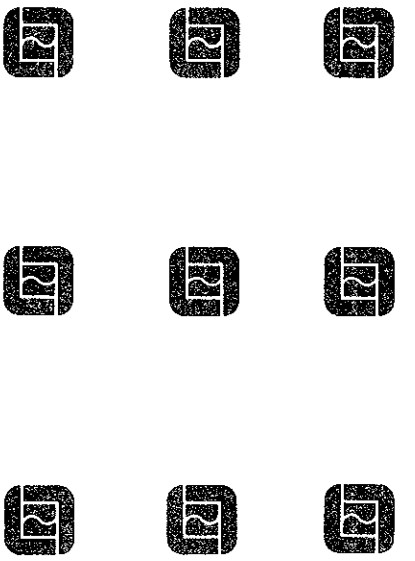


Quarterly Monitoring Report for October 1 through December 31, 1993 Former Bay Area Warehouse Property Emeryville, California

January 31, 1994
1649.13

Prepared for
Catellus Development Corporation
201 Mission Street
San Francisco, California

LEVINE·FRICKE

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

January 31, 1994 LF 1649.13

Ms. Susan Hugo
Alameda County Health Care Services Agency
80 Swan Way, Suite 200
Oakland, California 94621

Subject: Quarterly Monitoring Report for October 1 through December 31, 1993, Former Bay Area Warehouse Property, Emeryville, California

Dear Ms. Hugo:

Enclosed is the ground-water investigation report and quarterly monitoring report for the period from October 1 through December 31, 1993, for the former Bay Area Warehouse (BAW) property, located in Emeryville, California. This report has been prepared on behalf of Catellus Development Corporation ("Catellus") in accordance with Levine•Fricke's work plan dated April 30, 1993, and submitted to the Alameda Health Care Services Agency (ACHA).

As you are aware, this work was conducted in accordance with your October 13, 1992 letter to Mr. Charles Wellnitz of BAW, former tenant at the property and the owner and operator of the gasoline underground storage tank (UST) formerly located at the BAW property. Your October 13, 1992 letter to Mr. Wellnitz directed BAW to conduct a ground-water investigation at the BAW property to assess the possible effect of petroleum hydrocarbons from the former UST on shallow ground water in the vicinity of the tank excavation. Because BAW has failed and refused to perform any such investigation, Catellus, as the current owner of the BAW Property, was compelled to proceed with installation of the monitoring well.

The enclosed report describes field activities conducted and presents the analytical results for ground-water samples collected during monitoring activities.

1900 Powell Street, 12th Floor
Emeryville, California 94608
(510) 652-4500
Fax (510) 652-2246

Other offices in Irvine, CA; Sacramento/Roseville, CA; Tallahassee, FL; Honolulu, HI

Please call me if you have any questions or comments regarding this report.

Sincerely,

Jenifer Beatty

Jenifer Beatty
Project Hydrogeologist

cc: Richard Hiett, RWQCB
Kimberly Brandt, Catellus
Pat Cashman, Catellus

1649/BAWJ94.QMR

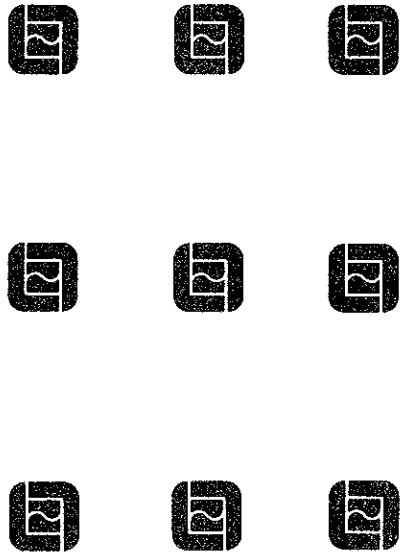
CONTENTS

CERTIFICATION

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

Andrew L. Wright
Senior Associate Geologist
California Registered Geologist (4592)

1/31/94
Date



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1649/BAWJ94.QMR

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Andrew L. Wright
Senior Associate Geologist
California Registered Geologist (4592)

1/31/94
Date

January 31, 1994 LF 1649.13

**QUARTERLY MONITORING REPORT FOR
OCTOBER 1 THROUGH DECEMBER 31, 1993
FORMER BAY AREA WAREHOUSE PROPERTY
EMERYVILLE, CALIFORNIA**

1.0 INTRODUCTION

This report describes analytical results for monitoring activities conducted at the former Bay Area Warehouse (BAW) property located in Area C of the Yerba Buena/East Baybridge Project Site in Emeryville, California (Figure 1). Monitoring activities were conducted by Levine·Fricke, Inc., on behalf of Catellus Development Corporation in accordance with the work plan dated April 30, 1993 (Levine·Fricke 1993), and submitted to the Alameda County Health Care Services Agency (ACHA).

