[redacted]

LEVINE • FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

Quarterly Ground-Water Monitoring Report
April 1 through June 30, 1995
Polvorosa Business Park
1555 Doolittle Drive
San Leandro, California

August 7, 1995
1204.00-001

Prepared for
Chamberlin Associates
32990 Alvarado-Niles Road, Suite 900
Union City, California 94587

LEVINE • FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

LEVINE • FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

August 7, 1995

LF 1204.00-001

Mr. Scott Seery
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94501

Subject: Quarterly Ground-Water Monitoring Report,
April 1 through June 30, 1995,
Polvorosa Business Park, 1555 Doolittle Drive,
San Leandro, California

Dear Scott:

Enclosed is one copy of the subject report for your review and for your files. The enclosed report covers the period from April 1 through June 30, 1995. This report is submitted on behalf of Chamberlin Associates, in accordance with your May 20, 1994 letter to Stephen Chamberlin of Chamberlin Associates.

Please call either of the undersigned if you have questions or comments.

Sincerely,

Adam Klein
Senior Project Hydrologist

John O. Sturman
Senior Geologist

enclosure

cc: Stephen Chamberlin, Chamberlin Associates

1900 POWELL STREET, 12TH FLOOR, EMERYVILLE, CALIFORNIA 94608-1811 *phone* (510) 652-4500 *fax* (510) 652-2246
San Francisco Bay Area Sacramento Irvine San Diego Chicago Tallahassee Newark Honolulu

CONTENTS

LIST OF TABLES

LIST OF FIGURES

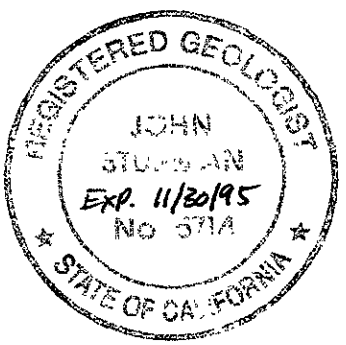
CERTIFICATION

All hydrogeologic and geologic information, conclusions, and recommendations in this report have been prepared under the supervision of and reviewed by a Levine-Fricke California Registered Geologist.

John O. Sturman — August 9, 1995

John O. Sturman
Senior Geologist
California Registered Geologist (5714)

Date



August 7, 1995 LF 1204.00-001

QUARTERLY GROUND-WATER MONITORING REPORT
APRIL 1 THROUGH JUNE 30, 1995
POLVOROSA BUSINESS PARK
1555 DOOLITTLE DRIVE
SAN LEANDRO, CALIFORNIA

1.0 SCOPE OF THIS REPORT

This quarterly ground-water monitoring report is submitted by Levine-Fricke, Inc. ("Levine-Fricke") on behalf of Chamberlin Associates for the Polvorosa Business Park, located at 1555 Doolittle Drive in San Leandro, California ("the Site"; Figure 1). This report is submitted pursuant to Section 2652 (d) of Title 23, California Code of Regulations, and in accordance with the Alameda County Department of Environmental Health's letter of May 20, 1994 to Stephen Chamberlin of Chamberlin Associates. This report presents summaries of ground-water monitoring and remedial activities conducted during April 1 to June 30, 1995 ("the reporting period") at the Site.

2.0 TECHNICAL PROGRESS

The following site activities were performed during the reporting period:

- Collection of water-level measurements from monitoring wells MW-3, MW-8, MW-10, LF-12, LF-13, LF-14, and LF-15 on May 26, 1995.
- Measurement of free-product thickness in monitoring well LF-12 on May 26, 1995.
- Collection of ground-water samples from monitoring wells MW-3, MW-8, MW-10, LF-13, LF-14, and LF-15 on May 26, 1995.

3.0 QUARTERLY GROUND-WATER MONITORING

This section presents the results of ground-water monitoring activities conducted during the reporting period.

Ground-water level measurements were collected from all accessible monitoring wells on May 26, 1995. Ground-water elevation data for all wells are summarized in Table 1 and are shown in Figure 2. Ground-water samples were also collected from all accessible monitoring wells on May 26, 1995. Field parameters measured

during well sampling are presented in Table 2, and the field parameter data sheets are presented in Appendix A. Ground-water quality data for total petroleum hydrocarbons as diesel (TPHd), total petroleum hydrocarbons as gasoline (TPHg), and benzene, toluene, ethylbenzene, and total xylenes (BTEX) are presented in Table 3, and are shown in Figure 3. Laboratory analytical data sheets are presented in Appendix B.

3.1 Ground-Water Elevation and Flow Direction

Depth to ground-water levels measured in site monitoring wells ranged from approximately 6 to 11 feet below the ground surface (bgs). Local ground water was at approximately the same level as during the March 1, 1995, sampling event. As shown in Figure 2, the general direction of ground-water flow at the Site is to the north under a horizontal hydraulic gradient of approximately 0.001 feet/foot (ft/ft). The direction of the horizontal hydraulic gradient has not changed significantly from the direction previously reported.

Approximately 0.02 feet of free petroleum product was measured in monitoring well LF-12. There has been no significant change in the free product thickness compared to the 0.01 foot thickness measured March 1, 1995. The water-level measurement collected from this well was not used in plotting the ground-water elevation contours presented in Figure 2, because of the depression of the ground-water surface caused by the presence of free product.

3.2 Ground-Water Sampling and Analysis

Ground-water samples were collected from monitoring wells MW-3, MW-8, MW-10, LF-13, LF-14, and LF-15 on May 26, 1995. A ground-water sample was not collected from monitoring well LF-12 because of the presence of free product in this well. Samples were collected using the following procedure:

- Depth to ground water was measured in the well using an electric water-level indicator.

- Approximately three well volumes were purged from the well using either a clean plastic bailer, or a clean disposable teflon bailer. Field parameters (temperature, pH, and conductivity) were measured during purging to ensure representative sample collection.

