PACIFIC
ENVIRONMENTAL
GROUP, INC.

AN IT COMPANY

Quarterly Groundwater Monitoring Report
First Quarter 1998

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

Prepared for

Mr. Michael Whelan
ARCO Products Company

September 30, 1998

Prepared by

Pacific Environmental Group, Inc.
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Project 330-006.2L

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REGISTERED GEOLOGIST
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No. 1293
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

Date: September 30, 1998
Quarter: 1Q98

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: Pacific Environmental Group, Inc./Debra J. Moser
Consultant Project No.: 330-006.2L
Primary Agency/Regulatory ID No.: Alameda County Health Care Services Agency
Monitoring Events Performed to Date: 36

WORK PERFORMED THIS QUARTER (First - 1998):

1. Submitted fourth quarter 1997 quarterly monitoring report.
2. Performed first quarter 1998 groundwater monitoring event on March 19 and 20, 1998.
3. Prepared first quarter 1998 groundwater monitoring report.
4. Continued quarterly payments to homeowners for not using domestic irrigation wells.
5. Continued homeowner quarterly monitoring results notification program.
6. Submitted MtBE Risk Assessment.
7. Measured dissolved oxygen.

WORK PROPOSED FOR NEXT QUARTER (Second - 1998):

1. Submit first quarter 1998 quarterly monitoring report.
2. Perform second quarter 1998 groundwater monitoring event.
3. Prepare second quarter 1998 groundwater monitoring report.
4. Continue quarterly 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:	7.92 to 11.80	(Measure Feet)
Groundwater Gradient:	West	(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:

- TPPH-g and BTEX compounds concentrations are within historical levels except for Well E-1A which contained 11,000 ppb TPPH-g and 1,300 ppb benzene.
- 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 ACHCSA representative indicated that the MtBE Risk Assessment had been approved and the site would be reviewed for case closure.
- During the current quarter, MtBE at a concentration of 1,400 ppb was reported for Well 17372 VM. MtBE has been non-detectable at this well during all previous monitoring events. Therefore, PEG believes that the detectable concentrations of MtBE are anomalous and possibly due to a laboratory error. Second quarter 1998 data will provide verification of the above.

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 - Groundwater Elevation Contour Map
- Figure 2 - 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: Ms. Madhulla Logan, M.S., Alameda County Health Care Services Agency
Mr. Ron Sykora/Mr. Robert L. Webster, David D. Bohannon Organization
Mr. Stephen Hill, Regional Water Quality Control Board - San Francisco Bay Region
Dr. Charles Lapin, ARCO Products Company

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	a	a	a	a	Quarterly
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	a	a	a	a	Quarterly
MW-14	a	a	a	a	Quarterly
MW-15	a	a	a	a	Quarterly
MW-16	a	a	a	a	Quarterly
MW-17	----------Destroyed----------				
MW-18	a	a	a	a	Quarterly
MW-19	a	a	a	a	Quarterly
MW-20	----------Destroyed----------				
MW-21	a	a	a	a	Quarterly
MW-22	a	a	a	a	Quarterly
MW-23	a	a	a	a	Quarterly
MW-24	a	a	a	a	Quarterly
MW-25	a	a	a	a	Quarterly
MW-26	a	a	a	a	Quarterly
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, and MtBE)

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 ††	03/14/96	a	33.99	9.75	24.24	1,600	30	<10	13	<10	NA	NM
	05/29/96	b		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
	11/25/96	d		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
	09/10/97	g		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
MW-7	03/15/96	a	34.40	9.73	24.67	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/29/96	b		11.60	22.80	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96	c		12.63	21.77	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96	d		12.10	22.30	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	04/01/97	f		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
	09/10/97	g		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
MW-8	03/14/96	a	32.79	8.90	23.89	670	5.1	<2.0	<2.0	<2.0	NA	NM
	05/29/96	b		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
	04/01/97	f		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
	09/10/97	g		11.67	21.12	570	57	<1.0	2.1	1.7	57	2.0
	09/10/97	e		--	--	--	--	--	--	--	48	--
	11/24,25/97			11.50	21.29	530	3.0	1.7	1.9	1.5	26	2.0
	03/19,20/98			**9.40**	**23.39**	**[illegible]**	**1.4**	**<0.50**	**<0.50**	**3.7**	**[illegible]**	**2.9**
MW-9	03/15/96	a	32.11	7.65	24.46	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96	b		9.67	22.44	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96	c		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
	04/01/97	f		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

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

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

Well Number	Date Sampled		Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MtBE (ppb)	Dissolved Oxygen (ppm)
MW-9	09/10/97	g		10.87	21.24	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.0
(cont.)	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**	**<2.5**	**4.8**
MW-10 ††	03/14/96	a	31.67	7.78	23.89	870	35	<5.0	5.2	7.0	NA	NM
	05/29/96	b		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
	11/25/96	d		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
	09/10/97	g		11.08	20.59	950	<1.2	3.3	2.5	3.7	240	2.0
	09/10/97	e		--	--	--	--	--	--	--	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**
MW-11	03/14/96	a	32.54	8.60	23.94	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96	b		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
	04/01/97	f		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
	09/10/97	g		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**
E-1A ††	03/14/96	a	33.06	10.35	22.71	2,700	38	<5.0	130	6.2	NA	NM
(MW-12)	05/29/96	b		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
	11/25/96	d		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
	09/10/97	g		11.85	21.21	3,200	9.0	<5.0	45	<5.0	85	2.0
	09/10/97	e		--	--	--	--	--	--	--	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**	**[illegible]**	**[illegible]**	**<0.50**	**[illegible]**	**[illegible]**	**[illegible]**	**6.2**

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

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-13	03/15/96	a	35.42	10.90	24.52	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/29/96	b		12.90	22.52	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			13.89	21.53	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			13.41	22.01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	04/01/97	f		13.11	22.31	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97			13.98	21.44	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/10/97	g		14.09	21.33	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	11/24,25/97			13.90	21.52	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	03/19,20/98			**11.80**	**23.62**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**	**2.8**
MW-14	03/15/96	a	30.46	6.63	23.83	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96	b		8.83	21.63	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			9.83	20.63	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			9.33	21.13	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	04/01/97	f		9.04	21.42	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97			9.94	20.52	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/10/97	g		10.08	20.38	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	11/24,25/97			9.78	20.68	<50	<0.50	<0.50	<0.50	<0.50	2.9	2.6
	03/19/98			**7.92**	**22.54**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**	**1.8**
MW-15	03/13/96	a	31.41	8.13	23.28	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/29/96	b		10.30	21.11	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			11.30	20.11	<50	<0.50	<0.50	<0.50	<0.50	5.3	NM
	11/25/96			10.83	20.58	<50	<0.50	<0.50	<0.50	<0.50	12	NM
	04/01/97	f		10.45	20.58	<50	<0.50	<0.50	<0.50	<0.50	7.2	NM
	06/25/97			11.39	20.02	<50	<0.50	<0.50	<0.50	<0.50	7.0	NM
	09/09/97			11.50	19.91	----	----	----	Well inaccessible	----	----	----
	11/24,25/97			----	----	Well inaccessible	----	----	----	----	----	----
	03/19/98			**9.15**	**22.26**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**5.3**	**2.2**
MW-16	03/13/96	a	31.39	8.62	22.77	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96	b		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
	04/01/97	f		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
	09/10/97	g		12.03	19.36	<50	<0.50	<0.50	<0.50	<0.50	63	3.0

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

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-16	09/10/97	e		--	--	--	--	--	--	--	86	--
(cont.)	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
MW-17	---------- Well Destroyed ----------											
MW-18	03/13/96	a	29.70	7.53	22.17	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96	b		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
	04/01/97	f		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
	09/10/97	g		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
MW-19	03/13/96	a	29.02	7.06	21.96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96	b		9.42	19.60	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			10.33	18.69	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			9.67	19.35	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	04/01/97	f		9.65	19.37	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97			10.41	18.61	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/10/97	g		10.47	18.55	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.0
	11/24,25/97			10.35	18.67	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.6
	03/19/98			8.67	20.35	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**	NM
MW-20	---------- Well Destroyed ----------											
MW-21	03/13/96	a	28.72	7.58	21.14	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/29/96	b		9.85	18.87	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			10.75	17.97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			10.00	18.72	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	04/01/97	f		10.03	18.69	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97			10.83	17.89	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/10/97	g		10.90	17.82	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	11/24,25/97			10.50	18.22	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	03/19/98			9.08	19.64	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**	0.8

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

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

Well Number	Date Sampled		Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MtBE (ppb)	Dissolved Oxygen (ppm)
MW-22	03/13/96	a	29.29	7.83	21.46	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96	b		10.33	18.96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			11.28	18.01	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			10.61	18.68	<50	<0.50	<0.50	<0.50	<0.50	3.0	NM
	12/30/96			10.61	18.68	NA	NA	NA	NA	NA	3.3	NM
	04/01/97	f		10.56	18.73	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97			11.51	17.78	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/10/97	g		11.45	17.84	<50	<0.50	<0.50	<0.50	<0.50	3.4	1.0
	11/24,25/97			11.08	18.21	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.6
	03/19/98			**9.40**	**19.89**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**	**2.0**
MW-23	03/13/96	a	30.99	9.13	21.86	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96	b		11.37	19.62	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			12.31	18.68	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			11.76	19.23	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	04/01/97	f		11.56	19.43	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97			12.39	18.60	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/10/97	g		12.53	18.46	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.0
	11/24,25/97			12.13	18.86	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	03/19/98			**10.22**	**20.77**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**	**1.4**
MW-24	01/15/96	a	34.38	10.10	24.28	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96	b		12.25	22.13	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96			13.28	21.10	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	11/25/96			12.71	21.67	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	04/01/97	f		12.50	21.88	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	06/25/97			13.38	21.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/10/97	g		13.46	20.92	<50	<0.50	<0.50	<0.50	<0.50	<2.5	5.0
	11/24,25/97			13.25	21.13	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/19,20/98			**11.32**	**23.06**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**	**1.6**
MW-25	03/14/96	a	34.12	9.61	24.51	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/29/96	b		11.30	22.82	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96	c		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
	04/01/97	f		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
	09/10/97	g		12.45	21.67	<50	<0.50	<0.50	<0.50	<0.50	78	1.0

