PACIFIC
ENVIRONMENTAL
GROUP, INC.

ENVIRONMENTAL
PROTECTION

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Quarterly Groundwater Monitoring Report and Remedial System Performance Evaluation Third Quarter 1996

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

Prepared for

Mr. Michael Whelan
ARCO Products Company

December 19, 1996

Prepared by

Pacific Environmental Group, Inc.
2025 Gateway Place, Suite 440
San Jose, California 95110

Project 330-006.2H

Shaw Garakani
Project Engineer

R. Lee Dooley
Senior Geologist
CEG 1006

REGISTERED GEOLOGIST
R. LEE DOOLEY
No. 1006
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Date: December 19, 1996
Quarter: 3Q96

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./Shaw Garakani
Consultant Project No.:	330-006.2H
Primary Agency/Regulatory ID No.:	Alameda County Health Care Services Agency

WORK PERFORMED THIS QUARTER (Third - 1996):

1. Performed third quarter 1996 groundwater monitoring event.
2. Prepared third quarter 1996 groundwater monitoring report.
3. Replaced depleted ORCs in Wells E1-A and MW-10, and installed ORCs in Well MW-5.
4. Continued intrinsic bioremediation monitoring program.
5. Continued quarterly payments to home owners for not using domestic irrigation wells.
6. Continued home owner quarterly monitoring results notification program.

WORK PROPOSED FOR NEXT QUARTER (Fourth - 1996):

1. Perform fourth quarter 1996 groundwater monitoring event.
2. Prepare fourth quarter 1996 groundwater monitoring report.
3. Continue intrinsic bioremediation monitoring program.
4. Continue quarterly payments to home owners for not using domestic irrigation wells.
5. Continue home owner quarterly monitoring results notification program.
6. Replace depleted ORCs as necessary.

Current Phase of Project:	Monitoring/Bioremediation Monitoring & Enhancement	(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:	Bioremediation Enhancement	(SVE/Sparge/FP Removal, etc.)
Approximate Depth to Groundwater:	9.8 to 13.9	(Measure Feet)
Groundwater Gradient:	West	(Direction)
	0.003	(Magnitude)
TPPH-g/Benzene Removed to Date:	0.0/0.0	(gallons)
Cumulative TPPH-g/Benzene Removed:	0.8/0.04	(gallons)

DISCUSSION:

- Groundwater levels continued to decline across the site.
- Hydrocarbon concentrations are within or lower than historical levels.
- **Wells E1-A and MW-10 were not sampled due to presence of ORCs in these wells.** need to be sampled!
- Intrinsic bioremedation has been documented to occur. How so?
- Intrinsic bioremediation enhancement study is in progress.

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 - Historical Liquid Surface Elevation and Groundwater Analytical Data Tables
- Attachment B - Field and Laboratory Procedures
- Attachment C - Certified Analytical Reports, Chain-of-Custody Documentation, and Field Data Sheets
- Attachment D - Remedial System Performance Evaluation

cc: Ms. Amy Leech, Alameda County Health Care Services Agency
Mr. Ron Sykora/Mr. Robert L. Webster, David D. Bohannon Organization
Mr. Kevin Graves, Regional Water Quality Control Board - S.F. Bay Region

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					
590H	b	b	b	b	Quarterly
633H	b	b	b	b	Quarterly
634H	b	b	b	b	Quarterly
642H	b	b	b	b	Quarterly
675H	b	b	b	b	Quarterly
17197 VM	b	b	b	b	Quarterly
17200 VM	----------Destroyed----------				
17203 VM	b	b	b	b	Quarterly
17302 VM	b	b	b	b	Quarterly
17348 VE	b	b	b	b	Quarterly
17349 VM	b	b	b	b	Quarterly
17371 VM	b	b	b	b	Quarterly
17372 VM	b	b	b	b	Quarterly
17393 VM	b	b	b	b	Quarterly

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

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

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)
590 H	03/14/96		<50	<0.50	<0.50	<0.50	<0.50
	05/29/96		<50	<0.50	<0.50	<0.50	<0.50
	08/29/96	a	NS	NS	NS	NS	NS
633 H	03/14/96		480	10	11	1.8	140
	05/13/96	*	<50	<0.50	<0.50	<0.50	<0.50
	05/27/96		<50	<0.50	<0.50	<0.50	<0.50
	08/29/96		<50	<0.50	<0.50	<0.50	<0.50
634 H	03/13/96	a	NS	NS	NS	NS	NS
	05/27/96	a	NS	NS	NS	NS	NS
	08/29/96	a	NS	NS	NS	NS	NS
642 H	03/15/96		<50	<0.50	<0.50	<0.50	<0.50
	05/27/96		<50	<0.50	<0.50	<0.50	<0.50
	08/29/96		<50	<0.50	<0.50	<0.50	<0.50
675 H	03/13/96	a	NS	NS	NS	NS	NS
	05/27/96	a	NS	NS	NS	NS	NS
	08/29/96	d	NS	NS	NS	NS	NS
17197 VM	03/15/96		<50	<0.50	<0.50	<0.50	<0.50
	05/27/96		<50	<0.50	<0.50	<0.50	<0.50
	08/29/96		<50	<0.50	<0.50	<0.50	<0.50
17200 VM	03/15/96		730	<1.0	<1.0	1.5	1.7
	05/27/96		200	<0.50	<0.50	1.4	1.8
	08/29/96		Well Destroyed				
17203 VM	03/15/96		<50	<0.50	<0.50	<0.50	<0.50
	05/27/96		<50	<0.50	<0.50	<0.50	<0.50
	08/29/96		<50	<0.50	<0.50	<0.50	<0.50
17302 VM	03/15/96		<50	<0.50	<0.50	<0.50	<0.50
	05/27/96		<50	<0.50	<0.50	<0.50	<0.50
	08/29/96		<50	<0.50	<0.50	<0.50	<0.50
17348 VE	03/13/96		<50	<0.50	<0.50	<0.50	<0.50
	05/27/96		Well Dry				
	08/29/96		Well Dry				
17349 VM	03/15/96		1,700	<2.0	<2.0	2.5	13
	05/27/96		320	4.2	1.3	0.95	0.71
	08/29/96		410	7.5	<0.50	<0.50	1.1
17371 VM	03/13/96	c	NS	NS	NS	NS	NS
	05/27/96	c	NS	NS	NS	NS	NS
	08/29/96	c	NS	NS	NS	NS	NS

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

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)
17372 VM	03/14/96	<50	<0.50	<0.50	<0.50	<0.50
	05/27/96	<50	<0.50	<0.50	<0.50	<0.50
	08/29/96	<50	<0.50	<0.50	<0.50	<0.50
17393 VM	03/14/96	<50	<0.50	<0.50	<0.50	<0.50
	05/27/96	<50	<0.50	<0.50	<0.50	<0.50
	08/29/96	<50	<0.50	<0.50	<0.50	<0.50

ppb = Parts ber billion
H = Hacienda Avenue
< = Less than laboratory detection limit stated at right.
NS = Not sampled
VM = Via Magdalena
VE = Via Encinas
a. Owner not available to approve sampling access; well not sampled.
b. Pump not functioning; well not sampled.
c. Access denied by owner; well not sampled.
d. Pumping equipment obstructing sampling access; well not sampled.
e. Laboratory analyzed duplicate sample for confirmation. See certified analytical report.
* = Well resampled to confirm March 14, 1996 data.
Homeowners are contacted one week prior to sampling event.

N

VIA MANZANAS

RESIDENTIAL

MW-20 ∅

POTRERO COURT

APARTMENTS

APARTMENTS

VIA ARRIBA

SHOPS

HESPERIAN BOULEVARD

RESTAURANT

MW-19 (18.69)

VIA MAGDALENA

18.5

19.0

19.5

20.0

20.5

21.0

21.5

CHURCH AND SCHOOL

17200VM

MW-17 ∅

MW-14 (20.63)

MW-24 (21.10)

RESIDENTIAL

MW-26 (21.16)

RESTAURANT

MW-9 (21.33)

MW-21 (17.97)

18.0

VIA MEDIA

VIA FLORES

17197VM

MW-18 (18.88)

17203VM

17302VM

17372VM

(21.36) E-1A

(20.74) MW-10

(21.49) MW-8

MW-25 (21.80)

MW-16 (19.55)

RESIDENTIAL

633H

SP-2/V-5

SP-1/V-4

590H

MW-5 (21.41)

MW-7 (21.77)

17349VM

MW-11 (21.02)

17371VM

MW-15 (20.11)

MW-13 (21.53)

LEY

MW-22 (18.01)

VIA ENCINAS COURT

17393VM

634H

642H

RESIDENTIAL

SHOPS

17348VE

MW-23 (18.68)

675H

HACIENDA AVENUE

VIA ALAMO

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

(21.41) GROUNDWATER ELEVATION IN FEET - MSL, 8-28-96

19.00 GROUNDWATER ELEVATION CONTOUR IN FEET - MSL, 8-28-96

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

APPROXIMATE GRADIENT = 0.003

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: 330-006.2H

N

VIA MANZANAS

RESIDENTIAL

MW-20 Ø

POTRERO COURT

APARTMENTS

APARTMENTS

VIA ARRIBA

SHOPS

HESPERIAN BOULEVARD

RESTAURANT

MW-19
ND/ND

VIA MAGDALENA

CHURCH
AND SCHOOL

17200VM
MW-17 Ø

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 ■
ND/ND

MW-26
ND/ND

RESTAURANT

MW-9
ND/ND

NS E-1A

17302VM ■
ND/ND

■ ND/ND
17372VM

MW-16
ND/ND

RESIDENTIAL

NS

■ ND/ND
633H

MW-10

SP-2/V-5 △

680/29

MW-8

SP-1/V-4 △

MW-25
ND/ND

MW-5

250/210

MW-7
ND/ND

590H ■
NS

17349VM
410/7.5 ■

NS

MW-15
ND/ND

17371VM ■
NS

MW-11
ND/ND

17393VM
ND/ND ■

MW-22
ND/ND

VIA ENCINAS COURT

(DRY) ■
17348VE

634H
642H ■ NS
ND/ND

MW-13
ND/ND

RESIDENTIAL

SHOPS

HACIENDA AVENUE

MW-23
ND/ND

675H ■
NS

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 Ø DESTROYED WELL LOCATION AND DESIGNATION

590H ■ DOMESTIC IRRIGATION WELL LOCATION AND DESIGNATION

E-1A ⊕ GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION

680/29 TPPH-g/BENZENE CONCENTRATION IN GROUNDWATER, IN PARTS PER BILLION, 8-28-96 and 8-29-96

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:
330-006.2H

ATTACHMENT A

HISTORICAL LIQUID SURFACE ELEVATION AND GROUNDWATER ANALYTICAL DATA TABLES

Table A-1
Historical Liquid Surface Elevation Data

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

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-1	01/11/88	N/A	N/A	--	N/A
	06/14/88	Well Destroyed			
MW-2	07/05/85	N/A	N/A	--	N/A
	01/11/88	N/A	N/A	--	N/A
	06/14/88	Well Destroyed			
MW-3	01/11/88	33.27	N/A	--	N/A
	03/07/89		11.96	--	21.31
	06/21/89		12.85	--	20.42
	12/12/89		13.46	--	19.81
	03/29/90		13.21	--	20.06
	05/08/90		13.23	--	20.04
	06/22/90		N/A	--	N/A
	07/18/90	Well Destroyed			
MW-4	01/11/88	32.43	N/A	--	N/A
	09/12/88		N/A	--	N/A
	03/07/89		10.76	--	21.67
	06/21/89		11.96	--	20.47
	12/12/89		N/A	--	N/A
	03/29/90		11.72	0.01	20.71
	05/08/90		12.19	--	20.24
	06/22/90		N/A	--	N/A
	07/18/90	Well Destroyed			
MW-5	01/16/92	Well Dry			
	02/19/92	33.99	13.50	--	20.49
	03/17/92		11.90	--	22.09
	04/15/92		12.18	--	21.81
	05/14/92		12.78	--	21.21
	06/15/92	Well Dry			
	07/14/92	Well Dry			
	08/18/92	Well Dry			
	09/15/92	Well Dry			
	10/16/92	Well Dry			
	11/18/92	Well Dry			
	12/17/92		12.74	--	21.25
	01/19/93		10.92	--	23.07
	02/22/93		11.10	--	22.89
	03/15/93		11.13	--	22.86
	04/09/93		11.46	--	22.53
	05/13/93		12.19	--	21.80
	06/04/93		12.51	--	21.48
	06/15/93		12.59	--	21.40
	09/13/93		13.40	--	20.59
	12/28/93		13.25	--	20.74
	03/28/94		12.22	--	21.77
	06/13/94		12.54	--	21.45
	09/19/94		13.55	--	20.44
	12/19/94		12.43	--	21.56
	03/13/95		10.72	--	23.27
	05/30/95		11.88	--	22.11
	09/15/95		12.68	--	21.31
	11/27/95		13.00	--	20.99

Table A-1 (continued)
Historical Liquid Surface Elevation Data

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

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-6	06/21/89	32.95	12.48	--	20.47
(E-1)	12/12/89		13.16	--	19.79
	03/29/90		12.39	--	20.56
	05/08/90		12.93	--	20.02
	06/22/90		12.94	--	20.01
	07/18/90	----------	Well Destroyed	----------	
MW-7	01/16/92	34.40	13.33	--	21.07
	02/19/92		12.16	--	N/A
	03/17/92		11.86	--	22.54
	04/15/92		12.30	--	22.10
	05/14/92		13.04	--	21.36
	06/15/92		13.78	--	20.62
	07/14/92		14.20	--	20.20
	08/18/92		14.79	--	19.61
	09/15/92		15.12	--	19.28
	10/16/92		15.38	--	19.02
	11/18/92		15.10	--	19.30
	12/17/92		13.69	--	20.71
	01/19/93		10.92	--	23.48
	02/22/93		10.91	--	23.49
	03/15/93		11.13	--	23.27
	04/09/93		11.46	--	22.94
	05/13/93		12.22	--	22.18
	06/04/93		12.51	--	21.89
	06/15/93		12.66	--	21.74
	09/13/93		13.78	--	20.62
	12/28/93		13.43	--	20.97
	03/28/94		12.32	--	22.08
	06/13/94		12.70	--	21.70
	09/19/94		14.16	--	20.24
	12/19/94		12.32	--	22.08
	03/13/95		10.72	--	23.68
	05/30/95		11.68	--	22.72
	09/15/95		12.77	--	21.63
	11/27/95		13.01	--	21.39
MW-8	01/16/92	32.79	13.40	--	19.39
	02/19/92		11.26	--	21.53
	03/17/92		10.90	--	21.89
	04/15/92		11.35	--	21.44
	05/14/92		12.06	--	20.73
	06/15/92		12.83	--	19.96
	07/14/92		12.75	--	20.04
	08/18/92		13.83	--	18.96
	09/15/92		14.17	--	18.62
	10/16/92		14.51	--	18.28
	11/18/92		14.15	--	18.64
	12/17/92		12.68	--	20.11
	01/19/93		9.79	--	23.00
	02/22/93		9.95	--	22.84
	03/15/93		10.31	--	22.48
	04/09/93		10.47	--	22.32
	05/13/93		11.18	--	21.61
	06/04/93		11.47	--	21.32

Table A-1 (continued)
Historical Liquid Surface Elevation Data

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

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-8	06/15/93		11.62	--	21.17
(cont.)	09/13/93		12.70	--	20.09
	12/28/93		12.23	--	20.56
	03/28/94		11.28	--	21.51
	06/13/94		11.60	--	21.19
	09/19/94		13.07	--	19.72
	12/19/94		11.22	--	21.57
	03/13/95		9.66	--	23.13
	05/30/95		10.87	--	21.92
	09/15/95		11.67	--	21.12
	11/27/95		11.88	--	20.91
MW-9	01/16/92	32.11	12.45	--	19.66
	02/19/92		10.25	--	21.86
	03/17/92		10.01	--	22.10
	04/15/92		10.49	--	21.62
	05/14/92		11.19	--	20.92
	06/15/92		11.86	--	20.25
	07/14/92		12.28	--	19.83
	08/18/92		12.89	--	19.22
	09/15/92		13.28	--	18.83
	10/16/92		13.60	--	18.51
	11/18/92		13.24	--	18.87
	12/17/92		11.76	--	20.35
	01/19/93		8.99	--	23.12
	02/22/93		9.13	--	22.98
	03/15/93		9.48	--	22.63
	04/09/93		9.63	--	22.48
	05/13/93		10.35	--	21.76
	06/04/93		10.65	--	21.46
	06/15/93		10.81	--	21.30
	09/13/93		11.87	--	20.24
	12/28/93		11.61	--	20.50
	03/28/94		10.48	--	21.63
	06/13/94		10.80	--	21.31
	09/19/94		12.25	--	19.86
	12/19/94		10.40	--	21.71
	03/13/95		8.70	--	23.41
	05/30/95		10.01	--	22.10
	09/15/95		10.88	--	21.23
	11/27/95		11.13	--	20.98
MW-10	01/16/92	31.67	12.55	--	19.12
	02/19/92		10.50	--	21.17
	03/18/92		10.12	--	21.55
	04/15/92		10.59	--	21.08
	05/14/92		11.30	--	20.37
	06/15/92		11.93	--	19.74
	07/14/92		12.42	--	19.25
	08/18/92		13.03	--	18.64
	09/15/92		13.42	--	18.25
	10/16/92		13.74	--	17.93
	11/18/92		13.42	--	18.25
	12/17/92		11.94	--	19.73
	01/19/93		9.13	--	22.54

Table A-1 (continued)
Historical Liquid Surface Elevation Data

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

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-10	02/22/93		9.22	--	22.45
(cont.)	03/15/93		9.64	--	22.03
	04/09/93		9.75	--	21.92
	05/13/93		10.49	--	21.18
	06/04/93		10.78	--	20.89
	06/15/93		10.93	--	20.74
	09/13/93		12.01	--	19.66
	12/28/93		11.41	--	20.26
	03/28/94		10.60	--	21.07
	06/13/94		10.95	--	20.72
	09/19/94		12.37	--	19.30
	12/19/94		10.64	--	21.03
	03/13/95		8.93	--	22.74
	05/30/95		10.18	--	21.49
	09/15/95		11.05	--	20.62
	11/27/95		12.02	--	19.65
MW-11	01/16/92	32.54	13.28	--	19.26
	02/19/92		11.29	--	21.25
	03/17/92		10.81	--	21.73
	04/15/92		11.23	--	21.31
	05/14/92		11.96	--	20.58
	06/15/92		12.64	--	19.90
	07/14/92		13.08	--	19.46
	08/18/92		13.72	--	18.82
	09/15/92		14.13	--	18.41
	10/16/92		14.45	--	18.09
	11/18/92		14.11	--	18.43
	12/17/92		12.69	--	19.85
	01/19/93		9.91	--	22.63
	02/22/93		9.95	--	22.59
	03/15/93		10.30	--	22.24
	04/09/93		10.42	--	22.12
	05/13/93		11.16	--	21.38
	06/04/93		11.44	--	21.10
	06/15/93		11.59	--	20.95
	09/13/93		12.68	--	19.86
	12/28/93		12.05	--	20.49
	03/28/94		11.23	--	21.31
	06/13/94		11.62	--	20.92
	09/19/94		13.05	--	19.49
	12/19/94		11.45	--	21.09
	03/13/95		9.70	--	22.84
	05/30/95		10.89	--	21.65
	09/15/95		11.71	--	20.83
	11/27/95		12.70	--	19.84
E-1A	01/16/92	33.06	23.68	--	9.38
(MW-12)	02/19/92		18.71	--	14.35
	03/17/92		23.10	--	9.96
	04/15/92		20.54	--	12.52
	05/14/92		23.09	--	9.97
	06/15/92		23.72	--	9.34
	07/14/92		13.25	--	19.81
	08/18/92		23.73	--	9.33

Table A-1 (continued)
Historical Liquid Surface Elevation Data

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

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
E-1A	09/15/92		23.62	--	9.44
(MW-12)	10/16/92		23.78	--	9.28
(cont.)	11/18/92		23.80	--	9.26
	12/17/92		22.65	--	10.41
	01/19/93		23.65	--	9.41
	02/22/93		23.70	--	9.36
	03/15/93		22.92	--	10.14
	04/09/93		22.50	--	10.56
	05/13/93		20.40	--	12.66
	06/04/93		18.74	--	14.32
	06/15/93		20.00	--	13.06
	09/13/93		19.50	--	13.56
	12/28/93		20.35	--	12.71
	03/28/94		18.13	--	14.93
	06/13/94		11.60	--	21.46
	09/19/94		19.61	--	13.45
	12/19/94		19.80	--	13.26
	03/13/95		21.75	--	11.31
	05/30/95		17.38	--	15.68
	09/15/95		11.83	--	21.23
	11/27/95		13.20	--	19.86
MW-13	01/16/92	35.42	15.70	--	19.72
	02/19/92		13.60	--	21.82
	03/17/92		13.20	--	22.22
	04/15/92		13.64	--	21.78
	05/14/92		14.34	--	21.08
	06/15/92		15.13	--	20.29
	07/14/92		15.45	--	19.97
	08/18/92		16.15	--	19.27
	09/15/92		16.51	--	18.91
	10/16/92		16.81	--	18.61
	11/18/92		16.50	--	18.92
	12/17/92		15.07	--	20.35
	01/19/93		12.40	--	23.02
	02/22/93		12.35	--	23.07
	03/15/93		12.69	--	22.73
	04/09/93		12.85	--	22.57
	05/13/93		13.55	--	21.87
	06/04/93		13.83	--	21.59
	06/15/93		13.97	--	21.45
	09/13/93		15.09	--	20.33
	12/28/93		14.47	--	20.95
	03/28/94		13.64	--	21.78
	06/13/94		13.98	--	21.44
	09/19/94		15.45	--	19.97
	12/19/94		13.60	--	21.82
	03/13/95		12.06	--	23.36
	05/30/95		13.25	--	22.17
	09/15/95		14.04	--	21.38
	11/27/95		14.31	--	21.11
MW-14	01/16/92	30.46	11.34	--	19.12
	02/19/92		9.32	--	21.14
	03/17/92		9.04	--	21.42

Table A-1 (continued)
Historical Liquid Surface Elevation Data

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

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-14	06/15/92		10.83	--	19.63
(cont.)	09/15/92		12.27	--	18.19
	12/17/92		10.69	--	19.77
	03/15/93		8.70	--	21.76
	06/15/93		9.90	--	20.56
	09/13/93		10.89	--	19.57
	12/28/93		10.24	--	20.22
	03/28/94		9.55	--	20.91
	06/13/94		9.92	--	20.54
	09/19/94		11.25	--	19.21
	12/19/94		9.52	--	20.94
	03/13/95		7.77	--	22.69
	05/30/95		9.18	--	21.28
	09/15/95		10.00	--	20.46
	11/27/95		10.97	--	19.49
MW-15	01/16/92	31.41	12.80	--	18.61
	02/19/92		10.85	--	20.56
	03/18/92		10.41	--	21.00
	06/15/92		12.19	--	19.22
	09/15/92		13.69	--	17.72
	12/17/92		12.26	--	19.15
	03/15/93		10.05	--	21.36
	06/15/93		11.32	--	20.09
	09/13/93		12.35	--	19.06
	12/28/93		11.76	--	19.65
	03/28/94		10.95	--	20.46
	06/13/94		11.34	--	20.07
	09/19/94		12.68	--	18.73
	12/19/94		11.03	--	20.38
	03/13/95		9.32	--	22.09
	05/30/95		10.57	--	20.84
	09/15/95		11.44	--	19.97
	11/27/95		12.32	--	19.09
MW-16	01/16/92	31.39	13.09	--	18.30
	02/19/92		10.99	--	20.40
	03/18/92		10.85	--	20.54
	06/15/92		12.64	--	18.75
	09/15/92		14.07	--	17.32
	12/17/92		12.56	--	18.83
	03/15/93		10.60	--	20.79
	06/15/93		11.86	--	19.53
	09/13/93		12.83	--	18.56
	12/28/93		12.14	--	19.25
	03/28/94		11.46	--	19.93
	06/13/94		11.87	--	19.52
	09/19/94		13.15	--	18.24
	12/19/94		11.36	--	20.03
	03/13/95		9.60	--	21.79
	05/30/95		11.17	--	20.22
	09/15/95		11.97	--	19.42
	11/27/95		12.85	--	18.54

Table A-1 (continued)
Historical Liquid Surface Elevation Data

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

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-17	01/16/92	32.43	13.92	--	18.51
	02/19/92		11.65	--	20.78
	03/18/92		11.71	--	20.72
	06/15/92		13.50	--	18.93
	09/15/92		14.95	--	17.48
	12/17/92		13.34	--	19.09
	03/15/93		11.47	--	20.96
	06/15/93		12.69	--	19.74
	09/13/93		13.66	--	18.77
	12/28/93		12.96	--	19.47
	03/28/94		12.33	--	20.10
	06/13/94		12.71	--	19.72
	09/19/94		14.00	--	18.43
	12/19/94		12.27	--	20.16
	03/13/95		10.64	--	21.79
	05/30/95		12.02	--	20.41
	09/15/95		12.83	--	19.60
	11/27/95		13.00	--	19.43
MW-18	03/18/92	29.70	9.73	--	19.97
	06/15/92		11.50	--	18.20
	09/15/92		12.90	--	16.80
	12/17/92		11.21	--	18.49
	03/15/93		9.62	--	20.08
	06/15/93		10.85	--	18.85
	09/13/93		11.75	--	17.95
	12/28/93		11.06	--	18.64
	03/28/94		10.43	--	19.27
	06/13/94		10.80	--	18.90
	09/19/94		12.03	--	17.67
	12/19/94		10.30	--	19.40
	03/13/95		8.52	--	21.18
	05/30/95		10.21	--	19.49
	09/15/95		10.96	--	18.74
	11/27/95		11.77	--	17.93
MW-19	03/18/92	29.02	9.22	--	19.80
	06/15/92		10.94	--	18.08
	09/15/92		12.38	--	16.64
	12/17/92		10.51	--	18.51
	03/15/93		9.23	--	19.79
	06/15/93		10.28	--	18.74
	09/13/93		11.16	--	17.86
	12/28/93		10.58	--	18.44
	03/28/94		9.92	--	19.10
	06/13/94		10.26	--	18.76
	09/19/94		11.45	--	17.57
	12/19/94		9.72	--	19.30
	03/13/95		8.04	--	20.98
	05/30/95		9.76	--	19.26
	09/15/95		10.40	--	18.62
	11/27/95		11.22	--	17.80

Table A-1 (continued)
Historical Liquid Surface Elevation Data

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

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-20	03/18/92	29.54	9.49	--	20.05
	06/15/92		11.11	--	18.43
	09/15/92		12.50	--	17.04
	12/17/92		10.74	--	18.80
	03/15/93		9.44	--	20.10
	06/05/93		10.45	--	19.09
	10/11/93		Well Destroyed		
MW-21	03/18/92	28.72	9.55	--	19.17
	06/15/92		11.30	--	17.42
	09/15/92		12.78	--	15.94
	12/17/92		10.80	--	17.92
	03/15/93		9.59	--	19.13
	06/15/93		10.77	--	17.95
	09/13/93		11.63	--	17.09
	12/28/93		11.02	--	17.70
	03/28/94		10.30	--	18.42
	06/13/94		10.69	--	18.03
	09/19/94		11.89	--	16.83
	12/19/94		10.07	--	18.65
	03/13/95		8.34	--	20.38
	05/30/95		10.15	--	18.57
	09/15/95		10.88	--	17.84
	11/27/95		11.61	--	17.11
MW-22	03/17/92	29.29	10.05	--	19.24
	06/15/92		11.84	--	17.45
	09/15/92		13.27	--	16.02
	12/17/92		11.58	--	17.71
	03/15/93		10.03	--	19.26
	06/15/93		11.22	--	18.07
	09/13/93		12.17	--	17.12
	12/28/93		11.34	--	17.95
	03/28/94		10.78	--	18.51
	06/13/94		11.24	--	18.05
	09/19/94		12.43	--	16.86
	12/19/94		10.62	--	18.67
	03/13/95		8.78	--	20.51
	05/30/95		10.61	--	18.68
	09/15/95		11.40	--	17.89
	11/27/95		12.20	--	17.09
MW-23	03/17/92	30.99	11.20	--	19.79
	06/15/92		12.94	--	18.05
	09/15/92		14.40	--	16.59
	12/17/92		13.01	--	17.98
	03/15/93		11.01	--	19.98
	06/15/93		12.26	--	18.73
	09/13/93		13.23	--	17.76
	12/28/93		12.57	--	18.42
	03/28/94		11.86	--	19.13
	06/13/94		12.26	--	18.73
	09/19/94		13.55	--	17.44
	12/19/94		11.81	--	19.18
	03/13/95		10.05	--	20.94

Table A-1 (continued)
Historical Liquid Surface Elevation Data

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

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-23	05/30/95		11.67	--	19.32
(cont.)	09/15/95		12.40	--	18.59
	11/27/95		13.24	--	17.75
MW-24	06/15/93	34.38	13.39	--	20.99
	09/13/93		14.38	--	20.00
	12/28/93		13.83	--	20.55
	03/28/94		13.02	--	21.36
	06/13/94		13.37	--	21.01
	09/19/94		14.72	--	19.66
	12/19/94		13.05	--	21.33
	03/13/95		11.10	--	23.28
	05/30/95		12.62	--	21.76
	09/15/95		13.47	--	20.91
	11/27/95		13.71	--	20.67
MW-25	04/09/93	34.12	11.18	--	22.94
	06/15/93		12.35	--	21.77
	09/13/93		13.45	--	20.67
	12/28/93		12.89	--	21.23
	03/28/94		12.02	--	22.10
	06/13/94		12.39	--	21.73
	09/19/94		13.82	--	20.30
	12/19/94		12.00	--	22.12
	03/13/95		10.30	--	23.82
	05/30/95		11.58	--	22.54
	09/15/95		12.42	--	21.70
	11/27/95		12.74	--	21.38
MW-26	06/15/93	33.71	12.66	--	21.05
	09/13/93		13.70	--	20.01
	12/28/93		13.06	--	20.65
	03/28/94		12.30	--	21.41
	06/13/94		12.65	--	21.06
	09/19/94		14.05	--	19.66
	12/19/94		12.39	--	21.32
	03/13/95		10.48	--	23.23
	05/30/95		11.93	--	21.78
	09/15/95		12.75	--	20.96
	11/27/95		13.00	--	20.71

SPH = Separate-phase hydrocarbons
MSL = Mean sea level
TOB = Top of box
N/A = Not available
Well elevations are measured from set mark at top of vault box.
For groundwater elevation data prior to January 1992, see previous groundwater monitoring reports.