- Following purging and before sample collection, depth to water was again measured in the well, to ensure that the well had recovered to at least 80 percent of the original water level.

- A ground-water sample was collected using the same bailer used for purging the well. Samples were decanted into 40-milliliter volatile organic analysis (VOA) vials for the TPHg and BTEX analyses, and into 1-liter amber bottles for the TPHd analysis.

Ground-water samples were analyzed by American Environmental Network Laboratories of Pleasant Hill, California (AEN), a state-certified laboratory, for TPHd and TPHg using modified EPA Method 8015, and for BTEX using EPA Method 8020. Results of the May 26, 1995 sampling program are summarized below.

3.3 Ground-Water Analysis Results

The water-quality data are presented in Figure 3, and indicate the following:

- The ground-water samples collected from monitoring wells MW-3, MW-8, MW-10, LF-13, and LF-15 were below method detection limits for BTEX compounds.

- Benzene was detected at 0.9 parts per billion (ppb) in LF-14.

- The ground-water samples collected from monitoring wells MW-10 and LF-13 were below method detection limits for TPHd and TPHg.

- Monitoring well MW-3 had the highest levels of TPHg (21 ppm) and TPHd (38 ppm).

- The laboratory reported that the TPHg detected in the ground-water samples was not typical of a gasoline chromatogram. This information, coupled with the low incidence of BTEX compounds in the ground-water samples, suggests that the reported TPHg was likely the lighter fraction hydrocarbons present in diesel.

Table 1
Ground-Water Elevation Data
Polvorosa Business Park
1555 Doolittle Drive
San Leandro, California

(all measurements in feet above mean sea level)

Well Number	Well Elevation	Ground-Water Elevation 22-Nov-94		Product Thickness 22-Nov-94 (feet)	Ground-Water Elevation 01-Mar-95		Product Thickness 01-Mar-95 (feet)	Ground-Water Elevation 26-May-95		Product Thickness 26-May-95 (feet)
						DTW			DTW	
MW-3	12.18	4.06		NP	4.10	8.08	NP	4.08	8.1	NP
MW-8	12.83	3.97		NP	3.45	9.38	NP	4.11	8.72	NP
MW-10	14.22	4.08		NP	2.10	12.12	NP	4.14	10.08	NP
LF-12	14.89	2.43	(1)	0.06	3.73	(1)	0.01	3.97	(1)	0.02
LF-13	14.58	3.92		NP	1.57	13.01	NP	3.97	10.61	NP
LF-14	10.76	3.84		NP	5.46	5.3	NP	3.96	6.8	NP
LF-15	11.20	NM		NM	4.98	6.22	NP	3.89	7.31	NP

Data input by RCM/02-Jun-95. Data proofed by BCC.

Notes:

NP - No product detected

NM - Not measured

(1) Ground-water surface may be depressed due to the presence of floating product.

Table 2
Water-Quality Parameters Measured During Purging and Sampling
Polvorosa Business Park
1555 Doolittle Drive
San Leandro, California

Well Number	Date Sampled	Time Sampled	Well Volume (gallons)	Water Extracted (gallons)	Depth to Water (feet)	pH	Temperature (degrees C)	Specific Conductance (micromhos/cm)	Remarks
MW-3	26-May-95	16:10	1.63	5.3	8.10	6.5	20.3	555	very turbid, odor, sheen
MW-8	26-May-95	15:35	1.44	4.5	8.72	6.9	20.0	1,012	turbid, odor, slight sheen
MW-10	26-May-95	12:15	2.18	6.8	10.08	7.0	19.0	1,019	turbid
LF-13	26-May-95	14:05	1.13	4.5	10.61	7.0	18.9	1,416	turbid
LF-14	26-May-95	14:35	1.80	6.0	6.80	6.9	16.3	1,288	turbid, odor, slight sheen
LF-15	26-May-95	13:25	1.55	5.3	7.31	7.0	19.7	1,210	turbid

Data input by RCM/02 Jun 95. Data proofed by Ali.