2.0 BACKGROUND AND PREVIOUS INVESTIGATIONS

On November 20, 1991, a gasoline underground storage tank (UST) was removed from the BAW property by consultants retained by BAW. A Levine·Fricke geologist was present to collect a sample of the fuel product contained in the UST before the UST was removed and to observe removal of the UST. The product sample was submitted to Friedman & Bruya of Seattle, Washington, for fuel characterization analysis. Results reported by Friedman & Bruya indicated that the product was gasoline with trace amounts of weathered diesel.

Tank removal activities are described in the December 1991 "Report of Findings, Underground Storage Tank Removal," prepared by the consultants for BAW and submitted to the ACHA.

Results presented in that report indicated that benzene was not detected in any soil samples collected by BAW from the UST excavation, and that total petroleum hydrocarbon (TPH) as gasoline (TPHg) concentrations in these soil samples were 3 parts per million (ppm) or less. Results for the grab ground-water sample collected from the UST excavation by BAW indicated the presence of benzene and TPHg at concentrations of 0.24 ppm and 8.8 ppm, respectively. Soil and ground-water samples were not submitted for laboratory analysis of TPH as diesel (TPHd).

On October 13, 1992, the ACHA sent a letter to Mr. Charles Wellnitz of BAW, directing BAW to conduct a ground-water investigation at the BAW property to assess the possible effect of petroleum hydrocarbons from the former UST on shallow ground water in the vicinity of the tank excavation. Because BAW has refused to perform any such investigation, Catellus was compelled to proceed with installation of the monitoring well. Levine•Fricke installed monitoring well LF-32 on May 20, 1993, within 10 feet downgradient from the former tank excavation (Figure 2).

3.0 QUARTERLY MONITORING ACTIVITIES CONDUCTED DURING OCTOBER 1 THROUGH DECEMBER 31, 1993

A quarterly monitoring program was implemented at BAW in May 1993 accordance with Levine•Fricke's work plan dated April 30, 1993 (Levine•Fricke 1993). The activities conducted and the results obtained are presented below.

3.1 Collection of Water-Level Measurements

Depth to water was measured in well LF-32 on December 9, 1993, using an electric water-level sounding probe to the nearest 0.01 foot, relative to the top of the PVC well casing.

3.2 Ground-Water Sampling and Laboratory Analysis

Before ground-water samples were collected, three to four well volumes of water were purged from the well in accordance with procedures described in Appendix A. A copy of the water-quality sampling sheet showing parameter readings (pH, specific conductance, temperature) is included in Appendix B. After the well had been purged, ground-water samples were collected on December 9, 1993. A duplicate sample (LF-132) was collected for quality assurance/quality control purposes.

Ground-water samples were submitted to Anametrix, Inc., of San Jose, California, a state-certified laboratory, and analyzed for TPHg and BTEX using modified EPA Method 8015/8020, TPHd and TPH as motor oil (TPHmo) using EPA Method 3510 GCFID, and for total recoverable petroleum hydrocarbons as oil and grease (TRPH) using Standard Method 5520BF. The duplicate sample (LF-132) was submitted to the laboratory on a hold basis pending laboratory analysis.

3.3 Results of Monitoring Activities

The depth to water measured in well LF-32 on December 9, 1993, was 4.98 feet below ground surface, which corresponds to a ground-water elevation of 6.93 feet above mean sea level. This represents an increase in ground-water elevation of approximately 1.82 feet relative to the July 1993 measurement.

The ground-water flow direction beneath the site has historicaly been to the southwest. Based on the ground-water elevation measured in well LF-31 on December 9, 1993 (11.96), located approximately 650 feet northeast of well LF-32, the ground-water flow direction in the vicinity of well LF-32 likely continues to be toward the southwest.

Analytical results for ground-water samples collected from well LF-32 do not indicate the presence of TPHg, BTEX, or TRPH above laboratory detection limits (Table 1). TPHd and TPHmo were detected at low concentrations of 0.660 ppm and 0.360 ppm, respectively.

Laboratory data sheets for ground-water samples are presented in Appendix C.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Analytical results for ground-water samples collected from well LF-32 indicate that shallow ground water has not been significantly affected by petroleum hydrocarbons. TPHg and BTEX, which were previously detected at low concentrations in soil and ground-water samples collected during tank removal activities, were not identified above method detection limits in the ground-water samples collected from well LF-32. The detection of a low concentration of TPHd in ground water may be related to the trace amount of diesel detected in the product sample collected from the UST. Soil and ground-water samples collected during tank removal activities were not analyzed for the presence of TPHd.

Well LF-32 will continue to be monitored on a quarterly basis through March 1994 to assess the potential effects on shallow ground water from the possible release of petroleum hydrocarbons from the former UST.

REFERENCES

Levine·Fricke, Inc. 1991. Correspondence to Mr. Don Marini of Catellus Development Corporation. Subject: Summary of Underground Fuel Storage Tank Removal, Former Bay Area Warehouse, Yerba Buena Project Site, Emeryville and Oakland, California. December 9.

———. 1993. Levine·Fricke, Inc. 1993. Work Plan to Install One Ground-Water Monitoring Well and Conduct Quarterly Monitoring, Bay Area Warehouse Property, Emeryville, California. April 30.

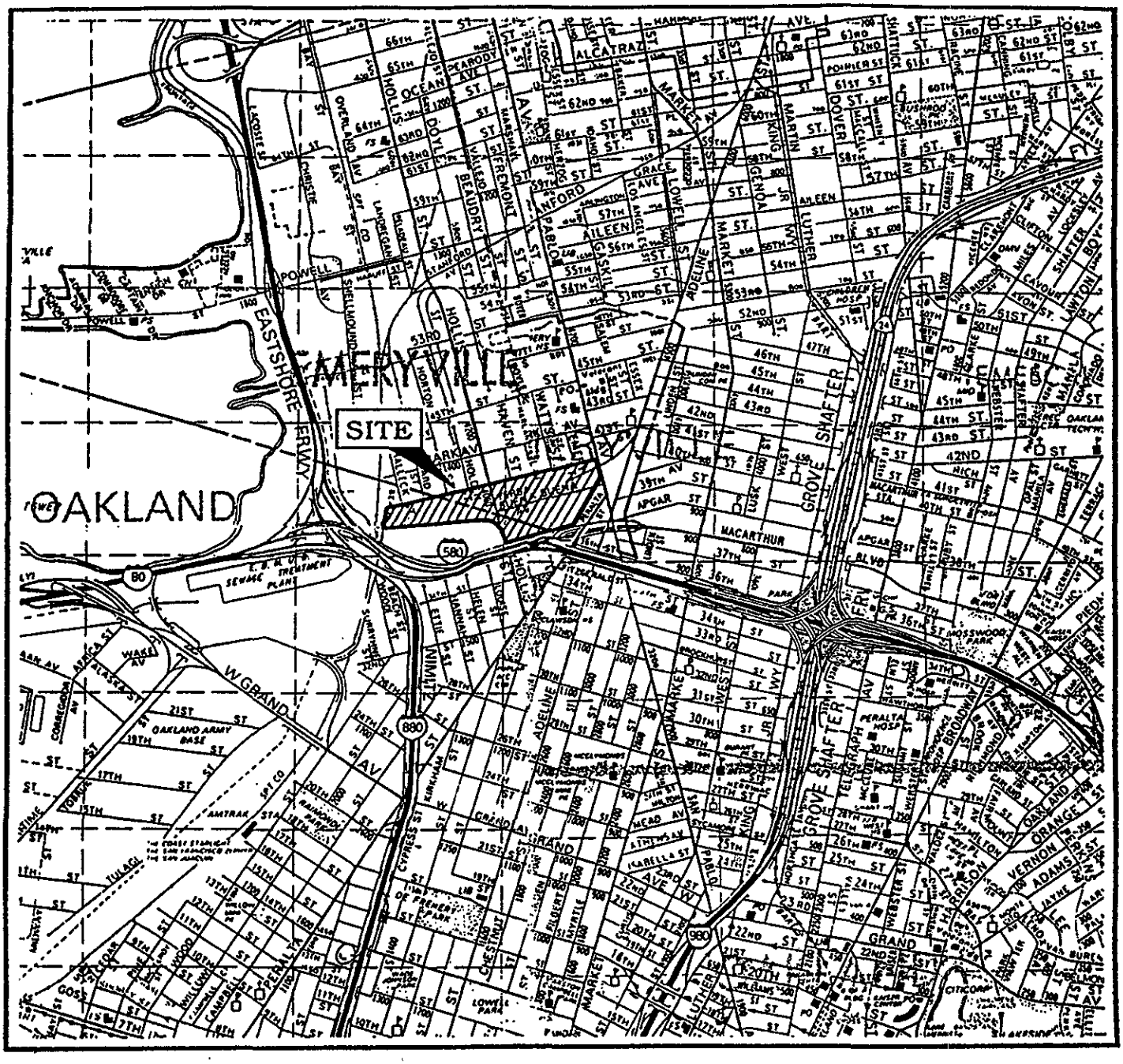
TABLE 1
CHEMICAL ANALYSIS RESULTS FOR MONITORING WELL LF-32
FORMER BAY AREA WAREHOUSE PROPERTY
(concentrations expressed in milligram per liter [mg/l])

Date	Lab	Notes	TPHg	Benzene	Toluene	Ethyl -benzene	Total Xylenes	Diesel
26-May-93	ANA		0.050	<0.0005	<0.0005	<0.0005	<0.0005	0.440
14-Jul-93	AEN		<0.050	<0.0005	<0.0005	<0.0005	<0.002	<0.050
14-Jul-93	ANA		<0.050	<0.0005	<0.0005	<0.0005	<0.005	0.230
09-Dec-93	ANA	(1)	<0.050	<0.0005	<0.0005	<0.0005	<0.005	0.660

Milligrams per liter is equivalent to parts per million.

TPHg = total petroleum hydrocarbons as gasoline
Diesel = extractable hydrocarbons as diesel
ANA = Anametrix, Inc., of San Jose, California
AEN = American Environmental Network of Pleasant Hill, California

(1) TPH as motor oil was detected at 0.360 ppm using EPA Method 3510 GCFID. Total petroleum hydrocarbons as oil and grease were not reported above the laboratory detection limit of 5 ppm.



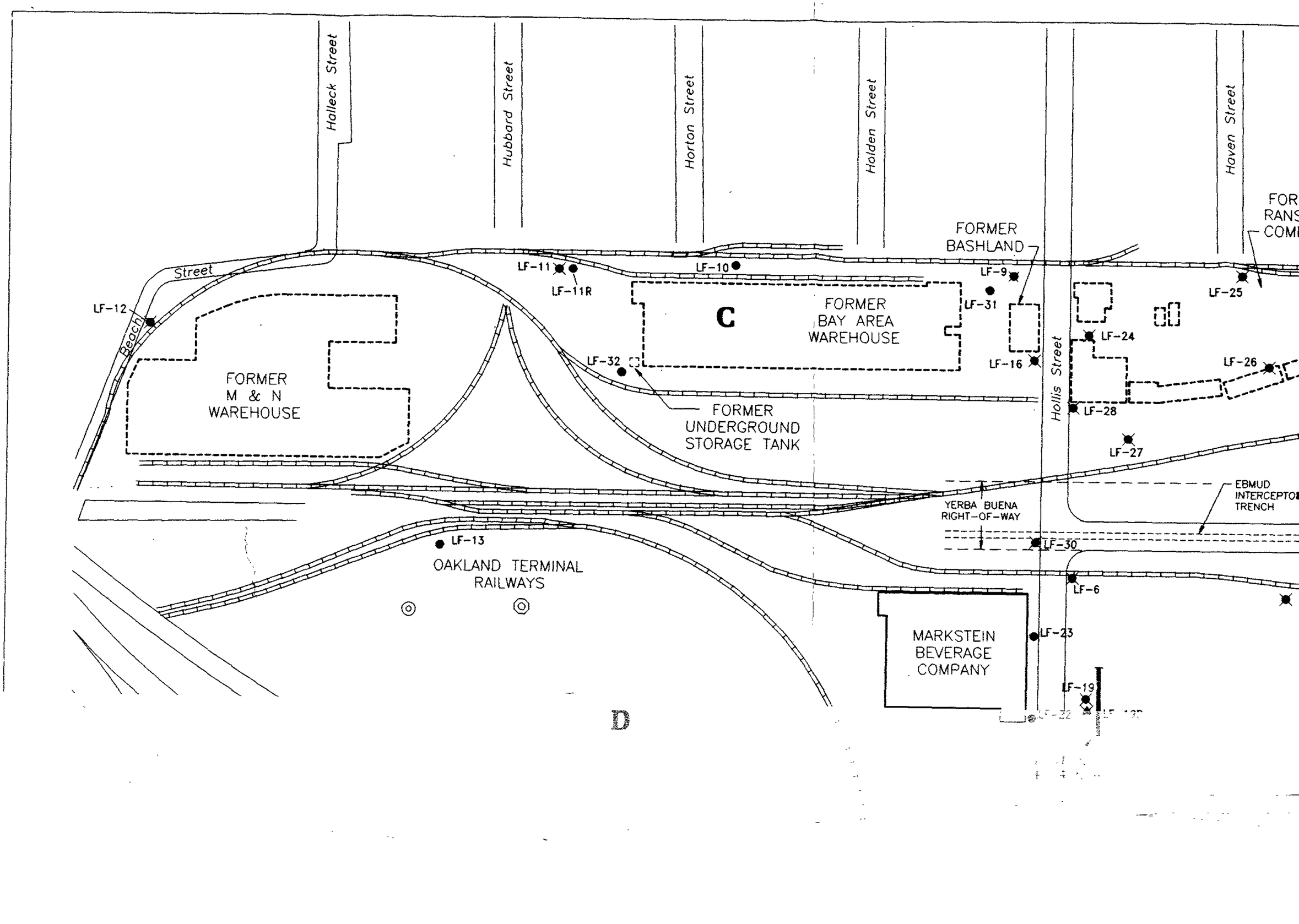
MAP SOURCE:
Alameda & Contra Costa Counties,
Thomas Bros. map, 1990 Edition

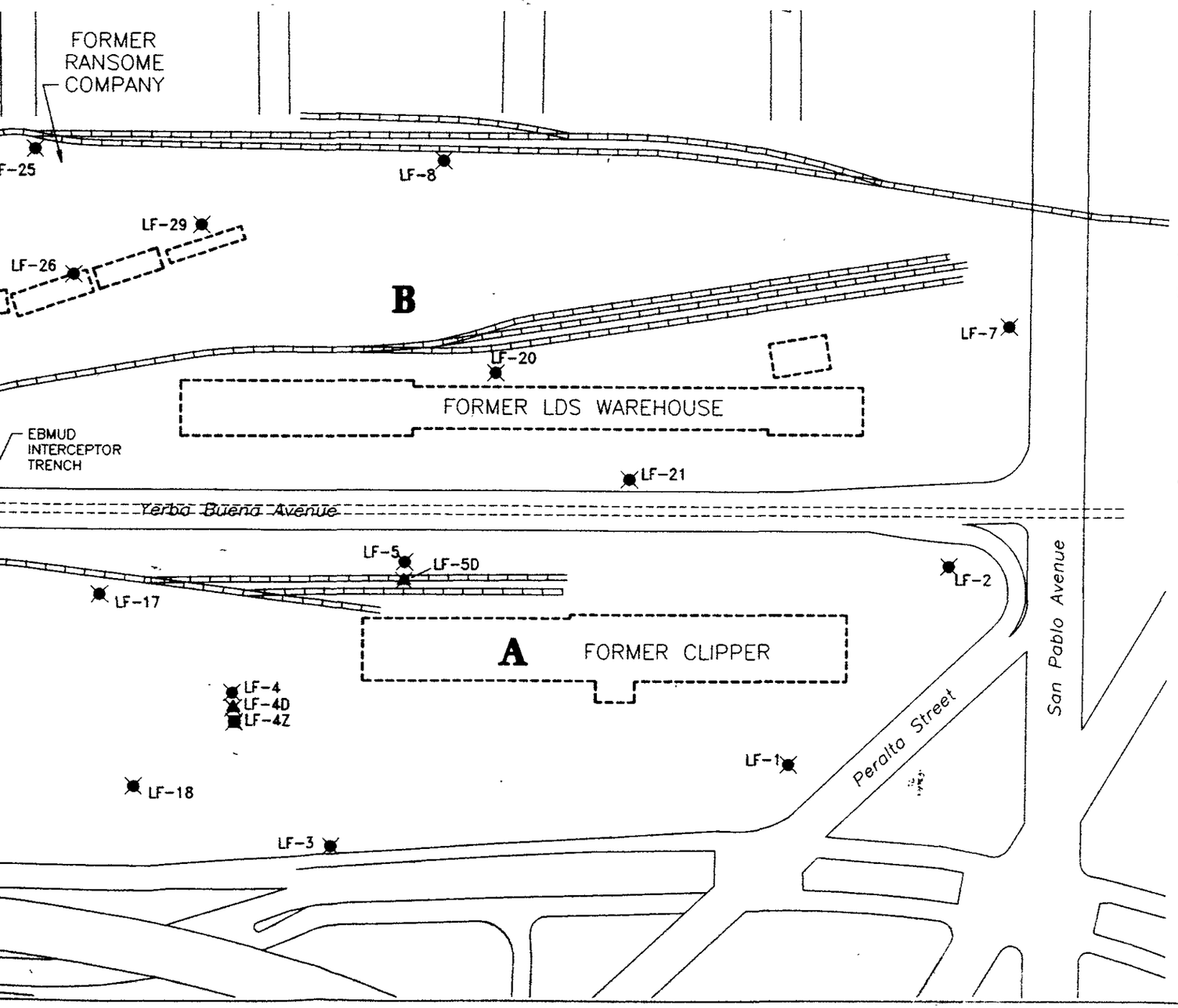
Figure 1 : SITE LOCATION MAP
YERBA BUENA PROJECT SITE

Project No. 1649

LEVINE • FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

1649ALS+8FEB91+nyt


Halleck Street
Hubbard Street
Horton Street
Holden Street
Haven Street
Hollis Street
Street
Beach
FORMER BASHLAND
FORMER BAY AREA WAREHOUSE
C
FORMER M & N WAREHOUSE
FORMER UNDERGROUND STORAGE TANK
LF-9
LF-10
LF-11
LF-11R
LF-12
LF-13
LF-16
LF-23
LF-24
LF-25
LF-26
LF-27
LF-28
LF-30
LF-31
LF-32
LF-6
LF-19
YERBA BUENA RIGHT-OF-WAY
EBMUD INTERCEPTOR TRENCH
OAKLAND TERMINAL RAILWAYS
MARKSTEIN BEVERAGE COMPANY
D



FORMER DEEPER (62 FEET) MONITORING WELL LOCATION

ABANDONED WELL

LOCATION OF FORMER BUSINESSES

0 150 300 FEET

Figure 2 :

SITE PLAN SHOWING
EXISTING AND ABANDONED
GROUND-WATER MONITORING WELLS

Project No. 1649

LEVINE-FRICKE
ENGINEERS, HYDROGEOLOGISTS, & APPLIED SCIENTISTS

APPENDIX A

GROUND-WATER SAMPLING PROCEDURES

GROUND-WATER SAMPLING PROCEDURES AND WATER-QUALITY SAMPLING SHEETS

Before sample collection, depth to static water was measured in well LF-32 and the volume of water in the well casing was calculated. Three to five well casing volumes of ground-water were then purged from the well using a submersible or centrifugal pump until indicator parameter readings (pH, specific conductance, and temperature) stabilized. Indicator parameters were measured using portable field instruments and measurements were recorded on a water-quality sampling form. Purging and sampling equipment was steam cleaned before use. Purged ground water was temporarily stored on site in 55-gallon drums.

A portion of the sample collected for analysis of TPHg and BTEX was placed into laboratory-supplied, 40-milliliter glass vials preserved with hydrochloric acid. The glass vials were filled to capacity, capped, and checked for trapped air bubbles. A portion of the sample collected for TPHd analyses was poured into laboratory-supplied 1-liter amber bottles. Filled sample vials were placed into an ice-chilled cooler immediately after collection for transportation under chain-of-custody protocols to a state-certified laboratory for chemical analysis.

Ground-water samples were submitted to Anametrix, a state-certified laboratory, under strict chain-of-custody protocol. For quality assurance/quality control measures, a duplicate sample also was collected from well LF-32. Laboratory certificates are included in Appendix C.

APPENDIX B

WATER-QUALITY SAMPLING SHEETS

LEVINE•FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name: Yerba Buena / Bay Area Warehouse — Project No. 1649.13

Date: 12-9-93 — Sample No. LF-32, LF-132

Samplers Name: SCH

Sampling Location: Emeryville

Sampling Method: Hand bail / Teflon bailer

Analyses Requested: TPHg + BTEX; TPHd; O+G ~~(?)~~ (520)

Number and Types of Sample Bottles used: 6 VOA/HCl; 4 amber; 2 amber/H_2SO_4

Method of Shipment: Courier

GROUND WATER

Well No. LF-32

Well Diameter (in.) 2

Depth to Water, Static (ft) 4.98

Water in Well Box

Well Depth (ft) 20.22

Height of Water Column in Well 15.24

Water Volume in Well 2.43 ≅ 2.5

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently? yes

Other

2-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

LOCATION MAP

20.22
4.98
1524
16
9144
15240
24384

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (umhos/cm)	OTHER		REMARKS
1010								pH, Cond. Calib
1014								start bailing
1019		2.5	15.8	6.75	1036			Mod. Turbid
1024		5.0	15.8	6.83	1080			"
1029		7.5	15.8	6.87	1088			" / Stop
1040								Sample LF-32
1050								LF-132
1046	~~(?)~~ 5.00							

Suggested Method for Purging Well

APPENDIX C

LABORATORY DATA SHEETS FOR GROUND-WATER SAMPLES

file 1649.13

Inchcape Testing Services
Anametrix Laboratories

1961 Concourse Drive
Suite E
San Jose, CA 95131
Tel: 408-432-8192
Fax: 408-432-8198

MS. JENIFER BEATTY
LEVINE-FRICKE
1900 POWELL STREET 12TH FLOOR
EMERYVILLE, CA 94608

Workorder # : 9312133
Date Received : 12/10/93
Project ID : 1649.13
Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9312133- 1	LF-32
9312133- 2	LF-132

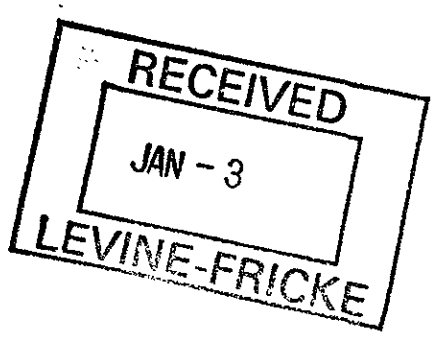
This report consists of 11 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Sarah Schoen, Ph.D.
Laboratory Director

12-27-93
Date



REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MS. JENIFER BEATTY
LEVINE-FRICKE
1900 POWELL STREET 12TH FLOOR
EMERYVILLE, CA 94608

Workorder # : 9312133
Date Received : 12/10/93
Project ID : 1649.13
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9312133- 1	LF-32	WATER	12/09/93	TPHd
9312133- 1	LF-32	WATER	12/09/93	TPHgBTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MS. JENIFER BEATTY
LEVINE-FRICKE
1900 POWELL STREET 12TH FLOOR
EMERYVILLE, CA 94608

Workorder # : 9312133
Date Received : 12/10/93
Project ID : 1649.13
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Department Supervisor 12/27/93 Date

Chemist 12/27/93 Date

Organic Analysis Data Sheet
Total Petroleum Hydrocarbons as Gasoline with BTEX
ITS - Anametrix Laboratories - (408)432-8192

Lab Workorder : 9312133 Client Project ID : 1649.13

Matrix : WATER Units : ug/L

Compound Name	Method Reporting Limit*	Client ID LF-32 / Lab ID 9312133-01	Client ID / Lab ID BLANK	Client ID / Lab ID	Client ID / Lab ID	Client ID / Lab ID
Benzene	0.50	ND	ND			
Toluene	0.50	ND	ND			
Ethylbenzene	0.50	ND	ND			
Total Xylenes	0.50	ND	ND			
TPH as Gasoline	50.00	ND	ND			
Surrogate Recovery		85%	84%			
Instrument ID		HP4	HP4			
Date Sampled		12/09/93	N/A			
Date Analyzed		12/14/93	12/14/93			
RLMF		1	1			
Filename Reference		FPD13301.D	BD1401E1.D			

* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.
TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.
BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Joshi 12/27/93

Analyst Date

Ina Shea 12/27/93

Supervisor Date

Laboratory Control Spike Report
Total Petroleum Hydrocarbons as BTEX
ITS - Anametrix Laboratories - (408)432-8192

Instrument ID : HP4
Matrix : LIQUID

Analyst : [illegible]
Supervisor : IS
Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Benzene	20	100%	52-133
Toluene	20	90%	57-136
Ethylbenzene	20	95%	56-139
Total Xylenes	20	95%	56-141
Surrogate Recovery		92%	61-139
Date Analyzed		12/14/93	
Multiplier		1	
Filename Reference		MD1402E1.D	

* Limits established by Inchcape Testing Services, Anametrix Laboratories.

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS DIESEL
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9312133
Matrix : WATER
Date Sampled : 12/09/93
Date Extracted: 12/13/93

Project Number : 1649.13
Date Released : 12/27/93
Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)	Surrogate %Rec
9312133-01	LF-32	12/23/93	50	660	87%
BD1311F1	METHOD BLANK	12/21/93	50	ND	94%

Note : Reporting limit is obtained by multiplying the dilution factor times 50 ug/L.
The surrogate recovery limits for C25 are 30-130%.

ND - Not detected at or above the practical quantitation limit for the method.
TPHd - Total Petroleum Hydrocarbons as C12-C22 is determined by GCFID following sample extraction by EPA Method 3510.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst 12/27/93 Date

Supervisor 12/27/93 Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9312133
Matrix : WATER
Date Sampled : 12/09/93
Date Extracted: 12/13/93

Project Number : 1649.13
Date Released : 12/27/93
Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)	Surrogate %Rec
9312133-01	LF-32	12/23/93	100	360	87%
BD1311F1	METHOD BLANK	12/21/93	100	ND	94%

Note : Reporting limit is obtained by multiplying the dilution factor times 50 ug/L.
The surrogate recovery limits for C25 are 30-130%.

ND - Not detected at or above the practical quantitation limit for the method.
TPHd - Total Petroleum Hydrocarbons as C22-C36 is determined by GCFID following sample extraction by EPA Method 3510.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Reggie Dawson 12/27/93
Analyst Date

Irma Shor 12/27/93
Supervisor Date

TOTAL EXTRACTABLE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 3510 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : WATER
Date Sampled : N/A
Date Extracted: 12/13/93
Date Analyzed : 12/14/93

Anametrix I.D. : MD1311F1
Analyst : AS
Supervisor : LS
Date Released : 12/27/93
Instrument I.D.: HP23

COMPOUND	SPIKE AMT (ug/L)	LCS REC (ug/L)	% REC LCS	LCSD REC (ug/L)	% REC LCSD	RPD	% REC LIMITS
DIESEL	1250	1210	97%	1240	99%	2%	47-130
SURROGATE			101%		96%		30-130

* Quality control limits established by Anametrix, Inc.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MS. JENIFER BEATTY
LEVINE-FRICKE
1900 POWELL STREET 12TH FLOOR
EMERYVILLE, CA 94608

Workorder # : 9312133
Date Received : 12/10/93
Project ID : 1649.13
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9312133- 1	LF-32	WATER	12/09/93	5520BF

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MS. JENIFER BEATTY
LEVINE-FRICKE
1900 POWELL STREET 12TH FLOOR
EMERYVILLE, CA 94608

Workorder # : 9312133
Date Received : 12/10/93
Project ID : 1649.13
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for this sample.

Cathy McCloskey 12/17/93
Department Supervisor Date

[signature] 12.17.93
Chemist Date

ANALYSIS DATA SHEET - TOTAL RECOVERABLE PETROLEUM HYDROCARBONS AS OIL AND GREASE
ANAMETRIX LABORATORY (408) 432-8192

Project I.D. : 1649.13
Matrix : WATER
Date sampled : 12/09/93
Date extracted: 12/13/93
Date analyzed : 12/14/93

Anametrix I.D. : 9312133
Analyst : M.P
Supervisor : [signature]
Date released : 12/15/93

Workorder #	Sample I.D.	Reporting Limit (mg/L)	Amount Found (mg/L)
9312133-01	LF-32	5	ND
BD1311W4	METHOD BLANK	5	ND

ND - Not detected above the reporting limit for the method.
TRPH - Total Recoverable Petroleum Hydrocarbons are determined by Standard Method 5520BF.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

LAB CONTROL SAMPLE REPORT - TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
AS OIL AND GREASE
STANDARD METHOD 5520BF
ANAMETRIX LABORATORIES (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : WATER
Date sampled : N/A
Date extracted : 12/13/93
Date analyzed : 12/14/93

Anametrix I.D. : MD1311W4
Analyst : M.P
Supervisor : CM
Date Released : 09/15/93

COMPOUND	SPIKE AMT. (mg/L)	LCS (mg/L)	%REC LCS	LCSD (mg/L)	%REC LCSD	%RPD	%REC LIMITS
Motor Oil	50	43	86	42	84	2	44-128

* Quality control limits established by Anametrix Laboratories.

#4986 9310-136 (8) 10/15

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 1649.13	Field Logbook No.:	Date: 12-9-93	Serial No.:
Project Name: Yerba Buena	Project Location: Emeryville		No. 12632
Sampler (Signature): Prescott C. Thedl			Samplers: SCH

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPH gas/BTEX	TPH diesel	oil+grease SM5520		HOLD	RUSH	REMARKS
(1) LF·32	12/9/93	1040		7	H_2O			3	2	2				Normal TAT
(2) LF·132	↓	1050	SCH75		↓			3	2	~~2~~ SCH				Results to Jenifer Beatty
														Invoice Cal/Mus. FAX/CC results to Levine-Fricke

RELINQUISHED BY: (Signature) Prescott C. Thedl	DATE 12-10-93	TIME 1245	RECEIVED BY: (Signature) Benny L. Canizares	DATE 12-10-93	TIME 1245
RELINQUISHED BY: (Signature) Benny L. Canizares	DATE 12-10-93	TIME 1345	RECEIVED BY: (Signature)	DATE 12/10/93	TIME 13:45
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: Courier	DATE	TIME	LAB COMMENTS:		

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

Analytical Laboratory:
Aramchrix, San Jose, CA

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