ARCO / 0608 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 11.57 = 11.43 x Gal/Linear Foot 0.38 = 4.34 x Number of Casings 3 = Calculated Purge 13.03

DATE PURGED: 9 15 99 START: 11:38 END (2400 hr): — PURGED BY: PE

DATE SAMPLED: 9 15 99 START: 12:10 END (2400 hr): — SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
12:01	4.25	7.39	891	69.3	Cloudy	Mod	None
12:04	8.5	7.24	8.59	68.4	Cloudy	Mod	None
12:07	12.75	7.06	839	67.7	Cloudy	Mod	None

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

Pumped dry Yes / (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC

PURGING EQUIPMENT/I.D.

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

SAMPLING EQUIPMENT/I.D.

- ☑ Bailer: 152
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-10	9/599	12:10	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: DO: 3.8

SIGNATURE:

PACIFIC ENVIRONMENTAL GROUP, INC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2P LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW-02

CLIENT/STATION No.: ARCO / 0608 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 11.20 ± 10.8 x Gal/Linear Foot 0.38 = 4.10 x Number of Casings 3 = Calculated Purge 12.31

DATE PURGED: 9/5/99 START: 11:49 END (2400 hr): — PURGED BY: PE

DATE SAMPLED: 9/5/99 START: 11:55 END (2400 hr): — SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
11:47	4	7.37	868	68.0	CLEAR	TRACE	NONE
11:49	8	6.99	8.49	66.6	CLEAR	TRACE	NONE
11:52	12	6.96	8.47	65.1	CLEAR	TRACE	NONE

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

Pumped dry Yes (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D.

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

SAMPLING EQUIPMENT/I.D.

- ☑ Bailer: 15-3
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-02	9/5/99	11:55	3	40ml	VOA	HCl	BTEX

REMARKS: DO: 1.0

SIGNATURE: _____

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2P LOCATION: 1760 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW-25

CLIENT/STATION No.: ARCO / 0608 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 11.87 = 9.13 x Gal/Linear Foot 0.17 = 1.55 x Number of Casings 3 = Calculated Purge 4.65

DATE PURGED: 9-16-99 START: 9:44 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 9-16-99 START: 9:55 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
9:47	1.5	7.21	1010	63.8	Cloudy	Light	None
9:49	3	7.13	1020	64.9	Cloudy	Light	None
9:52	4.5	7.03	1020	65.1	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: _____
- ☐ Airlift Pump: _____
- ☐ Centrifugal Pump: _____
- ☐ Dedicated: _____
- ☐ Other: _____

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: 15-20
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-25	9-16-99	9:55	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: DO: N/A

PACIFIC ENVIRONMENTAL GROUP, INC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2P LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: ~~MW~~ EIA

CLIENT/STATION No.: ARCO / 0608 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 2600 DTW 10.26 = 15.75 x Gal/Linear Foot 0.15 = 2360 Number of Casings 5 = Calculated Purge 7087

DATE PURGED: 9-16-99 START: 10:02 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 9-16-99 START: 10:30 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
10:10	2375	7.16	981	665	Clear	Light	Mod
10:18	4750	6.79	1010	660.7	Clear	Light	Mod
10:26	7125	6.80	1020	666.9	Clear	Light	Mod

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

Pumped dry Yes (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC

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

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: 15-18
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
~~MW~~ EIA	9.16.99	10:30	3	40ml	VOA	HCl	BTEX

REMARKS: DO: 3.2

PACIFIC ENVIRONMENTAL GROUP, INC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.20 LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: ~~MW-~~ 633H

CLIENT/STATION No.: ARCO / 0608 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 0.38 = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: 9 99 START: _____ END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 9/5 99 START: 10:40 END (2400 hr): _____ SAMPLED BY: PE

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

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 7.09 9.52 6.49 CLEAR TRACE NONE

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

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: 15
- ☐ Dedicated: _____
- ☐ Other: EPA 10

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-633H	9/5/99	10:40	3	40ml	VOA	HCl	BASIETEX

REMARKS: DO: 0 VA START → 10:25
STOP → 10:36
PURGE 53 GAL

SIGNATURE:

PACIFIC ENVIRONMENTAL GROUP, INC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2D LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: ~~MW-1~~ MW-6R

CLIENT/STATION No.: ARCO / 0608 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 0.38 = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: 9 99 START: _____ END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 9 15 99 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

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 7.32 8.71 660 CLEAR TRACE NONE

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

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: 15
- ☐ Dedicated: _____
- ☑ Other: GRAB

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-6R	91599	11:40	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: DO: 2.2 Start - 11:28 & 11:39
Home owner using water on lawn

SIGNATURE:

PACIFIC ENVIRONMENTAL GROUP, INC

FIELD DATA SHEET

FIELD DATA SHEET

PCT No.: 330-006.20 LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW-17197M

CLIENT/STATION No.: ARCO / 0608 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 0.38 = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: 9 99 START: _____ END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 9/5 99 START: 11:26 END (2400 hr): _____ SAMPLED BY: PE

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

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 7.27 8.78 6.42 Cloudy Faint None

PURGING EQUIPMENT/I.D.