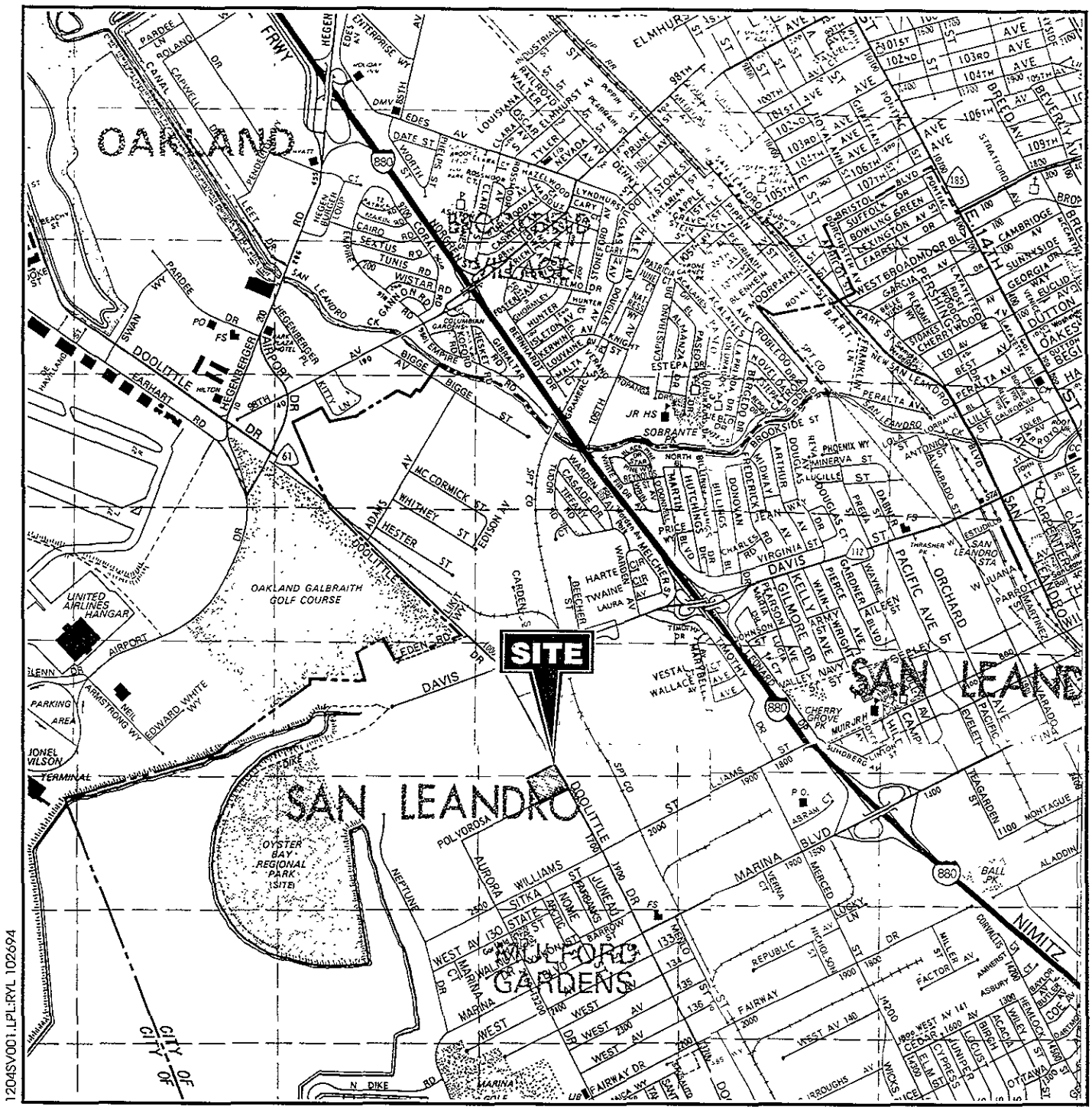
Table 3
Ground-Water Sample Analytical Results
Petroleum Hydrocarbon Compounds
Polvorosa Business Park
1555 Doolittle Drive
San Leandro, California
(results expressed in ppm)

Sample ID	Date	Notes	Benzene	Toluene	Ethyl-benzene	Xylenes, Total	TPHg	TPHd
MW-3	28-Sep-94		<0.01	<0.01	<0.01	<0.04	58.0	87.0
	22-Nov-94		0.0005	0.001	0.0008	0.003	7.8	56.0
	22-Nov-94	Dup	0.0006	0.001	<0.0005	<0.002	2.6	67.0
	01-Mar-95		<0.005	<0.005	<0.005	<0.02	4.3	110.0
	26-May-95		<0.005	<0.005	<0.005	<0.02	21.0	34.0
	26-May-95	Dup	<0.005	<0.005	<0.005	<0.02	6.4	38.0
MW-8	28-Sep-94		<0.0005	<0.0005	<0.0005	<0.002	0.1	2.1
	28-Sep-94	Dup	<0.0005	<0.0005	<0.0005	<0.002	1.6	1.5
	22-Nov-94		<0.0005	<0.0005	<0.0005	<0.002	0.7	8.0
	01-Mar-95		<0.0005	<0.0005	<0.0005	<0.002	1.9	8.7
	26-May-95		<0.0005	<0.0005	<0.0005	<0.002	2.1	15.0
MW-10	28-Sep-94		<0.0005	<0.0005	<0.0005	<0.002	<0.05	<0.05
	23-Nov-94		<0.0005	<0.0005	<0.0005	<0.002	<0.05	<0.05
	01-Mar-95		<0.0005	<0.0005	<0.0005	<0.002	<0.05	<0.05
	26-May-95		<0.0005	<0.0005	<0.0005	<0.002	<0.05	<0.05
LF-13	28-Sep-94		<0.0005	<0.0005	<0.0005	<0.002	<0.05	<0.05
	22-Nov-94		<0.0005	<0.0005	<0.0005	<0.002	<0.05	<0.05
	01-Mar-95		<0.0005	<0.0005	<0.0005	<0.002	<0.05	<0.05
	26-May-95		<0.0005	<0.0005	<0.0005	<0.002	<0.05	<0.05
LF-14	28-Sep-94		0.0006	<0.0005	<0.0005	<0.002	1.7	13.0
	22-Nov-94		0.0008	<0.0005	<0.0005	<0.002	1.0	9.2
	01-Mar-95		0.0007	<0.0005	<0.0005	<0.002	0.7	7.8
	26-May-95		0.0009	<0.0005	<0.0005	<0.002	0.9	11.0
LF-15	01-Mar-95		<0.0005	<0.0005	<0.0005	<0.002	<0.05	0.05
	26-May-95		<0.0005	<0.0005	<0.0005	<0.002	<0.05	0.06
Blanks								
MW-8-FB	28-Sep-94		<0.0005	<0.0005	<0.0005	<0.002	<0.05	<0.05
MW-8-FB	22-Nov-94		<0.0005	<0.0005	<0.0005	<0.002	<0.05	<0.05
MW-8-BB	26-May-95		<0.0005	<0.0005	<0.0005	<0.002	<0.05	<0.05

Data entered by RCM 07-Jul-95. Proofed by Rich.