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

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-25	09/10/97	e		--	--	--	--	--	--	--	79	--
(cont.)	11/24,25/97			12.30	21.82	<50	<0.50	<0.50	<0.50	<0.50	130	0.0
	03/19,20/98			10.18	23.94	<50	<0.50	<0.50	<0.50	<0.50	96	1.8
MW-26	03/15/96	a	33.71	9.38	24.33	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/28/96	b		11.57	22.14	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/28/96	c		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
	04/01/97	f		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
	09/10/97	g		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

MtBE = Methyl tert-butyl ether
MSL = Mean sea level
TOB = Top of box
ppb = Parts per billion
ppm = Parts per million
a. All wells gauged on March 13, 1996.
b. All wells gauged on May 28, 1996.
c. Well sampled on August 29, 1996.
d. Well sampled on November 26, 1996.
e. MtBE result confirmed by EPA Method 8260.
f. Wells gauged on March 31, 1997.
g. Wells gauged on September 9, 1997.
< = Less than laboratory detection limit.
NA = Not analyzed
NM = Not measured
NS = Not sampled
† = Well sampled without purging.
†† = ORC program at well was initiated on September 21, 1995 and discontinued on May 15, 1997.

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)
580 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**
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	**160**	1.8	**0.62**	**<0.50**	**[illegible]**	**77**	NM
	03/19/98	--	--	--	--	--	**<2.0 c**	NM
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 a	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NM**
642 H	03/15/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/27/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/29/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	11/26/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31/97	NS	NS	NS	NS	NS	NS	NM
	06/25/97	NS	NS	NS	NS	NS	NS	NM
	09/09/97 a	NS	NS	NS	NS	NS	NS	NM
	11/24/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/19/98 a	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NM**
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**

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)
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**
17200 VM	03/15/96	730	<1.0	<1.0	1.5	1.7	NA	NM
	05/27/96	200	<0.50	<0.50	1.4	1.8	NA	NM
	08/29/96	Well Destroyed						
17203 VM	03/15/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/27/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/29/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	11/26/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31/97 f	NS	NS	NS	NS	NS	NS	NM
	06/25/97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	09/09/97 f	NS	NS	NS	NS	NS	NS	NM
	11/24/97 f	NS	NS	NS	NS	NS	NS	NM
	03/19/98	Well Dry						
17302 VM	03/15/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/27/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	08/29/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	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 f	NS	NS	NS	NS	NS	NS	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**
17348 VE	03/13/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NM
	05/27/96	Well Dry						
	08/29/96	Well Dry						
	11/26/96	Well Dry						
	03/31/97	Well Dry						
	06/25/97	Well Inaccessible						
	09/09/97 g	NS	NS	NS	NS	NS	NS	NM
	11/24/97 g	NS	NS	NS	NS	NS	NS	NM
	03/19/98 a	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NM**

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	03/15/96	1,700	<2.0	<2.0	2.5	13	NA	NM
	05/27/96	320	4.2	1.3	0.95	0.71	NA	NM
	08/29/96	410	7.5	<0.50	<0.50	1.1	NA	NM
	11/26/96	300	<1.0	1.7	<1.0	2.1	55 *	NM
	03/31/97	430	<1.0	2.7	<1.0	1.0	57 c	NM
	06/25/97 **	2,100	30	<5.0	<5.0	6.7	140	NM
	08/18/97	320	2.0	<0.5	<0.5	<0.5	34	NM
	08/18/97	--	--	--	--	--	31 c	NM
	09/09/97	380	6.0	1.4	0.98	<0.50	38	3.0
	09/09/97	--	--	--	--	--	34 c	NM
	11/24/97	240	<1.0	1.1	<1.0	1.4	53	2.4
	11/24/97	--	--	--	--	--	33 c†	NM
	03/19/98	1,300	14	<0.50	<0.50	1.2	250	1.0
	03/19/98	--	--	--	--	--	27 c	NM
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
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	--	--	--	--	--	[illegible]	NM
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 (cont.)	11/26/96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NM
	03/31/97 a	NS	NS	NS	NS	NS	NS	NM
	06/25/97	Well Destroyed						

MtBE = Methyl tert-butyl ether
ppb = Parts ber billion
ppm = Parts per million
H = Hacienda Avenue
< = Less than laboratory detection limit stated at right.
NA = Not analyzed
NM = Not measured
NS = Not sampled
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.
VM = Via Magdalena
VE = Via Encinas
* = 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.
† = Sample analyzed past hold time.
Homeowners are contacted 1 week prior to sampling event.

N

VIA MANZANAS

RESIDENTIAL

MW-20

POTRERO COURT

APARTMENTS

APARTMENTS

VIA ARRIBA

SHOPS

HESPERIAN BOULEVARD

RESTAURANT

MW-19 (20.35)

VIA MAGDALENA

20.0

21.0

22.0

23.0

24.0

CHURCH AND SCHOOL

17200VM

MW-17

MW-14 (22.54)

MW-24 (23.06)

RESIDENTIAL

MW-26 (23.16)

RESTAURANT

MW-9 (23.48)

MW-21 (19.64)

VIA MEDIA

VIA FLORES

17197VM

MW-18 (20.75)

17203VM

17302VM

17372VM

(23.41) E-1A

MW-16 (21.59)

RESIDENTIAL

(22.89) MW-10

(23.39) MW-8

MW-25 (23.94)

633H

SP-2/V-5

SP-1/V-4

MW-5 (23.56)

590H

MW-7 (24.05)

17349VM

17371VM

MW-15 (22.26)

MW-11 (23.11)

MW-13 (23.62)

MW-22 (19.89)

VIA ENCINAS COURT

17393VM

634H

642H

SITE LOCATION

RESIDENTIAL

SHOPS

17348VE

MW-23 (20.77)

675H

RESIDENTIAL

HACIENDA AVENUE

VIA ALAMO

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

APPROXIMATE GRADIENT = 0.003

LEGEND

MW-7 — GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

SP-1/V-4 — DUAL COMPLETION AIR SPARGING/SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION

MW-20 — DESTROYED WELL LOCATION AND DESIGNATION

590H — DOMESTIC IRRIGATION WELL LOCATION AND DESIGNATION

E-1A — GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION

(21.59) GROUNDWATER ELEVATION IN FEET - MSL, 3-19-98

20.0 GROUNDWATER ELEVATION CONTOUR IN FEET - MSL, 3-19-98

PACIFIC ENVIRONMENTAL GROUP, INC.

APPROXIMATE SCALE

0 150 300 FEET

ARCO SERVICE STATION 0608
17601 Hesperian Boulevard at Hacienda Avenue
San Lorenzo, California

GROUNDWATER ELEVATION CONTOUR MAP

FIGURE: 1

PROJECT: 330-006.2L

N

VIA MANZANAS

RESIDENTIAL

MW-20 ∅

POTRERO COURT

APARTMENTS

APARTMENTS

VIA ARRIBA

SHOPS

HESPERIAN BOULEVARD

RESTAURANT

MW-19
ND/ND

VIA MAGDALENA

CHURCH
AND SCHOOL

17200VM
MW-17 ∅

MW-14
ND/ND

MW-24
ND/ND

RESIDENTIAL

MW-21
ND/ND

VIA MEDIA

VIA FLORES

ND/ND
MW-18
ND/ND

17197VM ■

17203VM
DRY ■

17302VM
NS ■

ND/ND
17372VM ■

MW-26
ND/ND

RESTAURANT

MW-9
ND/ND

11,000/1,300 E-1A

330/1.7
MW-10

440/1.4
MW-8 △
SP-1/V-4

MW-25
ND/ND

MW-5
61/1.0

MW-7
ND/ND

RESIDENTIAL

MW-16
ND/ND

150/1.8
633H ■

SP-2/V-5 △

17349VM
1,300/14 ■

MW-15
ND/ND

17371VM
NS ■

590H
ND/ND ■

LEY

MW-13
ND/ND

SHOPS

SITE LOCATION

MW-22
ND/ND

VIA ENCINAS COURT

17393VM ∅

MW-11
ND/ND

634H
642H ■ NS
ND/ND

17348VE
NS ■

MW-23
ND/ND

675H
NS ■

HACIENDA AVENUE

RESIDENTIAL

VIA ALAMO

APPROXIMATE DIRECTION
OF GROUNDWATER FLOW

LEGEND

MW-7 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

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

MW-20 ∅ DESTROYED WELL LOCATION AND DESIGNATION

590H ■ DOMESTIC IRRIGATION WELL LOCATION AND DESIGNATION

E-1A ⊗ GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION

440/1.4 TPPH-g/BENZENE CONCENTRATION IN GROUNDWATER, IN PARTS PER BILLION, 3-19-98 AND 3-20-98

ND NOT DETECTED

NS NOT SAMPLED

PACIFIC ENVIRONMENTAL GROUP, INC.