Table A-2
Historical Groundwater Analytical Data
Groundwater Monitoring Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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

Well Number	Date Sampled		TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
MW-1	01/11/88		300	20	10	50	80
	06/14/88		Well Destroyed				
MW-2	07/05/85	a	32,000	1,000	690	N/A	1,500
	01/11/88		3,300	804	115	168	166
	06/14/88		Well Destroyed				
MW-3	01/11/88		1,800	20	20	80	60
	03/07/89		150,000	4,600	5,200	5,600	13,000
	06/21/89		63,000	2,700	5,800	3,300	12,000
	12/12/89		Well Dry				
	03/29/90	b	1,100,000	13,000	60,000	17,000	91,000
	06/22/90		Well Dry				
	07/18/90		Well Destroyed				
MW-4	01/11/88		62,000	2,700	7,900	850	5,200
	09/12/88		Separate-Phase Hydrocarbon Sheen				
	03/07/89		84,000	2,400	3,400	2,500	7,600
	06/21/89		31,000	400	800	200	1,500
	12/12/89		Well Dry				
	03/29/90		0.01 foot of Separate-Phase Hydrocarbon				
	06/22/90		Well Dry				
	07/18/90		Well Destroyed				
MW-5	01/11/88		31,000	4,000	2,700	3,800	5,500
	03/07/89		1,300	340	ND	140	50
	06/21/89		1,100	200	ND	130	40
	12/12/89		Well Dry				
	03/29/90		Well Dry				
	06/22/90		Well Dry				
	09/19/90		Well Dry				
	12/27/90		Well Dry				
	03/21/91		Well Dry				
	06/26/91		Well Dry				
	09/24/91		Well Dry				
	12/19/91		Well Dry				
	03/18/92		11,000	110	2	410	150
	06/15/92		Well Dry				
	09/16/92		Well Dry				
	12/22/92		960	220	6.5	4	2
	03/17/93		2,600	180	1.4	28	1.2
	06/17/93		2,500	450	7.5	55	<5
	09/17/93		1,400	230	<5.0	6.7	<5.0
	12/29/93		690	38	2.1	2.7	3.8
	03/30/94		1,400	30	<5	<5	<5
	06/14/94		1,700	42	<5	<5	<5
	09/20/94		500	18	<0.5	<0.5	0.52
	12/20/94		840	19	2.2	1.1	2.3
	03/14/95		2,300	16	<5.0	8.6	<5.0
	06/01/95		750	13	<0.50	1.1	<0.50
	09/15/95		550	11	<1.0	<1.0	<1.0
	11/28/95		Well Dry				

Table A-2 (continued)
Historical Groundwater Analytical Data
Groundwater Monitoring Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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

Well Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
MW-6	06/21/89	1,700	170	170	85	290
(E-1)	12/12/89	500	26	7	8	18
	03/29/90	130	14	9	4	11
	06/22/90	150	15	5	4	13
	07/18/90	Well Destroyed				
MW-7	04/13/90	<50	<0.3	<0.3	<0.3	<0.3
	06/22/90	<50	0.5	1	0.6	3
	09/19/90	<50	<0.3	<0.3	<0.3	<0.3
	12/27/90	69	<0.3	0.3	0.4	2
	03/21/91	<30	<0.3	<0.3	<0.3	<0.3
	06/26/91	<30	<0.3	<0.3	<0.3	<0.3
	09/24/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/17/92	<30	<0.3	<0.3	<0.3	<0.3
	06/17/92	<30	<0.3	<0.3	<0.3	<0.3
	09/16/92	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	<50	<0.5	<0.5	<0.5	<0.5
	03/17/93	<50	<0.5	<0.5	<0.5	<0.5
	06/15/93	<50	<0.5	<0.5	<0.5	<0.5
	09/14/93	<50	<0.5	<0.5	<0.5	<0.5
	12/29/93	<50	<0.5	<0.5	<0.5	<0.5
	03/30/94	<50	<0.5	<0.5	<0.5	<0.5
	06/14/94	<50	<0.5	<0.5	<0.5	<0.5
	09/20/94	<50	<0.5	<0.5	<0.5	<0.5
	12/20/94	<50	<0.5	<0.5	<0.5	<0.5
	03/14/95	<50	<0.50	<0.50	<0.50	<0.50
	06/01/95	<50	<0.50	<0.50	<0.50	<0.50
	09/15/95	<50	<0.50	<0.50	<0.50	<0.50
	11/28/95	<50	<0.50	<0.50	<0.50	<0.50
MW-8	04/13/90	4,900	350	16	450	33
	06/22/90	3,700	370	12	330	28
	09/19/90	140	4	3	3	3
	12/27/90	1,200	7	0.3	53	<0.3
	03/21/91	540	8.8	<6.0	21	9.6
	06/26/91	2,100	290	<6.0	56	<6.0
	09/24/91	260	51	0.34	7.9	<0.3
	12/19/91	5,300	300	<3.0	21	4.8
	03/17/92	9,200	370	3	48	4.9
	06/17/92	3,300	460	2.7	63	6.9
	09/16/92	1,500	58	<0.5	6.1	4.5
	12/22/92	3,600	410	56	62	4.4
	03/18/93	3,800	61	<0.5	11	1.2
	06/17/93	2,400	430	<5	11	<5
	09/14/93	1,900	36	1.4	32	8.6
	12/29/93	2,100	50	0.65	2.9	4.7
	03/29/94	1,900	220	<10	<10	<10
	06/14/94	2,800	340	<5	<5	<5
	09/20/94	2,100	46	<1.0	<1.0	<1.0
	12/20/94	1,800	120	<2.5	<2.5	<2.5
	03/14/95	840	17	<2.0	<2.0	<2.0

Table A-2 (continued)
Historical Groundwater Analytical Data
Groundwater Monitoring Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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

Well Number	Date Sampled		TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
MW-8	06/01/95	c	810	5.2	<0.50	0.69	0.71
(cont.)	09/15/95	c	850	30	<1.0	<1.0	<1.0
	11/28/95	c	1,200	39	<5.0	<5.0	<5.0
MW-9	04/13/90		<50	<0.3	<0.3	<0.3	2
	06/22/90		12,000	200	3	250	180
	09/19/90		<50	<0.3	<0.3	<0.3	0.6
	12/27/90		<50	<0.3	<0.3	<0.3	<0.3
	03/21/91		<30	<0.3	<0.3	<0.3	<0.3
	06/26/91		<30	<0.3	<0.3	<0.3	<0.3
	09/24/91		<30	<0.3	<0.3	<0.3	<0.3
	12/19/91		<30	<0.3	<0.3	<0.3	<0.3
	03/17/92		<30	<0.3	<0.3	<0.3	<0.3
	06/16/92		<30	<0.3	<0.3	<0.3	<0.3
	09/16/92		<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	c	75	<0.5	<0.5	<0.5	<0.5
	03/16/93		<50	<0.5	<0.5	<0.5	<0.5
	06/15/93		<50	<0.5	<0.5	<0.5	<0.5
	09/14/93		<50	<0.5	<0.5	<0.5	<0.5
	12/29/93		<50	<0.5	<0.5	<0.5	<0.5
	03/29/94		<50	<0.5	<0.5	<0.5	<0.5
	06/14/94		<50	<0.5	<0.5	<0.5	<0.5
	09/20/94		<50	<0.5	<0.5	<0.5	<0.5
	12/20/94		<50	<0.5	<0.5	<0.5	<0.5
	03/14/95		<50	<0.50	<0.50	<0.50	<0.50
	06/01/95		<50	<0.50	<0.50	<0.50	<0.50
	09/15/95		<50	<0.50	<0.50	<0.50	<0.50
	11/28/95		<50	<0.50	<0.50	<0.50	<0.50
MW-10	04/13/90		10,000	150	4	280	200
	06/22/90		9,700	28	<0.3	131	210
	09/19/90		1,800	<0.3	4	0.8	10
	12/27/90		5,700	7	3	95	61
	03/21/91		6,900	22	<15	92	33
	06/26/91		9,300	51	<0.3	59	34
	09/24/91		360	8.6	5.2	14	6.2
	12/19/91		3,300	9.2	8.4	11	17
	03/18/92		4,700	14	<6.0	29	10
	06/16/92		4,800	0.46	0.34	7.4	3.8
	09/16/92		2,000	8.3	3	3.3	5.5
	12/22/92	c	2,700	6.2	<1.0	7.5	2.8
	03/16/93		4,100	340	2.4	58	54
	06/17/93		4,900	860	<10	540	92
	09/17/93		4,500	670	<10.0	240	7.2
	12/28/93	d	5,000	1,200	12	46	31
	03/29/94		4,700	470	<10	29	45
	06/14/94		3,700	370	<1.0	<1.0	<1.0
	09/20/94		2,600	79	<2.5	7.4	2.7
	12/20/94		3,000	150	<5.0	<5.0	<5.0
	03/13/95		2,500	18	<5.0	<5.0	<5.0
	06/01/95	c	1,100	<1.2	<1.2	<1.2	<1.2
	09/14/95	c	1,100	<2.0	<2.0	<2.0	<2.0
	11/28/95	c	840	<1.2	<1.2	<1.2	<1.2

Table A-2 (continued)
Historical Groundwater Analytical Data
Groundwater Monitoring Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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

Well Number	Date Sampled		TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
MW-11	04/13/90		<50	<0.3	<0.3	<0.3	<0.3
	06/22/90		63	0.4	0.9	0.7	3
	09/19/90		<50	<0.3	<0.3	<0.3	<0.3
	12/27/90		<50	<0.3	<0.3	<0.3	<0.3
	03/21/91		<30	<0.3	<0.3	<0.3	<0.3
	06/26/91		<30	<0.3	<0.3	<0.3	<0.3
	09/24/91		<30	<0.3	<0.3	<0.3	<0.3
	12/19/91		<30	<0.3	<0.3	<0.3	<0.3
	03/17/92		<30	<0.3	<0.3	<0.3	<0.3
	06/16/92		<30	<0.3	<0.3	<0.3	<0.3
	09/16/92		<50	<0.5	<0.5	<0.5	<0.5
	12/22/92		<50	<0.5	<0.5	<0.5	<0.5
	03/16/93		<50	<0.5	<0.5	<0.5	<0.5
	06/16/93		<50	<0.5	<0.5	<0.5	<0.5
	09/14/93		<50	<0.5	<0.5	<0.5	<0.5
	12/29/93		<50	<0.5	<0.5	<0.5	<0.5
	03/29/94		<50	<0.5	<0.5	<0.5	<0.5
	06/13/94		<50	<0.5	<0.5	<0.5	<0.5
	09/20/94		<50	<0.5	<0.5	<0.5	<0.5
	12/20/94		<50	<0.5	<0.5	<0.5	<0.5
	03/13/95		<50	<0.50	<0.50	<0.50	<0.50
	06/01/95		<50	<0.50	<0.50	<0.50	<0.50
	09/14/95		<50	<0.50	<0.50	<0.50	<0.50
	11/27/95		<50	<0.50	<0.50	<0.50	<0.50
E-1A	09/19/90		<50	7	0.9	1	2
(MW-12)	12/27/90		<50	3	0.5	1	1
	03/21/91		<30	4.2	<0.3	1.1	0.89
	06/26/91		41	6.3	<0.3	1.2	0.59
			---------- Converted to Extraction Well 8/91 ----------				
	03/28/94		120	4.8	<0.50	5.7	4.1
	06/14/94	*	230	12	<0.5	16	1.5
	09/20/94	*	<50	<0.5	<0.5	<0.5	<0.5
	12/20/94		<50	2.4	<0.5	1.9	<0.5
	03/14/95		<50	<0.50	<0.50	<0.50	<0.50
	06/01/95		680	4.9	<0.50	18	2.4
	09/15/95		73	3.3	<0.50	2.3	<0.50
	09/15/95		73	3.3	<0.50	2.3	<0.50
	11/28/95		220	3.9	<0.50	6.2	<0.50
MW-13	07/03/91		<30	<0.3	<0.3	<0.3	<0.3
	09/24/91		<30	<0.3	<0.3	<0.3	<0.3
	12/19/91		<30	<0.3	<0.3	<0.3	<0.3
	03/17/92		<30	<0.3	<0.3	<0.3	<0.3
	06/17/92		<30	<0.3	<0.3	<0.3	<0.3
	09/16/92		<50	<0.5	<0.5	<0.5	<0.5
	12/21/92		<50	<0.5	<0.5	<0.5	<0.5
	03/17/93		<50	<0.5	<0.5	<0.5	<0.5
	06/15/93		<50	<0.5	<0.5	<0.5	<0.5
	09/14/93		<50	<0.5	<0.5	<0.5	<0.5
	12/29/93		<50	<0.5	<0.5	<0.5	<0.5
	03/30/94		<50	<0.5	<0.5	<0.5	<0.5
	06/14/94		<50	<0.5	<0.5	<0.5	<0.5

Table A-2 (continued)
Historical Groundwater Analytical Data
Groundwater Monitoring Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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

Well Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
MW-13	09/20/94	<50	<0.5	<0.5	<0.5	<0.5
(cont.)	12/20/94	<50	<0.5	<0.5	<0.5	<0.5
	03/14/95 c	570	2.0	<0.50	3.9	7.9
	06/01/95	<50	<0.50	<0.50	<0.50	<0.50
	09/15/95	<50	<0.50	<0.50	<0.50	<0.50
	11/28/95	<50	<0.50	<0.50	<0.50	<0.50
MW-14	07/03/91	<30	<0.3	<0.3	<0.3	<0.3
	09/24/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/17/92	<30	<0.3	<0.3	<0.3	<0.3
	06/16/92	<30	<0.3	<0.3	<0.3	<0.3
	09/16/92	<50	<0.5	<0.5	<0.5	<0.5
	12/22/92	<50	<0.5	<0.5	<0.5	<0.5
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5
	06/15/93	<50	<0.5	<0.5	<0.5	<0.5
	09/15/93	<50	<0.5	<0.5	<0.5	<0.5
	12/28/93	<50	<0.5	<0.5	<0.5	<0.5
	03/29/94	<50	<0.5	<0.5	<0.5	<0.5
	06/13/94	<50	<0.5	<0.5	<0.5	<0.5
	09/20/94	<50	<0.5	<0.5	<0.5	<0.5
	12/20/94	<50	<0.5	<0.5	<0.5	<0.5
	03/13/95	<50	<0.50	<0.50	<0.50	<0.50
	06/01/95	<50	<0.50	<0.50	<0.50	<0.50
	09/14/95	<50	<0.50	<0.50	<0.50	<0.50
	11/27/95	<50	<0.50	<0.50	<0.50	<0.50
MW-15	07/03/91	570	1.8	1	1	2.2
	09/24/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	360	<0.6	<0.6	0.64	<0.6
	03/18/92	730	0.74	0.98	1.8	0.68
	06/16/92	310	0.54	0.34	0.96	2.5
	09/16/92	100	1	<0.5	<0.5	<0.5
	12/22/92	130 c	<0.5	<0.5	<0.5	<0.5
	03/18/93	130 c	<0.5	<0.5	<0.5	<0.5
	06/17/93	<50	<0.5	<0.5	<0.5	<0.5
	09/17/93	<50	<0.5	<0.5	<0.5	<0.5
	12/29/93	52	<0.5	<0.5	<0.5	1.5
	03/29/94	<50	<0.5	<0.5	<0.5	<0.5
	06/13/94	<50	<0.5	<0.5	<0.5	<0.5
	09/20/94	<50	<0.5	<0.5	<0.5	<0.5
	12/20/94	<50	<0.5	<0.5	<0.5	<0.5
	03/13/95	<50	<0.50	<0.50	<0.50	<0.50
	05/31/95	<50	<0.50	<0.50	<0.50	<0.50
	09/14/95	<50	<0.50	<0.50	<0.50	<0.50
	11/27/95	<50	<0.50	<0.50	<0.50	<0.50
MW-16	07/03/91	2,700	31	6.9	4.6	3.1
	09/24/91	430	1.8	1.3	1.9	1.5
	12/19/91	75	<0.3	<0.3	<0.3	<0.3
	03/18/92	1,500	4	0.73	2.2	1.3
	06/16/92	80	<0.3	<0.3	<0.3	<0.3
	09/16/92	<50	<0.5	<0.5	<0.5	<0.5

Table A-2 (continued)
Historical Groundwater Analytical Data
Groundwater Monitoring Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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

Well Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
MW-16	12/22/92	<50	<0.5	<0.5	<0.5	<0.5
(cont.)	03/18/93	380 c	<0.5	<0.5	<0.5	<0.5
	06/17/93	<50	<0.5	<0.5	<0.5	<0.5
	09/17/93	<50	<0.5	<0.5	<0.5	<0.5
	12/28/93	<50	<0.5	<0.5	0.72	<0.5
	03/28/94	<50	<0.5	<0.5	<0.5	<0.5
	06/13/94	<50	<0.5	<0.5	<0.5	<0.5
	09/20/94	<50	<0.5	<0.5	<0.5	<0.5
	12/20/94	52	<0.5	<0.5	<0.5	<0.5
	03/13/95	<50	<0.50	<0.50	<0.50	<0.50
	05/31/95 c	52	<0.50	<0.50	<0.50	<0.50
	09/14/95	<50	<0.50	<0.50	<0.50	<0.50
	11/27/95	<50	<0.50	<0.50	<0.50	<0.50
MW-17	07/03/91	1,200	12	1.9	28	40
	09/24/91	150	2.7	0.5	3.9	0.59
	12/19/91	370	2.6	<0.3	7.2	6.5
	03/18/92	470	3.1	<0.3	9.1	8.6
	06/16/92	310	1.7	0.56	12	9.6
	09/16/92	77	1.5	<0.5	1.2	1
	12/21/92	220	1.2	<0.5	9.8	9.4
	03/17/93	250	<0.5	<0.5	7.8	3.3
	06/17/93	90	0.92	<0.5	2.7	2.4
	09/16/93	140	<0.5	<0.5	5.4	3.9
	12/29/93	<50	<0.5	<0.5	<0.5	<0.5
	03/29/94	<50	<0.5	<0.5	<0.5	<0.5
	06/15/94	62	<0.5	<0.5	1.2	<0.90
	09/19/94	<50	<0.5	<0.5	<0.5	<0.5
	12/20/94	77	<0.5	<0.5	1.6	0.67
	03/13/95	110	<0.50	<0.50	2.9	1.2
	05/30/95	93	1.0	<0.50	1.2	<0.50
	09/14/95	63	<0.50	<0.50	1.1	0.51
	11/28/95	83	<0.50	<0.50	<0.50	<0.50
MW-18	10/04/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/18/92	<30	<0.3	<0.3	<0.3	<0.3
	06/15/92	<30	<0.3	<0.3	<0.3	<0.3
	09/15/92	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	<50	<0.5	<0.5	<0.5	<0.5
	03/17/93	<50	<0.5	<0.5	<0.5	<0.5
	06/16/93	<50	<0.5	<0.5	<0.5	<0.5
	09/16/93	<50	<0.5	<0.5	<0.5	<0.5
	12/28/93	<50	<0.5	<0.5	<0.5	<0.5
	03/28/94	<50	<0.5	<0.5	<0.5	<0.5
	06/13/94	<50	<0.5	<0.5	<0.5	<0.5
	09/20/94	<50	<0.5	<0.5	<0.5	<0.5
	03/13/95	<50	<0.50	<0.50	<0.50	<0.50
	05/30/95	<50	<0.50	<0.50	<0.50	<0.50
	09/14/95	<50	<0.50	<0.50	<0.50	<0.50
	11/27/95	<50	<0.50	<0.50	<0.50	<0.50

Table A-2 (continued)
Historical Groundwater Analytical Data
Groundwater Monitoring Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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

Well Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
MW-19	10/04/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/18/92	<30	<0.3	<0.3	<0.3	<0.3
	06/15/92	<30	<0.3	<0.3	<0.3	<0.3
	09/15/92	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	<50	<0.5	<0.5	<0.5	<0.5
	03/17/93	<50	<0.5	<0.5	<0.5	<0.5
	06/16/93	<50	<0.5	<0.5	<0.5	<0.5
	09/16/93	<50	<0.5	<0.5	<0.5	<0.5
	12/28/93	<50	<0.5	<0.5	<0.5	<0.5
	03/28/94	<50	<0.5	<0.5	<0.5	<0.5
	06/13/94	<50	<0.5	<0.5	<0.5	<0.5
	09/19/94	<50	<0.5	<0.5	<0.5	<0.5
	12/19/94	<50	<0.5	<0.5	<0.5	<0.5
	03/13/95	<50	<0.50	<0.50	<0.50	<0.50
	05/30/95	<50	<0.50	<0.50	<0.50	<0.50
	09/14/95	<50	<0.50	<0.50	<0.50	<0.50
	11/27/95	<50	<0.50	<0.50	<0.50	<0.50
MW-20	10/04/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/18/92	<30	<0.3	<0.3	<0.3	<0.3
	06/15/92	<30	<0.3	<0.3	<0.3	<0.3
	09/15/92	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	<50	<0.5	<0.5	<0.5	<0.5
	03/17/93	<50	<0.5	<0.5	<0.5	<0.5
	06/16/93	<50	<0.5	<0.5	<0.5	<0.5
	10/11/93	Well Destroyed				
MW-21	10/04/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/18/92	<30	<0.3	<0.3	<0.3	<0.3
	06/15/92	<30	<0.3	<0.3	<0.3	<0.3
	09/15/92	<50	<0.5	<0.5	<0.5	<0.5
	12/22/92	<50	<0.5	<0.5	<0.5	<0.5
	03/17/93	<50	<0.5	<0.5	<0.5	<0.5
	06/16/93	<50	<0.5	<0.5	<0.5	<0.5
	09/16/93	<50	<0.5	<0.5	<0.5	<0.5
	12/28/93	<50	<0.5	<0.5	<0.5	<0.5
	03/28/94	<50	<0.5	<0.5	<0.5	<0.5
	06/13/94	<50	<0.5	<0.5	<0.5	<0.5
	09/19/94	<50	<0.5	<0.5	<0.5	<0.5
	12/19/94	<50	<0.5	<0.5	<0.5	<0.5
	03/13/95	<50	<0.50	<0.50	<0.50	<0.50
	05/30/95	<50	<0.50	<0.50	<0.50	<0.50
	09/14/95	<50	<0.50	<0.50	<0.50	<0.50
	11/27/95	<50	<0.50	<0.50	<0.50	<0.50
MW-22	10/04/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/17/92	<30	<0.3	<0.3	<0.3	<0.3
	06/15/92	<30	<0.3	<0.3	<0.3	<0.3
	09/15/92	<50	<0.5	<0.5	<0.5	<0.5

Table A-2 (continued)
Historical Groundwater Analytical Data
Groundwater Monitoring Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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