NOTES:

TPHd = total petroleum hydrocarbons as diesel
TPHg = total petroleum hydrocarbons as gasoline



1204SV001.LPL:RYL 102694

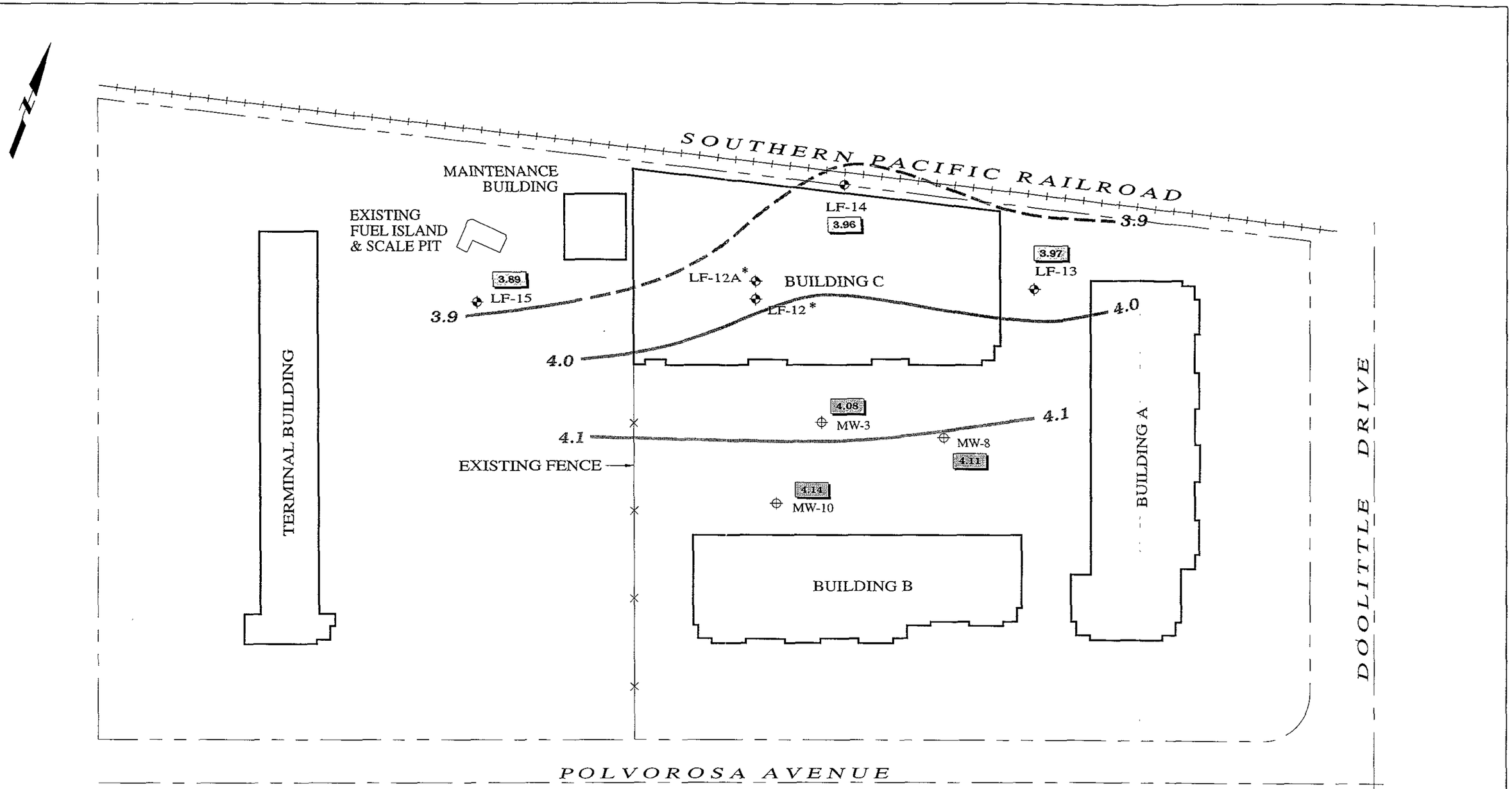
Modified from:
Thomas Brothers Map
Alameda and Contra Costa Counties
1994 Edition

Figure 1 : SITE LOCATION MAP
POLVOROSA BUSINESS PARK, 1555 DOOLITTLE DRIVE, SAN LEANDRO, CALIFORNIA

Project No. 1204

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

1204G001.AIK DAT 071195



EXPLANATION

- Approximate well location (installed by Levine-Fricke)
- Approximate well location (installed by others)
- 4.14 Ground-water elevation (feet above mean sea level)
- 4.0 Ground-water elevation contour dashed where inferred (feet above mean sea level)
- * Water levels in these wells were not considered in the elevation contouring due to presence of floating product

0 40 80 FEET

Figure 2 :