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

SAMPLING EQUIPMENT/I.D.

- ☑ Bailer: 15
- ☐ Dedicated: _____
- ☑ Other: GRAB

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-17197M	9/5/99	11:26	3	40ml	VOA	HCl	BASIETEX

REMARKS: DO: 10 START 11:10 → 11:50 PURGE 60 GAL

SIGNATURE:

PACIFIC ENVIRONMENTAL GROUP, INC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.20 LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: ~~MW-~~17349V

CLIENT/STATION No.: ARCO / 0608 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 0.38 = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: 9 99 START: _____ END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 9/5 99 START: 11:05 END (2400 hr): _____ SAMPLED BY: PE

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

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 7.14 883 64.9 CLEAR TRACE NONE

PURGING EQUIPMENT/I.D.

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

SAMPLING EQUIPMENT/I.D.

- ☑ Bailer: 15
- ☐ Dedicated: _____
- ☑ Other: GRAB

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-17349VM	9/5/99	11:05	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: DO: 2.2 Start 10:49 ⇒ 10:57

Parcel COC Cont.

SIGNATURES

PACIFIC ENVIRONMENTAL GROUP, INC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2P LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW-17372

CLIENT/STATION No.: ARCO/ 0608 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 0.38 = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: 9 99 START: _____ END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 9/5 99 START: 10:20 END (2400 hr): _____ SAMPLED BY: PE

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

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 7.00 945 69.1 CLEAR TRACE NONE

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

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: 15
- ☐ Dedicated: _____
- ☒ Other: GRAB

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-17372V4	9/5/99	10:20	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: DO: 2.0 HOME OWNER USING WATER ON LAWN NO PURGE REQUIRED

PACIFIC ENVIRONMENTAL GROUP, INC.

ARCO Products Company Division of AtlanticRichfieldCompany — 33000602P — **Task Order No.** 24150200 — **Chain of Custody**

ARCO Facility no. 0608	City (Facility) 1760 HESPERIAN BLVD SAN LORENZO	Project manager (Consultant) JOHN GARAMANI	Laboratory name SEQUOIA
ARCO engineer MIKE WHELAN	Telephone no. (ARCO)	Telephone no. (Consultant) (408) 453-7300	Fax no. (Consultant) (408) 453-0452	Contract number
Consultant name PACIFIC ENVIRONMENTAL GROUP	Address (Consultant) 1921 RINGWOOD AV. SAN JOSE CA 95131			Method of shipment

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH EPA 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 ☐		
*6331		3		W		Y	HCl	9-15-99	10:40		X											
*6421									11:40													
*17197VM									11:25													
*17349VM									11:05													
*17392VM									10:20													
MW9									12:40													
MW11									12:25													
MW16									12:10													
MW22									11:55													

Special detection Limit/reporting

Special QA/QC

Remarks: *RUN EPA 8260 ON THIS WELL W/ MTBE GRATER THAN 35 PPB

Lab number

Condition of sample:		Temperature received:	
Relinquished by sampler	Date 9-15-99 Time 15:00	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 ☒

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ARCO 3292 (2-91)

ARCO Products Company
Division of AtlanticRichfieldCompany

330088.9 Task Order No. 24155290

Chain of Custody

ARCO Facility no. 0608	City (Facility) ARCO Hesperian Blvd SW Corner	Project manager (Consultant) Shaw Gharakani	Laboratory name Sequoia
ARCO engineer Yin Wheilan	Telephone no. (ARCO)	Telephone no. (Consultant) (408) 453-7300	Fax no. (Consultant) (408) 453-0950
Consultant name Pacific Environmental Group	Address (Consultant) 1921 Ringwood Ave San Jose CA 95131		Contract number

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH EPA MTBE 602/8020/8015	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	9/10/99	9:15		X											
MW8									9:25													
MW10									9:40													
MW03									9:55													
E-1A									10:30													

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 9/10/99 Time 12:00	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