Well Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
MW-22	12/22/92	<50	<0.5	<0.5	<0.5	<0.5
(cont.)	03/17/93	<50	<0.5	<0.5	<0.5	<0.5
	06/16/93	<50	<0.5	<0.5	<0.5	<0.5
	09/16/93	<50	<0.5	<0.5	<0.5	<0.5
	12/28/93	<50	<0.5	<0.5	<0.5	<0.5
	03/28/94	<50	<0.5	<0.5	<0.5	<0.5
	06/13/94	<50	<0.5	<0.5	<0.5	<0.5
	09/19/94	<50	<0.5	<0.5	<0.5	<0.5
	12/19/94	<50	<0.5	<0.5	<0.5	<0.5
	03/13/95	<50	<0.50	<0.50	<0.50	<0.50
	05/30/95	<50	<0.50	<0.50	<0.50	<0.50
	09/14/95	<50	<0.50	<0.50	<0.50	<0.50
	11/27/95	<50	<0.50	<0.50	<0.50	<0.50
MW-23	10/04/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/17/92	<30	<0.3	<0.3	<0.3	<0.3
	06/15/92	<30	<0.3	<0.3	<0.3	<0.3
	09/15/92	<50	<0.5	<0.5	<0.5	<0.5
	12/22/92	<50	<0.5	<0.5	<0.5	<0.5
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5
	06/16/93	<50	<0.5	<0.5	<0.5	<0.5
	09/15/93	<50	<0.5	<0.5	<0.5	<0.5
	12/28/93	<50	<0.5	<0.5	<0.5	<0.5
	03/28/94	<50	<0.5	<0.5	<0.5	<0.5
	06/13/94	<50	<0.5	<0.5	<0.5	<0.5
	09/19/94	<50	<0.5	<0.5	<0.5	<0.5
	12/19/94	<50	<0.5	<0.5	<0.5	<0.5
	03/13/95	<50	<0.50	<0.50	<0.50	<0.50
	05/30/95	<50	<0.50	<0.50	<0.50	<0.50
	09/14/95	<50	<0.50	<0.50	<0.50	<0.50
	11/27/95	<50	<0.50	<0.50	<0.50	<0.50
MW-24	03/29/93	<50	<0.5	<0.5	<0.5	<0.5
	06/15/93	<50	<0.5	<0.5	<0.5	<0.5
	09/14/93	<50	<0.5	<0.5	<0.5	<0.5
	12/29/93	<50	<0.5	<0.5	<0.5	<0.5
	03/29/94	<50	<0.5	<0.5	<0.5	<0.5
	06/13/94	<50	<0.5	<0.5	<0.5	<0.5
	09/20/94	<50	<0.5	<0.5	<0.5	<0.5
	12/20/94	<50	<0.5	<0.5	<0.5	<0.5
	03/13/95	<50	<0.50	<0.50	<0.50	<0.50
	06/01/95	<50	<0.50	<0.50	<0.50	<0.50
	09/15/95	<50	<0.50	<0.50	<0.50	<0.50
	11/28/95	<50	<0.50	<0.50	<0.50	<0.50
MW-25	03/29/93	<50	0.69	<0.5	<0.5	<0.5
	06/15/93	<50	<0.5	<0.5	<0.5	<0.5
	09/14/93	<50	<0.5	<0.5	<0.5	<0.5
	12/29/93	<50	<0.5	<0.5	<0.5	<0.5
	03/29/94	<50	<0.5	<0.5	<0.5	<0.5
	06/13/94	<50	<0.5	<0.5	<0.5	<0.5
	09/20/94	<50	<0.5	<0.5	<0.5	<0.5

Table A-2 (continued)
Historical Groundwater Analytical Data
Groundwater Monitoring Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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

Well Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
MW-25	12/20/94	<50	<0.5	<0.5	<0.5	<0.5
(cont.)	03/14/95	<50	<0.50	<0.50	<0.50	<0.50
	06/01/95	<50	<0.50	<0.50	<0.50	<0.50
	09/15/95	140	<0.50	<0.50	1.9	3.6
	11/28/95	<50	<0.50	<0.50	<0.50	<0.50
MW-26	03/29/93	<50	<0.5	<0.5	<0.5	<0.5
	06/15/93	<50	<0.5	<0.5	<0.5	<0.5
	09/14/93	<50	<0.5	<0.5	<0.5	<0.5
	12/29/93	<50	<0.5	<0.5	<0.5	<0.5
	03/29/94	<50	<0.5	<0.5	<0.5	<0.5
	06/13/94	<50	<0.5	<0.5	<0.5	<0.5
	09/20/94	<50	<0.5	<0.5	<0.5	<0.5
	12/20/94	<50	<0.5	<0.5	<0.5	<0.5
	03/13/95	<50	<0.50	<0.50	<0.50	<0.50
	06/01/95	<50	<0.50	<0.50	<0.50	<0.50
	09/15/95	<50	<0.50	<0.50	<0.50	<0.50
	11/28/95	<50	<0.50	<0.50	<0.50	<0.50

ppb = Parts per billion
N/A = Not available
ND = Not detected
a. Ethylbenzene and xylenes given as a combined value.
b. Well contained slight product sheen.
c. Non-typical gasoline chromatograph pattern.
d. Anomalous data point.
< = Less than laboratory detection limit stated at right.
* = Value taken from system influent sampling.
Wells MW-1 and MW-2 destroyed prior to March 7, 1989 sampling event.
Wells MW-3, MW-4, and MW-6 (E-1) destroyed June 18, 1990.
Prior to June 1995, TPPH as gasoline was reported as TPH as gasoline.

Table A-3
Historical Groundwater Analytical Data
Total Methyl t-Butyl Ether

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

Groundwater Monitoring Wells

Well Number	Date Sampled	Methyl t-Butyl Ether (ppb)
MW-5	09/15/95	660
MW-7	09/15/95	<2.5
MW-8	09/15/95	110
MW-9	09/15/95	<2.5
MW-10	09/14/95 11/28/95	630 720
MW-11	09/14/95	<2.5
E-1A (MW-12)	09/15/95	220
MW-13	09/15/95	<2.5
MW-14	09/14/95	<2.5
MW-15	09/14/95	9.4
MW-16	09/14/95	17
MW-17	09/14/95	<2.5
MW-18	09/14/95	<2.5
MW-19	09/14/95	<2.5
MW-21	09/14/95	<2.5
MW-22	09/14/95	<2.5
MW-23	09/14/95	<2.5
MW-24	09/15/95	<2.5
MW-25	09/15/95	<2.5
MW-26	09/15/95	<2.5

Domestic Irrigation Wells

Well Number	Date Sampled	Methyl t-Butyl Ether (ppb)
590 H	09/15/95	<2.5
633 H	09/14/95	<2.5
634 H	09/14/95	NS
642 H	09/14/95	NS
675 H	09/14/95	NS
17348 VE	09/14/95	<2.5
17197 VM	09/14/95	<2.5
17200 VM	09/14/95	4.8
17203 VM	09/14/95	<2.5
17302 VM	09/14/95	<2.5
17349 VM	09/15/95	32
17371 VM	09/15/95	NS
17372 VM	09/14/95	<2.5
17393 VM	09/15/95	<2.5

ppb = Parts per billion
NS = Not sampled
< = Less than the detection limit stated at right.

Table A-4
Historical Groundwater Analytical Data
Domestic Irrigation Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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)
590 H	11/13/91		<30	<0.3	<0.3	<0.3	<0.3
	10/14/92		<50	<0.5	<0.5	<0.5	<0.5
	12/21/92		<50	<0.5	<0.5	<0.5	<0.5
	03/16/93		<50	<0.5	<0.5	<0.5	<0.5
	06/17/93		<50	<0.5	<0.5	<0.5	<0.5
	09/16/93		<50	<0.5	<0.5	<0.5	<0.5
	12/30/93	a	NS	NS	NS	NS	NS
	03/29/94		<50	<0.5	<0.5	<0.5	<0.5
	06/16/94		<50	<0.5	<0.5	<0.5	<0.5
	09/21/94		<50	<0.5	<0.5	<0.5	<0.5
	12/21/94		<50	<0.5	<0.5	<0.5	<0.5
	03/15/95		<50	<0.50	<0.50	<0.50	<0.50
	05/26/95		<50	<0.50	<0.50	<0.50	<0.50
	09/15/95		<50	<0.50	13	<0.50	<0.50
	11/29/95	a	NS	NS	NS	NS	NS
633 H	09/11/91	b,d	NS	NS	NS	NS	NS
	10/14/92	a	NS	NS	NS	NS	NS
	12/21/92		<50	<0.5	<0.5	<0.5	<0.5
	03/16/93		<50	<0.5	<0.5	<0.5	<0.5
	06/17/93		<50	<0.5	<0.5	<0.5	<0.5
	09/15/93	b,d	NS	NS	NS	NS	NS
	12/30/93	b,d	NS	NS	NS	NS	NS
	03/29/94	b,d	NS	NS	NS	NS	NS
	06/15/94	b,d	NS	NS	NS	NS	NS
	09/21/94	b,d	NS	NS	NS	NS	NS
	10/07/94		<50	<0.5	<0.5	<0.5	<0.5
	12/21/94		<50	<0.5	<0.5	<0.5	<0.5
	03/15/95		250	5.1	9.8	0.65	46
	03/15/95	e	<50	<0.50	<0.50	<0.50	<0.50
	05/31/95		<50	0.93	2.4	<0.50	14
	09/14/95		<50	0.64	1.2	<0.50	7.6
	11/28/95		<50	<0.50	0.89	<0.50	8.3
634 H	09/11/91	b,d	NS	NS	NS	NS	NS
	10/14/92	a	NS	NS	NS	NS	NS
	12/21/92	b,d	NS	NS	NS	NS	NS
	03/16/93	b,d	NS	NS	NS	NS	NS
	06/17/93	b,d	NS	NS	NS	NS	NS
	09/15/93	a	NS	NS	NS	NS	NS
	12/30/93	b,d	NS	NS	NS	NS	NS
	03/29/94	b,d	NS	NS	NS	NS	NS
	06/15/94		NS	NS	NS	NS	NS
	09/21/94	b,d	NS	NS	NS	NS	NS
	12/21/94	b,d	NS	NS	NS	NS	NS
	03/15/95	b,d	NS	NS	NS	NS	NS
	05/31/95	a	NS	NS	NS	NS	NS
	09/14/95	a	NS	NS	NS	NS	NS
	11/28/95	a	NS	NS	NS	NS	NS

Table A-4 (continued)
Historical Groundwater Analytical Data
Domestic Irrigation Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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)
642 H	11/13/91		<30	<0.3	<0.3	<0.3	<0.3
	10/16/92		<50	<0.5	<0.5	<0.5	<0.5
	12/21/92		<50	<0.5	<0.5	<0.5	<0.5
	03/16/93		<50	<0.5	<0.5	<0.5	<0.5
	06/17/93		<50	<0.5	<0.5	<0.5	<0.5
	09/16/93		<50	<0.5	<0.5	<0.5	<0.5
	12/30/93	a	NS	NS	NS	NS	NS
	03/30/94		<50	<0.5	<0.5	<0.5	<0.5
	06/15/94		NS	NS	NS	NS	NS
	09/21/94	b,d	NS	NS	NS	NS	NS
	12/21/94	b,d	NS	NS	NS	NS	NS
	03/15/95		<50	<0.50	<0.50	<0.50	<0.50
	05/31/95	a	NS	NS	NS	NS	NS
	09/14/95	a	NS	NS	NS	NS	NS
	11/28/95	a	NS	NS	NS	NS	NS
675 H	09/11/91	b,d	NS	NS	NS	NS	NS
	10/14/92	a	NS	NS	NS	NS	NS
	12/21/92	b,d	NS	NS	NS	NS	NS
	03/16/93	b,d	NS	NS	NS	NS	NS
	06/17/93	b,d	NS	NS	NS	NS	NS
	09/15/93	a	NS	NS	NS	NS	NS
	12/30/93	a	NS	NS	NS	NS	NS
	03/29/94	a	NS	NS	NS	NS	NS
	06/15/94	a	NS	NS	NS	NS	NS
	09/22/94		<50	<0.5	<0.5	<0.5	<0.5
	12/21/94	b,d	NS	NS	NS	NS	NS
	03/15/95	b,d	NS	NS	NS	NS	NS
	05/31/95	b,d	NS	NS	NS	NS	NS
	09/14/95	b,d	NS	NS	NS	NS	NS
	11/28/95	a	NS	NS	NS	NS	NS
17197 VM	11/13/91		<30	<0.3	<0.3	<0.3	<0.3
	10/14/92		<50	<0.5	<0.5	<0.5	<0.5
	12/21/92		<50	<0.5	<0.5	<0.5	<0.5
	03/16/93		<50	<0.5	<0.5	<0.5	<0.5
	06/17/93		<50	<0.5	<0.5	<0.5	<0.5
	09/16/93		<50	<0.5	<0.5	<0.5	<0.5
	12/30/93		<50	<0.5	<0.5	<0.5	<0.5
	03/30/94		<50	<0.5	<0.5	<0.5	<0.5
	06/15/94		<50	<0.5	<0.5	<0.5	<0.5
	09/21/94	a	NS	NS	NS	NS	NS
	12/21/94		<50	<0.5	<0.5	<0.5	<0.5
	03/15/95		<50	<0.50	<0.50	<0.50	<0.50
	05/31/95		<50	<0.50	<0.50	<0.50	<0.50
	09/14/95		<50	<0.50	<0.50	<0.50	<0.50
	11/29/95		<50	<0.50	<0.50	<0.50	<0.50

Table A-4 (continued)
Historical Groundwater Analytical Data
Domestic Irrigation Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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)
17200 VM	11/13/91	440	2.7	<0.3	<0.3	12
	10/14/92 a	NS	NS	NS	NS	NS
	12/18/92	160	1.4	<0.5	<0.5	3.4
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5
	06/16/93	<50	<0.5	<0.5	<0.5	<0.5
	09/15/93	<50	<0.5	<0.5	<0.5	<0.5
	12/30/93	<50	<0.5	<0.5	<0.5	<0.5
	03/29/94	<50	<0.5	<0.5	<0.5	<0.5
	06/15/94	<50	<0.5	<0.5	<0.5	<0.5
	09/21/94	<50	<0.5	<0.5	<0.5	<0.5
	12/20/94	<50	<0.5	<0.5	<0.5	<0.5
	03/15/95	<50	<0.50	<0.50	<0.50	<0.50
	05/30/95	<50	<0.50	<0.50	<0.50	<0.50
	09/14/95	510	<0.50	<0.50	3.1	3.4
	11/29/95	Well Dry				
17203 VM	11/13/91	<30	<0.3	<0.3	<0.3	<0.3
	10/16/92 a	NS	NS	NS	NS	NS
	12/21/92	<50	<0.5	<0.5	<0.5	1.3
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5
	06/17/93	<50	<0.5	<0.5	<0.5	<0.5
	09/16/93	<50	<0.5	<0.5	<0.5	<0.5
	12/30/93	<50	<0.5	<0.5	<0.5	<0.5
	03/30/94	<50	<0.5	<0.5	<0.5	<0.5
	06/15/94	<50	<0.5	<0.5	<0.5	<0.5
	09/21/94 a	NS	NS	NS	NS	NS
	12/21/94	<50	<0.5	<0.5	<0.5	<0.5
	03/15/95	<50	<0.50	<0.50	<0.50	<0.50
	05/31/95	<50	<0.50	<0.50	<0.50	<0.50
	09/14/95	<50	<0.50	<0.50	<0.50	<0.50
	11/29/95	<50	<0.50	<0.50	<0.50	<0.50
17302 VM	10/21/91	72	0.64	<0.3	0.44	<0.3
	10/14/92 a	NS	NS	NS	NS	NS
	12/21/92	<50	<0.5	<0.5	<0.5	<0.5
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5
	06/17/93 b,d	NS	NS	NS	NS	NS
	09/16/93	66	<0.5	<0.5	<0.5	<0.5
	12/30/93	<50	<0.5	<0.5	<0.5	<0.5
	03/30/94	<50	<0.5	<0.5	<0.5	<0.5
	06/15/94	<50	<0.5	<0.5	<0.5	<0.5
	03/30/94	<50	<0.5	<0.5	<0.5	<0.5
	06/15/94	<50	<0.5	<0.5	<0.5	<0.5
	09/21/94 a	NS	NS	NS	NS	NS
	12/21/94	<50	<0.5	<0.5	<0.5	<0.5
	03/15/95	<50	<0.50	<0.50	<0.50	<0.50
	09/14/95	<50	<0.50	<0.50	<0.50	<0.50
	11/29/95	<50	<0.50	<0.50	<0.50	<0.50

Table A-4 (continued)
Historical Groundwater Analytical Data
Domestic Irrigation Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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)
17348 VE	11/13/91	b,d	NS	NS	NS	NS	NS
	10/14/92	a	NS	NS	NS	NS	NS
	12/21/92		<50	<0.5	<0.5	<0.5	<0.5
	03/16/93		<50	<0.5	<0.5	<0.5	<0.5
	06/16/93		<50	<0.5	<0.5	<0.5	<0.5
	09/15/93		<50	<0.5	<0.5	<0.5	<0.5
	12/30/93	b,d	NS	NS	NS	NS	NS
	03/30/94		<50	<0.5	<0.5	<0.5	<0.5
	06/15/94		<50	<0.5	<0.5	<0.5	<0.5
	09/21/94	a	NS	NS	NS	NS	NS
	12/21/94		<50	<0.5	<0.5	<0.5	<0.5
	03/15/95		<50	<0.50	<0.50	<0.50	<0.50
	05/30/95		<50	<0.50	<0.50	<0.50	<0.50
	09/14/95		<50	<0.50	<0.50	<0.50	<0.50
	11/29/95		<50	<0.50	<0.50	<0.50	<0.50
17349 VM	09/27/91		780	13	<3.0	<3.0	<3.0
	10/14/92		2,200	<50	<50	<50	110
	12/18/92		1,500	14	1.8	7.1	56
	03/16/93		1,100	16	4.2	1.8	1.8
	06/17/93		1,100	1.5	6.7	2.9	7.9
	09/16/93		1,200	13	21	3	10
	12/30/93	a	NS	NS	NS	NS	NS
	03/30/94		420	<1	<1	<1	5.3
	06/15/94		460	<0.5	<0.5	<0.5	1.8
	09/21/94		590	1.8	<0.5	1.1	7.6
	12/21/94		670	<0.5	<0.5	<0.5	1.8
	03/15/95		1,400	19	<5.0	7.9	48
	05/31/95		890	<2.0	<2.0	4.3	22
	09/15/95		610	3.9	<0.50	<0.50	<0.50
	11/29/95		790	<2.5	<2.5	3.8	11
17371 VM	11/13/91		870	9	1	2.1	4.5
	10/14/92		<50	<0.5	<0.5	<0.5	<0.5
	12/18/92		<50	<0.5	<0.5	<0.5	<0.5
	03/16/93		500	8.7	<0.5	3.9	3.1
	06/17/93	c	NS	NS	NS	NS	NS
	09/16/93	c	NS	NS	NS	NS	NS
	12/30/93	c	NS	NS	NS	NS	NS
	03/30/94	c	NS	NS	NS	NS	NS
	06/15/94	c	NS	NS	NS	NS	NS
	09/21/94	c	NS	NS	NS	NS	NS
	12/21/94	c	NS	NS	NS	NS	NS
	03/15/95	c	NS	NS	NS	NS	NS
	05/31/95	c	NS	NS	NS	NS	NS
	11/29/95	c	NS	NS	NS	NS	NS

Table A-4 (continued)
Historical Groundwater Analytical Data
Domestic Irrigation Wells
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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)
17372 VM	09/27/91		300	5.5	<0.60	1.3	0.72
	10/14/92		220	<1.0	<1.0	<1.0	<1.0
	12/18/92		290	3.8	0.88	0.99	1.2
	03/16/93	*	110	<0.5	<0.5	<0.5	<0.5
	06/17/93		140	<0.5	1.3	0.63	1.1
	09/15/93		120	<0.5	1.1	0.62	1.2
	12/30/93		<50	<0.5	<0.5	<0.5	<0.5
	03/30/94		<50	<0.5	<0.5	<0.5	<0.5
	06/15/94		110	<0.5	<0.5	<0.5	<0.5
	09/21/94		55	<0.5	<0.5	<0.5	<0.5
	12/21/94		<50	<0.5	<0.5	<0.5	<0.5
	03/15/95		<50	<0.50	<0.50	<0.50	<0.50
	05/31/95		60	<0.50	<0.50	<0.50	<0.50
	09/14/95		<50	<0.50	<0.50	<0.50	<0.50
	11/30/95		<50	<0.50	<0.50	<0.50	<0.50
17393 VM	11/13/91		31	<0.3	<0.3	<0.3	<0.3
	10/14/92	a	NS	NS	NS	NS	NS
	12/18/92		<50	<0.5	<0.5	<0.5	<0.5
	03/16/93		<50	<0.5	<0.5	<0.5	<0.5
	06/17/93		<50	<0.5	<0.5	<0.5	<0.5
	09/15/93		<50	<0.5	<0.5	<0.5	<0.5
	12/30/93	a	NS	NS	NS	NS	NS
	12/30/93		<50	<0.5	<0.5	<0.5	<0.5
	03/30/94		50	<0.5	<0.5	<0.5	<0.5
	06/15/94		<50	<0.5	<0.5	<0.5	<0.5
	09/21/94	a	NS	NS	NS	NS	NS
	12/21/94		<50	<0.5	<0.5	<0.5	<0.5
	03/15/95		<50	<0.50	<0.50	<0.50	<0.50
	05/31/95		<50	<0.50	<0.50	<0.50	<0.50
	09/15/95		<50	<0.50	<0.50	<0.50	<0.50
	11/30/95		<50	<0.50	<0.50	<0.50	<0.50

ppb = Parts per billion
H = Hacienda Avenue
< = Less than laboratory detection limit stated at right.
NS = Not sampled
VM = Via Magdalena
* = Non-typical chromatogram pattern; did not sample.
VE = Via Encinas
a. Owner not available to approve sampling access; well not sampled.
b. Pump not functioning; well not sampled.
c. Access denied by owner; well not sampled.
d. Pumping equipment obstructing sampling access; well not sampled.
e. Laboratory analyzed duplicate sample for confirmation. See certified analytical report.
Homeowners are contacted 1 week prior to sampling event.
Prior to June 1995, TPPH as gasoline was reported as TPH as gasoline.

ATTACHMENT B

FIELD AND LABORATORY PROCEDURES

ATTACHMENT B
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, a Hydac digital tester, catalog No. 301353, is used to monitor temperature, pH, and electrical conductivity 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.

Field Procedures

Parameters measured in the field include color, odor, oxidation reduction potential, turbidity, hydrogen sulfide, dissolved oxygen, and ferrous iron. Field parameters were monitored at approximately the same times samples were collected for laboratory analysis. The instruments and techniques used to monitor these parameters are listed in the table below.

PARAMETER	INSTRUMENT OR TECHNIQUE
Color	Manually
Odor	Manually
Oxidation Reduction Potential (ORP)	YSI Model 3560 water quality monitoring system with YSI Model 3540 ORP electrode assembly
Turbidity	Nepholemetric turbidity unit or manually
Hydrogen Sulfide	HACH hydrogen sulfide test kit Model HS-C, catalog No. 25378-00
Dissolved Oxygen	YSI Model 50 in-situ dissolved oxygen meter
Ferrous Iron	HACH TPTZ iron reagent method, Model 1R-21, catalog No. 22993-00

Laboratory Procedures

The groundwater samples were analyzed for the presence of total purgeable petroleum hydrocarbons calculated as gasoline (TPPH-g), benzene, toluene, ethylbenzene, xylenes (BTEX compounds), methyl tert-butyl ether (MtBE), nitrate as nitrate, sulfate, nitrogen as ammonia, and total iron according to the methods listed in the table below.

ANALYSIS	METHOD	TECHNIQUE
TPPH-g, BTEX Compounds, and MtBE	EPA Methods 8015 (modified), 8020, and 5030	Purge-and-trap extraction. Final detection by gas chromatography using flame- and photo-ionization detectors.
Nitrate as Nitrate	EPA Method 300	Ion chromatography
Sulfate	EPA Method 300	Ion chromatography
Nitrogen as Ammonia	EPA Method 350.3	Probe method
Total Iron	EPA Method 6010	Inductively coupled plasma

Certified analytical reports, chain-of-custody documentation, and field data sheets are presented as Attachment C.