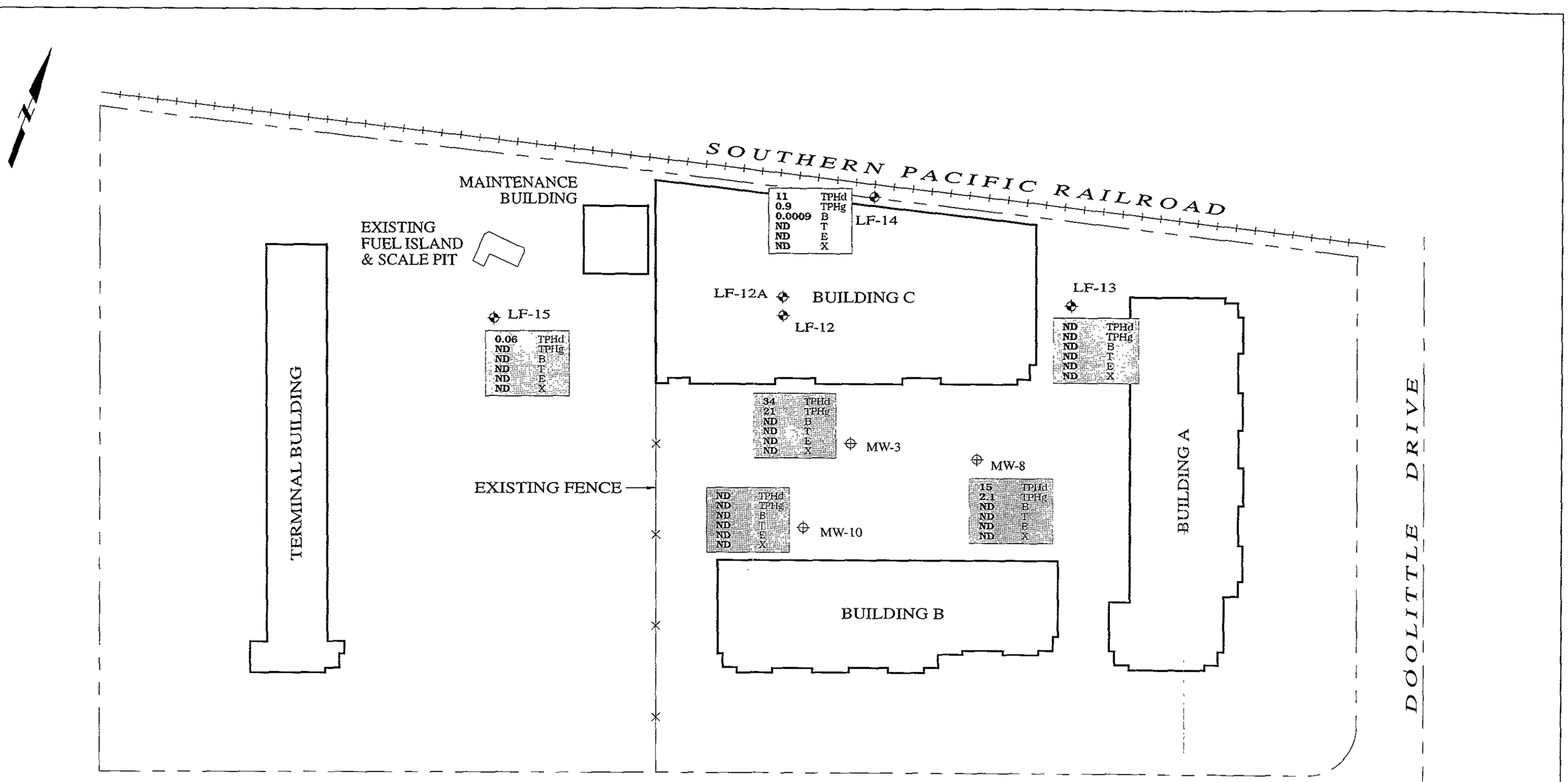
GROUND-WATER ELEVATION CONTOURS MAY 26, 1995

Project No 1204

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

1204B002 AIK EM 122394

1204QC01.AIK DAT 081095



EXPLANATION

- Approximate well location (installed by Levine-Fricke)
- Approximate well location (installed by others)

Wells LF-12 and LF-12A were not sampled

0.9 TPHg
- TPHg — Chemical compound
- 0.9 — Sample concentration (ppm)
- ND — Not detected

KEY TO ABBREVIATIONS

TPHd	Total petroleum hydrocarbons as diesel
TPHg	Total petroleum hydrocarbons as gasoline
B	Benzene
T	Toluene
E	Ethybenzene
X	Xylene

0 40 80 FEET

Figure 3 :

PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER (ppm) MAY 26, 1995

Project No. 1204

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

12048D02.AIK.EM 122394

APPENDIX A

WATER-QUALITY SAMPLING FIELD LOGS
MAY 26, 1995 SAMPLING EVENT

WATER-QUALITY SAMPLING INFORMATION

Project No.: 1204.01

Project Name: Polverosa

Sample Location: San Leandro

Samplers Name: BCC

Sampling Plan Prepared By: AIK

Sampling Method:

Date: 5/26/95

Sample No.: MW-3

☐ FB:

☒ DUP: MW-103

☐ Centrifugal Pump ☐ Disposable Bailer

☐ Submersible Pump ☒ Teflon Bailer

☒ Hand Bail ☐ _____ (Other)

Analyses Requested	Number and Types of Bottle used
TPHg/BTEX	3 VOA/2L
TPHd	

Method of Shipment: AEN (Lab Name) ☒ Courier ☐ Hand Deliver:

Well Number: MW-3

Depth of Water: 8.10

Well Depth: 18.26

Height of Water Column: 10.16

Volume in Well: 1.63 gal

Well Diameter:

☒ 2" (0.16 Gallon/Feet)

☐ 4" (0.65 Gallon/Feet

☐ 5" (1.02 Gallon/Feet)

☐ 6" (1.47 Gallon/Feet)

10.16	10.16
.16	-2
6096	2032
1016	8.10
1.6256	10.132

80% DTW 10.15

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temparture °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
13:52	8.10 ✓	0						start bailing
13:55		1.75		20.4	6.45	546		very turbid, odor, sheen
13:58		3.50		20.3	6.49	541	✓	very turbid, odor, sheen
14:01		5.25 ✓		20.3	6.50	555 ✓		very turbid, odor, sheen
14:10 ✓								sample MW-3
15:10								sample MW-103

Inlet Depth: _____

Comments: (Recommended Method For Purging Well)

WTR.QLTY.SMPLNG.INFO.22JUL94RYL

WATER-QUALITY SAMPLING INFORMATION

Project No.: 1204.01

Project Name: Polverosa

Sample Location: San Leandro

Samplers Name: BCC

Sampling Plan Prepared By: AIK

Sampling Method:

Date: 5/26/95

Sample No.: MW-8

☒ FB: MW-8-BB

☐ DUP: _____

☐ Centrifugal Pump ☐ Disposable Bailer

☐ Submersible Pump ☒ Teflon Bailer

☒ Hand Bail ☐ _____ (Other)

Analyses Requested	Number and Types of Bottle used
TPHg / BTEX	3 VOA's
TPHd	2 L

Method of Shipment

AEN (Lab Name) ☒ Courier

☐ Hand Deliver:

Well Number: MW-8

Depth of Water: 8.72

Well Depth: 17.75

Height of Water Column: 9.03

Volume in Well: 1.44 gal.