APPROXIMATE SCALE
0 150 300 FEET

ARCO SERVICE STATION 0608
17601 Hesperian Boulevard at Hacienda Avenue
San Lorenzo, California

TPPH-g/BENZENE CONCENTRATION MAP

FIGURE:
2
PROJECT:
330-006.2L

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 calculated as gasoline, benzene, toluene, ethylbenzene, 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

APR 2 2 1998

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 330-006.2L/0608,San Lorenzo	Sampled: 03/20/98
2025 Gateway Place, Suite 440	Sample Descript: MW5	Received: 03/23/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/01/98
Attention: Shaw Garakani	Lab Number: 9803F14-01	Reported: 04/11/98

QC Batch Number: GC040198BTEX09A
Instrument ID: HP9

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**61**
Methyl t-Butyl Ether	**2.5**	**75**
Benzene	**0.50**	**1.0**
Toluene	**0.50**	**0.56**
Ethyl Benzene	**0.50**	**0.55**
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		**Gasoline**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	101

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1271

Tod Granicher
Project Manager

Sequoia Analytical

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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 330-006.2L/0608,San Lorenzo	Sampled: 03/20/98
2025 Gateway Place, Suite 440	Sample Descript: MW7	Received: 03/23/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/01/98
Attention: Shaw Garakani	Lab Number: 9803F14-02	Reported: 04/11/98

QC Batch Number: GC040198BTEX09A
Instrument ID: HP9

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	100

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1271

Tod Granicher
Project Manager

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Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110 Attention: Shaw Garakani	Client Proj. ID: 330-006.2L/0608,San Lorenzo Sample Descript: MW8 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9803F14-03	Sampled: 03/20/98 Received: 03/23/98 Analyzed: 04/01/98 Reported: 04/11/98

QC Batch Number: GC040298BTEX05A
Instrument ID: HP5

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**440**
Methyl t-Butyl Ether	**2.5**	**140**
Benzene	**0.50**	**1.4**
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	**0.50**	**3.7**
Chromatogram Pattern:		
Gas & Unidentified HC		<C7

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1271

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW9
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9803F14-04

Sampled: 03/20/98
Received: 03/23/98

Analyzed: 04/01/98
Reported: 04/11/98

QC Batch Number: GC040198BTEX09A
Instrument ID: HP9

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	**2.5**	**58**
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	99

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1271

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW13
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9803F14-05

Sampled: 03/20/98
Received: 03/23/98

Analyzed: 04/01/98
Reported: 04/11/98

QC Batch Number: GC040198BTEX09A
Instrument ID: HP9

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	99

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1271

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW24
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9803F14-06

Sampled: 03/20/98
Received: 03/23/98

Analyzed: 04/01/98
Reported: 04/11/98

QC Batch Number: GC040198BTEX09A
Instrument ID: HP9

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	100

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1271

Tod Granicher
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 330-006.2L/0608,San Lorenzo	Sampled: 03/20/98
2025 Gateway Place, Suite 440	Sample Descript: MW25	Received: 03/23/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/01/98
Attention: Shaw Garakani	Lab Number: 9803F14-07	Reported: 04/11/98

QC Batch Number: GC040198BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	**2.5**	**96**
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	114

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1271

Tod Granicher
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110 Attention: Shaw Garakani	Client Proj. ID: 330-006.2L/0608,San Lorenzo Sample Descript: MW26 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9803F14-08	Sampled: 03/20/98 Received: 03/23/98 Analyzed: 04/01/98 Reported: 04/11/98

QC Batch Number: GC040198BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	113

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1271

Tod Granicher
Project Manager

Sequoia Analytical

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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: E1A
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9803F14-09

Sampled: 03/20/98
Received: 03/23/98

Analyzed: 04/01/98
Reported: 04/11/98

QC Batch Number: GC040198BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**11000**
Methyl t-Butyl Ether	**2.5**	**220**
Benzene	**0.50**	**1300**
Toluene	0.50	N.D.
Ethyl Benzene	**0.50**	**550**
Xylenes (Total)	**0.50**	**380**
Chromatogram Pattern:		**Gasoline**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	143 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1271

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Shaw Garakani

Client Project ID: 330-006.2L/0608, San Lorenzo
Matrix: LIQUID
Work Order #: 9803F14 01-09
Reported: Apr 20, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	BTEX as THP
QC Batch#:	GC040198802002A	GC040198802002A	GC040198802002A	GC040198802002A	GC040198802002A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb
MS/MSD #:	8032234	8032234	8032234	8032234	8032234
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/1/98	4/1/98	4/1/98	4/1/98	4/1/98
Analyzed Date:	4/1/98	4/1/98	4/1/98	4/1/98	4/1/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	350 µg/L
Result:	18	19	21	61	320
MS % Recovery:	90	95	105	102	91
Dup. Result:	19	20	22	64	330
MSD % Recov.:	95	100	110	107	94
RPD:	5.4	5.1	4.7	4.8	3.1
RPD Limit:	0-20	0-20	0-20	0-20	0-50
LCS #:	LCS040198	LCS040198	LCS040198	LCS040198	LCS040198
Prepared Date:	4/1/98	4/1/98	4/1/98	4/1/98	4/1/98
Analyzed Date:	4/1/98	4/1/98	4/1/98	4/1/98	4/1/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	350 µg/L
LCS Result:	18	19	19	61	330
LCS % Recov.:	90	95	95	102	94
MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130	60-140

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL
ELAP #1271

Tod Granicher
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Sequoia Analytical

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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Shaw Garakani

Client Project ID: 330-006.2L/0608, San Lorenzo
Matrix: LIQUID
Work Order #: 9803F14 01-09
Reported: Apr 20, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	BTEX as THP
QC Batch#:	GC040198802009A	GC040198802009A	GC040198802009A	GC040198802009A	GC040198802009A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb
MS/MSD #:	8031992	8031992	8031992	8031992	8031992
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/1/98	4/1/98	4/1/98	4/1/98	4/1/98
Analyzed Date:	4/1/98	4/1/98	4/1/98	4/1/98	4/1/98
Instrument I.D.#:	HP9	HP9	HP9	HP9	HP9
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	360 µg/L
Result:	19	21	22	67	340
MS % Recovery:	95	105	110	112	94
Dup. Result:	19	22	22	67	340
MSD % Recov.:	95	110	110	112	94
RPD:	0.0	4.7	0.0	0.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20	0-50
LCS #:	LCS040198	LCS040198	LCS040198	LCS040198	LCS040198
Prepared Date:	4/1/98	4/1/98	4/1/98	4/1/98	4/1/98
Analyzed Date:	4/1/98	4/1/98	4/1/98	4/1/98	4/1/98
Instrument I.D.#:	HP9	HP9	HP9	HP9	HP9
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	360 µg/L
LCS Result:	20	22	23	70	360
LCS % Recov.:	100	110	115	117	100
MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130	60-140

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL
ELAP #1271

Tod Granicher
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

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Pacific Environmental Group
2025 Gateway Place, Suite 440
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Attention: Shaw Garakani

Client Project ID: 330-006.2L/0608, San Lorenzo
Matrix: LIQUID
Work Order #: 9803F14 01-09
Reported: Apr 20, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	BTEX as THP
QC Batch#:	GC040298802002A	GC040298802002A	GC040298802002A	GC040298802002A	GC040298802002A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb
MS/MSD #:	8032405	8032405	8032405	8032405	8032405
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/2/98	4/2/98	4/2/98	4/2/98	4/2/98
Analyzed Date:	4/2/98	4/2/98	4/2/98	4/2/98	4/2/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	350 µg/L
Result:	21	21	20	64	340
MS % Recovery:	105	105	100	107	97
Dup. Result:	18	18	19	57	350
MSD % Recov.:	90	90	95	95	100
RPD:	15.4	15.4	5.1	11.6	2.9
RPD Limit:	0-20	0-20	0-20	0-20	0-50
LCS #:	LCS040298	LCS040298	LCS040298	LCS040298	LCS040298
Prepared Date:	4/2/98	4/2/98	4/2/98	4/2/98	4/2/98
Analyzed Date:	4/2/98	4/2/98	4/2/98	4/2/98	4/2/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	360 µg/L
LCS Result:	19	21	23	67	360
LCS % Recov.:	95	105	115	112	103
MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130	60-140

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL
ELAP #1271

Tod Granicher
Project Manager

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

ARCO Products Company
Division of AtlanticRichfieldCompany

330006AC **Task Order No.** 02340

Chain of Custody

ARCO Facility no. 0608 | City (Facility) 17601 Hesperian Blvd, 3rd (Consultant) | Project manager (Consultant) Jiraa Olueakawi

ARCO engineer Mike Whelan | Telephone no. (ARCO) | Telephone no. (Consultant) 408 441-7500 | Fax no. (Consultant) 408) 441-7539

Consultant name Pacific Environmental Group | Address (Consultant) 2025 Gateway place #440 San Jose CA

Laboratory name: SC Dicois

Contract number:

Method of shipment:

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH MTBE 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 ☐ VOA ☐ Semi VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
MW5	01	3		W		Y	HCL	3-20-98	12:00		X											
MW7	02								10:40													
MW8	03								11:10													
MW9	04								10:05													
MW13	05								10:55													
MW24	06								9:40													
MW25	07								10:25													
MW26	08								9:50													
E1A	09								11:35													

Special detection Limit/reporting:

Special QA/QC:

MAR 23 11 00

Remarks:

Lab number: 9803F14

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: [signature]	3-20-98	10:00	Received by: [signature]		
Relinquished by: [signature]	3/23/98		Received by: [signature]	3/23/98	955
Relinquished by: [signature] 3/23/98		11:00	Received by laboratory: [signature]	3/23/98	11:00

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

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

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

WORKORDER: 9803F74
DATE OF LOG-IN: 3/24/98

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: 3/23/98
12. Time Rec. at Lab: 1100
13. Temp Rec. at Lab: 8°C

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
1	N.C.	MW5	3 VOAS	Li	3/20	
2		MW7				
3		MW8				
4		MW9				
5		MW13				
6		MW24				
7		MW25				
8		MW26				
9		EIA				

Relinquished 3/23/98

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

Page _____ of _____

Revision 6/18/97
RCPTLOG.XLS

APR 2 2 1998

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 330-006.2L/0608,San Lorenzo	Sampled: 03/18/98
2025 Gateway Place, Suite 440	Sample Descript: 590H	Received: 03/20/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/26/98
Attention: Shaw Garakani	Lab Number: 9803E45-01	Reported: 04/11/98

QC Batch Number: GC032698BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	103

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: 633H
Matrix: LIQUID
Analysis Method: EPA 8240
Lab Number: 9803E45-02

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 04/01/98
Reported: 04/11/98

QC Batch Number: GC040198826001A
Instrument ID: MS1

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.0	N.D.

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	107
Toluene-d8	88	110	101
4-Bromofluorobenzene	86	115	101

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 330-006.2L/0608,San Lorenzo	Sampled: 03/18/98
2025 Gateway Place, Suite 440	Sample Descript: 633H	Received: 03/20/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/26/98
Attention: Shaw Garakani	Lab Number: 9803E45-02	Reported: 04/11/98

QC Batch Number: GC032698BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**150**
Methyl t-Butyl Ether	**2.5**	**77**
Benzene	**0.50**	**1.8**
Toluene	**0.50**	**0.62**
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	**0.50**	**28**
Chromatogram Pattern:		**Gasoline**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	100

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110 Attention: Shaw Garakani	Client Proj. ID: 330-006.2L/0608,San Lorenzo Sample Descript: 17197VM Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9803E45-03	Sampled: 03/18/98 Received: 03/20/98 Analyzed: 03/26/98 Reported: 04/11/98

QC Batch Number: GC032698BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	107

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: 17349VM
Matrix: LIQUID
Analysis Method: EPA 8240
Lab Number: 9803E45-04

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 04/01/98
Reported: 04/11/98

QC Batch Number: GC040198826001A
Instrument ID: MS1

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.0	27

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	99
Toluene-d8	88	110	100
4-Bromofluorobenzene	86	115	92

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 330-006.2L/0608,San Lorenzo	Sampled: 03/18/98
2025 Gateway Place, Suite 440	Sample Descript: 17349VM	Received: 03/20/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/26/98
Attention: Shaw Garakani	Lab Number: 9803E45-04	Reported: 04/11/98

QC Batch Number: GC032698BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**1300**
Methyl t-Butyl Ether	**2.5**	**250**
Benzene	**0.50**	**14**
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	**0.50**	**1.2**
Chromatogram Pattern:		**Gasoline**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: 17372VM
Matrix: LIQUID
Analysis Method: EPA 8240
Lab Number: 9803E45-05

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 04/01/98
Reported: 04/11/98

QC Batch Number: GC040198826001A
Instrument ID: MS1

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.0	1400

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	95
Toluene-d8	88	110	95
4-Bromofluorobenzene	86	115	93

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: 17372VM
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9803E45-05

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 03/26/98
Reported: 04/11/98

QC Batch Number: GC032698BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	**2.5**	**1200**
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	101

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110 Attention: Shaw Garakani	Client Proj. ID: 330-006.2L/0608,San Lorenzo Lab Proj. ID: 9803E45	Received: 03/20/98 Reported: 04/11/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of_____ pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Shaw Garakani

Client Project ID: 330-006.2L,/0608, San Lorenzo
Matrix: LIQUID
Work Order #: 9803E45 01-05

Reported: Apr 20, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	M.W.	M.W.	M.W.	M.W.
MS/MSD #:	LCSD032598	LCSD032598	LCSD032598	LCSD032598
Prepared Date:	3/25/98	3/25/98	3/25/98	3/25/98
Analyzed Date:	3/25/98	3/25/98	3/25/98	3/25/98
Instrument I.D.#:	N.A.	N.A.	N.A.	N.A.
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	20 µg/L
MS % Recovery:	110	109	103	109
MSD % Recov.:	109	108	102	109
RPD:	0.91	0.92	0.98	0.0
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	LCS032598	LCS032598	LCS032598	LCS032598
Prepared Date:	3/25/98	3/25/98	3/25/98	3/25/98
Analyzed Date:	3/25/98	3/25/98	3/25/98	3/25/98
Instrument I.D.#:	N.A.	N.A.	N.A.	N.A.
LCS % Recov.:	110	109	103	109
MS/MSD LCS Control Limits	80-120	80-120	80-120	80-120

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL
ELAP #1849

Tod Granicher
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Shaw Garakani

Client Project ID: 330-006.2L,/0608, San Lorenzo
Matrix: LIQUID
Work Order #: 9803E45 01-05

Reported: Apr 20, 1998

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chlorobenzene
Analy. Method:	EPA 8260	EPA 8260	EPA 8260	EPA 8260	EPA 8260
Analyst:	B.F.	B.F.	B.F.	B.F.	B.F.
MS/MSD #:	804004MS	804004MS	804004MS	804004MS	804004MS
Prepared Date:	4/1/98	4/1/98	4/1/98	4/1/98	4/1/98
Analyzed Date:	4/1/98	4/1/98	4/1/98	4/1/98	4/1/98
Instrument I.D.#:	N.A.	N.A.	N.A.	N.A.	N.A.
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	10 µg/L	10 µg/L
MS % Recovery:	111	104	102	102	105
MSD % Recov.:	104	109	100	99	112
RPD:	6.5	4.7	2.0	3.0	6.5
LCS #:	LCS040198	LCS040198	LCS040198	LCS040198	LCS040198
Prepared Date:	4/1/98	4/1/98	4/1/98	4/1/98	4/1/98
Analyzed Date:	4/1/98	4/1/98	4/1/98	4/1/98	4/1/98
Instrument I.D.#:	N.A.	N.A.	N.A.	N.A.	N.A.
LCS % Recov.:	107	96	97	99	104
MS/MSD LCS Control Limits	60-140	77-124	74-128	76-134	80-123

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL
ELAP #1849

Tod Granicher
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

ARCO Products Company Division of AtlanticRichfieldCompany 33000621 **Task Order No.** 20340

Chain of Custody

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

ARCO engineer M. Whelan | Telephone no. (ARCO) | Telephone no. (Consultant) 408) 441-7500 | Fax no. (Consultant) 408) 441-7539

Consultant name Pacific Environmental Group | Address (Consultant) 2025 Gateway place #440 San Jose CA

Laboratory name Sequoia

Contract number

Method of shipment

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH EPA M602/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ VOA ☐ Semi VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
*590H	01	3		X		Y	HCL	3-18-98	10:30		↓											
*633H	02	↓		↓		↓	↓	↓	11:40		↓											
*17192UW	03	↓		↓		↓	↓	↓	10:30		↓											
*17349UW	04	↓		↓		↓	↓	↓	10:10		↓											
*1733UW	05	↓		↓		↓	↓	↓	11:30		↓											

Special detection Limit/reporting

Special QA/QC

Remarks
*Home owners wells
Run EPA 8260 with MTBE greater than 35ppb.

Lab number 9803E45

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 [signature]	3-18-98	16:30	Received by [signature]		
Relinquished by [signature]	3/20/98	9:58	Received by [signature]		
Relinquished by [signature]	3/20/98		Received by laboratory [signature]	3/20/98	1519

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

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT): PH
WORKORDER: 9803E45
DATE OF LOG-IN: 3-23-98

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	Present / (Absent) Intact / Broken*	01	A-C	590H	3 VOAs	Li	3/18	
2. Custody Seal #:	Put in Remarks Section	02	↓	633H	↓	↓	↓	
3. Chain-of-Custody	(Present) / Absent*	03		17197VM				
4. Traffic Reports or Packing List:	Present / (Absent)	04		17349VM				
5. Airbill:	Airbill / Sticker Present / (Absent)	05		17372VM				
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:	3/20/98							
12. Time Rec. at Lab:	1519							
13. Temp Rec. at Lab:	8°C							

Rec'd: 3/20/98

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

Revision 6/18/97
RCPTLOG.XLS

APR 2 2 1998

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW10
Matrix: LIQUID
Analysis Method: EPA 8020
Lab Number: 9803E44-01

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 03/25/98
Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.5	130

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	97

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW10
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9803E44-01

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 03/25/98
Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**330**
Benzene	**0.50**	**1.7**
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		**Gasoline**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	97

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW11
Matrix: LIQUID
Analysis Method: EPA 8020
Lab Number: 9803E44-02

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 03/25/98
Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.5	N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	73

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW11
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9803E44-02

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 03/25/98
Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	73

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW14
Matrix: LIQUID
Analysis Method: EPA 8020
Lab Number: 9803E44-03

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 03/25/98
Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.5	N.D.
Surrogates	**Control Limits %**	**% Recovery**
Trifluorotoluene	70 130	91