ATTACHMENT C

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

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 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

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Kelly Brown

Project: 330-006.21/0608,San Lorenzo

Enclosed are the results from samples received at Sequoia Analytical on August 30, 1996.
The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9608J39 -01	LIQUID, MW-5	08/28/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -01	LIQUID, MW-5	08/28/96	TPHGBW Purgeable TPH/BTEX
9608J39 -02	LIQUID, MW-7	08/29/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -02	LIQUID, MW-7	08/29/96	TPHGBW Purgeable TPH/BTEX
9608J39 -03	LIQUID, MW-8	08/28/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -03	LIQUID, MW-8	08/28/96	TPHGBW Purgeable TPH/BTEX
9608J39 -04	LIQUID, MW-9	08/29/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -04	LIQUID, MW-9	08/29/96	TPHGBW Purgeable TPH/BTEX
9608J39 -05	LIQUID, MW-11	08/28/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -05	LIQUID, MW-11	08/28/96	TPHGBW Purgeable TPH/BTEX
9608J39 -06	LIQUID, MW-13	08/28/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -06	LIQUID, MW-13	08/28/96	TPHGBW Purgeable TPH/BTEX
9608J39 -07	LIQUID, MW-14	08/28/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -07	LIQUID, MW-14	08/28/96	TPHGBW Purgeable TPH/BTEX
9608J39 -08	LIQUID, MW-15	08/28/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -08	LIQUID, MW-15	08/28/96	TPHGBW Purgeable TPH/BTEX
9608J39 -09	LIQUID, MW-16	08/28/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -09	LIQUID, MW-16	08/28/96	TPHGBW Purgeable TPH/BTEX
9608J39 -10	LIQUID, MW-18	08/28/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -10	LIQUID, MW-18	08/28/96	TPHGBW Purgeable TPH/BTEX
9608J39 -11	LIQUID, MW-19	08/28/96	MTBE_W Methyl t-Butyl Ethe

SEQUOIA ANALYTICAL

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9608J39 -11	LIQUID, MW-19	08/28/96	TPHGBW Purgeable TPH/BTEX
9608J39 -12	LIQUID, MW-21	08/28/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -12	LIQUID, MW-21	08/28/96	TPHGBW Purgeable TPH/BTEX
9608J39 -13	LIQUID, MW-22	08/28/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -13	LIQUID, MW-22	08/28/96	TPHGBW Purgeable TPH/BTEX
9608J39 -14	LIQUID, MW-23	08/28/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -14	LIQUID, MW-23	08/28/96	TPHGBW Purgeable TPH/BTEX
9608J39 -15	LIQUID, MW-24	08/28/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -15	LIQUID, MW-24	08/28/96	TPHGBW Purgeable TPH/BTEX
9608J39 -16	LIQUID, MW-25	08/29/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -16	LIQUID, MW-25	08/29/96	TPHGBW Purgeable TPH/BTEX
9608J39 -17	LIQUID, MW-26	08/29/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -17	LIQUID, MW-26	08/29/96	TPHGBW Purgeable TPH/BTEX
9608J39 -18	LIQUID, TB-1	08/29/96	MTBE_W Methyl t-Butyl Ethe
9608J39 -18	LIQUID, TB-1	08/29/96	TPHGBW Purgeable TPH/BTEX
9608J39 -19	LIQUID, 633 H	08/29/96	TPHGBW Purgeable TPH/BTEX
9608J39 -20	LIQUID, 17372 VM	08/29/96	TPHGBW Purgeable TPH/BTEX

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Claudia Hirotsu
Project Manager

Quality Assurance Department

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Kelly Brown

Project: 330006.21/ 0608, San Lorenzo

Enclosed are the results from samples received at Sequoia Analytical on August 30, 1996. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9608J71 -01	LIQUID, 17393 VM	08/29/96	TPHGBW Purgeable TPH/BTEX
9608J71 -02	LIQUID, 17349 VM	08/29/96	TPHGBW Purgeable TPH/BTEX
9608J71 -03	LIQUID, 17302 VM	08/29/96	TPHGBW Purgeable TPH/BTEX
9608J71 -04	LIQUID, 17203 VM	08/29/96	TPHGBW Purgeable TPH/BTEX
9608J71 -05	LIQUID, 17197 VM	08/29/96	TPHGBW Purgeable TPH/BTEX
9608J71 -06	LIQUID, 642 H	08/29/96	TPHGBW Purgeable TPH/BTEX

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Claudia Hirotsu
Project Manager

Quality Assurance Department

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-5	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-01	Reported: 09/16/96

QC Batch Number: GC091196BTEX02A
Instrument ID: GCHP02

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	5.0	210

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 #1210

C. Hirotsu

Claudia Hirotsu
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-5	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-01	Reported: 09/16/96

QC Batch Number: GC091196BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**100**	**250**
Benzene	**1.0**	**210**
Toluene	**1.0**	**8.0**
Ethyl Benzene	1.0	N.D.
Xylenes (Total)	1.0	N.D.
Chromatogram Pattern:		
Weathered Gas		**C6-C12**

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 #1210

Claudia Hirotsu
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/29/96
2025 Gateway Place, Suite 440	Sample Descript: MW-7	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-02	Reported: 09/16/96

QC Batch Number: GC091196BTEX21A
Instrument ID: GCHP21

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	90

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

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-8	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-03	Reported: 09/16/96

QC Batch Number: GC091196BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	680
Benzene	0.50	29
Toluene	0.50	2.1
Ethyl Benzene	0.50	3.0
Xylenes (Total)	0.50	2.4
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	121

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

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 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

Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/29/96
2025 Gateway Place, Suite 440	Sample Descript: MW-9	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-04	Reported: 09/16/96

QC Batch Number: GC091196BTEX21A
Instrument ID: GCHP21

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	96

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

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/29/96
2025 Gateway Place, Suite 440	Sample Descript: MW-9	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-04	Reported: 09/16/96

QC Batch Number: GC091196BTEX21A
Instrument ID: GCHP21

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.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	96

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

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-11	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-05	Reported: 09/16/96

QC Batch Number: GC091196BTEX21A
Instrument ID: GCHP21

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	94

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

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-11	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-05	Reported: 09/16/96

QC Batch Number: GC091196BTEX21A
Instrument ID: GCHP21

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.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	94

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

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-13	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-06	Reported: 09/16/96

QC Batch Number: GC091196BTEX21A
Instrument ID: GCHP21

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	89

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

SEQUOIA ANALYTICAL - ELAP #1210

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

Attention: Kelly Brown

Client Proj. ID: 330-006.21/0608,San Lorenzo
Sample Descript: MW-13
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9608J39-06

Sampled: 08/28/96
Received: 08/30/96

Analyzed: 09/11/96
Reported: 09/16/96

QC Batch Number: GC091196BTEX21A
Instrument ID: GCHP21

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.
Surrogates	**Control Limits %**	**% Recovery**
Trifluorotoluene	70 130	89

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

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-14	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-07	Reported: 09/16/96

QC Batch Number: GC091196BTEX21A
Instrument ID: GCHP21

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.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	85

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

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-15	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-08	Reported: 09/16/96

QC Batch Number: GC091196BTEX21A
Instrument ID: GCHP21

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	94

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

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-15	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-08	Reported: 09/16/96

QC Batch Number: GC091196BTEX21A
Instrument ID: GCHP21

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.
Surrogates	**Control Limits %**	**% Recovery**
Trifluorotoluene	70 130	94

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

SEQUOIA ANALYTICAL - ELAP #1210

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

Attention: Kelly Brown

Client Proj. ID: 330-006.21/0608,San Lorenzo
Sample Descript: MW-16
Matrix: LIQUID
Analysis Method: EPA 8020
Lab Number: 9608J39-09

Sampled: 08/28/96
Received: 08/30/96

Analyzed: 09/11/96
Reported: 09/16/96

QC Batch Number: GC091196BTEX21A
Instrument ID: GCHP21

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.5	89

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	92

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

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-18	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-10	Reported: 09/16/96

QC Batch Number: GC091196BTEX21A
Instrument ID: GCHP21

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.

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-18	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-10	Reported: 09/16/96

QC Batch Number: GC091196BTEX21A
Instrument ID: GCHP21

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.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	91

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

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-19	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-11	Reported: 09/16/96

QC Batch Number: GC091196BTEX02A
Instrument ID: GCHP02

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	100

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

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-19	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-11	Reported: 09/16/96

QC Batch Number: GC091196BTEX02A
Instrument ID: GCHP02

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.

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 #1210

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-21	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-12	Reported: 09/16/96

QC Batch Number: GC091196BTEX02A
Instrument ID: GCHP02

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.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	93

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

SEQUOIA ANALYTICAL - ELAP #1210

C. Hirotsu

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-22	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-13	Reported: 09/16/96

QC Batch Number: GC091196BTEX02A
Instrument ID: GCHP02

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	103

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

SEQUOIA ANALYTICAL - ELAP #1210

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-22	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-13	Reported: 09/16/96

QC Batch Number: GC091196BTEX02A
Instrument ID: GCHP02

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.

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 #1210

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-23	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-14	Reported: 09/16/96

QC Batch Number: GC091196BTEX02A
Instrument ID: GCHP02

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	114

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

SEQUOIA ANALYTICAL - ELAP #1210

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-23	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-14	Reported: 09/16/96

QC Batch Number: GC091196BTEX02A
Instrument ID: GCHP02

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.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	114

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

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-24	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-15	Reported: 09/16/96

QC Batch Number: GC091196BTEX20A
Instrument ID: GCHP20

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	102

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

SEQUOIA ANALYTICAL - ELAP #1210

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/28/96
2025 Gateway Place, Suite 440	Sample Descript: MW-24	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-15	Reported: 09/16/96

QC Batch Number: GC091196BTEX20A
Instrument ID: GCHP20

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.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	102

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

SEQUOIA ANALYTICAL - ELAP #1210

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/29/96
2025 Gateway Place, Suite 440	Sample Descript: MW-25	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-16	Reported: 09/16/96

QC Batch Number: GC091196BTEX20A
Instrument ID: GCHP20

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	**2.5**	**51**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	88

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

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/29/96
2025 Gateway Place, Suite 440	Sample Descript: MW-25	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-16	Reported: 09/16/96

QC Batch Number: GC091196BTEX20A
Instrument ID: GCHP20

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.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	88

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

SEQUOIA ANALYTICAL - ELAP #1210

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/29/96
2025 Gateway Place, Suite 440	Sample Descript: MW-26	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-17	Reported: 09/16/96

QC Batch Number: GC091196BTEX17A
Instrument ID: GCHP17

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	128

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

SEQUOIA ANALYTICAL - ELAP #1210

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/29/96
2025 Gateway Place, Suite 440	Sample Descript: MW-26	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-17	Reported: 09/16/96

QC Batch Number: GC091196BTEX17A
Instrument ID: GCHP17

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.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	128

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

SEQUOIA ANALYTICAL - ELAP #1210

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Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/29/96
2025 Gateway Place, Suite 440	Sample Descript: TB-1	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: EPA 8020	Analyzed: 09/12/96
Attention: Kelly Brown	Lab Number: 9608J39-18	Reported: 09/16/96

QC Batch Number: GC091296BTEX02A
Instrument ID: GCHP02

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	116

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

SEQUOIA ANALYTICAL - ELAP #1210

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/29/96
2025 Gateway Place, Suite 440	Sample Descript: TB-1	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/12/96
Attention: Kelly Brown	Lab Number: 9608J39-18	Reported: 09/16/96

QC Batch Number: GC091296BTEX02A
Instrument ID: GCHP02

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	116

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

SEQUOIA ANALYTICAL - ELAP #1210

C Hirotsu

Claudia Hirotsu
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330-006.21/0608,San Lorenzo	Sampled: 08/29/96
2025 Gateway Place, Suite 440	Sample Descript: 17372 VM	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J39-20	Reported: 09/16/96

QC Batch Number: GC091196BTEX20A
Instrument ID: GCHP20

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	106

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

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 330006.21/ 0608, San Lorenzo	Sampled: 08/29/96
2025 Gateway Place, Suite 440	Sample Descript: 17393 VM	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/10/96
Attention: Kelly Brown	Lab Number: 9608J71-01	Reported: 09/16/96

QC Batch Number: GC091096BTEX18A
Instrument ID: GCHP18

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.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	93

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

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330006.21/ 0608, San Lorenzo	Sampled: 08/29/96
2025 Gateway Place, Suite 440	Sample Descript: 17349 VM	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/96
Attention: Kelly Brown	Lab Number: 9608J71-02	Reported: 09/16/96

QC Batch Number: GC091196BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**410**
Benzene	**0.50**	**7.5**
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	**0.50**	**1.1**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	90

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

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330006.21/ 0608, San Lorenzo	Sampled: 08/29/96
2025 Gateway Place, Suite 440	Sample Descript: 17302 VM	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/10/96
Attention: Kelly Brown	Lab Number: 9608J71-03	Reported: 09/16/96

QC Batch Number: GC091096BTEX18A
Instrument ID: GCHP18

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.

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 #1210

Claudia Hirotsu
Project Manager

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Pacific Environmental Group	Client Proj. ID: 330006.21 / 0608, San Lorenzo	Sampled: 08/29/96
2025 Gateway Place, Suite 440	Sample Descript: 17203 VM	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/10/96
Attention: Kelly Brown	Lab Number: 9608J71-04	Reported: 09/16/96

QC Batch Number: GC091096BTEX18A
Instrument ID: GCHP18

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.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	96

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

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 330006.21/ 0608, San Lorenzo	Sampled: 08/29/96
2025 Gateway Place, Suite 440	Sample Descript: 642 H	Received: 08/30/96
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/10/96
Attention: Kelly Brown	Lab Number: 9608J71-06	Reported: 09/16/96

QC Batch Number: GC091096BTEX18A
Instrument ID: GCHP18

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.

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 #1210

Claudia Hirotsu
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Pacific Environmental Group	Client Project ID:	330-006.2I / 0608, San Lorenzo	
2025 Gateway Place, Suite 440	Matrix:	LIQUID	
San Jose, CA 95110			
Attention: Kelly Brown	Work Order #:	9608J39 02, 04-14	Reported: Sep 16, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC091196BTEX21A	GC091196BTEX21A	GC091196BTEX21A	'GC091196BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	G. Fish	G. Fish	G. Fish	G. Fish
MS/MSD #:	9608J3905	9608J3905	9608J3905	9608J3905
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/11/96	9/11/96	9/11/96	9/11/96
Analyzed Date:	9/11/96	9/11/96	9/11/96	9/11/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	11	10	32
MS % Recovery:	110	110	100	107
Dup. Result:	9.1	10	10	31
MSD % Recov.:	91	100	100	103
RPD:	19	9.5	0.0	3.2
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK091196	BLK091196	BLK091196	BLK091196
Prepared Date:	9/11/96	9/11/96	9/11/96	9/11/96
Analyzed Date:	9/11/96	9/11/96	9/11/96	9/11/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	11	10	10	31
LCS % Recov.:	110	100	100	103
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

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

SEQUOIA ANALYTICAL

Claudia Hirotsu
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	Client Project ID:	330-006.2I / 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	LIQUID
San Jose, CA 95110		
Attention: Kelly Brown	Work Order #:	9608J39 15, 16 Reported: Sep 16, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC091196BTEX20A	GC091196BTEX20A	GC091196BTEX20A	GC091196BTEX20A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	9608J2303	9608J2303	9608J2303	9608J2303
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/11/96	9/11/96	9/11/96	9/11/96
Analyzed Date:	9/11/96	9/11/96	9/11/96	9/11/96
Instrument I.D.#:	GCHP20	GCHP20	GCHP20	GCHP20
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	10	10	31
MS % Recovery:	100	100	100	103
Dup. Result:	9.7	9.3	9.3	29
MSD % Recov.:	97	93	93	97
RPD:	3.0	7.3	7.3	6.7
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK091196	BLK091196	BLK091196	BLK091196
Prepared Date:	9/11/96	9/11/96	9/11/96	9/11/96
Analyzed Date:	9/11/96	9/11/96	9/11/96	9/11/96
Instrument I.D.#:	GCHP20	GCHP20	GCHP20	GCHP20
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	11	9.1	8.6	27
LCS % Recov.:	110	91	86	90
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

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

SEQUOIA ANALYTICAL

Claudia Hirotsu
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	Client Project ID:	330-006.2I / 0608, San Lorenzo	
2025 Gateway Place, Suite 440	Matrix:	LIQUID	
San Jose, CA 95110			
Attention: Kelly Brown	Work Order #:	9608J39 18	Reported: Sep 16, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC091296BTEX02A	GC091296BTEX02A	GC091296BTEX02A	GC091296BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	R. Burton	R. Burton	R. Burton	R. Burton
MS/MSD #:	9609J2301	9609J2301	9609J2301	9609J2301
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/12/96	9/12/96	9/12/96	9/12/96
Analyzed Date:	9/12/96	9/12/96	9/12/96	9/12/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	9.6	9.2	30
MS % Recovery:	110	96	92	100
Dup. Result:	12	10	9.9	33
MSD % Recov.:	120	100	99	110
RPD:	8.7	4.1	7.3	0.5
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK091296	BLK091296	BLK091296	BLK091296
Prepared Date:	9/12/96	9/12/96	9/12/96	9/12/96
Analyzed Date:	9/12/96	9/12/96	9/12/96	9/12/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	13	12	11	37
LCS % Recov.:	130	120	110	123

MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130
Control Limits				

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

SEQUOIA ANALYTICAL

Claudia Hirotsu
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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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Project ID:	330-006.2I / 0608, San Lorenzo	
2025 Gateway Place, Suite 440	Matrix:	LIQUID	
San Jose, CA 95110			
Attention: Kelly Brown	Work Order #:	9608J39 01, 03	Reported: Sep 16, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC091196BTEX02A	GC091196BTEX02A	GC091196BTEX02A	GC091196BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	9609J4102	9609J4102	9609J4102	9609J4102
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/11/96	9/11/96	9/11/96	9/11/96
Analyzed Date:	9/11/96	9/11/96	9/11/96	9/11/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	10	9.7	32
MS % Recovery:	110	100	97	107
Dup. Result:	11	10	9.5	32
MSD % Recov.:	110	100	95	107
RPD:	0.0	0.0	2.1	0.0
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK091196	BLK091196	BLK091196	BLK091196
Prepared Date:	9/11/96	9/11/96	9/11/96	9/11/96
Analyzed Date:	9/11/96	9/11/96	9/11/96	9/11/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	11	9.8	9.8	30
LCS % Recov.:	110	98	98	100
MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130
Control Limits				

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

SEQUOIA ANALYTICAL

Claudia Hirotsu
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.

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Pacific Environmental Group	Client Project ID:	330-006.2I / 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	LIQUID
San Jose, CA 95110		
Attention: Kelly Brown	Work Order #:	9608J39 02, 04-14 Reported: Sep 16, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC091196BTEX21A	GC091196BTEX21A	GC091196BTEX21A	GC091196BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	G. Fish	G. Fish	G. Fish	G. Fish
MS/MSD #:	9608J3905	9608J3905	9608J3905	9608J3905
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/11/96	9/11/96	9/11/96	9/11/96
Analyzed Date:	9/11/96	9/11/96	9/11/96	9/11/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	11	10	32
MS % Recovery:	110	110	100	107
Dup. Result:	9.1	10	10	31
MSD % Recov.:	91	100	100	103
RPD:	19	9.5	0.0	3.2
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK091196	BLK091196	BLK091196	BLK091196
Prepared Date:	9/11/96	9/11/96	9/11/96	9/11/96
Analyzed Date:	9/11/96	9/11/96	9/11/96	9/11/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	11	10	10	31
LCS % Recov.:	110	100	100	103
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

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

SEQUOIA ANALYTICAL

Claudia Hirotsu
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.

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Pacific Environmental Group	Client Project ID:	330-006.2I / 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	LIQUID
San Jose, CA 95110		
Attention: Kelly Brown	Work Order #:	9608J39 15, 16 Reported: Sep 16, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC091196BTEX20A	GC091196BTEX20A	GC091196BTEX20A	GC091196BTEX20A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	9608J2303	9608J2303	9608J2303	9608J2303
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/11/96	9/11/96	9/11/96	9/11/96
Analyzed Date:	9/11/96	9/11/96	9/11/96	9/11/96
Instrument I.D.#:	GCHP20	GCHP20	GCHP20	GCHP20
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	10	10	31
MS % Recovery:	100	100	100	103
Dup. Result:	9.7	9.3	9.3	29
MSD % Recov.:	97	93	93	97
RPD:	3.0	7.3	7.3	6.7
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK091196	BLK091196	BLK091196	BLK091196
Prepared Date:	9/11/96	9/11/96	9/11/96	9/11/96
Analyzed Date:	9/11/96	9/11/96	9/11/96	9/11/96
Instrument I.D.#:	GCHP20	GCHP20	GCHP20	GCHP20
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	11	9.1	8.6	27
LCS % Recov.:	110	91	86	90

MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130
Control Limits				

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

SEQUOIA ANALYTICAL

Claudia Hirotsu
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.

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Pacific Environmental Group	Client Project ID:	330-006.2I / 0608, San Lorenzo	
2025 Gateway Place, Suite 440	Matrix:	LIQUID	
San Jose, CA 95110			
Attention: Kelly Brown	Work Order #:	9608J39 18	Reported: Sep 16, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC091296BTEX02A	GC091296BTEX02A	GC091296BTEX02A	GC091296BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	R. Burton	R. Burton	R. Burton	R. Burton
MS/MSD #:	9609J2301	9609J2301	9609J2301	9609J2301
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/12/96	9/12/96	9/12/96	9/12/96
Analyzed Date:	9/12/96	9/12/96	9/12/96	9/12/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	9.6	9.2	30
MS % Recovery:	110	96	92	100
Dup. Result:	12	10	9.9	33
MSD % Recov.:	120	100	99	110
RPD:	8.7	4.1	7.3	0.5
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK091296	BLK091296	BLK091296	BLK091296
Prepared Date:	9/12/96	9/12/96	9/12/96	9/12/96
Analyzed Date:	9/12/96	9/12/96	9/12/96	9/12/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	13	12	11	37
LCS % Recov.:	130	120	110	123

MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130
Control Limits				

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

SEQUOIA ANALYTICAL

Claudia Hirotsu
Project Manager

Please Note:
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Pacific Environmental Group	Client Project ID:	330-006.2I / 0608, San Lorenzo	
2025 Gateway Place, Suite 440	Matrix:	LIQUID	
San Jose, CA 95110			
Attention: Kelly Brown	Work Order #:	9608J39 17, 19	Reported: Sep 16, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC091196BTEX17A	GC091196BTEX17A	GC091196BTEX17A	GC091196BTEX17A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	R. Burton	R. Burton	R. Burton	R. Burton
MS/MSD #:	9608J2301	9608J2301	9608J2301	9608J2301
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/11/96	9/11/96	9/11/96	9/11/96
Analyzed Date:	9/11/96	9/11/96	9/11/96	9/11/96
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	11	10	31
MS % Recovery:	110	110	100	103
Dup. Result:	10	10	9.6	30
MSD % Recov.:	100	100	96	100
RPD:	9.5	9.5	4.1	3.3
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK091196	BLK091196	BLK091196	BLK091196
Prepared Date:	9/11/96	9/11/96	9/11/96	9/11/96
Analyzed Date:	9/11/96	9/11/96	9/11/96	9/11/96
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	9.7	9.5	28
LCS % Recov.:	100	97	95	93
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

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

SEQUOIA ANALYTICAL

Claudia Hirotsu
Project Manager

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Pacific Environmental Group	Client Project ID:	330-006.2I / 0608, San Lorenzo	
2025 Gateway Place, Suite 440	Matrix:	LIQUID	
San Jose, CA 95110			
Attention: Kelly Brown	Work Order #:	9608J71 03-06	Reported: Sep 16, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC091096BTEX18A	GC091096BTEX18A	GC091096BTEX18A	GC091096BTEX18A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	Porter	Porter	Porter	Porter
MS/MSD #:	9608J7101	9608J7101	9608J7101	9608J7101
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/10/96	9/10/96	9/10/96	9/10/96
Analyzed Date:	9/10/96	9/10/96	9/10/96	9/10/96
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	9.8	9.1	29
MS % Recovery:	110	98	91	97
Dup. Result:	9.8	8.9	8.1	26
MSD % Recov.:	98	89	81	87
RPD:	12	9.6	12	11
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK091096	BLK091096	BLK091096	BLK091096
Prepared Date:	9/10/96	9/10/96	9/10/96	9/10/96
Analyzed Date:	9/10/96	9/10/96	9/10/96	9/10/96
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	11	9.8	9.3	29
LCS % Recov.:	110	98	93	97
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

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

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SEQUOIA ANALYTICAL

Claudia Hirotsu
Project Manager

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Kelly Brown

Client Project ID: 330-006.2I / 0608, San Lorenzo
Matrix: LIQUID
Work Order #: 9608J71 02
Reported: Sep 16, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC091196BTEX07A	GC091196BTEX07A	GC091196BTEX07A	GC091196BTEX07A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	Porter	Porter	Porter	Porter
MS/MSD #:	9608I1004	9608I1004	9608I1004	9608I1004
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/11/96	9/11/96	9/11/96	9/11/96
Analyzed Date:	9/11/96	9/11/96	9/11/96	9/11/96
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	9.5	9.0	27
MS % Recovery:	110	95	90	90
Dup. Result:	9.9	8.5	8.1	24
MSD % Recov.:	99	85	81	80
RPD:	11	11	11	12
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK091196	BLK091196	BLK091196	BLK091196
Prepared Date:	9/11/96	9/11/96	9/11/96	9/11/96
Analyzed Date:	9/11/96	9/11/96	9/11/96	9/11/96
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	11	9.4	9.0	27
LCS % Recov.:	110	94	90	90
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

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

SEQUOIA ANALYTICAL

Claudia Hirotsu
Project Manager

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SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

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

WORKORDER: 9608539 / 571
DATE OF LOG-IN: 9/3/96

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present / (Absent) — Intact / Broken*
2. Custody Seal Nos.: Put in Remarks Section
3. Chain-of-Custody Records: (Present) / Absent*
4. Traffic Reports or Packing List: Present / (Absent)
5. Airbill: Airbill / Sticker — Present / (Absent)
6. Airbill No.:
7. Sample Tags: (Present) / Absent* — Sample Tag Nos.: (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: 8-30-96
12. Temp. Rec. at Lab: 14°C
13. Time Rec. at Lab: 1149

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION(ETC.)
9608571 1	A-C	17393 VM	3 VOA	Liq	8/29	
2	2	17349 VM				on "Big Project" shelf
3	3	17302 VM				
4	4	17203 VM				
5	5	17197 VM				
6	6	642H				
	CM					

8/30

* If Circled, contact Project manager and attach record of resolution

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: Peg
REC. BY (PRINT): IDE

WORKORDER: J6085391571
DATE OF LOG-IN: ~~8~~ 9/3/96

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s) — Present / (Absent) — Intact / Broken*
2. Custody Seal Nos.: Put In Remarks Section
3. Chain-of-Custody Records: (Present) / Absent*
4. Traffic Reports or Packing List: Present / (Absent)
5. Airbill: Airbill / Sticker — Present / (Absent)
6. Airbill No.:
7. Sample Tags: (Present) / Absent* — Sample Tag Nos.: (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: 8-30-96
12. Temp. Rec. at Lab: 14 °C
13. Time Rec. at Lab: 1149

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION(ETC.)
1	A-C	MW-5	3 VOA	W	8/28	
2		7			↓	On "Big Project" shelf
3		8			↓	
4		9			8/29	
5	✓	11	↓		↓	
6	A,B	13	2 VOA			
7	A-C	14	3 VOA			
8		15				
9		16				
10		18				
11	↓	19	↓			
12	A,B	21	2 VOA			
13	↓	22	↓			
14	A-C	23	3 VOA			
15		24			↓	
16		25			8/29	
17	↓	↓ 26	↓		↓	
18	A,B	TB-1	2 VOA		8/28	
19	A-C	6333H	3 VOA		8/29	
20	↓	17372 VM	↓	↓	↓	

* If Circled, contact Project manager and attach record of resolution

ARCO Products Company 330006.21
Division of AtlanticRichfieldCompany

Task Order No. 1934800

Chain of Custody

ARCO Facility no. 0608 | City (Facility) 17601 Hesperian Blvd San Lorenzo | Project manager (Consultant) Kelly Brown | Laboratory name Sequoia

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

Consultant name Pacific Environmental Group | Address (Consultant) 2025 Gateway Place, Suite 440 San Jose CA 95110

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid HCL	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH/Gas/diesel 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 ☐		
MW-5	1	3		X		X	X	8/28/96	14:40		X											
MW-7	2	↓						8/29/96	10:05		↓											
MW-8	3							8/28/96	15:00													
MW-9	4							8/29/96	9:45													
MW-11	5	↓						8/28/96	15:35													
MW-13	6	2						8/28/96	14:20													
MW-14	7	3						8/28/96	13:30													
MW-15	8	↓						8/28/96	13:10													
MW-16	9							8/28/96	14:00													
MW-18	10							8/28/96	12:50													
MW-19	11	↓						8/28/96	12:30													
MW-21	12	2						8/28/96	12:05													
MW-22	13	2						8/28/96	11:45													
MW-23	14	3						8/28/96	11:25													
MW-24	15	↓						8/28/96	16:10													
MW-25	16	↓						8/29/96	9:10		↓											

9608J39

9608J71

Method of shipment

Special detection Limit/reporting

Special QA/QC

Remarks Page 1 of 2

Lab number

Condition of sample:

Temperature received:

Relinquished by	Date	Time	Received by	Date	Time
Relinquished by sampler: Walter [signature]	8/29/96	15:15	D. Alarcón	8/29/96	15:15
Relinquished by: D. Alarcón	8/30/96	09:40	Received by: Scott [signature]	8/30/96	09:40
Relinquished by: Scott [signature]	8/30/96	11:50	Received by laboratory: L. Cardenas	8-30-96	1149

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

ARCO Products Company ◆ 330 006 21 — Chain of Custody

Division of AtlanticRichfieldCompany

Task Order No. 1934800

ARCO Facility no. 0608	City (Facility) 17601 Hesperian Blvd San Lorenzo	Project manager (Consultant) Kelly Brown	Laboratory name Sequoia
ARCO engineer Mike Whelan	Telephone no. (ARCO)	Telephone no. (Consultant)	Fax no. (Consultant)	Contract number
Consultant name Pacific Environmental Group	Address (Consultant) 2025 Gateway Place Suite 440 San Jose CA 95110		Method of shipment

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Water	Other	Preservation: Ice	Acid HCl	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH Gas/Mod. 8015 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 Semi Metals ☐ VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐	
MW-26	17	3		X		X	X	8/29/96	9:30		X										
TB-1	18	2						8/29/96	N/A												
633 H	19	3						8/29/96	10:30												
17372 VM	20								10:40												
17393 VM	21	1							10:50												
17349 VM	22	2							11:00												
17302 VM	23	3							11:10												
17205 VM	24	4							11:20												
17197 VM	25	5							11:30												
642 H	26	6 W							12:10												
	27																				

9608539 / 9608-5-A

Special detection Limit/reporting

Special QA/QC

Remarks
Samples on line 3-10 No MTBE

Page 2 of 2

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:

	Date	Time		Date	Time
Relinquished by sampler: Walter Ken	8/29/96	1515	Received by: D. Alarcon	8/29/96	15:15
Relinquished by: D. Alarcon	8/30/96	09:40	Received by:	8/30/96	09:40
Relinquished by:	8/30/96	1100	Received by laboratory: L Cardenas	8-30-96	1149

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

APC-1292 (2-91)

V

FIELD SERVICES / O & M REQUEST

SITE INFORMATION FORM

Project #:330-006.2I

☐ **1st time visit**

Station #:0608

☐ **1st** ☐ **2nd** ☒ **3rd** ☐ **4th** **Date of Request:3Q**

Site Address:17601 Hesperian Bl
San Lorenzo, California

☐ **Monthly** **Ideal Field Date:**

☐ **Semi-Monthly** **Purge water**_____

County: Alameda ☐ **Weekly** **Budget Hrs.**_____

Project Manager: Kelly Brown ☐ **One time Event** **Actual Hrs.** 12 :

Requestor: Kelly Romero ☐ **Other.**_____ **Mob de Mob** 4

Client: Arco **Client P.O.C.:**Mike Whelan **Total Wells** 25

Total Purge = 179.50 Gal

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

Field Tasks: For General Description

Third Quarter 1996 groundwater sampling event: DTW/DTL on all wells from TOB/TOC
Sample per attached protocol:
WA#1934800

Comments, remarks, from Field Staff (include problems encountered

WELLS WITH ORC'S (MW-5, 10, E-1A) DO NOT PURGE AND SAMPLE. DW

Completed by: C Reis Date: 8/28/29/96

Checked by:_____

WELL SAMPLING REQUEST

SAMPLING PROTOCOL								
Project No.	Station #	Project Name	SEQUENCE	Project Manager	Approval	Date/s	Laboratory:	Client Engineer:
330-006.2I	608	17601 Hesperian San Lorenzo	3Q96	Kelly Brown	6/25/96		Sequoia	Mike Whelan

Well Number	Ideal Sampling Order	Sample I.D.	Sampling Frequency	Analyses	TOB TOC	Well Depth	Casing Diameter	Well goes Dry?	Comments
MW-5	18		QLY	MtBE/GAS/BTEX	TOB/TOC	14	4"	YES	
MW-7	15		QLY	MtBE/GAS/BTEX	TOB/TOC	19	3"	NO	
MW-8	17		QLY	MtBE/GAS/BTEX	TOB/TOC	22	3"	NO	
MW-9	14		QLY	MtBE/GAS/BTEX	TOB/TOC	19	3"	YES	
MW-10	16		QLY	MtBE/GAS/BTEX	TOB/TOC	22	3"	YES	
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-17				DESTROYED		24	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-20				DESTROYED		0	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	
TB-1			QLY	MtBE/GAS/BTEX					

WELL SAMPLING REQUEST

SAMPLING PROTOCOL								
Project No.	Station #	Project Name	SEQUENCE	Project Manager	Approval	Date/s	Laboratory:	Client Engineer:
330-006.2I	608	17601 Hesperian San Lorenzo	3Q96	Kelly Brown			Sequoia	Mike Whelan

Well Number	Ideal Sampling Order	Sample I.D.	Sampling Frequency	Analyses NO MTBE!!	TOB TOC	Well Depth	Casing Diameter	Well goes Dry?	Comments
Mr/Mrs Silva		590 Hacienda	QLY	GAS/BTEX	TOB/TOC				
Mr. Dahmann	Need to enter yard	633 Hacienda	QLY	GAS/BTEX	TOB/TOC				
Mrs Albright		634 Hacienda	QLY	GAS/BTEX	TOB/TOC				Not authorized to enter backyard
Ms. Corregedor		642 Hacienda	QLY	GAS/BTEX	TOB/TOC				Not authorized to enter backyard
Mr/Mrs Roberts	Unable to sam	675 Hacienda	QLY	GAS/BTEX	TOB/TOC				Dedicated pump inoperable
Mr Luehrs	Well Org	17348 Via Encinas	QLY	GAS/BTEX	TOB/TOC				
Mr Scrag		17197 Via Magdalena	QLY	GAS/BTEX	TOB/TOC				
Cavalry Church		17200 Via Magdalena	QLY	GAS/BTEX	TOB/TOC				
Mrs Toles		17203 Via Magdalena	QLY	GAS/BTEX	TOB/TOC				
Mr/Mrs Johanson		172302 Via Magdalena	QLY	GAS/BTEX	TOB/TOC				
Mr. Kast		17349 Via Magdalena	QLY	GAS/BTEX	TOB/TOC				
Mr. Manry		17371 Via Magdalena	QLY	GAS/BTEX	TOB/TOC				
Mr. Pimental		17372 Via Magdalena	QLY	GAS/BTEX	TOB/TOC				Not authorized to enter backyard
Mr. Hull		17393 Via Magdalena	QLY	GAS/BTEX	TOB/TOC				

Summary of Domestic Wells Sampling Contacts
ARCO Service Station #0608
17601 Hesperian, San Lorenzo
CALL AT LEAST ONE WEEK IN ADVANCE OF EVENT EACH QUARTER
Document with copy of this log in project file
DOCUMENT EVENT WITH A SAMPLING FORM FROM ALL HOMES WHETHER SAMPLED OR NOT!!!!!!!!!!!!!!!

Address	Contact Name Phone #	Date Contacted	Pump Assessment	Notes
590 Hacienda	Mr.& Mrs. Silva (510) 276-1534	8/20/96	operational	**Won't be home, don't sample.** Well in back yard
				Won't use well water this year.
633 Hacienda	Mr. Dahmann (510) 276-3860	8/20/96	operational	Well redeveloped with new pump as of 10/7/94
				ok to sample; won't use well water this year
634 Hacienda	Mrs. Albright (510) 278-6094	Don't Call Well Blocked	non-operational	No way to collect a sample
				no answer for 1995 letter
642 Hacienda	Ms. Corregedor (510) 481-1063	8/19/96	operational	Need more information on how to sample well
				ok to sample; won't use well water this year
675 Hacienda	Mr. & Mrs. Roberts (510) 276-7389	8/19/96	non-operational	Cannot sample because of well seal
				ok to sample; won't use well water this year
17348 Via Encinas	Mr. Luehrs (510)278-9059	8/19/96	non-operational	Ok to enter backyard and grab bailer sample if resident not
				ok to sample.
17197 Via Magdalena	Mr. Schrag (510) 278-1904	8/19/96	operational	Grab sample off hose bib on front porch
				ok to sample; won't use well water this year
17200 Via Magdalena	Cavalry Church (510) 278-2555	**WELL DESTROYED**	non-operational	Grab sample from well inside shed in church yard
				no answer for 1995 letter
17203 Via Magdalena	Mrs. Toles (510)276-6797	8/20/96	operational	OK to enter back yard and sample if not home; knock first
				ok to sample; won't use well water this year
17302 Via Magdalena	Mr. & Mrs. Johanson	8/20/96	operational	**Ring doorbell; if no answer, do not sample. Be sure to**
	(510) 278-5987	**SEE**		**sample well on side of house in front of fireplace behind**
		NOTES		**the hydraengea bush.**
17349 Via Magdalena	Mr. Kast (510)278-1263	8/20/96	operational	**OK to enter back yard and sample if not home**; knock first
				no answer for 1995 letter
17371 Via Magdalena	Mr. Manry (510) 317-9724	Don't Call Not autorized	operational	Won't allow access
				no answer for 1995 letter
17372 Via Magdalena	Mr. Pimental (510) 278-6304	8/20/96	operational	Sampled from hose bib in back yard; resident is usually
				ok to sample; will use well water this year
17393 Via Magdalena	Mr. Whaley (510) 278-5576	8/20/96	non-operational	Pump disassembed. Try to bail sample from well in back yard
				ok to sample; won't use well water this year

FIELD REPORT

DEPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 330 0062 1 LOCATION: 17601 Hesperian Blvd, San Lorenzo DATE: 3/28/96

CLIENT/STATION NO.: Arco #0608 FIELD TECHNICIAN: G. Peck DAY OF WEEK: Wed

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

Casing Size	Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	TOC 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
4"	18	MW-5	10:51	V	V		V	V	13.53	12.20 / 12.20	12.58 / 12.58										
3"	15	MW-7	10:38	V	V		V	V	18.25	12.10 / 12.10	12.63 / 12.63										
3"	17	MW-8	10:45	V	V		V	V	20.85	10.47 / 10.47	11.30 / 11.30										
3"	14	MW-9	10:35	V	V		V	V	18.15	10.18 / 10.18	10.78 / 10.78										
3"	16	MW-10	10:42	V	V		V	V	22.32	10.24 / 10.24	10.93 / 10.93										
3"	10	MW-11	10:22	V	V		V	V	18.80	11.10 / 11.10	11.52 / 11.52										
3"	9	MW-13	10:20	V	V		V	V	23.15	13.57 / 13.57	13.89 / 13.89										
3"	8	MW-14	10:16	V	V		V	V	23.0	9.60 / 9.60	9.83 / 9.83										
3"	7	MW-15	10:14	V	V		V	V	23.15	10.84 / 10.84	11.30 / 11.30										

Comments: _____

FIELD REPORT

DEPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 330 006 21 LOCATION: 17001 Hesperian Blvd, San Lorenzo DATE: 1/23/96

CLIENT/STATION NO.: Arco #0608 FIELD TECHNICIAN: W. Peck DAY OF WEEK: Wed

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

Casing Size	Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	TOC 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
4"	6	MW-16	10:12	Y	Y		Y	Y	23.0	11.40 / 11.40	11.84 / 11.84										
		MW-17																			
4"	5	MW-18	10:11	Y	Y		Y	Y	21.40	10.50 / 10.50	10.82 / 10.82										
4"	4	MW-19	10:09	Y	Y		Y	Y	21.45	10.16 / 10.16	10.33 / 10.33										
		MW-20																			
4"	3	MW-21	10:07	Y	Y		Y	Y	21.40	10.25 / 10.25	10.75 / 10.75										
2"	2	MW-22	10:05	Y	Y		Y	Y	21.44	11.0 / 11.0	11.28 / 11.28										
4"	1	MW-23	10:02	Y	Y		Y	Y	21.65	12.0 / 12.0	12.31 / 12.31										
2"	11	MW-24	10:26	Y	Y		Y	Y	20.60	13.0 / 13.0	13.28 / 13.28										

Comments:

FIELD REPORT

DEPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 330 006 21 LOCATION: 1701 Hesperian Blvd / San Lorenzo DATE: [illegible]

CLIENT/STATION NO.: Arco #0608 FIELD TECHNICIAN: W. Peck DAY OF WEEK: Wed

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

Casing Size	Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	TOC 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
2"	12.	MW-25	10:30	Y	Y		Y	0	20.85	11.75 / 11.75	12.32 / 12.30										
2"	13	MW-26	10:33	Y	Y		Y	Y	19.45	12.10 / 12.10	12.55 / 12.55										
8"	19	E1A	10:15	Y	Y		Y	Y	24.30	10.10 / 10.10	11.70 / 11.70										
2"/2"		SP-1 V-4	12:45	Y	Y		Y	Y	12.45 / 10.27	11.65 / 11.60	12.20 / 12.27										
2"/2"		SP-2 V-5	13:00	Y	Y		Y	Y	18.85 / 10.07	10.62 / 8.20	10.79 / 8.42										

Comments:

FIELD DATA SHEET

ATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 006.21 LOCATION: 17601 Hesperian Blvd San Lorenzo WELL ID #: 590 H

CLIENT/STATION No.: Arco # 0608 FIELD TECHNICIAN: [illegible]

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 ______ = ______ x Number of Casings 3 ______ = Calculated Purge ______

DATE PURGED: ______ START: ______ END (2400 hr): ______ PURGED BY: ______

DATE SAMPLED: ______ START: ______ END (2400 hr): ______ SAMPLED BY: ______

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
			NO SAMPLE	TAKEN			

Pumped dry Yes / No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ______ TOB/TOC ______

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

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

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
590H							

REMARKS: No one home unable to enter back yard

[illegible signature]

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006.21 LOCATION: 17601 Hesperian Blvd/San Lorenzo WELL ID #: 633 H

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: WRech

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: 8/29/96 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 _____ = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: 8/29/96 START: / END (2400 hr): _____ PURGED BY: C. J. Rocha

DATE SAMPLED: 8/29/96 START: 10:20 END (2400 hr): 10130 SAMPLED BY: C. J. Rocha

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
10:25	0	7.23	1140	65.8	Clear	Trace	None
			Grab Sample				

Pumped dry Yes / No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

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

SAMPLING EQUIPMENT/I.D. #
- ☒ ~~Bailer~~: _____
- ☐ Dedicated: _____
- ☒ Other: Sample taken from spigot

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
633 H	8/29/96	1030	3	40ml	VOA	HCL	Gas BTEX

REMARKS: Grab Sample

Water Rock

FIELD DATA SHEET

/ATER SAMPLE FIELD DATA SHEET

PROJECT No. : 330 006.21 LOCATION: 7601 Hesperian Blvd San Lorenzo WELL ID #: 634 H

CLIENT/STATION No.: Arco # 0608 FIELD TECHNICIAN: W Pull

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 ____ = ____ x Number of Casings 3 = Calculated Purge ____

DATE PURGED: ____ START: ____ END (2400 hr): ____ PURGED BY: ____

DATE SAMPLED: ____ START: ____ END (2400 hr): ____ SAMPLED BY: ____

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
		NO SAMPLE TAKEN					
					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: ____
☐ Dedicated: ____
☐ Other: ____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
634-H							

REMARKS: No way to collect Sample

W Pull

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006.21 LOCATION: 17601 Hesperian Blvd/San Lorenzo WELL ID #: 642 H

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: W Peck

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: 8/28/96 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 _____ = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: 8/29/96 START: _____ END (2400 hr): _____ PURGED BY: W Peck

DATE SAMPLED: 8/29/96 START: 1200 END (2400 hr): 1210 SAMPLED BY: W Peck

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
1205	6	7.92	1110	71.3	Clear	Trace	None
		Grab Sample					

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: _____
- ☐ Dedicated: _____
- ☒ Other: Taken from sprinkler

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
642H	8/29/96	1210	3	40ml	VOA	HCL	Gas BTEX

REMARKS: Grab Sample To sample well you must prime well with city water

W Peck

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 006.21 LOCATION: 7601 Hesperian Blvd San Lorenzo WELL ID #: 675 H

CLIENT/STATION No.: Arco # 0608 FIELD TECHNICIAN: W 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 _____ = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: _____ START: _____ END (2400 hr): _____ PURGED BY: _____

DATE SAMPLED: _____ START: _____ END (2400 hr): _____ SAMPLED BY: _____

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
			NO SAMPLE TAKEN				

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: _____
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
675 H							

REMARKS: Cannot sample cause of well seal

W Ruiz

FIELD DATA SHEET

/ATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 006.21 LOCATION: 17601 Hesperian Blvd San Lorenzo WELL ID #: 17348 VE

CLIENT/STATION No.: Arco # 0608 FIELD TECHNICIAN: W Phil

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 ______ = ______ x Number of Casings 3 = Calculated Purge ______

DATE PURGED: ______ START: ______ END (2400 hr): ______ PURGED BY: ______

DATE SAMPLED: ______ START: ______ END (2400 hr): ______ SAMPLED BY: ______

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
		NO	SAMPLE	TAKEN			
					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: ______
☐ Dedicated: ______
☐ Other: ______

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
17348 VE							

REMARKS: Well dry

[illegible signature]

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006.21 LOCATION: 1601 Expressway Blvd/San Lorenzo WELL ID #: 17197 VM

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: CWRech

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: 5/29/96 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 _____ = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: 5/29/96 START: _____ END (2400 hr): _____ PURGED BY: CWRech

DATE SAMPLED: 5/29/96 START: 1120 END (2400 hr): 1130 SAMPLED BY: CWRech

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
1125	6	7.68	1010	70.9	Clear	Trace	None
	7	Grab Sample					

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:~~ _____
- ☐ Dedicated: _____
- ☒ Other: Taken from Spigot

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
17197 VM	5/29/96	1130	3	40ml	VOA	HCl	Gas Bloc

REMARKS: Grab Sample

1. [illegible]

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006 21 LOCATION: 17601 Hesperian Blvd / San Lorenzo WELL ID #: 17200 VM

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: W Peck

WELL INFORMATION

Depth to Liquid: ______ TOB ______ TOC
Depth to water: ______ TOB ______ TOC
Total depth: ______ TOB ______ TOC
Date: 8/29/96 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 ______ = ______ x Number of Casings 3 = Calculated Purge ______

DATE PURGED: 8/29/96 START: ______ END (2400 hr): ______ PURGED BY: W Peck

DATE SAMPLED: 8/29/96 START: ______ END (2400 hr): ______ SAMPLED BY: W Peck

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
11:35							
		Grab Sample					

Pumped dry Yes / No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ______ TOB/TOC ______

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

SAMPLING EQUIPMENT/I.D. #
☒ Bailer: G4
☐ Dedicated: ______
☐ Other: ______

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
17200VM	8/29/96		3	40ml	VOA	HCL	Gas Btex

REMARKS: Grab Sample

WELL DESTROYED

Walter Peck

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330606 21 LOCATION: 1960 Hegenberger Rd/San Leandro WELL ID #: 17203 VM

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: W Peck

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: 8/29/96 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 _____ = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: 8/29/96 START: ~~1150~~ END (2400 hr): ~~1200~~ PURGED BY: W Peck

DATE SAMPLED: 8/29/96 START: 1110 END (2400 hr): 1120 SAMPLED BY: W Peck

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
1115	4	7.41	1110	69.7	Clear	Trace	None
		Grab Sample					

Pumped dry Yes / No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

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

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: Disposable
- ☐ Dedicated: _____
- ☒ Other: ~~Teflon Sa~~

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
17203VM	8/29/96	1120	3	40ml	VOA	HCl	Gas BTEX

REMARKS: Grab Sample

Water Flow

PAGE1

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006 21 LOCATION: 7601 Hesperian Blvd/San Lorenzo WELL ID #: 17302 VM

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: CWReich

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: 5/29/96 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 _____ = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: 5/29/96 START: [illegible] END (2400 hr): _____ PURGED BY: CWReich

DATE SAMPLED: 5/29/96 START: 1100 END (2400 hr): 1110 SAMPLED BY: CWReich

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
1105	0	7.22	1190	75.3	Clear	Trace	None
			Grab Sample				

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: _____
- ☐ Dedicated: _____
- ☒ Other: Taken From Spigot

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
17302VM	5/29/96	1110	3	40ml	VOA	HCL	Gas BTEX

REMARKS: Grab Sample

Water Lab.

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006.21 LOCATION: 17601 Hesperian Blvd, San Lorenzo WELL ID #: 17349 VM

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: W Peck

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: 8/29/96 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 _____ = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: 8/29/96 START: _____ END (2400 hr): _____ PURGED BY: W Peck

DATE SAMPLED: 8/29/96 START: 1050 END (2400 hr): 1100 SAMPLED BY: W Peck

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
1055	0	7.31	1190	76.1	Clear	Trace	None
			Grab Sample				

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: _____
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
17349VM	8/29/96	1100	3	40ml	VOA	HCL	GAS BTEX

REMARKS: Grab Sample

Walter Jones

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 006.21 LOCATION: 17601 Hesperian Blvd San Lorenzo WELL ID #: 17371 V/M

CLIENT/STATION No.: Arco # 0608 FIELD TECHNICIAN: W Hill

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 ______ = ______ x Number of Casings 3 = Calculated Purge ______

DATE PURGED: ______ START: ______ END (2400 hr): ______ PURGED BY: ______

DATE SAMPLED: ______ START: ______ END (2400 hr): ______ SAMPLED BY: ______

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
			NO SAMPLE TAKEN				
					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: ______
- ☐ Dedicated: ______
- ☐ Other: ______

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER

REMARKS: No Sample Taken owner won't allow access

Watt Hill

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006 21 LOCATION: 1601 Hesperian Blvd/San Lorenzo WELL ID #: 17372 VM

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: WRech

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: 8/29/96 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 _____ = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: 8/29/96 START: 10:30 END (2400 hr): 10:40 PURGED BY: CJ Rech

DATE SAMPLED: 8/29/96 START: _____ END (2400 hr): _____ SAMPLED BY: CJ Rech

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
1035	0	7.44	1270	73.1	Clear	Trace	None

Pumped dry Yes / No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

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

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

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
17372 VM	8/29/96	1040	3	40ml	VOA	HCL	Gas BTEX

REMARKS: Grab Sample

Water Flow

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006 21 LOCATION: 17601 Hesperian Blvd, San Lorenzo WELL ID #: 17393 V/M

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: W Peck

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: 8/29/96 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 _____ = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: 8/29/96 START: (1095) END (2400 hr): _____ PURGED BY: W Peck

DATE SAMPLED: 8/29/96 START: 1040 END (2400 hr): 1050 SAMPLED BY: W Peck

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
1045	0	7.38	1210	77.1	Clear	Trace	None
		Grab Sample					

Pumped dry Yes / No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

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

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: 29.1
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
17393 V/M	8/29/96	1050	3	40ml	VOA	HCL	Gas BTEX

REMARKS: Grab Sample

W Peck

PACIFI

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006 21 LOCATION: 7601 Kaiser Blvd/San Lorenzo WELL ID #: SP-1/V4

CLIENT/STATION No.: Arco #0508 FIELD TECHNICIAN: Wheeler

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: 8/29/96 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 12.75 / 20.27 - DTW 11.65 / 11.50 = .87 / .67 x Gal/Linear Foot .17 = .13 / .47 x Number of Casings 3 = Calculated Purge .40 / 4.02

DATE PURGED: 8/29/96 START: 12:50 END (2400 hr): _____ PURGED BY: C.J.B.

DATE SAMPLED: 8/29/96 START: _____ END (2400 hr): _____ SAMPLED BY: C.J.B.

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
12:55	2.5 / 1.50	7.58 / 7.54	1330 / 1130	73.2 / 69.9	Brown / Cloudy	Heavy / Light	None / None
13:00	/ 3.0	/ 7.40	/ 1130	/ 68.3	/ Cloudy	/ Light	/ None
13:03	/ 4.50	/ 7.37	/ 1120	/ 69.1	/ Cloudy	/ Light	/ None

Pumped dry (Yes) / (No)

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

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

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

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
SP-1/V-4	8/29/96	1301	3	40ml	VOA	HCl	GAS/BTEX/MTBE

REMARKS: Shallow casing dry at one casing vol.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 006 21 LOCATION: 2601 Hesperian Blvd/San Lorenzo WELL ID #: SP/4/V-3

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: W Reck

WELL INFORMATION

Depth to Liquid: ______ TOB ______ TOC
Depth to water: ______ TOB ______ TOC
Total depth: ______ TOB ______ TOC
Date: 8/8/96 Time (2400): ______

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

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

SAMPLE TYPE
☒ Groundwater
☐ Duplicate
☐ Extraction well
☐ Trip blank
☐ Field blank
☐ Equipment blank
☐ Other: ______

TD 18.85/10.07 - DTW 10.62/8.20 = 8.23/1.87 x Gal/Linear Foot .17 = 1.39/.31 x Number of Casings 3 = Calculated Purge ______

DATE PURGED: 8/ /96 START: ______ END (2400 hr): ______ PURGED BY: W Reck

DATE SAMPLED: 8/ /96 START: ______ END (2400 hr): ______ SAMPLED BY: W Reck

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
	1.50/.50	7.56/7.57	1960/1230	75.0/70.9	Brown/Brown	Heavy/Mod	None/None
	3.0/	7.63	1170/	70.8	Cloudy/	light/	None/
	4.50	7.55	1150/	71.5/	Cloudy/	light/	None/

Pumped dry (Yes) (No)

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ______ TOB/TOC ______ ______ ______ ______ ______ ______

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

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

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
	8/ /96		3	40ml	VOA	HCL	Gas Btex

REMARKS: Shallow well dry at .50 Gal

PACER

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 CC6 21 LOCATION: 17601 Hesperian Blvd/San Lorenzo WELL ID #: MW-5

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: W Peck

WELL INFORMATION

Depth to Liquid: — TOB — TOC
Depth to water: 12.58 TOB 12.20 TOC
Total depth: — TOB 13.53 TOC
Date: 8/28/96 Time (2400): 10:51

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 13.53 - DTW 12.20 = 1.33 x Gal/Linear Foot .66 = .87 x Number of Casings 3 = Calculated Purge 2.63

DATE PURGED: 8/28/96 START: 14:25 END (2400 hr): 14:27 PURGED BY: C. J. Peck

DATE SAMPLED: 8/28/96 START: 14:35 END (2400 hr): 14:40 SAMPLED BY: C. J. Peck

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
14:27	1.0	6.93	1100	72.9	Cloudy	Light	None
			DRY AT 1.0 Gal				

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						
13.10	TOC	7.45	1120	73.7	Cloudy	Light	None

PURGING EQUIPMENT/I.D. #
- ☒ Bailer: G-10
- ☒ ~~Centrifugal Pump:~~
- ☐ Other:
- ☐ Airlift Pump:
- ☐ Dedicated:

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: G-10
- ☐ Dedicated:
- ☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-5	8/28/96	14:40	3	40ml	VOA	HCL	Gas/Benz/MTBE

REMARKS: DRY AT 1.0 Gal

Water Level

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006.21 LOCATION: 1760 Hegenberger Rd/San Leandro WELL ID #: MW-7

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: W Peck

WELL INFORMATION

Depth to Liquid:	— TOB	TOC
Depth to water:	10.78 TOB 10.18	TOC
Total depth:	— TOB 18.15	TOC
Date: 8/28/96	Time (2400): 10:35	

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

CASING DIAMETER / GAL/LINEAR FT.