Well Diameter:

☒ 2" (0.16 Gallon/Feet)

☐ 4" (0.65 Gallon/Feet

☐ 5" (1.02 Gallon/Feet)

☐ 6" (1.47 Gallon/Feet)

9.03	9.03
.16	.2
5418	1806
903	8.72
1.4448	10.526

80% DTW 10.53

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temparture °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
3:20	8.72	0						start bailing
3:22		1.5		20.3	7.02	1013		turbid, odor, sl. sheen
3:25		3.0		20.2	6.97	1010		turbid, odor, sl. sheen
3:28		4.5		20.0	6.94	1012		turbid, odor, sl. sheen
3:35								sample MW-8
3:10								sample MW-8-BB

Inlet Depth: _____

Comments: _____

(Recommended Method For Purging Well)

WTR.QLTY.SMPLNG.INFO.22JUL94.RYL

WATER-QUALITY SAMPLING INFORMATION

Project No.: 1204.01

Project Name: Polverosa

Sample Location: San Leandro

Samplers Name: BCC

Sampling Plan Prepared By: AIK

Sampling Method:

Date: 5/26/95

Sample No.: MW-10

☐ FB:

☐ DUP:

☐ Centrifugal Pump ☒ Disposable Bailer

☐ Submersible Pump ☐ Teflon Bailer

☒ Hand Bail ☐ _____ (Other)

Analyses Requested	Number and Types of Bottle used
TPHg BTEX	3 VOA's
TPHd	2 L's

Method of Shipment

AEN (Lab Name) ☒ Courier

☐ Hand Deliver:

Well Number: MW-10

Depth of Water: 10.08

Well Depth: 23.70

Height of Water Column: 13.62

Volume in Well: 2.18 gal

Well Diameter:

☒ 2" (0.16 Gallon/Feet)

☐ 4" (0.65 Gallon/Feet

☐ 5" (1.02 Gallon/Feet)

☐ 6" (1.47 Gallon/Feet)

13.62 × .16 = 8172 + 1362 = 21792

13.62 − 2 = 2.724 × 10.08 = 12.804

80% DTW 12.80

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temparature °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
1:50	10.08	0						start bailing
1:58		2.25		18.9	7.29	1042		turbid
2:02		4.50		19.0	7.04	1026		turbid
2:09		6.75		19.0	7.02	1019		turbid
2:15								sample MW-10

Inlet Depth: _____

Comments: _____

(Recommended Method For Purging Well)

WATER-QUALITY SAMPLING INFORMATION

Project No.: 1204.01

Project Name: Polverosa

Sample Location: San Leandro

Samplers Name: BCC

Sampling Plan Prepared By: AIK

Sampling Method:

Date: 5/26/95

Sample No.: LF-13

☐ FB:

☐ DUP:

☐ Centrifugal Pump ☐ Disposable Bailer

☐ Submersible Pump ☒ Teflon Bailer

☒ Hand Bail ☐ _____ (Other)

Analyses Requested	Number and Types of Bottle used
TPHg / BTEX	3 VOA's
TPHd	2 L's

Method of Shipment: AEN (Lab Name) ☒ Courier ☐ Hand Deliver:

Well Number: LF-13

Depth of Water: 10.61

Well Depth: 17.67

Height of Water Column: 7.06

Volume in Well: 1.13

Well Diameter:

☒ 2" (0.16 Gallon/Feet)

☐ 4" (0.65 Gallon/Feet

☐ 5" (1.02 Gallon/Feet)

☐ 6" (1.47 Gallon/Feet)

7.06 × .16 = 1.1296

7.06 × .2 = 1.412

10.61 + 1.412 = 12.022

80% DTW 12.02

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temparture °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
1:52	10.61	0						start bailing
1:54		1.5		19.1	6.97	1424		turbid
1:56		3.0		19.0	7.00	1415		turbid
2:00		4.5		18.9	7.02	1416		turbid
2:05								sample LF-13

Inlet Depth:

Comments:

(Recommended Method For Purging Well)

WTR.QLTY.SMPLNG.INFO.22JUL94RYL

WATER-QUALITY SAMPLING INFORMATION

Project No.: 1204.01

Project Name: Polverosa

Sample Location: San Leandro

Samplers Name: BCC

Sampling Plan Prepared By: AIK

Sampling Method:

Date: 5/26/95

Sample No.: LF-14

☐ FB:

☐ DUP:

☐ Centrifugal Pump ☐ Disposable Bailer

☐ Submersible Pump ☒ Teflon Bailer

☒ Hand Bail ☐ _____ (Other)

Analyses Requested	Number and Types of Bottle used
TPHg/BTEX	3 VOA's
TPHd	2 L's

Method of Shipment: AEN (Lab Name) ☒ Courier _____ ☐ Hand Deliver:

Well Number: LF-14

Depth of Water: 6.80

Well Depth: 18.06

Height of Water Column: 11.26

Volume in Well: 1.80 gal

Well Diameter:

☒ 2" (0.16 Gallon/Feet)

☐ 4" (0.65 Gallon/Feet

☐ 5" (1.02 Gallon/Feet)

☐ 6" (1.47 Gallon/Feet)

11.26	11.26
.16	.2
6756	1252
1126	6.80
1.806	8.052

80% DTW 8.05

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temparture °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
2:21	6.80	0						start bailing
2:24		2		16.3	6.97	1313		turbid, odor, H. sheen
2:26		4		16.3	6.92	1297		turbid, odor, lt. sheen
2:29		6		16.3	6.90	1288		turbid, odor, lt. sheen
2:35								sample LF-14

Inlet Depth: _____

Comments: _____

(Recommended Method For Purging Well)

WTR.QLTY.SMPLNG.INFO.22JUL94YL

WATER-QUALITY SAMPLING INFORMATION

Project No.: 1204.01

Project Name: Polverosa

Sample Location: San Leandro

Samplers Name: BCC

Sampling Plan Prepared By: AIK

Sampling Method:

Date: 5/26/95

Sample No.: LF-15

☐ FB:

☐ DUP:

☐ Centrifugal Pump ☐ Disposable Bailer

☐ Submersible Pump ☒ Teflon Bailer

☒ Hand Bail ☐ _____ (Other)

Analyses Requested	Number and Types of Bottle used
TPHg/BTEX	3 VOA's
TPHd	2 L's

Method of Shipment

AEN (Lab Name) ☒ Courier

☐ Hand Deliver:

Well Number: LF-15

Depth of Water: 7.31

Well Depth: 17.00

Height of Water Column: 9.69

Volume in Well: 1.55 gal

Well Diameter:

☒ 2" (0.16 Gallon/Feet)

☐ 4" (0.65 Gallon/Feet

☐ 5" (1.02 Gallon/Feet)

☐ 6" (1.47 Gallon/Feet)

9.69	9.69
.16	.2
5814	1.938
969	7.31
1.5504	9.248

80% DTW 9.25

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temparture °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
1:09	7.31	0						start bailing
1:12		1.75		19.8	7.07	1726		turbid
1:15		3.50		19.8	6.98	1239		turbid
1:18		5.25		19.7	6.97	1210		turbid
1:25								sample LF-15

Inlet Depth: _____

Comments: _____

(Recommended Method For Purging Well)

WTR.QLTY.SMPLNG.INFO.22JUL94RYL

APPENDIX B

LABORATORY CERTIFICATES FOR GROUND-WATER SAMPLES MAY 26, 1995 SAMPLING EVENT

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

1204\1704 HWQ

LEVINE-FRICKE
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

ATTN: BRYAN CROLL
CLIENT PROJ. ID: 1204.01
CLIENT PROJ. NAME: POLVEROSA
C.O.C. NUMBER: 013491

REPORT DATE: 06/14/95
DATE(S) SAMPLED: 05/26/95
DATE RECEIVED: 05/26/95
AEN WORK ORDER: 9505399

PROJECT SUMMARY:

On May 26, 1995, this laboratory received 8 water sample(s).

Client requested sample(s) be analyzed for organic parameters. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.

Larry Klein
Laboratory Director

LEVINE-FRICKE

SAMPLE ID: MW-10
AEN LAB NO: 9505399-01
AEN WORK ORDER: 9505399
CLIENT PROJ. ID: 1204.01

DATE SAMPLED: 05/26/95
DATE RECEIVED: 05/26/95
REPORT DATE: 06/14/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	06/07/95
Toluene	108-88-3	ND	0.5	ug/L	06/07/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	06/07/95
Xylenes, Total	1330-20-7	ND	2	ug/L	06/07/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	06/07/95
#Extraction for TPH	EPA 3510	-		Extrn Date	06/07/95
TPH as Diesel	GC-FID	ND	0.05	mg/L	06/10/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-15
AEN LAB NO: 9505399-02
AEN WORK ORDER: 9505399
CLIENT PROJ. ID: 1204.01

DATE SAMPLED: 05/26/95
DATE RECEIVED: 05/26/95
REPORT DATE: 06/14/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	06/07/95
Toluene	108-88-3	ND	0.5	ug/L	06/07/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	06/07/95
Xylenes, Total	1330-20-7	ND	2	ug/L	06/07/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	06/07/95
#Extraction for TPH	EPA 3510	-		Extrn Date	06/07/95
TPH as Diesel	GC-FID	0.06 *	0.05	mg/L	06/10/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-13
AEN LAB NO: 9505399-03
AEN WORK ORDER: 9505399
CLIENT PROJ. ID: 1204.01

DATE SAMPLED: 05/26/95
DATE RECEIVED: 05/26/95
REPORT DATE: 06/14/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	06/07/95
Toluene	108-88-3	ND	0.5	ug/L	06/07/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	06/07/95
Xylenes, Total	1330-20-7	ND	2	ug/L	06/07/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	06/07/95
#Extraction for TPH	EPA 3510	-		Extrn Date	06/07/95
TPH as Diesel	GC-FID	ND	0.05	mg/L	06/10/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-14
AEN LAB NO: 9505399-04
AEN WORK ORDER: 9505399
CLIENT PROJ. ID: 1204.01

DATE SAMPLED: 05/26/95
DATE RECEIVED: 05/26/95
REPORT DATE: 06/14/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	0.9 *	0.5	ug/L	06/09/95
Toluene	108-88-3	ND	0.5	ug/L	06/09/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	06/09/95
Xylenes, Total	1330-20-7	ND	2	ug/L	06/09/95
Purgeable HCs as Gasoline	5030/GCFID	0.9 *	0.05	mg/L	06/09/95
#Extraction for TPH	EPA 3510	-		Extrn Date	06/07/95
TPH as Diesel	GC-FID	11 *	0.05	mg/L	06/10/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-8-BB
AEN LAB NO: 9505399-05
AEN WORK ORDER: 9505399
CLIENT PROJ. ID: 1204.01

DATE SAMPLED: 05/26/95
DATE RECEIVED: 05/26/95
REPORT DATE: 06/14/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	06/07/95
Toluene	108-88-3	ND	0.5	ug/L	06/07/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	06/07/95
Xylenes, Total	1330-20-7	ND	2	ug/L	06/07/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	06/07/95
#Extraction for TPH	EPA 3510	-		3xtrn Date	06/07/95
TPH as Diesel	GC-FID	ND	0.05	mg/L	06/10/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-8
AEN LAB NO: 9505399-06
AEN WORK ORDER: 9505399
CLIENT PROJ. ID: 1204.01