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 330-006.2L/0608,San Lorenzo	Sampled: 03/18/98
2025 Gateway Place, Suite 440	Sample Descript: MW14	Received: 03/20/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/25/98
Attention: Shaw Garakani	Lab Number: 9803E44-03	Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	91

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW15
Matrix: LIQUID
Analysis Method: EPA 8020
Lab Number: 9803E44-04

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 03/25/98
Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.5	5.3

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	99

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW15
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9803E44-04

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 03/25/98
Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	99

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110 Attention: Shaw Garakani	Client Proj. ID: 330-006.2L/0608,San Lorenzo Sample Descript: MW16 Matrix: LIQUID Analysis Method: EPA 8020 Lab Number: 9803E44-05	Sampled: 03/18/98 Received: 03/20/98 Analyzed: 03/25/98 Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.5	8.4

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	100

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW16
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9803E44-05

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 03/25/98
Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	100

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW18
Matrix: LIQUID
Analysis Method: EPA 8020
Lab Number: 9803E44-06

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 03/25/98
Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.5	N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	95

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 330-006.2L/0608,San Lorenzo	Sampled: 03/18/98
2025 Gateway Place, Suite 440	Sample Descript: MW18	Received: 03/20/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/25/98
Attention: Shaw Garakani	Lab Number: 9803E44-06	Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	95

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW19
Matrix: LIQUID
Analysis Method: EPA 8020
Lab Number: 9803E44-07

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 03/25/98
Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.5	N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	95

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW19
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9803E44-07

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 03/25/98
Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	95

Analytes reported as N.D. were not present above the stated limit of detection.

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW21
Matrix: LIQUID
Analysis Method: EPA 8020
Lab Number: 9803E44-08

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 03/25/98
Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.5	N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	110

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW21
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9803E44-08

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 03/25/98
Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	110

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW22
Matrix: LIQUID
Analysis Method: EPA 8020
Lab Number: 9803E44-09

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 03/25/98
Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.5	N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	108

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 330-006.2L/0608,San Lorenzo	Sampled: 03/18/98
2025 Gateway Place, Suite 440	Sample Descript: MW22	Received: 03/20/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/25/98
Attention: Shaw Garakani	Lab Number: 9803E44-09	Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	108

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Sample Descript: MW23
Matrix: LIQUID
Analysis Method: EPA 8020
Lab Number: 9803E44-10

Sampled: 03/18/98
Received: 03/20/98

Analyzed: 03/25/98
Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.5	N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

Sequoia Analytical

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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 330-006.2L/0608,San Lorenzo	Sampled: 03/18/98
2025 Gateway Place, Suite 440	Sample Descript: MW23	Received: 03/20/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/25/98
Attention: Shaw Garakani	Lab Number: 9803E44-10	Reported: 04/05/98

QC Batch Number: GC032598BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Tod Granicher
Project Manager

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Shaw Garakani

Client Proj. ID: 330-006.2L/0608,San Lorenzo
Lab Proj. ID: 9803E44

Received: 03/20/98
Reported: 04/05/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of_____ pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Shaw Garakani

Client Project ID: 330-006.2L/0608, San Lorenzo
Matrix: Liquid

QC Sample Group: 9803E44 01-10

Reported:

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	M. W.	M. W.	M. W.	M. W.
MS/MSD Batch#:	LCSD032598	LCSD032598	LCSD032598	LCSD032598
Date Prepared:	3/25/98	3/25/98	3/25/98	3/25/98
Date Analyzed:	3/25/98	3/25/98	3/25/98	3/25/98
Instrument I.D.#:	N.A.	N.A.	N.A.	N.A.
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	20 µg/L
Matrix Spike % Recovery:	106	105	100	108
Matrix Spike Duplicate % Recovery:	105	105	100	108
Relative % Difference:	0.95	0.0	0.0	0.0
LCS Batch#:	LCS032598	LCS032598	LCS032598	LCS032598
Date Prepared:	3/25/98	3/25/98	3/25/98	3/25/98
Date Analyzed:	3/25/98	3/25/98	3/25/98	3/25/98
Instrument I.D.#:	N.A.	N.A.	N.A.	N.A.
LCS % Recovery:	106	105	100	108
% Recovery Control Limits:	80-120	80-120	80-120	80-120

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL
ELAP #1849

Tod Granicher
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

ARCO Products Company
Division of AtlanticRichfieldCompany

330000621 **Task Order No.** 02340

Chain of Custody

ARCO Facility no. 0608	City (Facility) 17601 Hesperian Blvd	Project manager (Consultant) Shaw Garaghan	Laboratory name Sequoia
ARCO engineer Mike Whelan	Telephone no. (ARCO)	Telephone no. (Consultant) 408 441 7500	Fax no. (Consultant) (408) 441 7539	Contract number
Consultant name Pacific Environmental Group	Address (Consultant) 2025 Gateway Place #440 San Jose CA			Method of shipment

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH EPA M602/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐
Mw10	01	3		X		4	HCl	3.18.98	14:55		X									
Mw11	02								11:35											
Mw14	03								14:05											
Mw15	04								14:10											
Mw16	05								13:55											
Mw18	06								13:40											
Mw19	07								13:30											
Mw21	08								13:15											
Mw22	09								13:05											
Mw23	10								12:50											

Special detection Limit/reporting

Special QA/QC

Remarks

Lab number 9803E44

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
Relinquished by sampler	3.18.98	16:30
Relinquished by	3/20/98	9:58
Relinquished by	3/20/98	

Received by

Received by

Received by laboratory — Date 3/20/98 — Time 1519

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

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT): PH
WORKORDER: 9803E44
DATE OF LOG-IN: 03.23.98

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	Present / (Absent) Intact / Broken*	01	A-C	MW10	3 VOAs	Li	3/19	
2. Custody Seal #:	Put in Remarks Section	02		MW11				
3. Chain-of-Custody	(Present) / Absent*	03		MW14				
4. Traffic Reports or Packing List:	Present / (Absent)	04		MW15				
5. Airbill:	Airbill / ~~Sticker~~ Present / (Absent)	05		MW16				
6. Airbill #:	—	06		MW18				
		07		MW19				
7. Sample Tags:	(Present) / Absent	08		MW21				
		09		MW22				
Sample Tags #s:	(Listed) / Not Listed on Chain-of-Custody	10		MW23				
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:	3/20/98							
12. Time Rec. at Lab:	1519							
13. Temp Rec. at Lab:	8°C							

Rulp 3/20/98

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

Revision 6/18/97
RCPTLOG.XLS

MAR 2 3 1998

FIELD SERVICES / O & M REQUEST

SITE INFORMATION FORM

Project #:330-006.2L

☐ 1st time visit

Station #:0608

☒ 1st ☐ 2nd ☐ 3rd ☐ 4th

Date of Request:1Q98

Site Address:17601 Hesperian Blvd.
San Lorenzo, California

☐ Monthly

Ideal Field Date:3/12,13

☐ Semi-Monthly

Purge water 3980 gals

County:Alameda

☐ Weekly

Budget Hrs. 1

Project Manager:Shaw Garakani

☐ One time Event

Actual Hrs. 17 Hrs

Requestor:Krissy Flesoras

☐ Other._____

Mob de Mob_____

Client:Arco

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

Total Wells 24

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

Field Tasks: For General Description

Perform 1q98 sampling event. **Purge all wells, irrigation wells for at least 15 minutes before sampling. Also record time when purging starts and when purging is stopped. Notify homeowners 1 week and the day before sampling event.** DTW on all wells. Instruct Sequoia to run EPA 8260 on any homeowner well with MTBE greater than 35 ppb. Take Dissolved Oxygen readings on all wells.

WA#22340

Comments, remarks, from Field Staff (include problems encountered

TSM Completed Sample per attached Protocol

Completed by:_____ Date: 3-19 20-98

Checked by:_____

WELL SAMPLING REQUEST

SAMPLING PROTOCOL								
Project No.	Station #	Project Name	SEQUENCE	Project Manager	Approval	Date/s	Laboratory:	Client Engineer:
330-006.2L	608	17601 Hesperian San Lorenzo	1Q98	Shaw Garakani			Sequoia 22340	Mike Wheilan

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

WELL SAMPLING REQUEST

SAMPLING PROTOCOL								
Project No.	Station #	Project Name	SEQUENCE	Project Manager	Approval	Date/s	Laboratory:	Client Engineer:
330-006.2L	608	17601 Hesperian San Lorenzo	1Q98	Shaw Garakani			Sequoia 22340	Mike Whelan

Well Number	Ideal Sampling Order	Sample I.D.	Sampling Frequency	Analyses	TOB TOC	Well Depth	Casing Diameter	Top of Screen	Well goes Dry?	Comments
Mr/Mrs Silva		590 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					• OK to sample - call to let them know which you're sampling
Mr. Dahmann		633 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					• OK to sample anytime
Mrs Albright		634 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					Access Denied
Ms. Corregedor	Pump not accessible	642 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					• could not be reached
Mr/Mrs Roberts		675 Hacienda	QLY	GAS/BTEX/MtBE	TOB/TOC					† Okay to sample † Pump non-operational (4Q97)
Mr Luehrs		17348 Via Encinas †	QLY	GAS/BTEX/MtBE	TOB/TOC			PREFER TO BE SAMPLED EARLY AM. BEFORE 10:30AM		* Pump non-operational (4Q97) - call beforehand to let them know day, time of sampling
Mr. Schrag		17197 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					† OK to sample anytime
Cavalry Church		17200 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					Well covered over
Mrs Toles	Pump on top	17203 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC			(owner not sure of pump status)		OK to sample after 10AM † Pump non-operational (4Q97). Access allowed after 10 AM.
Mr/Mrs Johanson	Pump on bottom	172302 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					Confirmed w/owner-haven't had time ** Pump non-operational since 7/97 to fix pump
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					Access Denied
Mr. Pimental		17372 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					† OK to sample anytime
Mr. Whaley		17393 Via Magdalena	QLY	GAS/BTEX/MtBE	TOB/TOC					Well Destroyed 7/97
		17348 VE Not Reach 3.19.300								
		642 H Not Access 3.19.300								* Owner must be present to
										allow access
										** Will be contacted to find out
										well status and if access is
										granted
										† Owner need not be present to
										allow access

3/10/98SMPLRQST.XLS

QUARTERLY CONTACT LIST:
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!!!!!!!!!!!!!!

Address	Contact Name Phone #	Date Contacted	Pump Assessment	Notes
590 Hacienda	Mr.& Mrs. Silva (510) 276-1534	11/17&21/97	operational	Left messages on homeowner's answering machine. Please knock on front door! Part-time resident of Arizona & need homeowner there to sample. Well in backyard.
633 Hacienda	Mr. Dahmann (510) 276-3860	11/17&21/97	operational	Left mesage on homeowner's answering machine. Please knock on front door!. Well redeveloped with new pump as of 10/7/94. No access unless someone is home.
642 Hacienda NO ACCESS	Ms. Corregedor (510) 481-1063	11/21/97	operational	Verbal auth to smaple per Ms. Corregador. Pls. knock on front door!
675 Hacienda PUMP NOT WORKING.	Mr. & Mrs. Roberts (510) 276-7389	11/17&21/97	non-operational	Left message on answering machine. Pls. knock on front door first. 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!!!.
17348 Via Encinas NO ACCESS	Mr. Luehrs (510)278-9059	11/18/97	non-operational	Homeowner has dog in backyard!! Per Mrs. Luehrs, please go to front door and knock, so that someone can bring the dog in the house.
17197 Via Magdalena	Mr. Schrag (510) 278-1904	11/17/97	operational	Okay to grab sample off hose bib on front porch. Pls. call him before heading to site to turn on hose bib to purge. OKAY TO SAMPLE IF HOMEOWNER NOT AT HOME.
17203 Via Magdalena PUMP NOT PUMPING (HOT)	Mrs. Toles (510)276-6797	11/17&21/97	operational	Per previous instructions, AFTER 10AM ONLY!!! OK to enter back yard and sample if no answer not home; KNOCK FIRST! Pump not working.
17302 Via Magdalena PUMP NOT WORKING NO ACCESS	Mr. & Mrs. Johanson (510) 278-5987	11/17/97	non-operational	Per Mrs. Johanson, pump still hasn't been fixed. Pump has been non-operational per Mrs. Johanson since July. Foot valve broken--no pressure & not holding it's prime. Call before next sampling to see if fixed.
17349 Via Magdalena	Mr. Kast (510)278-1263	11/17/97	operational	OK to enter back yard and sample if not home; well shed in back yard; KNOCK FIRST!
17371 Via Magdalena NO ACCESS	Mr. Manry (510) 317-9724	11/17&21/97 no answer	operational	Per previous notes, won't allow access. Call for notification to verify homeowner response.
17373 Via Magdalena	Mr. Pimental (510) 278-6304	11/17/97	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!

FIELD REPORT

EPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 330-006.2L LOCATION: 17601 HESPERIAN DATE: 3-19-98

CLIENT/STATION NO.: ARCO/0608 FIELD TECHNICIAN: RD DAY OF WEEK: THU

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

Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	Total Depth (feet)	First Depth to Water (feet) TOB/TOC	Second Depth to Water (feet) TOB/TOC	SEPARATE-PHASE HYDROCARBONS (SPH): SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	COLOR: Fresh	Weathered	Gas	Oil	VISCOSITY: Lite	Medium	Heavy	LIQUID REMOVED (gallons): SPH / H_2O
	MW-5	10:41	–	O	–	–	–	13.80 / 14.00	10.05 / 10.05	10.43 / 10.43										/
	MW-7	10:35	–	–	–	–	–	19.00	9.85 / 9.85	10.39 / 10.36										/
	MW-8	10:45	–	–	–	–	–	22.00	8.55 / 8.05	9.40 / 9.40										/
	MW-9	10:05	–	–	–	–	–	19.00	8.10 / 8.10	8.63 / 8.63										/
	MW-10	10:00	–	–	–	–	–	20.00	8.15 / 8.15	8.78 / 8.78										/
	MW-11	9:56	–	–	–	–	–	19.00	9.00 / 9.00	9.43 / 9.43										/
	MW-13	10:17	–	–	–	–	–	23.5	11.50 / 11.50	11.80 / 11.80										/
	MW-14	9:53	–	–	–	–	–	24.00	7.60 / 7.60	7.92 / 7.92										/
	MW-15	9:50	–	–	–	–	–	24.00	8.70 / 8.70	9.15 / 9.15										/

Comments: _____

FIELD REPORT

DEPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 330-0062L LOCATION: 1760 HESPERIAN BLVD SAN LORENZO DATE: 3-19-98

CLIENT/STATION NO.: ARCO/0608 FIELD TECHNICIAN: TJ DAY OF WEEK: THU

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

Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	Total Depth (feet)	First Depth to Water (feet) TOB/TOC	Second Depth to Water (feet) TOB/TOC	SEPARATE-PHASE HYDROCARBONS (SPH): SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	COLOR: Fresh	Weathered	Gas	Oil	VISCOSITY: Lite	Medium	Heavy	LIQUID REMOVED (gallons): SPH / H_2O
	MW-16	9:18	✓	✓	✓	✓	✓	23.00	9.35 / 9.35	9.80 / 9.80										
	~~MW-17~~																			
	MW-18	9:10	✓	✓	✓	✓	✓	22.00	8.95 / 8.95	8.96 / 8.95										
	MW-19	9:44	✓	✓	✓	✓	✓	19.00	8.50 / 8.50	8.97 / 8.97										
	~~MW-20~~																			
	MW-21	9:41	✓	✓	✓	✓	✓	22.00	8.55 / 8.55	9.08 / 9.08										
	MW-22	9:36	✓	✓	✓	✓	✓	22.00	9.10 / 9.10	9.10 / 9.10										
	MW-23	9:31	✓	✓	✓	✓	✓	22.00	9.95 / 9.95	10.02 / 10.02										
	EI-A	10:18	✓	✓	✓	✓	✓	26.20	8.00 / 8.00	9.65 / 9.65										

Comments: _____

FIELD REPORT

EPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 330-006.2 L LOCATION: 1760 HESPERIAN BLVD SAN LORENZO DATE: 3-19-98

CLIENT/STATION NO.: ARCO/0608 FIELD TECHNICIAN: [signature] DAY OF WEEK: THU

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

Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	Total Depth (feet)	First Depth to Water (feet) TOB/TOC (TOC circled)	Second Depth to Water (feet) TOB/TOC (TOB circled)	SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	Fresh	Weathered	Gas	Oil	Viscosity: Lite	Medium	Heavy	Liquid Removed (gallons) SPH / H_2O
	MW-24	10:08	✓	✓	✓	✓	✓	20.00	11.00 / 11.00	11.32 / 11.32										
	MW-25	10:37	✓	✓	✓	✓	✓	21.00	9.66 / 9.66	10.18 / 10.18										
	MW-26	10:10	✓	✓	✓	✓	✓	20.00	10.10 / 10.10	10.55 / 10.56										

SERARATE-PHASE HYDROCARBONS (SPH) — COLOR

Comments:

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2L LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW5

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 1380 DTW 1005 = 375 x Gal/Linear Foot 0.66 = 2.47 x Number of Casings 3 = Calculated Purge 7.41

DATE PURGED: 32098 START: 11:40 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 32098 START: 12:00 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
11:45	2	7.05	1090	65.1	Cloudy	Heavy	Strong
11:47	3	6.89	1040	65.2	Cloudy	Heavy	Strong

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

Pumped dry (Yes) / No At 3 gal

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: 12.00 TOB (TOC) 7.09 1020 65.0 Clear Mod None

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

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: 15 + 00
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW5	32098	12:00	3	40ml	VOA	HCl	BTEX

REMARKS: DO; TD

SIGNATURE:

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2L LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW7

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 9.86 = 9.15 x Gal/Linear Foot 0.38 = 3.47 x Number of Casings 3 = Calculated Purge 10.13

DATE PURGED: 3/20/98 START: 10:31 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3/20/98 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
10:33	35	7.36	960	65.1	Clear	Faint	None
10:36	7	7.06	9.61	65.3	Clear	Faint	None
10:37	105	7.00	9.68	65.3	Clear	Faint	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: 15-10
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW7	3/20/98	10:40	3	40ml	VOA	HCl	BTEX

REMARKS: DO: 0

PACIFIC ENVIRONMENTAL

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.21 LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW8

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

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 0200 DTW 8.55 = 1345 x Gal/Linear Foot 0.38 = 5.11 x Number of Casings 3 = Calculated Purge 15.33

DATE PURGED: 32098 START: 11:00 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 32098 START: 11:10 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
1102	5	7.10	1010	66.0	Cloudy	Heavy	Faint
1105	10	6.91	1010	66.7	Cloudy	Light	Faint
1108	15	6.81	1030	66.9	Cloudy	Light	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 12
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW8	32098	1160	3	40ml	VOA	HCl	BTEX

REMARKS: DO: 2.2

PACIFIC ENVIRONMENTAL

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2L LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW9

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 8.10 = 10.9 x Gal/Linear Foot 0.38 = 4.14 x Number of Casings 3 = Calculated Purge 12.4

DATE PURGED: 32098 START: 9:58 END (2400 hr): ______ PURGED BY: PE

DATE SAMPLED: 320 98 START: 10:05 END (2400 hr): ______ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
9:59	4	7.32	670	65.9	Cloudy	Light	None
10:01	8	7.11	1060	66.4	Cloudy	Light	None
10:04	12	6.99	1080	66.9			

Pumped dry Yes / No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ______ TOB/TOC ______

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

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: 15-7
- ☐ Dedicated: ______
- ☐ Other: ______

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW9	32098	10:05	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: DO: 4.8

PACIFIC ENVIRONMENTAL

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2 LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW10

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 8.16 = 13.86 x Gal/Linear Foot 0.38 = 5.06 x Number of Casings 5 = Calculated Purge 10.78

DATE PURGED: 3/9/98 START: 14:30 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3/9/98 START: 14:55 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
14:46	5.06	7.00	1030	65.4	Cloudy	Mod	Mod
14:48	10.5	6.99	1030	65.7	Cloudy	Light	Mod
14:51	15.75	6.71	1030	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 15
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW10	3/9/98	14:55	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: DO

SIGNATURE: _____

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.21 LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW11

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

WELL INFORMATION

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

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

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

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

TD 19.00 - DTW 9.00 = 10 x Gal/Linear Foot 0.38 = 3.8 x Number of Casings 5 = Calculated Purge 19

DATE PURGED: 3/9/98 START: 14:09 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3/9/98 START: 14:35 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
14:31	375	7.06	1160	66.1	Clear	Heavy	None
14:33	750	6.98	1150	66.2	Clear	Light	None
14:35	1125	6.96	1120	66.5	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: 15
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW11	3/9/98	11:35	3	40ml	VOA	HCl	BTEX

REMARKS: 24

SIGNATURE: _____

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2L LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW 13

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 23.5 - DTW 11.50 = 12 x Gal/Linear Foot 0.38 = 4.56 x Number of Casings 3 = Calculated Purge 13.68

DATE PURGED: 3 20 98 START: 10:47 END (2400 hr): ______ PURGED BY: PE

DATE SAMPLED: 3 20 98 START: 10:55 END (2400 hr): ______ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
1050	5	7.02	1030	66.1	Clear	Mod	None
1052	10	7.10	1030	66.8	Clear	Mod	None
1055	15	7.04	1040	67.7	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: ______
- ☐ Centrifugal Pump: ______
- ☐ Other: ______
- ☐ Airlift Pump: ______
- ☐ Dedicated: ______

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: 15 11
- ☐ Dedicated: ______
- ☐ Other: ______

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW13	32098	10:55	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: 10:28

SIGNATURE: [signature]

PACIFIC ENVIRONMENTAL GROUP, INC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2L LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW4

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 24.00 - DTW 7.62 = 16.38 x Gal/Linear Foot 0.38 = 6.00 x Number of Casings 3 = Calculated Purge 18.67

DATE PURGED: 3/9/98 START: 14:18 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3/9/98 START: 14:25 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
14:18	6.25	6.93	1110	67.6	Cloudy	Light	None
14:20	12.5	6.88	1110	67.4	Cloudy	Light	None
14:23	18.75	6.82	1130	67.7	Cloudy	Light	None

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

Pumped dry Yes (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: _____
- ☐ 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
MW4	3/9/98	14:26	3	40ml	VOA	HCl	BTEX

REMARKS: 0.18

SIGNATURE: _____

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2L LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW15

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 24.00 - DTW 8.70 = 15.3 x Gal/Linear Foot 0.38 = 5.81 x Number of Casings 3 = Calculated Purge 17.44

DATE PURGED: 3 19 98 START: 14:00 END (2400 hr): ______ PURGED BY: PE

DATE SAMPLED: 3 19 98 START: 14:10 END (2400 hr): ______ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
14:02	5.75	6.5	1000	65.7	Cloudy	Mod	None
14:05	11.5	6.80	1070	66.3	Cloudy	Light	None
14:07	17.00	6.73	1080	67.0	Cloudy	Light	None
					Cobalt 0-100 Clear Cloudy Yellow Brown	NTU 0-200 Heavy Moderate Light Trace	Strong Moderate Faint None

Pumped dry Yes / (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ______ TOB/TOC

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

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: 158
- ☐ Dedicated: ______
- ☐ Other: ______

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW15	31998	14:10	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: DO2.0

SIGNATURE: [signature]

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.21 LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW16

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

WELL INFORMATION

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

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

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

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

TD 23.00 DTW 9.35 = 13.65 x Gal/Linear Foot 0.38 = 5.18 x Number of Casings 3 = Calculated Purge 15.50

DATE PURGED: 3/9/98 START: 13:17 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3/9/98 START: 13:55 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
13:50	5	7.03	1170	67.9	Cloudy	Mod	Low
13:52	10	6.87	1160	67.2	Cloudy	Mod	Low
13:55	16	6.90	1180	67.4	Cloudy	Mod	Low

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
MW16	3/9/98	13:06	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: DO: 3

SIGNATURE: _____

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2L LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW 18

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

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 2000 DTW 8.65 = 1335 x Gal/Linear Foot 0.38 = 507 x Number of Casings 3 = Calculated Purge 1521

DATE PURGED: 3/9/98 START: 1333 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3/9/98 START: 1340 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
1335	5	0.95	1000	69.3	Clear	Mod	None
1337	10	0.81	1085	68.8	Clear	Mod	None
1339	15	0.79	1070	68.1	Clear	Mod	None

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

Pumped dry Yes (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

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

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

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW18	3/9/98	1340	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: DO

SIGNATURE:

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2L 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 8.50 = 10.5 x Gal/Linear Foot 0.38 = 3.99 x Number of Casings 3 = Calculated Purge 11.97

DATE PURGED: 3 19 98 START: 13:19 END (2400 hr): ______ PURGED BY: PE

DATE SAMPLED: 3 19 98 START: 13:30 END (2400 hr): ______ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
13:21	4	6.90	1100	70.1	Cloudy	Mod	NONE
13:24	8	6.88	1000	70.3	Cloudy	Mod	NONE
13:27	12	6.91	1080	70.5	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: ______
- ☐ Centrifugal Pump: ______
- ☐ Other: ______
- ☐ Airlift Pump: ______
- ☐ Dedicated: ______

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: 15-3
- ☐ Dedicated: ______
- ☐ Other: ______

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW9	3 1998	13:30	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: DO: NA too Cloudy

SIGNATURE: [signature]

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.21 LOCATION: 17601 HESPERIAN BLVD SAN LORENZO (CA) WELL ID #: MW21

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

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 8.05 = 13.15 x Gal/Linear Foot 0.38 = 5.11 x Number of Casings 3 = Calculated Purge 15.33

DATE PURGED: 3/9/98 START: 1308 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3/9/98 START: 1315 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
1310	5	6.88	913	66.7	Clear	Heavy	None
1313	10	6.83	928	66.4	Clear	Light	None
1315	15	6.80	929	66.3	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: 1560
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW21	3/9/98	1315	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: DO: 1.08

SIGNATURE:

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2L LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW-2

CLIENT/STATION No.: ARCO / 0608 FIELD TECHNICIAN: (EDRO) E Ruiz

WELL INFORMATION

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

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

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

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

TD 20.00 - DTW 9.10 = 10.9 x Gal/Linear Foot 0.38 = 4.90 x Number of Casings 3 = Calculated Purge 14.7

DATE PURGED: 3/9/98 START: 12:53 END (2400 hr): _____ PURGED BY: RE

DATE SAMPLED: 3/9/98 START: 13:05 END (2400 hr): _____ SAMPLED BY: RE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
12:55	5	6.98	919	67.0	Clear	Mod	Mod
12:58	10	6.94	928	67.3	Clear	Mod	Mod
13:01	15	6.90	897	66.5	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: 154
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-2	3/9/98	13:05	3	40ml	VOA	HCl	BTEX

REMARKS: DO: 2

SIGNATURE: _____

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2L LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW03

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 9.95 = 12.05 x Gal/Linear Foot 0.38 = 4.57 x Number of Casings 3 = Calculated Purge 13.73

DATE PURGED: 3 19 98 START: 12:40 END (2400 hr): ______ PURGED BY: PE
DATE SAMPLED: 3 19 98 START: 12:50 END (2400 hr): ______ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
12:43	4.5	7.08	998	67.1	Clear	Mod	None
12:45	9	6.96	1000	67.5	Clear	Mod	None
12:48	13.5	6.91	1030	66.4	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: 15-1
☐ Dedicated: ______
☐ Other: ______

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW03	31998	12:50	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: DO: 1.4

SIGNATURE: [signature]

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2L LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW24

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

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 2000 - DTW 11.00 = 9 x Gal/Linear Foot 0.17 = 1.53 x Number of Casings 3 = Calculated Purge 4.59

DATE PURGED: 3/20/98 START: 9:32 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3/20/98 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
9:35	15	7.18	1170	65.7	Cloudy	Heavy	Strong
9:37	9	7.05	1130	65.1	Cloudy	Heavy	Strong
9:39	15	7.14	1120	66.1	Cloudy	Heavy	Strong

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

Pumped dry Yes (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

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

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: 152
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW24	32098	940	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: DO: 1.8

SIGNATURE: _____

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.21 LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW26

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

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 9.65 = 11.35 x Gal/Linear Foot 0.38 = 1.92 x Number of Casings 3 = Calculated Purge 5.78

DATE PURGED: 3/20/98 START: 10:17 END (2400 hr): _____ PURGED BY: DE

DATE SAMPLED: 3/20/98 START: 10:20 END (2400 hr): _____ SAMPLED BY: DE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
10:20	2	7.55	1050	64.6	Cloudy	Mod	Mod
10:23	4	7.31	1030	64.3	Cloudy	Mod	Mod
10:25	6	7.09	1030	64.7	Cloudy	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
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW26	3/20/98	10:25	3	40ml	VOA	HCl	BTEX

REMARKS: DO: 1.8

SIGNATURE: _____

PACIFIC ENVIRONMENTAL GROUP, INC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2L LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: MW2S

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

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 10.10 = 9.9 x Gal/Linear Foot 0.38 = 1.88 x Number of Casings 5 = Calculated Purge 5.04

DATE PURGED: 3/20/98 START: 9:12 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3/20/98 START: 9:50 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
9:44	1.5	7.16	1010	65.7	Cloudy	Heavy	None
9:47	3	7.33	1030	65.9	Cloudy	Heavy	None
9:50	4.5	7.05	1020	66.1	Cloudy	Heavy	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
MW2S	32098	9:50	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: 2S cloudy

SIGNATURE:

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2L LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: E-1A

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 26.00 DTW 8.00 = 18.0 x Gal/Linear Foot 0.38 = 2.73 x Number of Casings 3 = Calculated Purge 8.19

DATE PURGED: 32098 START: 11:14 END (2400 hr): ______ PURGED BY: PE
DATE SAMPLED: 32098 START: 11:35 END (2400 hr): ______ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
11:19	2.7	7.00	928	66.4	Clear	Mod	Mod
11:25	5.4	6.73	995	67.8	Clear	Mod	Mod
11:32	8.8	6.70	1010	67.8	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: 1513
☐ Dedicated:
☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
E-1A	32098	11:35	3	40ml	VOA	HCl	GAS/BTEX

REMARKS: DO: 0.0

SIGNATURE:

PACIFIC ENVIRONMENTAL GROUP, INC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2L LOCATION: 17601 HESPERIAN BLVD SAN LORENZO (CA) WELL ID #: 590 H

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

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: 3/19/98 START: 10:00 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3/19/98 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
		7.10	9.59	65.3	CLEAR	TRACE	LIGHT

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

Pumped dry Yes / No

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

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

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

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
590H	3/19/98	10:30	3	40ml	VOA	HCl	BTEX
			START	END			

REMARKS: DUP 10:20 ⇒ 10:27

SIGNATURE: _____

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

FIELD DATA SHEET

30-006.21 LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: 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 5 = Calculated Purge _____

DATE PURGED: 3 98 START: _____ END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3 9 98 START: 11:10 END (2400 hr): _____ SAMPLED BY: PE

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

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

Pumped dry Yes / (N6)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC 7.18 | 7.87 | 69.9 | 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
633H	3 1998	11:40	3	40ml	VOA	HCl	GAS/BTEX
			Start	END			

REMARKS: DO: NA 0. 11:25 = 1130

53 GAL GRAB

SIGNATURE: _____

PACIFIC ENVIRONMENTAL GROUP, INC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.21 LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: 17197UM

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: 3 9 98 START: 12:20 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 3 9 98 START: 12:30 END (2400 hr): _____ SAMPLED BY: PE

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

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	TOC	8.99	70.6	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
17197UM	1998	12:30	3	40ml	VOA	HCl	BTEX
		START		END.			

REMARKS: DO: 3.2 12:20 → 12:28

SIGNATURE: [signature]

PACIFIC ENVIRONMENTAL GROUP, INC.

FIELD DATA SHEET

PLE FIELD DATA SHEET

PROJECT No.: 330-006.2L LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: 17349UM

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: 3 98 START: 11:50 END (2400 hr): ______ PURGED BY: PE
DATE SAMPLED: 3 19 98 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
	Bail.						

Pumped dry Yes / No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ______ TOB/TOC 7.N 880 71.N Clear Mod Faint

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

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

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
17349UM	31998	12:10	3	40ml	VOA	HCl	GAS/BTEX

DO: 1. Start End
REMARKS: 4.5 [illegible] 1150 → 1203

SIGNATURE: [signature]

PACIFIC ENVIRONMENTAL GROUP INC.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330-006.2L LOCATION: 17601 HESPERIAN BLVD SAN LORENZO CA WELL ID #: 1737BUM

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: 3 98 START: ______ END (2400 hr): ______ PURGED BY: PE

DATE SAMPLED: 3 19 98 START: 11:30 END (2400 hr): ______ SAMPLED BY: PE

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

Pumped dry Yes / No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ______ TOB/TOC 7.37 1010 67.9 Clear light None

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

SAMPLING EQUIPMENT/I.D. #
- ☑ Bailer: 1.5
- ☐ Dedicated: ______
- ☐ Other: ______

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
1737BUM	31998	11:30	3	40ml	VOA	HCl	GAS/BTEX.

REMARKS: DO: 1.8 start 11:20 END 11:30

OWNER WAS ASKING FOR PURGING WATER INTO LAWN WHEN I GOT THERE -

SIGNATURE:

PACIFIC ENVIRONMENTAL GROUP INC

ARCO Products Company
Division of AtlanticRichfieldCompany

330006 21 **Task Order No.** 20340

Chain of Custody

ARCO Facility no. 0608 | City (Facility) 17801 Hesperian Blvd San Lorenzo | Project manager (Consultant) Shaw Garakani | Laboratory name Sequoia

ARCO engineer M. Whelan | Telephone no. (ARCO) | Telephone no. (Consultant) 408) 441-7500 | Fax no. (Consultant) 408) 441-7539 | Contract number

Consultant name Pacific Environmental Group | Address (Consultant) 2025 Gateway place #440 San Jose CA

Method of shipment

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH/MTBE 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 ☐ VOA ☐ Semi VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
*590H		3		X		Y	HCL	3-18-98	10:30		✓											
*633H		↓		↓		↓	↓	↓	11:40		↓											
*17197UY		↓		↓		↓	↓	↓	10:30		↓											
*17349UY		↓		↓		↓	↓	↓	12:10		↓											
*1733UY		↓		↓		↓	↓	↓	11:30		↓											

Special detection Limit/reporting

Special QA/QC

Remarks
*Home owners wells
Run EPA 8260 with MTBE greater than 35ppb.

Lab number

Condition of sample: | Temperature received:

Relinquished by sampler [signature] | Date 3-18-98 | Time 16:30 | Received by

Relinquished by | Date | Time | Received by

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

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

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

ARCO Products Company
Division of AtlanticRichfieldCompany

33000602C Task Order No. 22340

Chain of Custody

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

ARCO engineer Mike Whelan | Telephone no. (ARCO) | Telephone no. (Consultant) 408 441-7500 | Fax no. (Consultant) 408) 441-7539

Consultant name Pacific Environmental Group | Address (Consultant) 2025 Gateway place #440 San Jose CA

Laboratory name: Sequoia

Contract number:

Method of shipment:

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH MTBE 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 ☐ VOA ☐ Semi VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
MW10		3		X		Y	HCL	3.18.98	14:55		X											
MW11		↓		↓		↓	↓	↓	11:35		↓											
MW14		↓		↓		↓	↓	↓	14:25		↓											
MW15		↓		↓		↓	↓	↓	14:10		↓											
MW16		↓		↓		↓	↓	↓	13:55		↓											
MW18		↓		↓		↓	↓	↓	13:40		↓											
MW19		↓		↓		↓	↓	↓	13:30		↓											
MW21		↓		↓		↓	↓	↓	13:15		↓											
MW22		↓		↓		↓	↓	↓	13:05		↓											
MW23		↓		↓		↓	↓	↓	10:50		↓											

Special detection Limit/reporting:

Special QA/QC:

Remarks:

Lab number:

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

Condition of sample: | Temperature received:

Relinquished by sampler [signature] | Date 3.18.98 | Time 10:30 | 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
APC-3292 (2-91)

ARCO Products Company
Division of AtlanticRichfieldCompany

330062C **Task Order No.** 02340

Chain of Custody

ARCO Facility no.	0608
City (Facility)	17601 Hesperian Blvd San Lorenzo
Project manager (Consultant)	Jhan Chachkovic
ARCO engineer	Mike Whelan
Telephone no. (ARCO)	
Telephone no. (Consultant)	408 441-7500
Fax no. (Consultant)	408) 441-7539
Consultant name	Pacific Environmental Group
Address (Consultant)	2025 Gateway place #440 San Jose CA
Laboratory name	Sequoia
Contract number	
Method of shipment	
Special detection Limit/reporting	
Special QA/QC	
Remarks	
Lab number	

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH MTBE 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 ☐ VOA ☐ Semi VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
MW5		3		W		Y	HCl	32098	12:00		X											
MW7		↓		↓		↓	↓	↓	10:40		↓											
MW8									11:10													
MW9									10:05													
MW13									10:55													
MW24									9:40													
MW25									10:25													
MW26									9:50													
E1A		↓		↓		↓	↓	↓	11:35		↓											

Condition of sample:		Temperature received:	
Relinquished by sampler [signature]	Date 32098 Time 10:00	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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