☐	2	0.17
☒	3	0.38
☐	4	0.66
☐	4.5	0.83
☐	5	1.02
☐	6	1.5
☐	8	2.6

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

TD 18.15 - DTW 10-18 = 7.97 x Gal/Linear Foot .38 = 3.02 x Number of Casings 3 = Calculated Purge 9.08

DATE PURGED: 8/29/96 START: 9:50 END (2400 hr): 9:58 PURGED BY: W Peck

DATE SAMPLED: 8/29/96 START: 9:58 END (2400 hr): 10:05 SAMPLED BY: W Peck

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
9:53	3.25	7.07	1180	70.6	Brown	Mod	None
9:55	6.50	7.08	1150	69.3	Brown	Mod	None
9:58	9.75	7.16	1170	67.5	Cloudy	Light	None

Pumped dry Yes / (No)

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: TOB/TOC

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

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: G-9
- ☐ Dedicated:
- ☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-7	8/29/96	10:05	3	40ml	VOA	HCL	G/B&E/MTBE

REMARKS:

Walter Peck

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006 21 LOCATION: 17601 Hesperian Blvd/San Lorenzo WELL ID #: MW-8

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: WFech

WELL INFORMATION

Depth to Liquid: — TOB — TOC
Depth to water: 11:30 TOB 10.47 TOC
Total depth: — TOB 20.85 TOC
Date: 8/28/96 Time (2400): 10:45

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 20.85 - DTW 10.47 = 10.38 x Gal/Linear Foot .38 = 3.94 x Number of Casings 3 = Calculated Purge 11.83

DATE PURGED: 8/28/96 START: 14:45 END (2400 hr): 14:54 PURGED BY: WFech
DATE SAMPLED: 8/28/96 START: 14:54 END (2400 hr): 15:00 SAMPLED BY: WFech

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 2 5°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
14:48	4.0	6.94	1050	71.7	Brown	Mod	None
14:51	8.0	6.93	1020	73.2	Brown	Mod	None
14:54	12.0	6.93	1000	73.0	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: G-7
☐ Dedicated:
☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-8	8-28-96	1500	3	40ml	VOA	HCL	Gas/Btex/MTBE
↓	↓	↓	3	40ml	VOA	NP	CH4 Methane
↓	↓	↓	1	1-L	Plastic	NP	CO2

REMARKS:

Walter Fech

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006.21 LOCATION: 7601 Edgemont Blvd/San Leandro WELL ID #: MW-9

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: CJ Reich

WELL INFORMATION

Depth to Liquid: ——— TOB ——— TOC
Depth to water: 10.78 TOB 10.18 TOC
Total depth: ——— TOB 18.15 TOC
Date: 8/29/96 Time (2400): 1035

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

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

SAMPLE TYPE
- ☒ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other:

TD 18.15 - DTW 10.18 = 7.97 x Gal/Linear Foot .38 = 3.02 x Number of Casings 3 = Calculated Purge 9.08

DATE PURGED: 8/29/96 START: 9:35 END (2400 hr): 9:43 PURGED BY: CJ Reich

DATE SAMPLED: 8/29/96 START: 9:43 END (2400 hr): 9:45 SAMPLED BY: CJ Reich

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
9:38	3.25	7.08	7130	65.2	Brown	mod	None
9:40	6.50	7.11	1000	66.8	Brown	Mod	None
9:43	9.75	7.09	1100	64.8	Brown	mod	None

Pumped dry Yes / (No)

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ——— TOB/TOC ———

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

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

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-9	8/29/96	9:45	3	40ml	VOA	HCL	Gas/Benz/MTBE

REMARKS:

Water Flow

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 006.21 LOCATION: 7601 Hesperian Blvd San Lorenzo WELL ID #: MW10

CLIENT/STATION No.: Arco # 0608 FIELD TECHNICIAN: CW Reed

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 _____ = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: _____ START: _____ END (2400 hr): _____ PURGED BY: _____

DATE SAMPLED: _____ START: _____ END (2400 hr): _____ SAMPLED BY: _____

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
			NO SAMPLE TAKEN				

Pumped dry Yes / No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC

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

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

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW10							

REMARKS: No Sample Taken by request of project manager

Christopher

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006.21 LOCATION: 1060 Hegenberger Rd/San Leandro WELL ID #: MW-11

CLIENT/STATION No.: ARCO #0608 FIELD TECHNICIAN: CWRock

WELL INFORMATION

Depth to Liquid: _____ TOB — TOC
Depth to water: 7.52 TOB 11.10 TOC
Total depth: — TOB ~~18.80~~ 18.80 TOC
Date: 8/28/96 Time (2400): 15:22

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

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

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

TD 18.80 - DTW 11.10 = 7.70 x Gal/Linear Foot .38 = 2.92 x Number of Casings 3 = Calculated Purge 8.77

DATE PURGED: 8/28/96 START: 15:20 END (2400 hr): 15:29 PURGED BY: CWRock

DATE SAMPLED: 8/28/96 START: 15:29 END (2400 hr): 15:35 SAMPLED BY: CWRock

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
15:23	3.0	6.90	1120	74.3	Brown	Mod	None
15:26	6.0	7.01	1110	72.0	Brown	Mod	None
15:29	9.0	7.05	1090	71.2	Brown	Mod	None

Pumped dry Yes (No)

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC

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

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: G10
- ☐ Dedicated:
- ☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-11	8/28/96	15:35	3	40ml	VOA	HCL	GAS/BTEX MTBE

REMARKS:

Water Level

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006.21 LOCATION: 1760 Hesperian Blvd/San Lorenzo WELL ID #: MW-13

CLIENT/STATION No.: Arco #0508 FIELD TECHNICIAN: WTech

WELL INFORMATION

Depth to Liquid: — TOB — TOC
Depth to water: 13.89 TOB 13.57 TOC
Total depth: — TOB 23.15 TOC
Date: 8/8/96 Time (2400): 10:20

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 23.15 - DTW 13.57 = 9.58 x Gal/Linear Foot .38 = 3.64 x Number of Casings 3 = Calculated Purge 10.92

DATE PURGED: 8/8/96 START: 14:06 END (2400 hr): 14:14 PURGED BY: CWRob

DATE SAMPLED: 8/8/96 START: 14:14 END (2400 hr): 14:20 SAMPLED BY: CWRob

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
14:09	3.75	6.96	1110	74.2	Brown	Mod	None
14:11	7.50	6.98	1090	71.6	Brown	Mod	None
14:14	11.25	7.00	1080	71.7	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: G-13
- ☐ Dedicated:
- ☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW13	8/8/96	1420	3	40ml	VOA	HCL	G-B/BTEX MTBE

REMARKS:

Water Level

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006.21 LOCATION: 1960 Hyperion Blvd/San Lorenzo WELL ID #: MW-14

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: WReich

WELL INFORMATION

Depth to Liquid: ____ TOB ____ TOC
Depth to water: 11.30 TOB 10.84 TOC
Total depth: ____ TOB 23.15 TOC
Date: 8/28/96 Time (2400): 10:14

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 23.15 - DTW 10.84 = 12.31 x Gal/Linear Foot .38 = 4.67 x Number of Casings 3 = Calculated Purge 14.03

DATE PURGED: 8/28/96 START: 13:15 END (2400 hr): 13:24 PURGED BY: WReich

DATE SAMPLED: 8/28/96 START: 13:24 END (2400 hr): 13:30 SAMPLED BY: WReich

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
13:18	4.75	6.90	1120	71.8	Brown	Mod	None
13:21	9.50	6.96	1120	70.8	Brown	Mod	None
13:24	14.25	7.02	1130	69.4	Cloudy	Light	None

Pumped dry Yes / No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ____ TOB/TOC ____

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

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: 18-1
- ☐ Dedicated:
- ☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-14	8/28/96	13:30	3	40ml	VOA	HCL	GAS/BTEX/MTBE

REMARKS:

Walter Reich

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330606.21 LOCATION: 1760 Hotel Circle N Blvd/San Diego WELL ID #: MW-16

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: CWRock

WELL INFORMATION

Depth to Liquid:	— TOB	—	TOC
Depth to water:	11.84 TOB	11.40	TOC
Total depth:	— TOB	23.0	TOC
Date:	8/28/96 Time (2400):	10:12	

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 23.0 - DTW 11.40 = 11.6 x Gal/Linear Foot .38 = 4.40 x Number of Casings 3 = Calculated Purge 13.22

DATE PURGED: 8/28/96 START: 12:55 END (2400 hr): 13:04 PURGED BY: CWRock

DATE SAMPLED: 8/28/96 START: 13:04 END (2400 hr): 13:10 SAMPLED BY: CWRock

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
12:58	4.50	7.01	1040	70.6	Brown	Mod	None
13:01	9.0	6.99	1030	69.7	Brown	Mod	None
13:04	13.50	7.04	990	69.1	Cloudy	Light	None

Pumped dry Yes (No)

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ____ TOB/TOC ____

PURGING EQUIPMENT/I.D.
- ☐ Bailer:
- ☒ 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
MW-16	8/28/96	13:10	3	40ml	VOA	HCL	GAS/BTEX/MTBE

REMARKS:

Water Flow

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006.21 LOCATION: 1760 Hyperion Blvd/San Lorenzo WELL ID #: MW-16

CLIENT/STATION No.: Arco #0508 FIELD TECHNICIAN: WTech

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: 11.84 TOB 11.90 TOC
Total depth: _____ TOB 23.0 TOC
Date: 8/28/96 Time (2400): 1017

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 23.0 - DTW 11.40 = 11.6 x Gal/Linear Foot .38 = 4.40 x Number of Casings 3 = Calculated Purge 13.2

DATE PURGED: 8/28/96 START: 13:43 END (2400 hr): 13:55 PURGED BY: CW Rich

DATE SAMPLED: 8/28/96 START: 13:55 END (2400 hr): 14:00 SAMPLED BY: CW Rich

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
13:47	4.5	7.04	1100	73.1	Brown	Mod	None
13:51	9.0	7.07	1050	72.0	Brown	Mod	None
13:55	13.5	7.03	1050	70.1	Brown	Mod	None

Pumped dry Yes / No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

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

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: 23.0
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-16	8/28/96	1400	3	40ml	VOA	HCL	Gas/BTEX/MTBE

REMARKS: _____

Walter T. Rich

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 CC6 21 LOCATION: 17601 Hesperian Blvd/San Lorenzo WELL ID #: MW-18

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: CWeeks

WELL INFORMATION

Depth to Liquid: — TOB _____ TOC
Depth to water: 10.52 TOB 10.50 TOC
Total depth: _____ TOB 21.40 TOC
Date: 8/28/96 Time (2400): 10 11

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 21.40 - DTW 10.50 = 10.90 x Gal/Linear Foot .38 = 4.14 x Number of Casings 3 = Calculated Purge 12.42

DATE PURGED: 8/28/96 START: 12:35 END (2400 hr): 12:47 PURGED BY: CWeeks

DATE SAMPLED: 8/28/96 START: 12:44 END (2400 hr): 12:50 SAMPLED BY: CWeeks

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
12:38	4.25	7.00	1110	69.5	Brown	Mod	None
12:41	8.50	7.01	1130	68.7	Brown	Mod	None
12:44	12.75	7.01	1110	68.5	Brown	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: G6
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-18	8/28/96	12:50	3	40ml	VOA	HCl	Gas/Benz/MTBE

REMARKS: _____

CWeeks

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006.21 LOCATION: 1601 Hegenberger Blvd/San Leandro WELL ID #: MW-19

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: W Beck

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: 10.32 TOB 10:16 TOC
Total depth: _____ TOB 21.45 TOC
Date: 8/28/96 Time (2400): 1209

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 21.45 - DTW 10.16 = 11.29 x Gal/Linear Foot .38 = 4.29 x Number of Casings 3 = Calculated Purge 12.87

DATE PURGED: 8/28/96 START: 12:15 END (2400 hr): 12:24 PURGED BY: W Beck

DATE SAMPLED: 8/28/96 START: 12:24 END (2400 hr): 12:30 SAMPLED BY: W Beck

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
12:18	4.50	7.04	1100	68.2	Brown	Mod	None
12:21	9.0	7.17	1100	68.9	Brown	Mod	None
12:24	13.50	7.11	1110	67.9	Cloudy	Light	None

Pumped dry Yes / No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

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

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: 23-9
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-19	8/28/96	12:30	3	40ml	VOA	HCL	Gas/BTEX/MTBE

REMARKS: Car parked on well at 12:12 8/28/96

W Beck

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006.21 LOCATION: 1760 Hyperion Blvd/San Lorenzo WELL ID #: MW-21

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: W. Beck

WELL INFORMATION

Depth to Liquid: — TOB — TOC
Depth to water: 12.75 TOB 10.25 TOC
Total depth: — TOB 21.90 TOC
Date: 8/28/96 Time (2400): 1007

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 21.90 - DTW 10.25 = 11.15 x Gal/Linear Foot 38 = 4.23 x Number of Casings 3 = Calculated Purge 12.7

DATE PURGED: 8/28/96 START: 11:50 END (2400 hr): 12:02 PURGED BY: W. Beck

DATE SAMPLED: 8/28/96 START: 12:02 END (2400 hr): 12:05 SAMPLED BY: W. Beck

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (° F)	COLOR	TURBIDITY	ODOR
11:55	4.25	6.91	1050	68.7	Brown	Mod	None
11:58	8.50	6.95	1080	68.2	Brown	Mod	None
12:02	12.75	6.97	1080	68.1	Brown	Mod	None

Pumped dry Yes / (No)

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ____ TOB/TOC

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

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: Gil
- ☐ Dedicated:
- ☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-21	8/28/96	12:05	3	40ml	VOA	HCL	Gas/BTEX/MTBE

REMARKS:

Walter J. Kerr

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006.21 LOCATION: 7601 Edgewater Blvd/San Lorenzo WELL ID #: MW-22

CLIENT/STATION No.: Arco #0608 FIELD TECHNICIAN: WFeeh

WELL INFORMATION

Depth to Liquid: — TOB — TOC
Depth to water: 11.28 TOB 11.5 TOC
Total depth: — TOB 21.44 TOC
Date: 5/8/96 Time (2400): 10:05

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 21.44 - DTW 11.0 = 10.44 x Gal/Linear Foot .38 = 3.96 x Number of Casings 3 = Calculated Purge 11.90

DATE PURGED: 5/8/96 START: 11:35 END (2400 hr): 11:42 PURGED BY: CWFeeh

DATE SAMPLED: 5/8/96 START: 11:42 END (2400 hr): 11:45 SAMPLED BY: CWFeeh

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 2 5°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
11:38	4.0	6.85	1180	67.8	Brown	Mod	None
11:40	8.0	6.88	1180	67.0	Cloudy	Light	None
11:42	12.0	6.88	1170	67.5	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: 29-1
- ☐ Dedicated:
- ☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW 22	5/8/96	11:45	3	40ml	VOA	HCL	GAS/BTEX/MTBE

REMARKS:

Water Flow

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006 21 LOCATION: 17601 Hesperian Blvd/San Lorenzo WELL ID #: MW-23

CLIENT/STATION No.: Arco #0605 FIELD TECHNICIAN: CWRock

WELL INFORMATION

Depth to Liquid: ——— TOB ——— TOC
Depth to water: 12.31 TOB 16.0 TOC
Total depth: ——— TOB 21.65 TOC
Date: 8/28/96 Time (2400): 10102

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 21.65 - DTW 12.0 = 9.65 x Gal/Linear Foot .38 = 3.66 x Number of Casings 3 = Calculated Purge 11.00

DATE PURGED: 8/28/96 START: 1108 END (2400 hr): 1118 PURGED BY: CWRock

DATE SAMPLED: 8/28/96 START: 1128 END (2400 hr): 1135 SAMPLED BY: CWRock

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
1111	3.75	7.63	1160	67.7	Brown	Mod	None
1115	7.50	7.07	1150	66.1	Brown	Mod	None
1118	11.25	6.76	1120	66.9	Brown	Mod	None

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

Pumped dry Yes / (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ——— TOB/TOC ———

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

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: GIS
- ☐ Dedicated:
- ☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-23	8/28/96	1125	3	40ml	VOA	HCL	Gas/BTEX/MTBE
↓	↓	↓	3	40ml	VOA	NP	(CH4) Methane
↓	↓	↓	1	1L	Plastic	NP	CO2

REMARKS:

Water Flow

PACIFIC

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330006.21 LOCATION: 1601 Hesperian Blvd/San Lorenzo WELL ID #: MW-26

CLIENT/STATION No.: Arco #0508 FIELD TECHNICIAN: W Beck

WELL INFORMATION

Depth to Liquid:	—	TOB —	TOC
Depth to water:	12.55	TOB 12.10	TOC
Total depth:	—	TOB 19.46	TOC
Date: 5/29/96	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 19.46 - DTW 12.10 = 7.36 x Gal/Linear Foot .17 = 1.25 x Number of Casings 3 = Calculated Purge 3.75

DATE PURGED: 5/29/96 START: 9:15 END (2400 hr): 9:23 PURGED BY: W Beck

DATE SAMPLED: 5/29/96 START: 9:23 END (2400 hr): 9:30 SAMPLED BY: W Beck

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
9:18	1.25	7.24	1090	66.7	Brown	Mod	None
9:20	2.50	7.18	1090	66.8	Brown	Mod	None
9:23	3.75	7.14	1010	66.8	Brown	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: G-13
- ☐ Dedicated:
- ☐ Other:

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-26	5/29/96	9:30	3	40ml	VOA	HCL	GC/BTEX MTBE

REMARKS:

Water Level

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 330 006.21 LOCATION: 7601 Hesperian Blvd San Lorenzo WELL ID #: EA-1

CLIENT/STATION No.: Arco # 0608 FIELD TECHNICIAN: [illegible]

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 _____ = _____ x Number of Casings 3 = Calculated Purge _____

DATE PURGED: _____ START: _____ END (2400 hr): _____ PURGED BY: _____

DATE SAMPLED: _____ START: _____ END (2400 hr): _____ SAMPLED BY: _____

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
			NO SAMPLE TAKEN				

Pumped dry Yes / No

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

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

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

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

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
EA-1							

REMARKS: No Sample Taken request of project manager

[illegible]

ARCO Products Company ◆ 330 006 21 — Chain of Custody

Division of AtlanticRichfieldCompany

Task Order No. 1934800

ARCO Facility no. 0608	City (Facility) 17601 Hesperian blvd San Lorenzo	Project manager (Consultant) Kelly Brown	Laboratory name Sequoia
ARCO engineer Mike Whelan	Telephone no. (ARCO)	Telephone no. (Consultant)	Fax no. (Consultant)	Contract number
Consultant name Pacific Environmental Group	Address (Consultant) 2025 Gateway Place Suite 440 San Jose CA 95110		Method of shipment

	Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid HCL	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH Gas/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 ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐
1	MW-26	6	3		X		X	X	8/29/96	9:30		X									
2	TB-1	6	2						8/28/29/96	N/A											
	633 H	6	3						8/29/96	10:30											
	17372 VM	6								10:40											
	17393 VM	6								10:50											
	17349 VM	6								11:00											
7	17302 VM	6								11:10											
8	17203 VM	6								11:20											
9	17197 VM	6								11:30											
10	642 H	6								12:10											

Remarks: Samples on line 3-10 No MTBE

Special detection Limit/reporting

Special QA/QC

Lab number

Turnaround time

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

Condition of sample:		Temperature received:	
Relinquished by sampler: Walter Keller	Date 8/29/96 Time 15:15	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

ARC 3292 (2-91)

ATTACHMENT D

REMEDIAL SYSTEM PERFORMANCE EVALUATION

ATTACHMENT D
REMEDIAL SYSTEM PERFORMANCE EVALUATION

Remedial History

Remedial action consisting of groundwater extraction (GWE) was initiated on September 25, 1991. Remedial objectives for the GWE system included migration control of the impacted groundwater plume, and petroleum hydrocarbon mass reduction. Operation of the GWE system created a small area of hydraulic influence extending no greater than 20 feet radially around the extraction well, and proved to be minimally effective in achieving the mass reduction objective (between September 1991 and August 1995, approximately 4.6 million gallons of groundwater were extracted and only 0.8 gallon of TPPH-g and 0.04 gallon of benzene were removed). A brief description and historical operational data for the GWE system are presented as Attachment D-A.

Intrinsic bioremediation parameters obtained during the second quarter 1995 indicated the presence of anaerobic conditions within the impacted groundwater plume. As part of a strategy to enhance the intrinsic bioremediation process; at the request of ARCO, PACIFIC initiated an oxygen enhancement pilot study program (OEPSP) according to an Alameda County Health Care Services Agency (ACHCSA)-approved work plan. The purpose of the OEPSP was to determine if the addition of oxygen releasing compound (ORC) to groundwater would be effective in the enhancement of dissolved oxygen (DO) concentrations within the impacted groundwater plume. With the approval of the ACHCSA, GWE was temporarily deactivated on August 21, 1995, and ORC installation was performed on September 21, 1995.

The OEPSP consisted of installing ORC "socks" in Extraction Well E-1A and groundwater Monitoring Well MW-10, and monitoring intrinsic bioremediation indicator parameters (bioparameters) in those wells and existing nearby observation wells on a monthly basis during the fourth quarter 1995. Bioparameters collected during the OEPSP were then compared to baseline data collected during the second quarter 1995.

The results of the OEPSP were mixed. Several geochemical parameters including ferrous iron, nitrates, and sulfates, suggest that anaerobic conditions continued to exist within the ORC-containing wells. However, oxidation reduction potential (ORP) and DO data suggest

the presence of aerobic conditions in the ORC-containing wells. Total purgeable petroleum hydrocarbons calculated as gasoline (TPPH-g) and benzene concentration data further supported that the OEPSP may have increased the rate of intrinsic biodegradation locally. Considering the low permeability soils at the site, PACIFIC concluded that modification of the OEPSP consisting of longer periods of monitoring and ORC installations at Well MW-5, would be required to obtain more conclusive results. Additional bioremediation indicator data collected during second quarter 1996 monitoring event clearly indicated that intrinsic bioremedation remained active at the site. Additionally, a trend of increased electron acceptors (DO, nitrate, and sulfate) concentrations were observed in Well MW-8, which is located downgradient of ORC containing Well E1-A; however, the above trend was not observed in the other observation locations and therefore was not considered conclusive.

A summary of field and laboratory data is presented in Table D-1. A detailed description and results of the OEPSP were presented in PACIFIC's fourth quarter 1995 groundwater monitoring and remedial system performance evaluation report.

Third Quarter 1996 GWE System Data

The GWE system remained inoperative during the third quarter 1996, since no evidence of further plume migration was observed and the bioremediation enhancement at the Extraction Well E-1 was in progress.

Third Quarter 1996 Intrinsic Bioremediation Evaluation Results

Additional intrinsic bioremediation indicator parameters including carbon dioxide (CO_2) and methane (CH_4) concentration data were collected from Wells MW-8 (plume interior) and MW-23 (background). As expected, CO_2 and CH_4 concentrations were greater at Well MW-8 which are further evidnece of intrinsic bioremediation within the impacted plume.

Intrinsic bioremediation indicator parameter certified analytical reports, chain-of-custody documentation, and field data sheets are presented as Attachment D-B.

OEPSP

At the request of ARCO, PACIFIC expanded the OEPSP to include ORC installation at Well MW-5. Installation of fresh ORCs in Well MW-5 occurred on September 13, 1996 rather than May 31, 1996 as reported in the second quarter 1996 groundwater monitoring report. Fresh ORCs were also installed in Wells E1-A and MW-10 during the September 13, 1996 event, based on depleted concentrations of DO in these wells. To allow for better utilization of the ORC, PACIFIC has initiated semiannual sampling of the ORC containing wells.

The bioparameter monitoring program will be continued on an as needed basis throughout 1996.

Conclusions

In light of evidence of intrinsic biodegradation and relative plume stability, PACIFIC, on behalf of ARCO, will maintain the inoperative status of the GWE system unless further plume migration is observed. The OEPSP will continue throughout 1996.

Attachments: Table D-1 - Intrinsic Biodegradation Indicator Parameters
Attachment D-A - Groundwater Extraction System Description and Historical Operational Data
Attachment D-B - Intrinsic Bioremediation Indicator Parameter Field Data Sheets, Certified Analytical Reports, and Chain-of-Custody Documentation

Table D-1
Intrinsic Bioremediation Indicator Parameters

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

			Field Analyses									Laboratory Analyses								
Well		Date Sampled	Color	Odor	pH (units)	E.C (millimhs)	O.R.P. (millivolts)	Temp (deg C)	Turbidity (NTU)	Chemets D.O.† (mg/L)	D.O.‡ (mg/L)	Ferrous Iron (mg/L)	Nitrate as Nitrate (mg/L)	Sulfate (mg/L)	B.O.D. (mg/L)	C.O.D. (mg/L)	Carbon Dioxide (mg/L)	Methane (mg/L)	TPPH as Gasoline (µg/L)	Total BTEX (µg/L)	Benzene (µg/L)
633 H		05/31/95	Clear	None	7.09	1,295	-203	18.9	Trace	1.0 +	N/A	0.20	38	61	N/A	N/A	N/A	N/A	<50	17.83	0.93
		09/12/95	Clear	None	7.36	876	N/A	20.0	Light	1.5 +	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	9.94	0.64
		11/28/95	Clear	None	7.10	914	-4.7	20.4	Light	1.0 +	N/A	0.10	48	68	N/A	N/A	N/A	N/A	<50	9.69	<0.50
		03/14/96	Brown	None	7.16	760	-207	18.5	Mod	2.79 b	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	480	162.8	10
		05/31/96	Cloudy	None	7.06	1,000	-442	19.0	Light	1.0 +	N/A	0.80	41	76	2.4	N/A	N/A	N/A	<50	<2.0	<0.50
		08/28/96	Clear	None	7.23	1,140	N/A	18.8	Trace	3.0 +	N/A	0.20	N/A	N/A	N/A	N/A	N/A	N/A	<50	<2.0	<0.50
E-1A	a	06/01/95	Clear	None	7.63	1,340	-155	20.4	Trace	0.0	2.0	0.10	23	54	N/A	N/A	N/A	N/A	680	25.8	4.9
		09/15/95	Clear	Mod	7.36	1,208	N/A	15.9	Light	N/A	1.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	73	6.6	3.3
		10/13/95	b,c,d	N/A	N/A	7.76	1,300	N/A	21.8	N/A	N/A	3.36	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<250	<10	<2.5
		11/28/95	b	Brown	Faint	9.11	1,070	40	23.1	Heavy	N/A	OS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	69	<2.0	<0.50
		11/28/95		Clear	None	7.40	880	-21	21.4	Light	0.0	3.06	0.15	18	74	N/A	N/A	N/A	N/A	220	66.9	3.9
		12/21/95	b	N/A	N/A	7.88	489	N/A	15.8	N/A	N/A	16.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	230	26.94	5.7
		03/14/96	b	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		03/14/96		Brown	None	7.16	800	-318	20.7	Mod	N/A	0.41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2,700	179.2	38
		05/31/96	f	Brown	None	7.39	1,000	-339	21.6	Mod	N/A	2.34	N/A	8.1	N/A	6.0	35	N/A	N/A	1,400	488.5	410
		08/28/96		N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.0	N/A	0.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		09/13/96	g	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-5		06/01/95		Brown	Faint	7.10	1,400	-119	20.2	Mod	0.0	2.0	*	19	<0.1	N/A	N/A	N/A	N/A	750	15.1	13
		09/15/95		Clear	Heavy	7.20	1,068	N/A	17.7	Light	N/A	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	550	14	11
		10/13/95	b	N/A	N/A	7.59	1,329	N/A	25.6	N/A	N/A	1.24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		11/28/95		Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		03/14/96	b	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		03/14/96		Brown	None	6.88	900	-14.3	18.7	Mod	N/A	0.72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,600	63	30
		05/31/96	f	Brown	None	6.98	900	-392	23.5	Mod	N/A	3.64	N/A	<0.10	N/A	3.0	<20	N/A	N/A	240	3.9	2.4
		08/28/96		Cloudy	None	6.93	1,100	N/A	22.7	Light	N/A	2.0	3.0	N/A	N/A	N/A	N/A	N/A	N/A	250	220	210
		09/13/96	g	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-7		06/01/95		Brown	None	7.11	1,156	-99	20.7	Light	0.0	*	*	42	68	N/A	N/A	N/A	N/A	<50	<2.0	<0.50
		09/15/95		Brown	None	7.20	1,406	N/A	18.3	Light	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	<2.0	<0.50
		10/13/95	b	N/A	N/A	7.23	1,075	N/A	23.J142	N/A	N/A	0.56	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		11/28/95		Brown	None	7.05	832	N/A	20.7	Heavy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	<2.0	<0.50
		03/15/96		Cloudy	None	7.69	800	N/A	17.5	Light	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	<2.0	<0.50
		05/29/96		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	<2.0	<0.50
		08/28/96		Cloudy	None	7.16	1,170	N/A	19.7	Light	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	<2.0	<0.50

Table D-1 (continued)
Intrinsic Bioremediation Indicator Parameters

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

		Field Analyses										Laboratory Analyses								
Well	Date Sampled	Color	Odor	pH (units)	E.C (millimhs)	O.R.P. (millivolts)	Temp (deg C)	Turbidity (NTU)	Chemets D.O.† (mg/L)	D.O.‡ (mg/L)	Ferrous Iron (mg/L)	Nitrate as Nitrate (mg/L)	Sulfate (mg/L)	B.O.D. (mg/L)	C.O.D. (mg/L)	Carbon Dioxide (mg/L)	Methane (mg/L)	TPPH as Gasoline (µg/L)	Total BTEX (µg/L)	Benzene (µg/L)
MW-8	06/01/95	Brown	Strong	7.09	1,071	-199	20.4	Light	0.0	1.0	0.10	<0.10	33	N/A	N/A	N/A	N/A	810	7.1	5.2
	09/15/95	Clear	Mod	7.01	1,000	N/A	17.3	Light	N/A	1.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	850	33	30
	10/13/95 b,e	N/A	N/A	6.96	972	N/A	22.6	N/A	N/A	0.35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	760	6.72	<2.5
	11/28/95 b	Clear	None	7.01	811	0	25.7	Trace	N/A	0.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/95	Clear	None	6.73	846	0	22.2	Trace	0.0	0.07	0.40	<1.0	<1.0	N/A	N/A	N/A	N/A	1,200	54	39
	12/21/95 b	Clear	None	6.75	640	N/A	17.0	Trace	N/A	0.06	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/21/95	Clear	None	6.80	652	N/A	16.7	Trace	N/A	0.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	560	29.5	28
	03/14/96 b	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.33	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	03/14/96	Cloudy	None	6.87	793	-266	19.6	Light	N/A	0.62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	670	11.1	5.1
	05/31/96 f	Brown	None	6.79	800	-467	19.9	Mod	0.0	1.62	1.40	2.2	58	3.0	N/A	N/A	N/A	490	3.8	<1.0
	08/28/96	Cloudy	None	6.93	1,000	N/A	22.8	Light	1.5	N/A	1.40	N/A	N/A	N/A	N/A	N/A	N/A	680	37	29
MW-10 a	06/01/95	Clear	Mod	7.00	1,301	-199	18.0	Trace	0.0	1.0	0.20	<0.10	8.1	N/A	N/A	N/A	N/A	1,100	<4.8	<1.2
	09/14/95	Clear	Mod	7.10	968	N/A	20.0	Light	N/A	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,100	<8	<2.0
	10/13/95 b,e	N/A	N/A	7.33	1,397	N/A	23.6	N/A	N/A	17.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	510	<2.0	<0.50
	11/28/95 b	Cloudy	None	6.43	868	16	19.2	Light	N/A	9.74	N/A	N/A	N/A	N/A	N/A	N/A	N/A	770	<4.0	<1.0
	11/28/95	Clear	None	6.99	1,021	5	21.8	Trace	0.0	0.71	0.40	<1.0	<1.0	N/A	N/A	N/A	N/A	840	<4.8	<1.0
	12/21/95 b	N/A	N/A	7.18	787	N/A	17.1	N/A	N/A	2.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	440	6.6	5.1
	03/14/96 b	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.89	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	03/14/96	Clear	None	6.87	830	-244	19.1	Trace	N/A	1.92	N/A	N/A	N/A	N/A	N/A	N/A	N/A	870	52.2	35
	05/31/96 f,g	Clear	None	6.84	900	-470	19.1	Trace	N/A	2.07	N/A	<0.10	N/A	16	46	N/A	N/A	800	<4	<1.0
	09/13/96 g	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-23	05/31/96 f	Cloudy	None	7.65	1,000	-328	18.5	Light	0.0	4.23	0.40	39	85	<1.0	N/A	N/A	N/A	<50	<2.0	<0.50
	08/28/96	Brown	None	6.76	1,120	N/A	19.4	Mod	2.0	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A	<50	<2.0	<0.50
SP-1	09/15/95	Clear	None	6.94	1,040	N/A	18.3	Mod	N/A	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	<2.0	<0.50
	10/13/95 b,e	N/A	N/A	7.30	1,062	N/A	22.6	N/A	N/A	0.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	<2.0	<0.50
	11/28/95 b	Brown	None	7.37	837	88	22.7	Heavy	N/A	0.18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/95	Cloudy	None	6.89	956	72	21.8	Heavy	0.0	0.13	0.20	16	44	N/A	N/A	N/A	N/A	<50	<2.0	<0.50
	12/21/95 b	Clear	None	7.02	644	N/A	15.0	Trace	N/A	0.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/21/95	Clear	None	7.05	710	N/A	15.7	Trace	N/A	0.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	<2.0	<0.50
	03/14/96 b	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	03/14/96	Cloudy	None	6.99	840	-198	21.0	Light	N/A	1.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	<2.0	<0.50
	05/31/96	Brown	None	6.85	900	-455	20.7	Mod	N/A	1.34	0.40	18	17	3.0	N/A	N/A	N/A	N/A	N/A	N/A
	08/28/96	Cloudy	None	7.38	1,120	N/A	20.6	Light	2.0	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table D-1 (continued)
Intrinsic Bioremediation Indicator Parameters

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

		Field Analyses										Laboratory Analyses								
Well	Date Sampled	Color	Odor	pH (units)	E.C (millimhs)	O.R.P. (millivolts)	Temp (deg C)	Turbidity (NTU)	Chemets D.O.† (mg/L)	D.O.‡ (mg/L)	Ferrous Iron (mg/L)	Nitrate as Nitrate (mg/L)	Sulfate (mg/L)	B.O.D. (mg/L)	C.O.D. (mg/L)	Carbon Dioxide (mg/L)	Methane (mg/L)	TPPH as Gasoline (µg/L)	Total BTEX (µg/L)	Benzene (µg/L)
SP-2	09/15/95	Clear	None	7.18	1,110	N/A	20.1	Light	N/A	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	94	<2.0	<0.50
	10/13/95 b,e	N/A	N/A	7.11	1,090	N/A	23.0	N/A	N/A	0.53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	80	<2.0	<0.50
	11/28/95 b	Brown	None	7.10	866	2	23.3	Heavy	N/A	0.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/95	Brown	None	6.74	690	36	25.7	Heavy	0.0	0.72	0.60	<1.0	25	N/A	N/A	N/A	N/A	94	<2.0	<0.50
	12/21/95 b	Clear	None	7.25	662	N/A	15.6	Trace	N/A	3.87	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/21/95	Clear	None	7.19	710	N/A	16.7	Trace	N/A	3.49	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	<2.0	<0.50
	03/14/96 b	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	03/14/96	Brown	None	6.84	810	-231	19.8	Heavy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	<2.0	0.50
	05/31/96	Brown	None	6.95	900	-388	19.8	Mod	0.0	2.63	0.60	<0.10	24	2.3	N/A	N/A	N/A	N/A	N/A	N/A
	08/28/96	Cloudy	None	7.55	1,150	N/A	21.9	Light	3.0	N/A	0.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

E.C. = Electrical conductivity
O.R.P. = Oxygen reduction potential
D.O. = Dissolved oxygen
B.O.D. = Biochemical oxygen demand
C.O.D. = Chemical oxygen demand
Temp = Temperature
deg C = Degrees Centigrade
NTU = Nepholemetric turbidity unit
mg/L = Milligrams per liter
µg/L = Micrograms per liter
TPPH = Total purgeable petroleum hydrocarbons
N/A = Not available or not applicable
Mod = Moderate
OS = Off scale
< = Denotes sample method detection limit

† = Dissolved oxygen measured using Chemets colorometric analysis kit ampules
‡ = Dissolved oxygen measured using a YSI Model #SODB D.O. meter
* = High sample turbidity prevented colorimetric analysis
@ = Turbidity measured greater than 200 NTU's.
+ = Well was sealed; unable to lower D.O. probe into well. Obtained D.O. measurement from extracted water using Chemets dissolved oxygen test kit.
a. ORC's installed September 21, 1995 in Wells E-1A and MW-10, and replaced on May 31, 1996.
b. Measurements and samples taken before purging.
c. ORCs were jammed in Well E-1A, therefore no sampling was performed.
d. October monthly data obtained 11/01/95 following removal of jammed ORCs from Well E-1A.
e. TPPH and BTEX samples taken on October 23, 1995.
f. TPPH and BTEX samples taken on May 29, 1996 (Well MW-23 samples taken May 28, 1996).
g. Fresh ORC installed in wells following data collection.

Turbidity measured using a Nepholemetric turbidity unit or assessed visually.
All data collected after purging well, except where noted.

ATTACHMENT D-A

GROUNDWATER EXTRACTION SYSTEM DESCRIPTION AND HISTORICAL OPERATIONAL DATA

ATTACHMENT D-A
GROUNDWATER EXTRACTION SYSTEM DESCRIPTION

GWE System Description

The GWE system is comprised of an extraction well (E-1A) containing an electric submersible pump, and three 1,200-pound granular activated carbon vessels to treat the influent groundwater stream before it is discharged into the sanitary sewer. The carbon vessels are arranged in series, with valving to permit bed order rotation. This allows for the primary vessel to become the secondary vessel after the carbon has been renewed. The third vessel serves as a polishing vessel. Sample ports are located at the treatment system influent, effluent, the midpoint between the carbon vessels, and at each individual well head. Treatment system effluent is discharged into the sanitary sewer system in accordance with Permit No. 90-073-91, issued by the Oro Loma Sanitary District on April 4, 1991. The permit was recently renewed and is effective through April 4, 1997.

Attachments:
- Table D-A-1 - Groundwater Extraction System Performance Data
- Table D-A-2 - Treatment System Analytical Data - Total Purgeable Petroleum Hydrocarbons (TPPH as Gasoline and BTEX Compounds)
- Figure D-A-1 - Groundwater Extraction System Mass Removal Trend
- Figure D-A-2 - Groundwater Extraction System Concentration Trend

Table D-A-1
Groundwater Extraction System Performance Data

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

Influent Sample Date	Hour Meter Reading (hours)	System Down Time (%)	Volume Reading (gallons)	Net Volume (gallons)	Average Flow (gpm)	TPPH as Gasoline: Influent Concentration (µg/L)	TPPH as Gasoline: Net Removed (pounds)	TPPH as Gasoline: Removed To Date (pounds)	Benzene: Influent Concentration (µg/L)	Benzene: Net Removed (pounds)	Benzene: Removed To Date (pounds)	Primary Carbon Loading (%)
09/25/91	0	N/A	0	0	0.0	ND	N/A	0.0	N/A	0.00	0.00	0.0
09/26/91	N/A	N/A	1,144	1,144	N/A	38	0.0	0.0	4.8	0.00	0.00	0.0
10/22/91	26	96	12,844	11,700	7.6	ND	N/A	0.0	ND	0.00	0.00	0.0
11/22/91	77	93	52,532	39,688	13.0	ND	N/A	0.0	0.52	0.00	0.00	0.0
12/19/91	322	62	122,540	70,008	4.8	ND	N/A	0.0	ND	0.00	0.00	0.0
01/16/92	994	0	283,289	160,749	4.0	ND	N/A	0.0	ND	0.00	0.00	0.0
02/19/92	1,809	0	485,200	201,911	4.1	370	0.3	0.3	14	0.01	0.01	0.4
03/17/92	2,462	0	662,847	177,647	4.5	160	0.4	0.7	18	0.02	0.04	0.9
04/15/92	3,150	1	851,100	188,253	4.6	200	0.3	1.0	11	0.02	0.06	1.2
05/14/92	3,849	0	1,030,086	178,986	4.3	45	0.2	1.2	1.4	0.01	0.07	1.5
06/19/92	4,712	0	1,229,960	199,874	3.9	ND	N/A	1.2	ND	0.00	0.07	1.5
07/14/92	5,001	52	1,291,201	61,241	3.5	97	0.0	1.2	25.0	0.01	0.08	1.5
08/18/92	N/A	N/A	1,410,018	118,817	N/A	ND	N/A	1.2	ND	0.01	0.09	1.5
09/15/92	6,298	N/A	1,535,640	125,622	3.1	ND	N/A	1.2	ND	0.00	0.09	1.5
10/16/92	7,012	4	1,651,623	115,983	2.7	ND	N/A	1.2	ND	0.00	0.09	1.5
11/18/92	7,809	0	1,768,076	116,453	2.4	ND	N/A	1.2	ND	0.00	0.09	1.5
12/17/92	8,502	0	1,864,300	96,224	2.3	96	0.0	1.2	7.7	0.00	0.09	1.5
01/18/93	8,798	61	1,915,165	50,865	2.9	100	0.0	1.3	13	0.00	0.10	1.6
02/22/93	9,607	0	2,096,930	181,765	3.7	480	0.4	1.7	36	0.04	0.13	2.1
03/15/93	10,113	0	2,205,833	108,903	3.6	310	0.4	2.1	29	0.03	0.16	2.6
04/09/93	10,517	33	2,298,770	92,937	3.8	140	0.2	2.2	11	0.02	0.18	2.8
05/13/93	11,211	15	2,449,160	150,390	3.6	530	0.4	2.7	27	0.02	0.20	3.3
06/04/93	11,734	1	2,543,500	94,340	3.0	170	0.3	2.9	5.2	0.01	0.21	3.7
07/20/93	12,573	24	2,689,697	146,197	2.9	200	0.2	3.2	12	0.01	0.22	4.0
08/16/93	13,219	0	2,791,366	101,669	2.6	150	0.1	3.3	4.9	0.01	0.23	4.1
09/13/93	13,888	0	2,884,736	93,370	2.3	80	0.1	3.4	2.2	0.00	0.23	4.3
10/08/93	14,485	1	2,951,737	67,001	1.9	ND	0.0	3.4	ND	0.00	0.24	4.3
11/19/93	15,494	0	3,036,032	84,295	1.4	ND	0.0	3.4	ND	0.00	0.24	4.3
12/21/93	16,260	0	3,113,565	77,533	1.7	73	0.0	3.5	3.5	0.00	0.24	4.3
01/18/94	16,939	0	3,190,900	77,335	1.9	60	0.0	3.5	3.1	0.00	0.24	4.4
02/17/94	17,658	0	3,273,720	82,820	1.9	ND	0.0	3.5	2.5	0.00	0.24	4.4
03/15/94	18,235	7	3,344,249	70,529	2.0	ND	0.0	3.5	ND	0.00	0.24	4.4
04/21/94	18,849	31	3,418,537	74,288	2.0	110	0.0	3.5	7.8	0.00	0.24	4.4
05/13/94	19,351	5	3,478,910	60,373	2.0	230	0.1	3.6	8.3	0.00	0.25	4.5
06/14/94	19,680	57	3,518,608 a	39,698	2.0	230	0.1	3.7	12	0.00	0.25	4.6
07/14/94	20,145	35	3,574,408 b	55,800	2.0	270	0.1	3.8	6.9	0.00	0.26	4.8
08/17/94	20,920	5	51,260 c	91,580 c	2.0	ND	0.1	3.9	1.8	0.00	0.26	4.9
09/12/94	21,549	0	120,910	69,650	1.8	ND	0.0	3.9	ND	0.00	0.26	4.9
10/18/94	22,408	1	211,880	90,970	1.8	ND	0.0	3.9	ND	0.00	0.26	4.9
11/15/94	23,080	0	280,840	68,960	1.7	ND	0.0	3.9	0.66	0.00	0.26	4.9
12/05/94	23,489	15	325,830	44,990	1.8	470	0.1	4.0	32	0.01	0.27	5.0
01/04/95	24,205	1	408,740	82,910	1.9	ND	0.2	4.2	1.1	0.01	0.28	5.2
02/06/95	24,926	9	499,690	90,950	2.1	100	0.0	4.2	2.4	0.00	0.28	5.2
03/02/95	25,465	6	569,180	69,490	2.1	ND	0.0	4.2	ND	0.00	0.28	5.3

Table D-A-1 (continued)
Groundwater Extraction System Performance Data

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

Influent Sample Date	Hour Meter Reading (hours)	System Down Time (%)	Volume Reading (gallons)	Net Volume (gallons)	Average Flow (gpm)	TPPH as Gasoline: Influent Concentration (µg/L)	TPPH as Gasoline: Net Removed (pounds)	TPPH as Gasoline: Removed To Date (pounds)	Benzene: Influent Concentration (µg/L)	Benzene: Net Removed (pounds)	Benzene: Removed To Date (pounds)	Primary Carbon Loading (%)
04/04/95	26,253	1	672,510	103,330	2.2	290	0.1	4.3	6.6	0.00	0.28	5.4
05/02/95	26,924	0	760,350	87,840	2.2	240	0.2	4.5	7.1	0.01	0.29	5.7
06/05/95	27,721	2	848,810	88,460	1.9	ND	0.1	4.6	ND	0.00	0.29	5.8
07/06/95	28,464	0	921,260	72,450	1.6	270	0.1	4.7	2.4	0.00	0.29	5.9
08/21/95 d	29,568	0	993,320	72,060	1.1	230	0.2	4.9	1.8	0.00	0.29	6.1
REPORTING PERIOD: 06/30/96 - 09/30/96 (d)												
TOTAL GALLONS EXTRACTED:			**4,608,048**									
PERIOD GALLONS EXTRACTED:			**0**									
TOTAL POUNDS REMOVED:								**4.9**			**0.29**	
TOTAL GALLONS REMOVED:								**0.8**			**0.04**	
PERIOD POUNDS REMOVED:							**0.0**			**0.00**		
PERIOD GALLONS REMOVED:							**0.00**			**0.00**		
AVERAGE PERIOD FLOW RATE (gpm):												**0.0**
AVERAGE PERCENT DOWNTIME SINCE START-UP UNTIL SHUTDOWN (d):												**13.6%**
PERIOD PERCENT OPERATIONAL:												**0%**

TPPH = Total purgeable petroleum hydrocarbons
gpm = Gallons per minute
µg/L = Micrograms per liter
N/A = Not available or not applicable
ND = Not detected above detection limit
Densities: Gasoline = 6.1 lbs/gallon; Benzene = 7.34 lbs/gallon.

a. Totalizer broken; volume estimated from hourmeter and flow rate.
b. Volume estimated from hourmeter and instantaneous flow rate.
c. Sewer totalizer replaced July 28, 1994; volume discharged estimated between July 14 and 26, 1994 at 2.0 gpm.
d. GWE system temporarily shut down August 21, 1995.
Primary carbon loading estimated using isotherm of 8 percent by weight.

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

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

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

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

Table D-A-2 (continued)
Treatment System Analytical Data
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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

Date Sampled	TPPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)
MID-1 (between carbons)					
09/26/91	<30	<0.3	<0.3	<0.3	<0.3
10/22/91	<30	<0.3	<0.3	<0.3	<0.3
12/19/91	<30	<0.3	<0.3	<0.3	<0.3
01/16/91	<30	<0.3	<0.3	<0.3	<0.3
02/19/92	<30	<0.3	<0.3	<0.3	<0.3
03/17/92	<30	<0.3	<0.3	<0.3	<0.3
04/15/92	<30	<0.3	<0.3	<0.3	<0.3
05/14/92	<30	<0.3	<0.3	<0.3	<0.3
06/19/92	<30	<0.3	<0.3	<0.3	<0.3
07/14/92	NS	NS	NS	NS	NS
08/18/92	NS	NS	NS	NS	NS
09/15/92	NS	NS	NS	NS	NS
10/16/92	NS	NS	NS	NS	NS
11/18/92	NS	NS	NS	NS	NS
12/17/92	NS	NS	NS	NS	NS
01/18/93	NS	NS	NS	NS	NS
02/22/93	NS	NS	NS	NS	NS
03/15/93	NS	NS	NS	NS	NS
04/09/93	NS	NS	NS	NS	NS
05/13/93	NS	NS	NS	NS	NS
06/04/93	NS	NS	NS	NS	NS
07/14/94	ND	ND	ND	ND	ND
08/17/94	NS	NS	NS	NS	NS
09/12/94	NS	NS	NS	NS	NS
10/18/94	NS	NS	NS	NS	NS
11/05/94	NS	NS	NS	NS	NS
12/05/94	NS	NS	NS	NS	NS
01/04/95	NS	NS	NS	NS	NS
02/06/95	NS	NS	NS	NS	NS
03/02/95	NS	NS	NS	NS	NS
EFFL (effluent to sewer)					
09/26/91	<30	<0.3	<0.3	<0.3	<0.3
10/22/91	<30	<0.3	<0.3	<0.3	<0.3
11/22/91	<30	<0.3	<0.3	<0.3	<0.3
12/19/91	<30	<0.3	<0.3	<0.3	<0.3
01/16/91	<30	<0.3	<0.3	<0.3	<0.3
02/19/92	<30	<0.3	<0.3	<0.3	<0.3
03/17/92	<30	<0.3	<0.3	<0.3	<0.3
04/15/92	<30	<0.3	<0.3	<0.3	<0.3
05/14/92	<30	<0.3	<0.3	<0.3	<0.3
06/19/92	<30	<0.3	<0.3	<0.3	<0.3
07/14/92	<50	<0.5	<0.5	<0.5	<0.5
08/18/92	<50	<0.5	<0.5	<0.5	<0.5
09/15/92	<50	<0.5	<0.5	<0.5	<0.5
10/16/92	<50	<0.5	<0.5	<0.5	<0.5
11/18/92	<50	<0.5	<0.5	<0.5	<0.5
12/17/92	<50	<0.5	<0.5	<0.5	<0.5

Table D-A-2 (continued)
Treatment System Analytical Data
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

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

Date Sampled	TPPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)
EFFL (effluent to sewer) (cont.)					
01/18/93	<50	<0.5	<0.5	<0.5	<0.5
02/22/93	<50	<0.5	<0.5	<0.5	<0.5
03/15/93	<50	<0.5	<0.5	<0.5	<0.5
04/09/93	<50	<0.5	<0.5	<0.5	<0.5
05/13/93	<50	<0.5	<0.5	<0.5	<0.5
06/04/93	<50	<0.5	<0.5	<0.5	<0.5
07/20/93	<50	<0.5	<0.5	<0.5	<0.5
08/16/93	<50	<0.5	<0.5	<0.5	<0.5
09/13/93	<50	<0.5	<0.5	<0.5	<0.5
10/08/93	<50	<0.5	<0.5	<0.5	<0.5
11/19/93	<50	<0.5	<0.5	<0.5	<0.5
12/21/93	<50	<0.5	<0.5	<0.5	<0.5
01/18/94	<50	<0.5	<0.5	<0.5	<0.5
02/17/94	<50	<0.5	<0.5	<0.5	<0.5
03/15/94	<50	<0.5	<0.5	<0.5	<0.5
04/21/94	<50	<0.5	<0.5	<0.5	<0.5
05/13/94	<50	<0.5	<0.5	<0.5	<0.5
06/14/94	<50	<0.5	<0.5	<0.5	<0.5
07/14/94	<50	<0.5	<0.5	<0.5	<0.5
08/17/94	<50	<0.5	<0.5	<0.5	<0.5
09/12/94	<50	<0.5	<0.5	<0.5	<0.5
10/18/94	<50	<0.5	<0.5	<0.5	<0.5
11/05/94	<50	<0.5	<0.5	<0.5	<0.5
12/05/94	<50	<0.5	<0.5	<0.5	<0.5
01/04/95	<50	<0.50	<0.50	<0.50	<0.50
02/06/95	<50	<0.50	<0.50	<0.50	<0.50
03/02/95	<50	<0.50	<0.50	<0.50	<0.50
04/04/95	<50	<0.50	<0.50	<0.50	<0.50
05/02/95	<50	<0.50	<0.50	<0.50	<0.50
06/05/95	<50	<0.50	<0.50	<0.50	<0.50
07/06/95	<50	<0.50	<0.50	<0.50	<0.50
08/21/95	<50	<0.50	<0.50	<0.50	<0.50

ppb = Parts per billion
< = Less than laboratory detection limit at right.
NS = Not sampled
ND = Not detected
Prior to June 1995, TPPH as gasoline was reported as TPH as gasoline.

Figure D-A-1
Groundwater Extraction System Mass Removal Trend

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

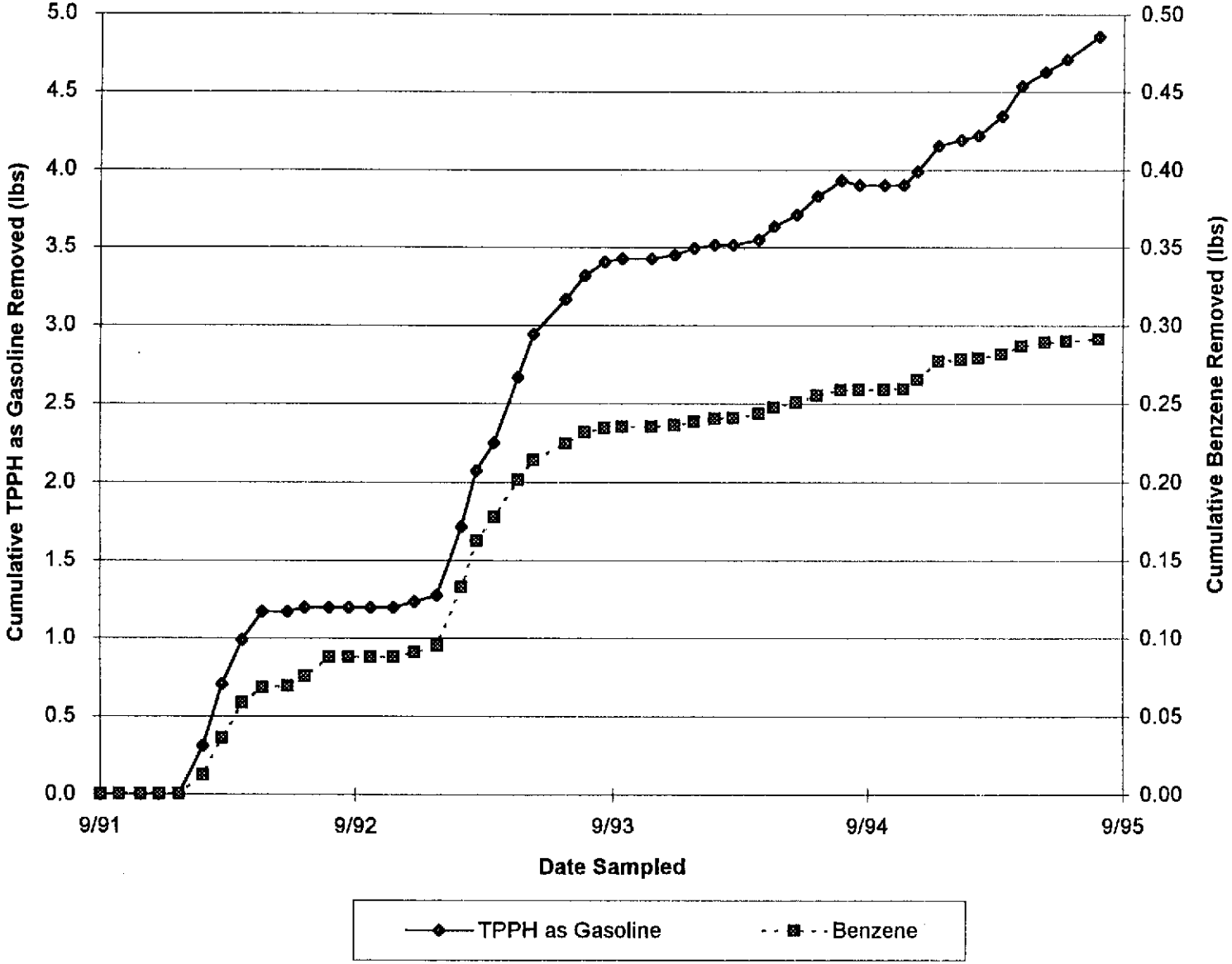
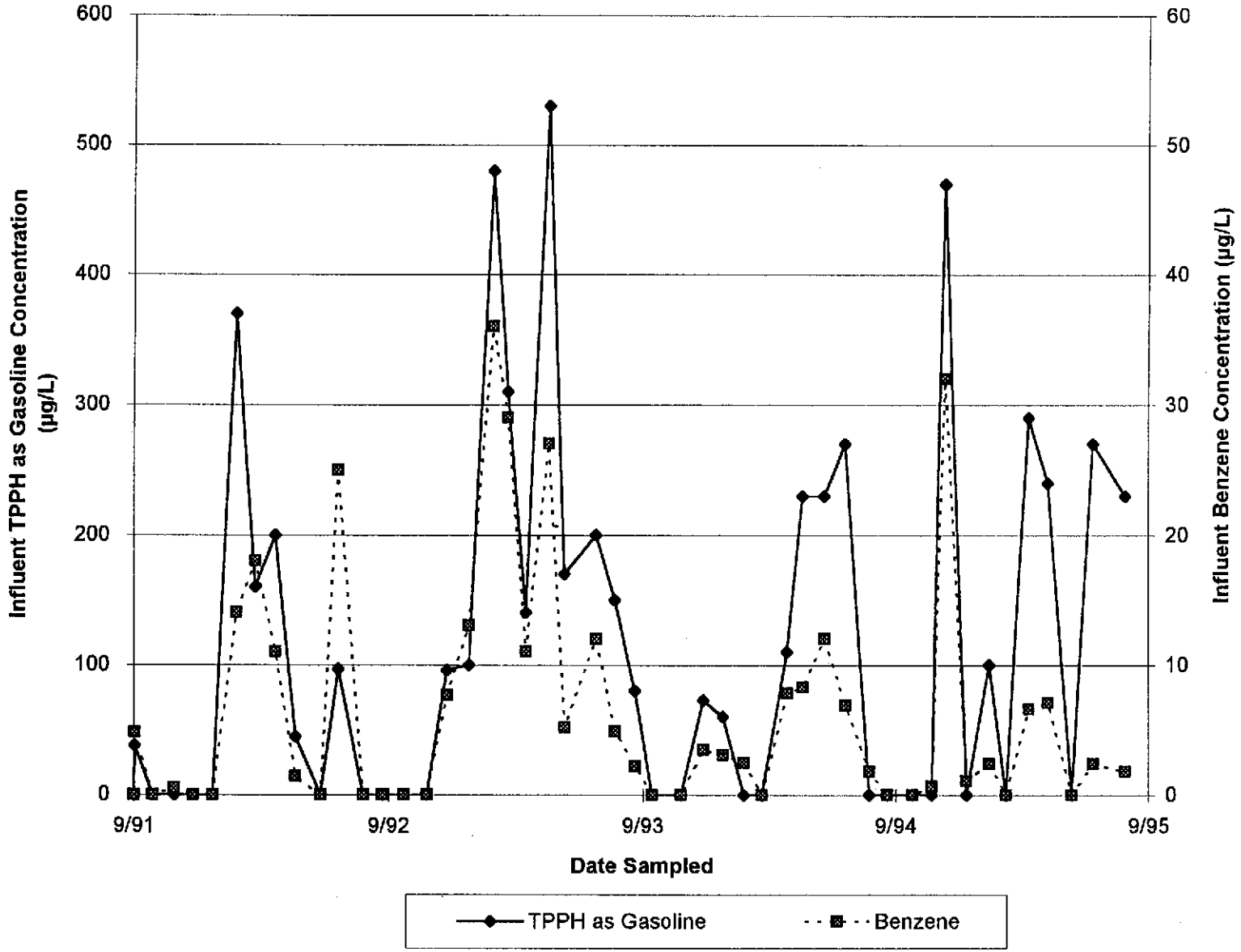


Figure D-A-2
Groundwater Extraction System Concentration Trend

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



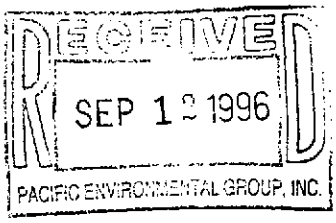
ATTACHMENT D-B

INTRINSIC BIOREMEDIATION INDICATOR PARAMETER CERTIFIED ANALYTICAL REPORTS, CHAIN-OF-CUSTODY DOCUMENTATION, AND FIELD DATA SHEETS

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 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

9/23



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

Project: 330-006.5C/0608, Oakland

Enclosed are the results from samples received at Sequoia Analytical on August 28, 1996. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9608G71 -01	LIQUID, MW8	08/28/96	Carbon Dioxide
9608G71 -01	LIQUID, MW8	08/28/96	Methane
9608G71 -02	LIQUID, MW23	08/28/96	Carbon Dioxide
9608G71 -02	LIQUID, MW23	08/28/96	Methane

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Nellie Lane FOR

Claudia Hirotsu
Project Manager

Quality Assurance Department

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 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

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

Attention: Shaw Garakani

Client Proj. ID: 330-006.5C/0608, Oakland

Lab Proj. ID: 9608G71

Sampled: 08/28/96
Received: 08/28/96
Analyzed: see below

Reported: 09/11/96

LABORATORY ANALYSIS

	Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9608G71-01					
Sample Desc : **LIQUID,MW8**					
	Carbon Dioxide	**mg/L**	**09/05/96**	**5.0**	**500**
#1271	**Methane**	**%**	**08/29/96**	**0.020**	**0.26**
Lab No: 9608G71-02					
Sample Desc : **LIQUID,MW23**					
	Carbon Dioxide	**mg/L**	**09/05/96**	**5.0**	**420**
#1271	Methane	%	08/29/96	0.020	N.D.

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

ELAP Number
SEQUOIA ANALYTICAL - ELAP #1210

Noelle Lane FOR

Claudia Hirotsu
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 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

Pacific Environmental Group	Client Project ID:	330-006.5C / 0608, Oakland	
2025 Gateway Place, Suite 440	Matrix:	LIQUID	
San Jose, CA 95110			
Attention: Shaw Garakani	Work Order #:	9608G71 01-02	Reported: Sep 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Alkalinity
QC Batch#:	IN09049640300A
Analy. Method:	SM 403
Prep. Method:	N.A.
Analyst:	C. Bryant
MS/MSD #:	9608C8201
Sample Conc.:	360
Prepared Date:	9/4/96
Analyzed Date:	9/4/96
Instrument I.D.#:	MANUAL
Conc. Spiked:	200 mg/L
Result:	560
MS % Recovery:	100
Dup. Result:	580
MSD % Recov.:	110
RPD:	3.5
RPD Limit:	0-20

LCS #:	LCS090496
Prepared Date:	9/4/96
Analyzed Date:	9/4/96
Instrument I.D.#:	MANUAL
Conc. Spiked:	100 mg/L
LCS Result:	92
LCS % Recov.:	92

MS/MSD	75-125
LCS	80-120
Control Limits	

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

SEQUOIA ANALYTICAL

FOR Claudia Hirotsu
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

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 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

Pacific Environmental Group	Client Project ID:	330-006.5C / 0608, Oakland	
2025 Gateway Place, Suite 440	Matrix:	Air	
San Jose, CA 95110			
Attention: Shaw Garakani	Work Order #:	9608G71 01-02	Reported: Sep 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Carbon Dioxide	Oxygen	Nitrogen
QC Batch:	GC082996341508A	GC082996341508A	GC082996341508A
Analy. Method:	ASTMD 3416M	ASTMD 3416M	ASTMD 3416M
Prep Method:			
Analyst:	J. Dinsay	J. Dinsay	J. Dinsay
Reporting Units:	Inert Gases %	Inert Gases %	Inert Gases %
Duplicate Sample #:	Ambient Air	Ambient Air	Ambient Air
Prepared Date:	8/29/96	8/29/96	8/29/96
Analyzed Date:	8/29/96	8/29/96	8/29/96
Instrument I.D.#:	GCHP8	GCHP8	GCHP8
Sample Concentration:	0.049	15	57
Dup. Sample Concentration:	0.043	16	60
RPD:	13	6.5	5.1
RPD Limit:	0-30	0-30	0-30

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

SEQUOIA ANALYTICAL
ELAP #1271

FOR Claudia Hirotsu
Project Manager

** RPD = Relative % Difference

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 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

Pacific Environmental Group	Client Project ID:	330-006.5C / 0608, Oakland	
2025 Gateway Place, Suite 440	Matrix:	Liquid	
San Jose, CA 95110			
Attention: Shaw Garakani	Work Order #:	9608G71 01-02	Reported: Sep 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	pH
QC Batch:	IN082896150100A
Analy. Method:	EPA 150.1
Prep Method:	N.A.
Analyst:	C. Bryant
Duplicate Sample #:	9608F9601
Prepared Date:	8/28/96
Analyzed Date:	8/28/96
Instrument I.D.#:	MANUAL
Sample Concentration:	8.1
Dup. Sample Concentration:	8.1
RPD:	0.0
RPD Limit:	0-20

SEQUOIA ANALYTICAL

FOR Claudia Hirotsu
Project Manager

** RPD = Relative % Difference

ARCO Products Company 330 0065C
Division of AtlanticRichfieldCompany

Task Order No. 96086-71

Chain of Custody

ARCO Facility no. 0608	City (Facility) 17601 Hesperian Blvd San Leandro	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 Suite 440 San Jose CA 95110	

Laboratory name: Sequoia

Contract number:

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH EPA M602/8020/8015	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 ☐	CH4 methane	CO2
MW8	01	4		X		X		8/28/96	1500												X	X
MW23	02	4		X		X		8/28/96	1125												X	X

Method of shipment:

Special detection Limit/reporting:

Special QA/QC:

Remarks:

Lab number:

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

Condition of sample:

Temperature received:

Relinquished by	Date	Time	Received by	Date	Time
Relinquished by sampler: [signature]	8/28/96	1500	Received by: [signature]		
Relinquished by: [signature]	8/28/96		Received by:		
Relinquished by:			Received by laboratory: [signature]	8/28/96	1650

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

FIELD SERVICES REQUEST

SITE INFORMATION FORM

Identification

Project # 330-006.5C

Station ID #0608

Site Address: 17601 Hesperian Blvd. Oakland

Lab: Sequoia

County:

Project Manager: Shaw Garakani

Requester: David S. Nanstad

Client: ARCO

Client P.O.C: MIKE WHELAN

Date of Request: August 27, 1996

Project Type

☒ Operation & Maintenance

☐ Sampling

☐ 1st time visit

☐ Quarterly

☐ 1st ☐ 2nd ☐ 3rd ☐ 4th

X Monthly

☐ Semi-Monthly

☐ Weekly

☐ One time event

☐ Other:

Ideal field date: May 31, 1996

Check Appropriate Category

X In Budget Site Visit

☐ Out of Budget Site Visit

Budget Hours: 4

Actual Hours: 2.5

Mob de Mob: 1

Site Safety Concerns

STANDARD

Field Tasks General Description

OBJECTIVE: Peform intrinsic groundwater bioremediation monitoring program (attached). Be sure to charge time associatted with it to 3300065c. Retrieve used ORC's on site. If no oder throw away in dumpster. Call engineer as soon as you have obtained requested data to discuss. Measure distance between MW-8 and E-1a. Mark locations of both wells on map. (I think map is not very accurate). Check wells V-4 andV-5 for water. IF THEY HAVE WATER WE WANT TO PURGE (TYPICAL PURGE PROTOCAL) THEM AND GET FERROUS IRON AND D.O. FROM ITEM. IF THEY GO DRY DO NOT GET READINGS.

Comments, remarks from field staff

Distance From MW-8 to E-1 A 24' to 25' hard to get accurate measurement due to fence in way

Completed By: DSN Date: 8/28/96

Pacific Environmental Group, Inc.

3rd Quarter Intrinsic Groundwater Bioremediation Enhancement Program Monitoring Schedule

ARCO Service Station 0608
17601 Hesperian Blvd.
San Lorenzo, CA

Well	O.R.P. Before Purging	O.R.P. After Purging	Hydro-gen Sulfide	D.O. Before Purging	D.O. After Purging	Ferrous Iron	Laboratory Analyses: Nitrate as Nitrate	Sulfate	Nitrogen as Ammonia	Total Iron	B.O.D.	Hetero-trophic Plate Count	C.O.D.	CO2	CH4
633 H	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N	N
E-1A*	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
MW-5*	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
MW-8	N	N	N	N	Y	Y	N	N	N	N	N	N	N	Y	Y
MW-10*	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
MW-23	N	N	N	N	Y	Y	N	N	N	N	N	N	N	Y	Y
SP-1/V-4	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N	N
SP-2/V-5	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N	N

O.R.P. = Oxidation reduction potential
D.O. = Dissolved oxygen
B.O.D.. = Biological oxygen demand
C.O.D. = Chemical oxygen demand
ORC = Oxygen releasing compound
Y/N = Monitor/Don't monitor
* = Wells containing ORC (Well MW-5 scheduled for ORC installation 2Q96)

Bioremediation Assessment Field and Laboratory Procedures

Field Procedures

Parameter	Instrument or Technique
Color	Manually
Odor	Manually
Oxidation Reduction Potential (ORP)	YSI Model 3560 water quality monitoring system with YSI Model 3540 ORP electrode assembly
Turbidity	Nepholemetric turbidity unit or manually
Hydrogen Sulfide	HACH hydrogen sulfide test kit Model HS-C, catalog No. 25378-00
Dissolved Oxygen	YSI Model 50 in-situ dissolved oxygen meter
Ferrous Iron	HACH TPTZ iron reagent method, Model IR-21, catalog No. 22993-00 and ferrous iron Powder Pillows Catalog No. 1037-69

Laboratory Procedures

Analysis	Method	Bottle
TPPH-g & BTEX Compounds	EPA Methods 8015 (modified), 8020, and 5030	Voa, cool, HCL; no head-space
*Nitrate as Nitrate	EPA Method 300	G or P, keep cool, 100ml, 24 hr hold;NP
*Sulfate	EPA Method 300	G or P, keep cool, 100ml, 28 day hold:NP
Nitrogen as Ammonia	EPA Method 350.3	G or P, 500 ml with H_2SO4, keep cool, 28 day hold time
B.O.D.	EPA Method 405.1	P, 1L, 48 hour hold, NP, keep cool
C.O.D.	EPA Method 410.4	VOA w/ H_2SO_4, 28 day hold time, keep cool
Heterotrophic Plate Count	SM 907	P, 100ml, $NA_2S_2O_3$, keep cool, 30 hour hold; or non-preserved: keep cool, 12 hour hold time
Total Iron	EPA Method 6010	P, G, C, 200ml; HNO_3 6 month hold, keep cool
*Alkalinity	EPA Method 310.1	P or G, 100 ml, cool, NP, 14d
*CO_2	SM406C	P or G, 100 ml, cool, NP, immediately
Methane (CH4)	fill NP air tight voa half full	Air tight VOA, NP, immediately

ese analyses can all be extracted from the same 1 liter bottle. Be sure to collect 1 backup bottle.

Dissolved Oxygen Meter Checklist and Data Sheet

PART A: WELL DATA
MATERIALS
PLEASE CHECK OFF THE FOLLOWING BEFORE LEAVING OFFICE!

DO METER	_____	PROBE AND REEL	_____
CALIBRATION BOTTLE	_____	KCL SOLUTION	_____
SPARE MEMBRANES	_____	6 SPARE D BATTERIES	_____
BUCKET	_____	PAPER TOWEL	_____
INSTRUCTION BINDER	_____	SPARE O-RINGS	_____
SCISSORS	_____	SPARE DATA SHEETS	_____
ALCONOX	_____	STICK	_____
WATER BOTTLE	_____	WATER LEVEL INDICATOR	_____

BEFORE MEASUREMENTS

INSPECT MEMBRANE (DAMAGED OR 1/8"BUBBLES)?		WARM UP UNIT FOR 20 MINUTES?	

CALIBRATION

INSPECT MEMBRANE (DAMAGED OR 1/8"BUBBLES)?		CALIBRATE UNIT?	
4a. CALIBRATION TEMPERATURE (C)		4b. CALIBRATION DO READING (mg/L)	

COMPARED TO CALIBRATION DO TABLE VALUE?		4d. CALIBRATION BOTTLE READING (mg/L)	

FIELD MEASUREMENTS

WELL 633H

DISSOLVED OXYGEN (mg/L), **HYDROGEN SULFIDE and FERROUS IRON**

		D.O.	Hydrogen Sulfide	Ferrous Iron
2' From top	Allow 2 minute minimum stabilization time	3.0	NA	0.20
PROBE & CORD RINSED?				
DO READING STABILIZED?				

WELL E-1A

DISSOLVED OXYGEN (mg/L), **HYDROGEN SULFIDE and FERROUS IRON**

		D.O.	Hydrogen Sulfide	Ferrous Iron
2' From top	Allow 2 minute minimum stabilization time	2.0 Ampules	NA	0.0
PROBE & CORD RINSED?				
DO READING STABILIZED?				

0.0 2nd time

WELL MW-5

DISSOLVED OXYGEN (mg/L), **HYDROGEN SULFIDE and FERROUS IRON**

		D.O.	Hydrogen Sulfide	Ferrous Iron
2' From top	Allow 2 minute minimum stabilization time	2.0	NA	3.0
PROBE & CORD RINSED?				
DO READING STABILIZED?				

WELL MW-8

DISSOLVED OXYGEN (mg/L), **HYDROGEN SULFIDE and FERROUS IRON**

		D.O.	Hydrogen Sulfide	Ferrous Iron
2' From top	Allow 2 minute minimum stabilization time	1.5 / 1.0 2nd time	NA	1.4
PROBE & CORD RINSED?				
DO READING STABILIZED?				

1.4 2nd time

WELL MW-10

DISSOLVED OXYGEN (mg/L), **HYDROGEN SULFIDE and FERROUS IRON**

		D.O.	Hydrogen Sulfide	Ferrous Iron
2' From top	Allow 2 minute minimum stabilization time		NA	
PROBE & CORD RINSED?				
DO READING STABILIZED?				

WELL MW-23

DISSOLVED OXYGEN (mg/L), **HYDROGEN SULFIDE and FERROUS IRON**

		D.O.	Hydrogen Sulfide	Ferrous Iron
2' From top	Allow 2 minute minimum stabilization time	2.0 / 1.5	NA	0.0 / 0.0 2nd time
PROBE & CORD RINSED?				
DO READING STABILIZED?				

WELL SP-1/V-4

DISSOLVED OXYGEN (mg/L), HYDROGEN SULFIDE and FERROUS IRON

		D.O.	Hydrogen Sulfide	Ferrous Iron
2' From top	Allow 2 minute minimum stabiliza-tion time	2.0	NA	0.0
PROBE & CORD RINSED?				
DO READING STABILIZED?				

WELL SP-2/V-5

DISSOLVED OXYGEN (mg/L), HYDROGEN SULFIDE and FERROUS IRON

		D.O.	Hydrogen Sulfide	Ferrous Iron
2' From top	Allow 2 minute minimum stabiliza-tion time	3.0	NA	0.60
PROBE & CORD RINSED?				
DO READING STABILIZED?				

Bioremediation Enhancement Program
Bottle Schedule

ARCO Service Station 0608
1760 Hesperain Boulevard at Hacienda
San Lorenzo, CA

	BOTTLE TYPE (VOLUME, PRESERVATIVE)						
Well	VOA (40ml,HCL)	Plastic (1L,NP)	Plastic (500ml, H_2SO_4)	VOA (40ml, H_2SO_4)	VOA (40ml,NP)	Plastic (500ml,$NA_2S_2O_3$)	Plastic (500ml,HNO_3)
633H	0	0	0	0	0	0	0
E-1A	0	0	0	0	0	0	0
MW-5	0	0	0	0	0	0	0
MW-7	0	0	0	0	0	0	0
MW-8	0	2	0	0	3	0	0
MW-10	0	0	0	0	0	0	0
MW-23	0	2	0	0	3	0	0
SP-1/V-4	0	0	0	0			
SP-2/V-5	0	0	0	0	3	0	0
TOTAL	**0**	**4**	**0**	**0**	**6**	**0**	**0**

FIELD SERVICES REQUEST

SITE INFORMATION FORM

Identification

Project # 330-006.5C
Station ID #0608
Site Address: 17601 Hesperian Blvd, Oakland
Lab: Sequoia 1928100
County:
Project Manager: Shaw Garakani
Requester: David S. Nanstad
Client: ARCO
Client P.O.C: MIKE WHELAN
Date of Request: September 3, 1996

Project Type

☒ Operation & Maintenance
☐ Sampling
☐ 1st time visit
☐ Quarterly
☐ 1st ☐ 2nd ☐ 3rd ☐ 4th
X Monthly
☐ Semi-Monthly
☐ Weekly
☐ One time event
☐ Other:
Ideal field date: asap

Check Appropriate Category

X In Budget Site Visit
☐ Out of Budget Site Visit

Budget Hours: 4
Actual Hours:
Mob de Mob: 5

Site Safety Concerns

STANDARD

Field Tasks General Description

OBJECTIVE:

Obtain DO values from wells MW-10, E1-A and MW-5 while the ORC's are in the well. Remove the 14, 2" ORC's from we MW-10, the 13, 4" ORC's from well E-1A and the 5, 4" ORC's from well MW-5.

Place the removed ORC's in a bucket and leave on-site in the enclosure to dry out.

They are to be disposed of during the next quarterly event.

Obtain DTW measurements, DO and Ferrouse Iron measurements in each of the wells upon removing the ORC's.

Install 14 new 2" ORC's in well MW-10, 13 new 4" ORC's in well E-1A and 5 new 4" ORC's in well MW-5.

Install ORC's per typical procedure (make sure they are in their green sleeves). See engineer for ORC's.

Review the attached ORC installation instructions and take great care in lacing the ORC's together.

They harden to a cement like consistancy and could be difficult to pull out if not correctly laced up. Call the engineer from the site. Use both the DO ampoules and the in-situ probe for DO measurements.

Comments, remarks from field staff

120 ORC's FOUND ON MW5
INSTALL ORC's ON ALL WELLS

Completed By: [signature] Date: 9-13-96

Pacific Environmental Group, Inc.

WELL E-1A

DISSOLVED OXYGEN (mg/L), **HYDROGEN SULFIDE and FERROUS IRON**

		D.O. (ampoule/probe)	Hydrogen Sulfide	Ferrous Iron	ORC's installed?
2' From top	Allow 2 minute minimum stabilization time	1	NA	NA	~~N~~ Y
PROBE & CORD RINSED?		NA			
DO READING STABILIZED?		NA	~~12.30 1045 1180~~ 12.70 1053		NO

WELL MW-5

DISSOLVED OXYGEN (mg/L), **HYDROGEN SULFIDE and FERROUS IRON**

		D.O. (ampoule/probe)	Hydrogen Sulfide	Ferrous Iron	ORC's installed?
2' From top	Allow 2 minute minimum stabilization time	2	NA	NA	~~N~~ Y
PROBE & CORD RINSED?		NA			
DO READING STABILIZED?		NA	12.30 1045 12.70 1053		

WELL MW-10

DISSOLVED OXYGEN (mg/L), **HYDROGEN SULFIDE and FERROUS IRON**

		D.O. (ampoule/probe)	Hydrogen Sulfide	Ferrous Iron	ORC's installed
2' From top	Allow 2 minute minimum stabilization time	2	NA	NA	Y
PROBE & CORD RINSED?		NA	~~1045~~ 10.15	~~1053~~ 1108	
DO READING STABILIZED?		NA			