DATE SAMPLED: 05/26/95
DATE RECEIVED: 05/26/95
REPORT DATE: 06/14/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	06/09/95
Toluene	108-88-3	ND	0.5	ug/L	06/09/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	06/09/95
Xylenes, Total	1330-20-7	ND	2	ug/L	06/09/95
Purgeable HCs as Gasoline	5030/GCFID	2.1 *	0.05	mg/L	06/09/95
#Extraction for TPH	EPA 3510	-		Extrn Date	06/07/95
TPH as Diesel	GC-FID	15 *	0.05	mg/L	06/10/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-3
AEN LAB NO: 9505399-07
AEN WORK ORDER: 9505399
CLIENT PROJ. ID: 1204.01

DATE SAMPLED: 05/26/95
DATE RECEIVED: 05/26/95
REPORT DATE: 06/14/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/L	06/08/95
Toluene	108-88-3	ND	5	ug/L	06/08/95
Ethylbenzene	100-41-4	ND	5	ug/L	06/08/95
Xylenes, Total	1330-20-7	ND	20	ug/L	06/08/95
Purgeable HCs as Gasoline	5030/GCFID	21 *	0.5	mg/L	06/08/95
#Extraction for TPH	EPA 3510	-		Extrn Date	06/07/95
TPH as Diesel	GC-FID	34 *	0.3	mg/L	06/10/95

Reporting limits elevated for gas/BTEX due to high levels of non-target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-103
AEN LAB NO: 9505399-08
AEN WORK ORDER: 9505399
CLIENT PROJ. ID: 1204.01

DATE SAMPLED: 05/26/95
DATE RECEIVED: 05/26/95
REPORT DATE: 06/14/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/L	06/08/95
Toluene	108-88-3	ND	5	ug/L	06/08/95
Ethylbenzene	100-41-4	ND	5	ug/L	06/08/95
Xylenes, Total	1330-20-7	ND	20	ug/L	06/08/95
Purgeable HCs as Gasoline	5030/GCFID	6.4 *	0.5	mg/L	06/08/95
#Extraction for TPH	EPA 3510	-		Extrn Date	06/07/95
TPH as Diesel	GC-FID	38 *	0.05	mg/L	06/10/95

Reporting limits elevated for gas/BTEX due to high levels of non-target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9505399

CLIENT PROJECT ID: 1204.01

Quality Control Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9505399
AEN LAB NO: 0607-BLANK
DATE EXTRACTED: 06/07/95
DATE ANALYZED: 06/10/95
INSTRUMENT: C
MATRIX: WATER

Method Blank

Analyte	Result (mg/L)	Reporting Limit (mg/L)
Diesel	ND	0.05

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9505399
DATE(S) EXTRACTED: 06/07/95
INSTRUMENT: C
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
06/10/95	MW-10	01	88
06/10/95	LF-15	02	96
06/10/95	LF-13	03	87
06/10/95	LF-14	04	88
06/10/95	MW-8-BB	05	91
06/10/95	MW-8	06	106
06/10/95	MW-3	07	86
06/10/95	MW-103	08	92
QC Limits:			59-118

DATE EXTRACTED: 06/07/95
DATE ANALYZED: 06/09/95
SAMPLE SPIKED: DI WATER
INSTRUMENT: C

Method Spike Recovery Summary

Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Diesel	1.82	103	5	65-103	12

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9505399
AEN LAB NO: 0607-BLANK
DATE ANALYZED: 06/07/95
INSTRUMENT: H
MATRIX: WATER

Method Blank

Analyte	CAS #	Result (ug/L)	Reporting Limit (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2
HCs as Gasoline		ND mg/L	0.05 mg/L

AEN LAB NO: 0608-BLANK
DATE ANALYZED: 06/08/95
INSTRUMENT: H

Method Blank

Analyte	CAS #	Result (ug/L)	Reporting Limit (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2
HCs as Gasoline		ND mg/L	0.05 mg/L

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9505399
AEN LAB NO: 0609-BLANK
DATE ANALYZED: 06/09/95
INSTRUMENT: H
MATRIX: WATER

Method Blank

Analyte	CAS #	Result (ug/L)	Reporting Limit (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2
HCs as Gasoline		ND mg/L	0.05 mg/L

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9505399
INSTRUMENT: H
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
06/07/95	MW-10	01	99
06/07/95	LF-15	02	99
06/07/95	LF-13	03	99
06/09/95	LF-14	04	98
06/07/95	MW-8-BB	05	99
06/09/95	MW-8	06	99
06/08/95	MW-3	07	99
06/08/95	MW-103	08	99
QC Limits:			92-109

DATE ANALYZED: 06/07/95
SAMPLE SPIKED: 9506017-01
INSTRUMENT: H

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Benzene	36.3	109	3	85-109	17
Toluene	103.0	107	13	87-111	16
Hydrocarbons as Gasoline	1000	99	18	66-117	19

*** END OF REPORT ***

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9505399

Project No.: 1204.01	Field Logbook No.:	Date: 5/26/95	Serial No.: Nº 013491
Project Name: Polverosa	Project Location: San Leandro		
Sampler (Signature): Bryan Coll			Samplers: BCC

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPHg/BTEX	TPHd			HOLD	RUSH	REMARKS
MW-10	5/26	12:15	01A-E	5	H_2O									
LF-15		1:25	02A-E											
LF-13		2:05	03A-E											
LF-14		2:35	04A-E											
MW-8-BB		3:10	05A-E											
MW-8		3:35	06A-E											
MW-3		4:10	07A-E											
MW-103		5:10	08A-E											
														Results to Bryan Coll

RELINQUISHED BY: (Signature) Bryan Coll	DATE 5/26/95	TIME 5:00	RECEIVED BY: (Signature) Michael E McMullen	DATE 5/26/95 TIME 17:00
RELINQUISHED BY: (Signature) Michael E McMullen	DATE 5/26/95	TIME 17:40	RECEIVED BY: (Signature) Lisa L Pruitt	DATE 5/26/95 TIME 1740
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:	

Sample Collector:

LEVINE-FRICKE
1900 Powell Street, 12th Floor
Emeryville, California 94608
(510) 652-4500

Analytical Laboratory: AEN

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF