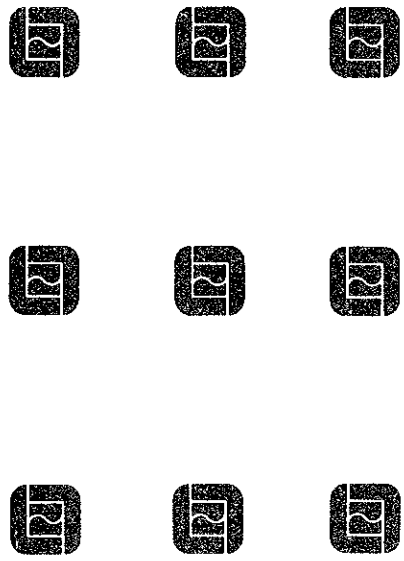


Remediation and Containment of Soil Excavated During Soil Remediation Activities
Beach Street Area
Yerba Buena/East Baybridge Center Project Site
Oakland, California

November 19, 1993
1649.00-16

Prepared for
Catellus Development Corporation
201 Mission Street, 30th Floor
San Francisco, California 94105

LEVINE·FRICKE

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

November 19, 1993 LF 1649.16

Ms. Susan Hugo
Hazardous Materials Specialist
Department of Environmental Health
Alameda County Health Care Services Agency
80 Swan Way, Room 200
Oakland, California 94621

Subject: Remediation and Containment of Soil Excavated During Soil Remediation Activities, Beach Street Area, Yerba Buena/East Baybridge Center Project Site

Dear Ms. Hugo:

The enclosed report presents analytical results for soil excavated and aerated or excavated and stockpiled during soil remediation activities conducted in the Beach Street Area of the Yerba Buena/East Baybridge Center Project Site. Soil excavation and remediation activities were described in our report entitled "Report on the Removal of Two Underground Fuel Storage Tanks and Soil Remediation Activities," dated October 20, 1993.

In the October report, we indicated that approximately 1,700 cubic yards of gasoline-affected soil excavated from the Beach Street Area were being aerated, and that a separate report would be prepared for submittal to the Alameda County Health Care Services Agency and the Regional Water Quality Control Board.

The enclosed report describes aeration of gasoline-affected soils, characterization of stockpiled soils, and containment of oil- and diesel-affected soil excavated from the Beach Street area.

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

If you have any questions or comments, please do not hesitate to call me or Michael Stoll.

Sincerely,

Cynthia Barclay for

Jenifer Beatty
Project Hydrogeologist

Enclosure

cc: Mr. Richard Hiett, Regional Water Quality Control Board
Ms. Kimberly Brandt, Catellus Development Corporation
Mr. Pat Cashman, Catellus Development Corporation

CONTENTS

CERTIFICATION

All hydrogeologic and geologic information, conclusions, and recommendations presented in this report 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)

11/19/93
Date

November 19, 1993 LF 1649.16

REMEDIATION AND CONTAINMENT OF SOIL EXCAVATED DURING SOIL REMEDIATION ACTIVITIES BEACH STREET AREA YERBA BUENA/EAST BAYBRIDGE CENTER PROJECT SITE OAKLAND, CALIFORNIA

1.0 INTRODUCTION

The Yerba Buena/East Baybridge Center Project Site is located in Emeryville and Oakland, California. Within the Oakland portion of this site is the Beach Street area ("the Site"; Figure 1).

Soil remediation activities conducted in the Beach Street Area from August 1993 through October 1993 were discussed in a report dated October 20, 1993 (Levine·Fricke 1993b), prepared by Levine·Fricke on behalf of Catellus Development Corporation ("Catellus"), the property owner. When that report was prepared, not all of the petroleum-affected soil excavated from the Site had been fully characterized or remediated. Levine·Fricke proposed submitting a separate report describing the characterization and management of petroleum-affected soil excavated from the Site upon completion of remedial activities. Those activities have been completed and this report is submitted to the Alameda County Health Care Services Agency (ACHA) and the Regional Water Quality Control Board (RWQCB) to describe the activities conducted.

All work described in this report was conducted in accordance with our "Work Plan to Conduct Soil Remediation Activities in the Beach Street Area," dated August 17, 1993, and submitted to the ACHA and RWQCB. The scope of work proposed in the work plan was verbally approved by Ms. Susan Hugo of the ACHA and Mr. Richard Hiett of the RWQCB in a meeting on August 4, 1993, with representatives of Catellus and Levine·Fricke.

2.0 REMEDIATION AND CHARACTERIZATION OF EXCAVATED SOIL

During remediation activities, approximately 6,000 cubic yards (cy) of petroleum-affected soils were excavated from the Site.

Approximately 1,700 cy of the excavated soil, which was suspected of containing gasoline, was segregated and placed in an aeration bed constructed at the Site for remediation.

Aeration activities complied with the Bay Area Air Quality Management District's (BAAQMD) Rule 8, Regulation 40. The successfully aerated soils are located in the on-site aeration beds.

During excavation activities, approximately 4,300 cy of excavated petroleum-affected soil was stockpiled on plastic sheeting at the Site. These soils are discussed in Section 2.3.

2.1 Aeration of Gasoline-Affected Soil

As discussed in our October 20, 1993 report, soil excavated from the Site was screened for volatile organic compounds (VOCs) using a photoionization detector (PID), to identify soil containing elevated concentrations of total petroleum hydrocarbons as gasoline (TPHg). Soil suspected of containing TPHg based on PID readings or visual or olfactory observations was placed directly onto the aeration bed in layers approximately 1 foot thick.

The gasoline-affected soils were aerated during and following soil remediation activities (August through October) to reduce TPHg and BTEX concentrations to below aeration criteria established for the Yerba Buena/East Baybridge Center Project Site. These aeration criteria are 10 parts per million (ppm) TPHg, 1 ppm total toluene, ethylbenzene, and xylenes (TEX), and below laboratory detection limits for benzene (Levine•Fricke 1992).

Soil on the aeration beds was turned periodically during and following soil remediation activities using a rototiller to enhance the aeration process. The soil was mixed in this manner until sampling and analysis indicated that the soil had been successfully aerated.

2.2 Characterization of Aerated Soils

On September 30, 1993, six preliminary soil samples (AB1 through AB6) were collected from areas of the aeration bed where PID readings indicated the presence of VOCs. The soil samples were collected at depths of 6 to 12 inches beneath the soil surface at locations distributed evenly over the area of the aeration bed. The soil samples were submitted to Anametrix, Inc., of San Jose, California, for analysis of TPHg and BTEX using modified EPA Methods 5030 and 8020, respectively. Analytical results are presented in Table 1. As presented in Table 1, four of the six soil samples contained concentrations of TPHg and/or benzene, toluene,

ethylbenzene, and xylenes (BTEX compounds) at concentrations exceeding aeration criteria for the Site.

Based on these results, remediation of the soil was continued for another four weeks. On November 2, 1993, seven soil samples (AB7 through AB13) were collected from randomly selected locations to provide areal coverage of the aeration bed. Soil samples were submitted to the analytical laboratory for analysis of TPHg and BTEX. PID readings measured in various areas of the aeration bed before samples were collected did not indicate the presence of VOCs.

Analytical results for the second round of sampling are included in Table 1. Results indicated that the TPHg and BTEX concentrations were well below the aeration criteria. Analytical results did not indicate the presence of benzene, toluene, or ethylbenzene above laboratory detection limits (0.005 ppm) in any of the samples collected. Xylene was detected in two of the seven samples at concentrations of 0.009 ppm and 0.006 ppm, which was below the aeration criterion. TPHg was detected above laboratory detection limits (0.5 ppm) in five of the seven samples ranging from 0.60 ppm to 0.98 ppm, well below the aeration criteria for TPHg of 10 ppm.

Based on these results, 10 additional soil samples (AB14 through AB23) were collected on November 12, 1993, to verify that soil had been remediated. No benzene was detected in any of the samples and concentrations of TPHg and combined TEX, if detected, were well below the aeration criteria (Table 1). Laboratory certificates are contained in Appendix A.

The analytical data were evaluated using guidelines outlined in Chapter 9 of the Environmental Protection Agency Office of Solid Waste Management Document SW-846, Test Methods for Evaluating Solid Waste (hereafter "EPA SW-846"), as described in Appendix B, to assess whether the soil had been sufficiently characterized. The results of this evaluation, are presented in Table B1. These results indicate that a sufficient number of samples have been collected from the aeration beds to adequately characterize the soil, with a 95 percent confidence level. Therefore, no additional soil samples were collected.

2.3 Evaluation of Oil- and Diesel-Affected Soil

Excavated soils containing elevated concentrations of oil and/or diesel are stockpiled on site. A total of 19 composite soil samples were collected for chemical analysis from these

stockpiled soils from August 27, 1993 through October 7, 1993. Analytical results are presented in Table 2. Laboratory certificates are contained in Appendix A.

Seven of the samples (USP1 through USP7) were analyzed for TPHg, BTEX, TPH as diesel (TPHd), TPH as motor oil (TPHmo), and oil and grease (O&G). Twelve of the samples (P1 through P12) were analyzed for TPHg and BTEX only to confirm the nondetection of these compounds. Each sample analyzed was a composite of three to four soil samples. (Sample compositing was performed by the laboratory.) The results generally do not indicate the presence of TPHg or BTEX above aeration criteria. Results for two of the samples (P5-1B and P11-3B) indicate TPHg at concentrations of 15 ppm and 14 ppm, respectively. However, the laboratory quality assurance/quality control (QA/QC) summary report indicates that the concentrations reported as TPHg are primarily due to the presence of a heavier petroleum product of hydrocarbon range C_9 to C_{14}, possibly diesel fuel. It should also be noted that no associated BTEX compounds were detected in sample P5-1B, benzene was not detected above laboratory detection limits in sample P11-3B, and the concentration of combined TEX in sample P11-3B was well below 1 ppm (0.59 ppm). As a further proactive remediation measure, soil from the vicinity of soil sample locations P5-1B and P11-3B was moved onto the aeration bed.

Based on these results and results for soil samples collected during previous remediation activities, it appears that petroleum-affected soil stockpiled at the Site has not been significantly affected by TPHg or BTEX. Additionally, soil currently stockpiled at the Site likely will "aerate" further during soil management activities discussed in Section 3.0.

With the exception of soil samples USP1 through USP7 collected from the stockpiled soil, samples collected from the aeration bed and stockpiled soil were not analyzed for the presence of TPHd or O&G. Analytical results for 43 soil samples collected during previous soil remediation activities (Tables 1 and 2 of Levine•Fricke 1993b) indicate concentrations of TPHd and O&G range from below laboratory detection limits to 1,700 ppm and 12,000 ppm, respectively. These concentrations for TPHd and O&G are similar to and lower than, respectively, the concentrations of these compounds detected in soil excavated from other areas of the Yerba Buena/East Baybridge Center Project Site and approved for containment by the ACHA and the RWQCB (Levine•Fricke 1992).

3.0 CONTAINMENT OF OIL- AND DIESEL-AFFECTED SOIL

Soils excavated from the Site, including successfully aerated soils, are present at the Site in stockpiles or in the aeration bed. These soils likely will be contained on site (east of Hollis Street) in accordance with verbal approval from the ACHA and RWQCB in a meeting on August 4, 1993, and with the regulatory-approved Containment Plan for the Yerba Buena/East Baybridge Center Project Site (Levine·Fricke 1992).

In accordance with the Containment Plan, diesel- and oil-affected soil will be placed beneath proposed building pads and/or in areas to be covered with asphalt or concrete (parking lots) during Phase I Development activities to be conducted east of Hollis Street. Additional soil samples will be collected for chemical analysis following placement of soil to document concentrations of diesel and oil in soil contained on site.

Placement of the soils beneath proposed building pads, asphalt, and/or concrete will minimize possible exposure to the affected soils and mitigate future effects to shallow ground water by reducing surface infiltration through soil. To monitor future effects of TPH-affected soil on ground water beneath the Site, ground-water samples collected from selected ground-water monitoring wells during monitoring activities will be analyzed for TPHmo and TPHd on a periodic basis in accordance with the Levine·Fricke work plan dated April 28, 1993 (Levine·Fricke 1993a).

REFERENCES

Levine•Fricke, Inc. 1992. Soil Remediation Activities Report, Former Ransome Property, Yerba Buena Project Site, Emeryville, California. December 21.

———. 1993a. Work Plan for Site Characterization and Remediation Activities to be Conducted in Conjunction with Proposed Site Development, Yerba Buena Project Site, Emeryville and Oakland, California. April 28.

———. 1993b. Report on the Removal of Two Underground Fuel Storage Tanks and Soil Remediation Activities, Beach Street Area, Yerba Buena/East Baybridge Project Site, Oakland, California. October 20.

TABLE 1
ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM THE AERATION BED
BEACH STREET AREA, OAKLAND, CALIFORNIA
(concentrations reported in milligrams per kilogram [mg/kg])

Sample ID	Date	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes
AB-1	30-Sep-93	0.59	<0.005	<0.005	0.011	0.024
AB-2	30-Sep-93	18	0.061	0.052	0.18	0.42
AB-3	30-Sep-93	59	0.39	0.46	0.87	1.0
AB-4	30-Sep-93	130	<0.005	0.44	0.62	4.1
AB-5	30-Sep-93	49	0.09	0.088	0.46	0.89
AB-6	30-Sep-93	1.5	<0.005	0.012	0.029	0.066
Soils Aerated for Four Additional Weeks						
AB-7	02-Nov-93	<0.50	<0.005	<0.005	<0.005	<0.005
AB-8	02-Nov-93	0.50	<0.005	<0.005	<0.005	<0.005
AB-9	02-Nov-93	0.88	<0.005	<0.005	<0.005	0.009
AB-10	02-Nov-93	0.98	<0.005	<0.005	<0.005	0.006
AB-11	02-Nov-93	0.60	<0.005	<0.005	<0.005	<0.005
AB-12	02-Nov-93	0.60	<0.005	<0.005	<0.005	<0.005
AB-13	02-Nov-93	0.66	<0.005	<0.005	<0.005	<0.005
AB-14	12-Nov-93	<0.50	<0.005	<0.005	<0.005	<0.005
AB-15	12-Nov-93	<0.50	<0.005	<0.005	<0.005	<0.005
AB-16	12-Nov-93	<0.50	<0.005	<0.005	<0.005	<0.005
AB-17	12-Nov-93	0.75	<0.005	<0.005	<0.005	0.007
AB-18	12-Nov-93	<0.50	<0.005	0.006	0.010	0.030
AB-19	12-Nov-93	<0.50	<0.005	<0.005	<0.005	<0.005
AB-20	12-Nov-93	0.63	<0.005	<0.005	<0.005	<0.005
AB-21	12-Nov-93	<0.50	<0.005	<0.005	0.006	0.012
AB-22	12-Nov-93	1.90	<0.005	<0.005	<0.005	0.019
AB-23	12-Nov-93	0.59	<0.005	<0.005	0.008	0.022

Data entered by MEK/11, 15 Nov 93 Data proofed by JTB

One milligram per kilogram is equivalent to one part per million.
TPHg - Total petroleum hydrocarbons as gasoline using EPA Method 5030
Benzene, toluene, ethylbenzene, and total xylenes using EPA Method 8020

Analyses performed by Anametrix Laboratories, San Jose, California.

TABLE 2
ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM STOCKPILED SOIL
(concentrations reported in milligrams per kilogram [mg/kg])

Sample ID	Date	Notes	TPHd	Oil & Grease	TPHmo	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes
USP1	27-Aug-93		<200	3,400	1,100	<0.5	<0.005	<0.005	<0.005	<0.005
USP2	27-Aug-93		<200	2,000	930	<0.5	<0.005	<0.005	<0.005	<0.005
USP3	27-Aug-93		<200	4,200	1,000	<0.5	<0.005	<0.005	<0.005	<0.005
USP4	27-Aug-93		<200	3,500	620	<0.5	<0.005	<0.005	<0.005	<0.005
USP5	27-Aug-93		<200	2,400	640	<0.5	<0.005	<0.005	<0.005	<0.005
USP6	27-Aug-93		<200	1,600	410	<0.5	<0.005	<0.005	<0.005	<0.005
USP7	27-Aug-93		<200	1,900	570	<0.5	<0.005	<0.005	<0.005	<0.005
P1-3C	14-Sep-93		NA	NA	NA	<0.5	<0.005	<0.005	<0.005	<0.005
P2-3B	14-Sep-93	(1)	NA	NA	NA	1.2	<0.005	<0.005	<0.005	0.014
P3-2C	14-Sep-93	(1)	NA	NA	NA	<0.5	<0.005	<0.005	<0.005	<0.005
P4-3A	14-Sep-93		NA	NA	NA	0.86	<0.005	<0.005	<0.005	<0.005
P5-1B	20-Sep-93	(1)	NA	NA	NA	15	<0.005	<0.005	<0.005	<0.005
P6-2B	20-Sep-93	(1)	NA	NA	NA	0.6	<0.005	<0.005	<0.005	<0.005
P7-1A	20-Sep-93		NA	NA	NA	<0.5	<0.005	<0.005	<0.005	<0.005
P8-3C	07-Oct-93		NA	NA	NA	<0.5	<0.005	<0.005	<0.005	<0.005
P9-2C	07-Oct-93		NA	NA	NA	<0.5	<0.005	<0.005	<0.005	<0.005
P10-2B	07-Oct-93		NA	NA	NA	<0.5	<0.005	<0.005	0.005	0.017
P11-3B	07-Oct-93		NA	NA	NA	14	<0.005	0.032	0.032	0.53
P12-2A	07-Oct-93	(1)	NA	NA	NA	<0.5	<0.005	<0.005	<0.005	<0.005

Data entered by MEK/11,12-Oct-93. Data proofed by JJB.

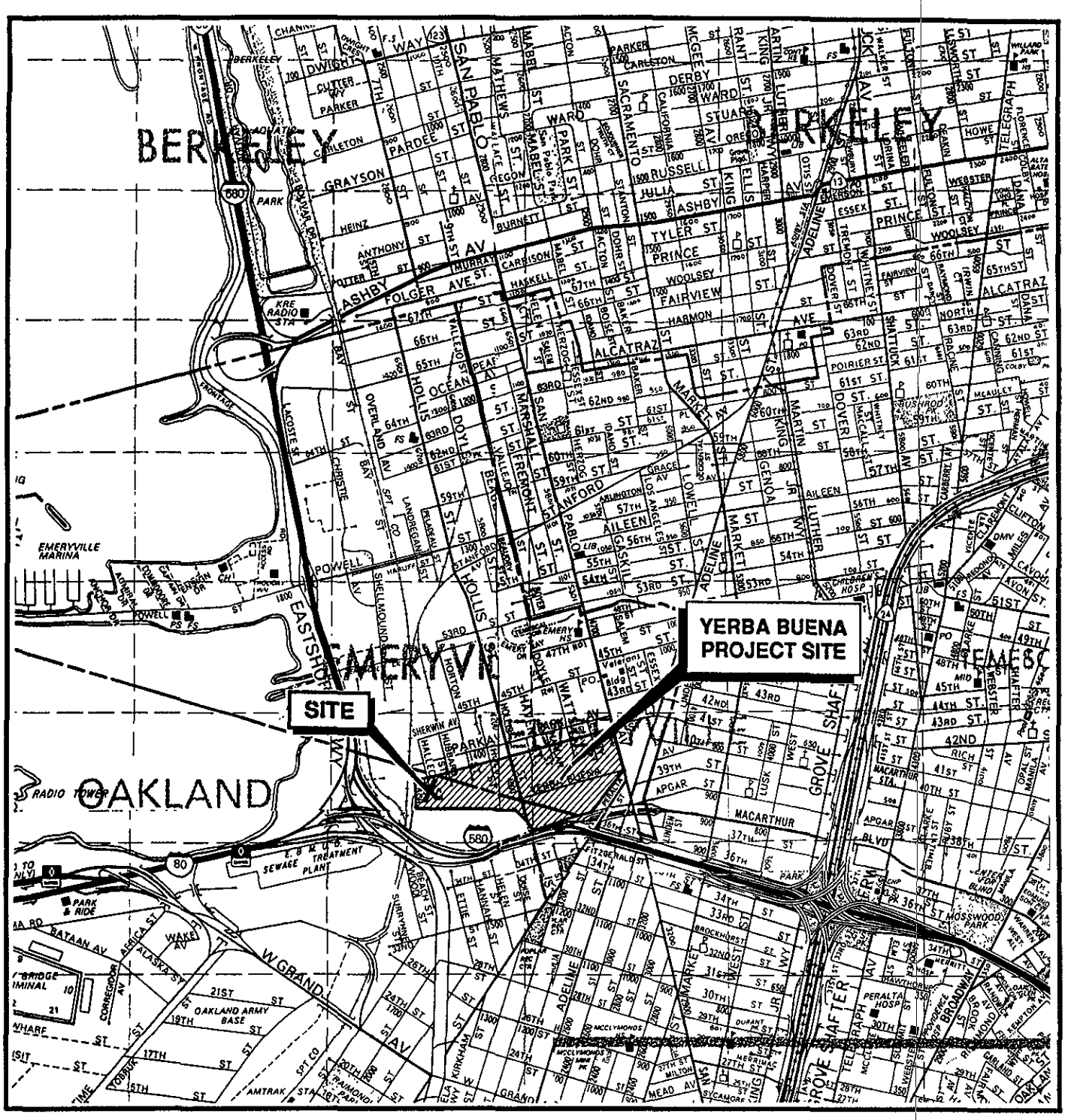
One milligram per kilogram is equivalent to one part per million.

TPHd - Total petroleum hydrocarbons as diesel using EPA Method 3550
Oil and grease using Standard Method 5520 E,F
TPHmo - Total petroleum hydrocarbons as motor oil using EPA Method 3550
TPHg - Total petroleum hydrocarbons as gasoline using EPA Method 5030
Benzene, toluene, ethylbenzene, and total xylenes using EPA Method 8020
NA - sample not analyzed for that particular compound

USP - Upper 3 feet of soil from the excavation limits. This soil was later added to the nongasoline-affected stockpile.

Analyses performed by Anametrix Laboratories, San Jose, California.

(1) The concentration reported as gasoline is primarily due to the presence of a heavier petroleum produc hydrocarbon range C9-C14, possibly diesel fuel. As a precaution, this soil was moved to the aeration bed for remediation.



MAP SOURCE:
Thomas Bros. Map
Alameda and Contra Costa Counties
1992 EDITION

Figure 1: SITE LOCATION MAP

Project No. 1649.16

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

MJS29JUL93RYL

APPENDIX A

AERATION BED SOIL SAMPLES

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 # : 9309380
Date Received : 09/30/93
Project ID : 1649.16
Purchase Order: N/A

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

ANAMETRIX ID	CLIENT SAMPLE ID
9309380- 1	AB-1
9309380- 2	AB-2
9309380- 3	AB-3
9309380- 4	AB-4
9309380- 5	AB-5
9309380- 6	AB-6

This report consists of 9 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

10-7-93
Date

COPY

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

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

Workorder # : 9309380
Date Received : 09/30/93
Project ID : 1649.16
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentrations reported as gasoline for all samples in this workorder are primarily due to the presence of a heavier petroleum product of hydrocarbon range C9-C14, possibly diesel fuel.
- The recoveries of the BTEX matrix spike and matrix spike duplicate on sample AB-6 for ethylbenzene and total xylenes are outside of quality control limits due to a soil matrix effect.

Cheryl Bairman 10/7/93
Department Supervisor Date

Reggie Dawson 10/7/93
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9309380 Project Number : 1649.16
Matrix : SOIL Date Released : 10/06/93
Date Sampled : 09/30/93

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# AB-6 -06	Sample I.D.# BO0401E2 BLANK	Sample I.D.# BO0501E2 BLANK
Benzene	0.005	ND	ND	ND
Toluene	0.005	0.012	ND	ND
Ethylbenzene	0.005	0.029	ND	ND
Total Xylenes	0.005	0.066	ND	ND
TPH as Gasoline	0.5	1.5	ND	ND
% Surrogate Recovery		111%	105%	110%
Instrument I.D.		HP4	HP4	HP4
Date Analyzed		10/04/93	10/04/93	10/05/93
RLMF		1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Reggie Dawson 10/7/93
Analyst Date

Supervisor Date

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1649.16 AB-2
Matrix : SOIL
Date Sampled : 09/30/93
Date Analyzed : 10/04/93

Anametrix I.D. : 09380-02
Analyst :
Supervisor : BP
Date Released : 10/06/93
Instrument I.D.: HP4

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	REC MS (mg/Kg)	% REC MS	REC MD (mg/Kg)	% REC MD	RPD	% REC LIMITS
BENZENE	0.500	0.000	0.364	73%	0.383	77%	5%	45-139
TOLUENE	0.500	0.012	0.412	80%	0.480	94%	15%	51-138
ETHYLBENZENE	0.500	0.029	0.462	87%	0.494	93%	7%	48-146
TOTAL XYLENES	0.500	0.066	0.538	94%	0.531	93%	-1%	50-139
p-BFB				89%		86%		53-147

* Quality control limit established by Anametrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: MO0402E3
Matrix	: SOIL	Analyst	: RD
Date Sampled	: N/A	Supervisor	: CS
Date Analyzed	: 10/04/93	Date Released	: 10/06/93
		Instrument ID	: HP4

COMPOUND	SPIKE AMT (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
BENZENE	0.020	0.019	95%	52-133
TOLUENE	0.020	0.021	105%	57-136
ETHYLBENZENE	0.020	0.023	115%	56-139
TOTAL-XYLENES	0.020	0.022	110%	56-141
SURROGATE			96%	53-147

* Quality control limit established by Anametrix, Inc.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 1649.16	Field Logbook No.:	Date: 9/30/93	Serial No.: 8852
Project Name: Beach Street	Project Location: Emeryville		
Sampler (Signature): William Madison			Samplers: WEM

SAMPLES						ANALYSES							
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPHgas	BTEX			HOLD	RUSH	REMARKS
(1) AB-1	9/30/93			3	Soil			X	X				X	3-DAY TAT
(2) AB-2				3				X	X				X	Composite 3 TUBES
(3) AB-3				3				X	X				X	into 1 Sample
(4) AB-4				3				X	X				X	for each Sample.
(5) AB-5				3				X	X				X	Results to
(6) AB-6				3				X	X				X	Jenifer Beatty

RELINQUISHED BY: (Signature) William Madison	DATE 9/30/93	TIME 3:25	RECEIVED BY: (Signature) Jenny L. Langston	DATE 9/30/93	TIME 1525
RELINQUISHED BY: (Signature) Jenny L. Langston	DATE 9/30/93	TIME 1645	RECEIVED BY: (Signature)	DATE 9/30/93	TIME 16:45
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, Ca 94608
(415) 652-4500

Analytical Laboratory:
Anametrix

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink)

FORM NO. 86/COC/ARF

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 # : 9311029
Date Received : 11/02/93
Project ID : 1649.16
Purchase Order: N/A

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

ANAMETRIX ID	CLIENT SAMPLE ID
9311029- 1	AB7
9311029- 2	AB8
9311029- 3	AB9
9311029- 4	AB10
9311029- 5	AB11
9311029- 6	AB12
9311029- 7	AB13

This report consists of 6 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.

RECEIVED
- 9
LEVINE-FRICKE

Corinne Bacon for 11/8/93

Sarah Schoen, Ph.D. Date
Laboratory Director

COPY

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

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

Workorder # : 9311029
Date Received : 11/02/93
Project ID : 1649.16
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9311029- 1	AB7	SOIL	11/02/93	TPHgBTEX
9311029- 2	AB8	SOIL	11/02/93	TPHgBTEX
9311029- 3	AB9	SOIL	11/02/93	TPHgBTEX
9311029- 4	AB10	SOIL	11/02/93	TPHgBTEX
9311029- 5	AB11	SOIL	11/02/93	TPHgBTEX
9311029- 6	AB12	SOIL	11/02/93	TPHgBTEX
9311029- 7	AB13	SOIL	11/02/93	TPHgBTEX

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

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

Workorder # : 9311029
Date Received : 11/02/93
Project ID : 1649.16
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentrations reported as gasoline for samples AB8, AB9, AB10, AB11, AB12 and AB13 are primarily due to the presence of a heavier petroleum product of hydrocarbon range C9-C14, possibly diesel fuel.

Cheryl Bateman 11/5/93
Department Supervisor Date

Teresa Shor 11/5/93
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9311029
Matrix : SOIL
Date Sampled : 11/02/93

Project Number : 1649.16
Date Released : 11/05/93

	Reporting Limit	Sample I.D.# AB7	Sample I.D.# AB8	Sample I.D.# AB9	Sample I.D.# AB10	Sample I.D.# AB11
COMPOUNDS	(mg/Kg)	-01	-02	-03	-04	-05
Benzene	0.005	ND	ND	ND	ND	ND
Toluene	0.005	ND	ND	ND	ND	ND
Ethylbenzene	0.005	ND	ND	ND	ND	ND
Total Xylenes	0.005	ND	ND	0.009	0.006	ND
TPH as Gasoline	0.5	ND	0.50	0.88	0.98	0.60
% Surrogate Recovery		97%	120%	84%	86%	95%
Instrument I.D.		HP8	HP8	HP8	HP8	HP8
Date Analyzed		11/03/93	11/03/93	11/03/93	11/03/93	11/03/93
RLMF		1	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as C4-C12 is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Teresa Shaw 11/5/93
Analyst Date

Cheryl Bowman 11/5/93
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9311029
Matrix : SOIL
Date Sampled : 11/02/93

Project Number : 1649.16
Date Released : 11/05/93

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# AB12 -06	Sample I.D.# AB13 -07	Sample I.D.# BNO302E2 BLANK
Benzene	0.005	ND	ND	ND
Toluene	0.005	ND	ND	ND
Ethylbenzene	0.005	ND	ND	ND
Total Xylenes	0.005	ND	ND	ND
TPH as Gasoline	0.5	0.60	0.66	ND
% Surrogate Recovery		93%	100%	93%
Instrument I.D.		HP8	HP8	HP8
Date Analyzed		11/03/93	11/03/93	11/03/93
RLMF		1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as C4-C12 is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Analyst 11/5/93 Date

Supervisor 11/5/93 Date

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1649.16 AB11
Matrix : SOIL
Date Sampled : 11/02/93
Date Analyzed : 11/03/93

Anametrix I.D. : 11029-05
Analyst : IS
Supervisor : CS
Date Released : 11/05/93
Instrument I.D.: HP8

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	REC MS (mg/Kg)	% REC MS	REC MD (mg/Kg)	% REC MD	RPD	% REC LIMITS *
BENZENE	0.040	0.000	0.041	102%	0.038	95%	-8%	45-139
TOLUENE	0.040	0.000	0.039	98%	0.036	90%	-8%	51-138
ETHYLBENZENE	0.040	0.000	0.038	95%	0.034	85%	-11%	48-146
TOTAL XYLENES	0.040	0.000	0.043	108%	0.040	100%	-7%	50-139
p-BFB				113%		100%		53-147

* Quality control limits established by Anametrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : SOIL
Date Sampled : N/A
Date Analyzed : 11/03/93

Anametrix I.D. : MN0301E3
Analyst : IS
Supervisor : [illegible]
Date Released : 11/04/93
Instrument ID : HP8

COMPOUND	SPIKE AMT (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS *
BENZENE	0.020	0.020	100%	52-133
TOLUENE	0.020	0.021	105%	57-136
ETHYLBENZENE	0.020	0.022	110%	56-139
TOTAL-XYLENES	0.020	0.024	120%	56-141
SURROGATE			105%	53-147

* Quality control limits established by Anametrix, Inc.

[redacted] CHAIN [redacted] OF [redacted] ANALYSIS REQUEST [redacted] FORM 931029 (2)

Project No.: 1649.16	Field Logbook No.:	Date: 11-2-93	Serial No.: 11218
Project Name: Beach St, Yerba Buena	Project Location: Emeryville-Oakland, CA		
Sampler (Signature): Michael Stoll			Samplers: MJS

	SAMPLES						ANALYSES								
	SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPHgasoline	BTEX			HOLD	RUSH	REMARKS
1	AB7	11/2/93			1	Soil			X	X				X	48-hr TAT
2	AB8	"			"	"			X	X				X	"
3	AB9	"			"	"			X	X				X	"
4	AB10	"			"	"			X	X				X	"
5	AB11	"			"	"			X	X				X	"
6	AB12	"			"	"			X	X				X	"
7	AB13	X			X	X			X	X				X	"
															Results to: Jenifer Beatty

RELINQUISHED BY: (Signature) Michael Stoll	DATE 11-2-93	TIME 1425	RECEIVED BY: (Signature) Bonnie L. Carrington	DATE 11/2/93	TIME 1425
RELINQUISHED BY: (Signature) Bonnie L. Carrington	DATE 11-2-93	TIME 1640	RECEIVED BY: (Signature) [illegible]	DATE 11/2/93	TIME 16:40
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, Ca 94608
510 ~~(415)~~ 652-4500

Analytical Laboratory:
Anametrix Inc, San Jose, CA

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

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 # : 9311184
Date Received : 11/12/93
Project ID : 1649.16
Purchase Order: N/A

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

ANAMETRIX ID	CLIENT SAMPLE ID
9311184- 1	AB14
9311184- 2	AB15
9311184- 3	AB16
9311184- 4	AB17
9311184- 5	AB18
9311184- 6	AB19
9311184- 7	AB20
9311184- 8	AB21
9311184- 9	AB22
9311184-10	AB23

This report consists of 6 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

11/16/93
Date

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

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

Workorder # : 9311184
Date Received : 11/12/93
Project ID : 1649.16
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9311184- 1	AB14	SOIL	11/12/93	TPHgBTEX
9311184- 2	AB15	SOIL	11/12/93	TPHgBTEX
9311184- 3	AB16	SOIL	11/12/93	TPHgBTEX
9311184- 4	AB17	SOIL	11/12/93	TPHgBTEX
9311184- 5	AB18	SOIL	11/12/93	TPHgBTEX
9311184- 6	AB19	SOIL	11/12/93	TPHgBTEX
9311184- 7	AB20	SOIL	11/12/93	TPHgBTEX
9311184- 8	AB21	SOIL	11/12/93	TPHgBTEX
9311184- 9	AB22	SOIL	11/12/93	TPHgBTEX
9311184-10	AB23	SOIL	11/12/93	TPHgBTEX

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

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

Workorder # : 9311184
Date Received : 11/12/93
Project ID : 1649.16
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentrations reported as gasoline for samples AB17, AB20, AB22 and AB23 are primarily due to the presence of a heavier petroleum product of hydrocarbon range C9-C14, possibly diesel fuel.

Cheryl Bairner 11/15/93
Department Supervisor Date

Peggie Dawson 11/16/93
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9311184
Matrix : SOIL
Date Sampled : 11/12/93

Project Number : 1649.16
Date Released : 11/15/93

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# AB14 -01	Sample I.D.# AB15 -02	Sample I.D.# AB16 -03	Sample I.D.# AB17 -04	Sample I.D.# AB18 -05
Benzene	0.005	ND	ND	ND	ND	ND
Toluene	0.005	ND	ND	ND	ND	0.006
Ethylbenzene	0.005	ND	ND	ND	ND	0.010
Total Xylenes	0.005	ND	ND	ND	0.007	0.030
TPH as Gasoline	0.5	ND	ND	ND	0.75	ND
% Surrogate Recovery		86%	85%	90%	114%	101%
Instrument I.D.		HP8	HP8	HP8	HP8	HP4
Date Analyzed		11/12/93	11/12/93	11/12/93	11/12/93	11/13/93
RLMF		1	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Reggie Davison 11/16/93
Analyst Date

Cheryl Beaman 11/15/93
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9311184
Matrix : SOIL
Date Sampled : 11/12/93

Project Number : 1649.16
Date Released : 11/15/93

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# AB19 -06	Sample I.D.# AB20 -07	Sample I.D.# AB21 -08	Sample I.D.# AB22 -09	Sample I.D.# AB23 -10
Benzene	0.005	ND	ND	ND	ND	ND
Toluene	0.005	ND	ND	ND	ND	ND
Ethylbenzene	0.005	ND	ND	0.006	ND	0.008
Total Xylenes	0.005	ND	ND	0.012	0.019	0.022
TPH as Gasoline	0.5	ND	0.63	ND	1.9	0.59
% Surrogate Recovery		90%	96%	95%	100%	100%
Instrument I.D.		HP8	HP8	HP4	HP8	HP4
Date Analyzed		11/13/93	11/13/93	11/13/93	11/13/93	11/13/93
RLMF		1	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Peggie Davison 11/16/93
Analyst Date

Cheryl Bateman 11/15/93
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9311184
Matrix : SOIL
Date Sampled : N/A

Project Number : 1649.16
Date Released : 11/15/93

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# BN1201E1 BLANK	Sample I.D.# BN1301E1 BLANK
Benzene	0.005	ND	ND
Toluene	0.005	ND	ND
Ethylbenzene	0.005	ND	ND
Total Xylenes	0.005	ND	ND
TPH as Gasoline	0.5	ND	ND
% Surrogate Recovery		88%	98%
Instrument I.D.		HP8	HP4
Date Analyzed		11/12/93	11/13/93
RLMF		1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Peggie Davison 11/16/93
Analyst Date

Cheryl Barlow 11/15/93
Supervisor Date

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : SOIL
Date Sampled : N/A
Date Analyzed : 11/12/93

Anametrix I.D. : MN1201E3
Analyst : RD
Supervisor : [illegible]
Date Released : 11/15/93
Instrument ID : HP8

COMPOUND	SPIKE AMT (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS *
BENZENE	0.020	0.016	80%	52-133
TOLUENE	0.020	0.016	80%	57-136
ETHYLBENZENE	0.020	0.018	90%	56-139
TOTAL-XYLENES	0.020	0.017	85%	56-141
SURROGATE			101%	53-147

* Quality control limits established by Anametrix, Inc.

STOCKPILED SOIL SAMPLES

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 # : 9308441
Date Received : 08/27/93
Project ID : 1649.16
Purchase Order: N/A

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

ANAMETRIX ID	CLIENT SAMPLE ID
9308441- 1	USP1
9308441- 2	USP2
9308441- 3	USP3
9308441- 4	USP4
9308441- 5	USP5
9308441- 6	USP6
9308441- 7	USP7

This report consists of 14 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.

Larry Kent for SEP - 9 1993 9-8-93

Sarah Schoen, Ph.D.
Laboratory Director

Date

COPY

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

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

Workorder # : 9308441
Date Received : 08/27/93
Project ID : 1649.16
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9308441- 1	USP1	SOIL	08/27/93	TPHd
9308441- 2	USP2	SOIL	08/27/93	TPHd
9308441- 3	USP3	SOIL	08/27/93	TPHd
9308441- 4	USP4	SOIL	08/27/93	TPHd
9308441- 5	USP5	SOIL	08/27/93	TPHd
9308441- 6	USP6	SOIL	08/27/93	TPHd
9308441- 7	USP7	SOIL	08/27/93	TPHd
9308441- 1	USP1	SOIL	08/27/93	TPHgBTEX
9308441- 2	USP2	SOIL	08/27/93	TPHgBTEX
9308441- 3	USP3	SOIL	08/27/93	TPHgBTEX
9308441- 4	USP4	SOIL	08/27/93	TPHgBTEX
9308441- 5	USP5	SOIL	08/27/93	TPHgBTEX
9308441- 6	USP6	SOIL	08/27/93	TPHgBTEX
9308441- 7	USP7	SOIL	08/27/93	TPHgBTEX

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

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

Workorder # : 9308441
Date Received : 08/27/93
Project ID : 1649.16
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The recoveries of the gasoline matrix spike and matrix spike duplicate on sample USP4 are outside of quality control limits due to a soil matrix effect.
- The diesel surrogate recoveries for samples USP3, USP4, USP5, USP6 and USP7 are outside of quality control limits due to dilution.

Cheryl Baeman 9/7/93
Department Supervisor Date

Kamel G. Kamel 9/7/93
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9308441 Project Number : 1649.16
Matrix : SOIL Date Released : 09/07/93
Date Sampled : 08/27/93

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# USP1 -01	Sample I.D.# USP2 -02	Sample I.D.# USP3 -03	Sample I.D.# USP4 -04	Sample I.D.# USP5 -05
Benzene	0.005	ND	ND	ND	ND	ND
Toluene	0.005	ND	ND	ND	ND	ND
Ethylbenzene	0.005	ND	ND	ND	ND	ND
Total Xylenes	0.005	ND	ND	ND	ND	ND
TPH as Gasoline	0.5	ND	ND	ND	ND	ND
% Surrogate Recovery		80%	85%	82%	87%	87%
Instrument I.D.		HP4	HP4	HP4	HP4	HP4
Date Analyzed		08/31/93	08/31/93	08/31/93	09/01/93	09/01/93
RLMF		1	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Kamel G. Kamel 9/7/93
Analyst Date

Charlotte Bench 9.7.93
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9308441
Matrix : SOIL
Date Sampled : 08/27/93

Project Number : 1649.16
Date Released : 09/07/93

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# USP6 -06	Sample I.D.# USP7 -07	Sample I.D.# BG3101E2 BLANK	Sample I.D.# BG0101E2 BLANK
Benzene	0.005	ND	ND	ND	ND
Toluene	0.005	ND	ND	ND	ND
Ethylbenzene	0.005	ND	ND	ND	ND
Total Xylenes	0.005	ND	ND	ND	ND
TPH as Gasoline	0.5	ND	ND	ND	ND
% Surrogate Recovery		95%	89%	100%	103%
Instrument I.D.		HP4	HP4	HP4	HP4
Date Analyzed		09/01/93	09/01/93	08/31/93	09/01/93
RLMF		1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Kamel G. Kamel 9/7/93
Analyst Date

Charleston Burch 9.7.93
Supervisor Date

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

Anametrix W.O.: 9308441
Matrix : SOIL
Date Sampled : 08/27/93
Date Extracted: 08/31/93

Project Number : 1649.16
Date Released : 09/07/93
Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9308441-01	USP1	09/01/93	200	ND	99%
9308441-02	USP2	09/01/93	200	ND	36%
9308441-03	USP3	09/01/93	200	ND	21%
9308441-04	USP4	09/02/93	200	ND	18%
9308441-05	USP5	09/01/93	200	ND	8%
9308441-06	USP6	09/01/93	200	ND	4%
9308441-07	USP7	09/01/93	200	ND	2%
BG31H1F9	METHOD BLANK	09/01/93	10	ND	83%

Note : Reporting limit is obtained by multiplying the dilution factor times 10 mg/Kg.
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 are determined by GCFID following sample extraction by EPA Method 3510.

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

Kamel G. Kamel 9/7/93
Analyst Date

Charlesetta Burch 9.7.93
Supervisor Date

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

Anametrix W.O.: 9308441
Matrix : SOIL
Date Sampled : 08/27/93
Date Extracted: 08/31/93

Project Number : 1649.16
Date Released : 09/07/93
Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9308441-01	USP1	09/01/93	200	1100	99%
9308441-02	USP2	09/01/93	200	930	36%
9308441-03	USP3	09/01/93	200	1000	21%
9308441-04	USP4	09/02/93	200	620	18%
9308441-05	USP5	09/01/93	200	640	8%
9308441-06	USP6	09/01/93	200	410	4%
9308441-07	USP7	09/01/93	200	570	2%
BG31H1F9	METHOD BLANK	09/01/93	10	ND	83%

Note : Reporting limit is obtained by multiplying the dilution factor times 10 mg/Kg.
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 are determined by GCFID following sample extraction by EPA Method 3510.

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

Kamel G. Kamel 9/7/93
Analyst Date

Charleston Burch 9.7.93
Supervisor Date

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT
EPA METHOD 5030 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1649.16 USP4
Matrix : SOIL
Date Sampled : 08/27/93
Date Analyzed : 09/01/93

Anametrix I.D. : 08441-04
Analyst : KK
Supervisor : [illegible]
Date Released : 09/07/93
Instrument ID : HP4

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	REC MS (mg/Kg)	% REC MS	REC MD (mg/Kg)	% REC MD	RPD	% REC LIMITS
GASOLINE	1.00	0	0.36	36%	0.54	54%	40%	48-149
P-BFB				83%		85%		53-147

* Limits established by Anametrix, Inc.

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1649.16 USP7
Matrix : SOIL
Date Sampled : 08/27/93
Date Analyzed : 09/01/93

Anametrix I.D. : 08441-07
Analyst : KK
Supervisor : CMB
Date Released : 09/07/93
Instrument I.D.: HP4

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	REC MS (mg/Kg)	% REC MS	REC MD (mg/Kg)	% REC MD	RPD	% REC LIMITS
BENZENE	0.040	0.000	0.035	88%	0.035	88%	0%	45-139
TOLUENE	0.040	0.000	0.037	93%	0.040	100%	8%	51-138
ETHYLBENZENE	0.040	0.000	0.033	83%	0.036	90%	9%	48-146
TOTAL XYLENES	0.040	0.000	0.031	78%	0.036	90%	15%	50-139
p-BFB				64%		76%		53-147

* Quality control limit established by Anametrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: MG3102E1
Matrix	: SOIL	Analyst	: KK
Date Sampled	: N/A	Supervisor	:
Date Analyzed	: 09/01/93	Date Released	: 09/07/93
		Instrument I.D.	: HP4

COMPOUND	SPIKE AMT. (mg/Kg)	REC LCS (mg/Kg)	%REC LCS	% REC LIMITS
GASOLINE	0.50	0.42	84%	58-130
p-BFB			94%	53-147

* Quality control established by Anametrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : SOIL
Date Sampled : N/A
Date Analyzed : 09/01/93

Anametrix I.D. : MS0101E1
Analyst : KK
Supervisor : [illegible]
Date Released : 09/07/93
Instrument ID : HP4

COMPOUND	SPIKE AMT (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
BENZENE	0.020	0.013	65%	52-133
TOLUENE	0.020	0.017	85%	57-136
ETHYLBENZENE	0.020	0.017	85%	56-139
TOTAL-XYLENES	0.020	0.016	80%	56-141
P-BFB			95%	53-147

* Quality control limit established by Anametrix, Inc.

TOTAL EXTRACTABLE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 3550 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: MG31H1F9
Matrix	: SOIL	Analyst	: KK
Date Sampled	: N/A	Supervisor	:
Date Extracted	: 08/31/93	Date Released	: 09/07/93
Date Analyzed	: 09/01/93	Instrument I.D.	: HP23

COMPOUND	SPIKE AMT (mg/Kg)	REC LCS (mg/Kg)	% REC LCS	% REC LIMITS
DIESEL	125	91	73%	48-113
SURROGATE			95%	30-130

*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 # : 9308441
Date Received : 08/27/93
Project ID : 1649.16
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9308441- 1	USP1	SOIL	08/27/93	5520EF
9308441- 2	USP2	SOIL	08/27/93	5520EF
9308441- 3	USP3	SOIL	08/27/93	5520EF
9308441- 4	USP4	SOIL	08/27/93	5520EF
9308441- 5	USP5	SOIL	08/27/93	5520EF
9308441- 6	USP6	SOIL	08/27/93	5520EF
9308441- 7	USP7	SOIL	08/27/93	5520EF

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

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

Workorder # : 9308441
Date Received : 08/27/93
Project ID : 1649.16
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

QA/QC SUMMARY :

-Due to the high concentration of Total Recoverable Petroleum Hydrocarbons in the spiked sample, the recoveries of MS and MSD were outside of the quality control limits.

Department Supervisor 9/3/93 Date

Chemist 09/03/93 Date

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

Project # : 1649.16
Matrix : SOIL
Date sampled : 08/27/93
Date extracted: 08/31/93
Date analyzed : 09/01/93

Anametrix I.D. : 9308441
Analyst : GK
Supervisor : CP
Date released : 09/03/93

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9308441-01	USP1	30	3,400
9308441-02	USP2	30	2,000
9308441-03	USP3	30	4,200
9308441-04	USP4	30	3,500
9308441-05	USP5	30	2,400
9308441-06	USP6	30	1,600
9308441-07	USP7	30	1,900
BG31H1W9	METHOD BLANK	30	ND

ND - Not detected above the reporting limit for the method.
TRPH - Total Recoverable Petroleum Hydrocarbons are determined by Standard Method 5520EF, 18th edition.

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

MATRIX SPIKE REPORT - TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
AS OIL AND GREASE
ANAMETRIX LABORATORIES (408) 432-8192

Sample I.D.	: 1649.16, USP6MS, MD	Anametrix I.D.	: 9308441-06
Matrix	: SOIL	Analyst	: GE
Date sampled	: 08/27/93	Supervisor	: CM
Date extracted	: 08/31/93	Date Released	: 09/01/93
Date analyzed	: 09/01/93		

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	MS AMT (mg/Kg)	%REC MS	MD AMT (mg/Kg)	%REC MD	%RPD	% REC LIMITS
Motor Oil	300	1600	1700	33%	1700	33%	0%	48-114%

* Quality control limits established by Anametrix Laboratories.

TRPH - Total Recoverable Petroleum Hydrocarbons are determined by Standard Method 5520EF, 18th edition.

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

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: MG31H1W9
Matrix	: SOIL	Analyst	: HE
Date sampled	: N/A	Supervisor	: CM
Date extracted	: 08/31/93	Date Released	: 09/01/93
Date analyzed	: 09/01/93		

COMPOUND	SPIKE AMT. (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
PETROLEUM HYDROCARBON	300	280	93%	81-119%

Reference - Methods for Chemical Analysis of Water and Wastes, 3rd edition US-600/4-79-020, March 1983.

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

9308441 (2)

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 1649.16	Field Logbook No.:	Date: 8-27-93	Serial No.: 11124
Project Name: Beach Street - Yerba Buena	Project Location: Emeryville, CA		
Sampler (Signature): Michael Stoll			Samplers: MJS

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	5520 E&F TRPH	TPH gasoline	BTEX	TPH oil	TPH diesel	HOLD	RUSH	REMARKS
① USP1	8-27-93			4	Soil		X	X	X	X	X		X	Composite 4:1 for analysis
② USP2	↓			↓	↓		↓	↓	↓	↓	↓		↓	(4 tubes : 1 analysis) → 7 analyses
③ USP3	↓			↓	↓		↓	↓	↓	↓	↓		↓	
④ USP4	↓			↓	↓		↓	↓	↓	↓	↓		↓	
⑤ USP5	↓			↓	↓		↓	↓	↓	↓	↓		↓	
⑥ USP6	↓			↓	↓		↓	↓	↓	↓	↓		↓	
⑦ USP7	↓			↓	↓		↓	↓	↓	↓	↓		↓	
														Results to Jennifer Beatty
														5-day TAT

RELINQUISHED BY: (Signature) Michael Stoll	DATE 8-27-93	TIME 1307	RECEIVED BY: (Signature) Benny S. Carrizosa	DATE 8/27/93	TIME 1307
RELINQUISHED BY: (Signature) Benny S. Carrizosa	DATE 8/27/93	TIME 1510	RECEIVED BY: (Signature) [illegible]	DATE 8/27/93	TIME 15:10
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, Ca 94608 510 ~~(415)~~ 652-4500	Analytical Laboratory: Anametrix Inc. San Jose, CA

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

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 # : 9309166
Date Received : 09/14/93
Project ID : 1649.16
Purchase Order: N/A

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

ANAMETRIX ID	CLIENT SAMPLE ID
9309166- 1	P1-3C
9309166- 2	P2-3B
9309166- 3	P3-2C
9309166- 4	P4-3A

This report consists of 4 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

09-21-93
Date

SEP 22 1993

COPY

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

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

Workorder # : 9309166
Date Received : 09/14/93
Project ID : 1649.16
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9309166- 1	P1-3C	SOIL	09/14/93	TPHgBTEX
9309166- 2	P2-3B	SOIL	09/14/93	TPHgBTEX
9309166- 3	P3-2C	SOIL	09/14/93	TPHgBTEX
9309166- 4	P4-3A	SOIL	09/14/93	TPHgBTEX

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

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

Workorder # : 9309166
Date Received : 09/14/93
Project ID : 1649.16
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentrations reported as gasoline for samples P2-3B and P4-3A are primarily due to the presence of a heavier petroleum product of hydrocarbon range C9-C14, possibly diesel fuel.

Cheryl Bateman 9/21/93
Department Supervisor Date

Charleston Bench 9.21.93
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9309166
Matrix : SOIL
Date Sampled : 09/14/93

Project Number : 1649.16
Date Released : 09/21/93

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# P1-3C -01	Sample I.D.# P2-3B -02	Sample I.D.# P3-2C -03	Sample I.D.# P4-3A -04	Sample I.D.# BS1601E2 BLANK
Benzene	0.005	ND	ND	ND	ND	ND
Toluene	0.005	ND	ND	ND	ND	ND
Ethylbenzene	0.005	ND	ND	ND	ND	ND
Total Xylenes	0.005	ND	0.014	ND	ND	ND
TPH as Gasoline	0.5	ND	1.2	ND	0.86	ND
% Surrogate Recovery		88%	90%	84%	83%	99%
Instrument I.D.		HP4	HP4	HP4	HP4	HP4
Date Analyzed		09/16/93	09/16/93	09/16/93	09/16/93	09/16/93
RLMF		1	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Charlesh Burch 9.21.93
Analyst Date

Cheryl Baeuer 9/21/93
Supervisor Date

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : SOIL
Date Sampled : N/A
Date Analyzed : 09/16/93

Anametrix I.D. : MS1601E3
Analyst : CMB
Supervisor : cs
Date Released : 09/21/93
Instrument ID : HP4

COMPOUND	SPIKE AMT (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
BENZENE	0.040	0.036	90%	52-133
TOLUENE	0.040	0.044	110%	57-136
ETHYLBENZENE	0.040	0.044	110%	56-139
TOTAL-XYLENES	0.040	0.043	108%	56-141
P-BFB			96%	53-147

* Quality control limit established by Anametrix, Inc.

ANALYTICAL INC.
Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

9309166 (2)

CHAIN-OF-CUSTODY RECORD

PROJECT NUMBER	PROJECT NAME
1649.16	Beach Street

Send Report Attention of:	Report Due	Verbal Due
Jenifer Beatty	9/21/93	/ /

	Sample Number	Date	Time	Comp	Matrix	Station Location	Number of Cntnrs	Type of Containers	Type of Analysis: TPH-g	Type of Analysis: BTEX	Condition of Samples	Initial
(1)	P1-3C	9/14/93			Soil	Oakland	4	Brass Tubes	X	X		
(2)	P2-3B	↓			↓		4	↓	X	X		
(3)	P3-2C						4		X	X		
(4)	P4-3A						4		X	X		

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	9/14/93 1600	[signature]	9-14-93 1600
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	9-14-93 1707		
Relinquished by: (Signature)	Date/Time	Received by Lab:	Date/Time
		[signature]	9/14/93 17:07

Remarks: ~~24-hr~~ 5-Day TAT
Composite 4 tubes into 1 sample for each sample

COMPANY: Levine-Fricke
ADDRESS: 1900 Powell Street, Emeryville, CA 94608
PHONE: 510 652-4500 FAX: 510 652-2246

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 # : 9309255
Date Received : 09/20/93
Project ID : 1649.16
Purchase Order: N/A

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

ANAMETRIX ID	CLIENT SAMPLE ID
9309255- 1	P5-1B
9309255- 2	P6-2B
9309255- 3	P7-1B

This report consists of 5 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

09-27-93
Date

SEP 28 1993

COPY

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

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

Workorder # : 9309255
Date Received : 09/20/93
Project ID : 1649.16
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9309255- 1	P5-1B	SOIL	09/20/93	TPHgBTEX
9309255- 2	P6-2B	SOIL	09/20/93	TPHgBTEX
9309255- 3	P7-1B	SOIL	09/20/93	TPHgBTEX

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

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

Workorder # : 9309255
Date Received : 09/20/93
Project ID : 1649.16
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentration reported as gasoline for samples P5-1B and P6-2B are primarily due to the presence of a heavier petroleum product of hydrocarbon range C9-C14, possibly diesel fuel.

Department Supervisor — Date 9/21/93

Chemist — Date 09/27/93

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9309255
Matrix : SOIL
Date Sampled : 09/20/93

Project Number : 1649.16
Date Released : 09/24/93

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# P5-1B -01	Sample I.D.# P6-2B -02	Sample I.D.# P7-1B -03	Sample I.D.# BS2201E2 BLANK
Benzene	0.005	ND	ND	ND	ND
Toluene	0.005	ND	ND	ND	ND
Ethylbenzene	0.005	ND	ND	ND	ND
Total Xylenes	0.005	ND	ND	ND	ND
TPH as Gasoline	0.5	15	0.6	ND	ND
% Surrogate Recovery		105%	93%	91%	108%
Instrument I.D.		HP4	HP4	HP4	HP4
Date Analyzed		09/22/93	09/22/93	09/22/93	09/22/93
RLMF		10	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Reggie Davison 9/27/93
Analyst Date

Cheryl Bueno 9/27/93
Supervisor Date

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1649.16 P7-1B
Matrix : SOIL
Date Sampled : 09/20/93
Date Analyzed : 09/22/93

Anametrix I.D. : 09255-03
Analyst : CMB
Supervisor : CO
Date Released : 09/24/93
Instrument I.D.: HP4

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	REC MS (mg/Kg)	% REC MS	REC MD (mg/Kg)	% REC MD	RPD	% REC LIMITS
BENZENE	0.040	0.000	0.033	83%	0.036	90%	9%	45-139
TOLUENE	0.040	0.000	0.030	75%	0.032	80%	6%	51-138
ETHYLBENZENE	0.040	0.000	0.027	68%	0.029	73%	7%	48-146
TOTAL XYLENES	0.040	0.000	0.027	68%	0.027	68%	0%	50-139
p-BFB				95%		84%		53-147

* Quality control limit established by Anametrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: MS2201E1
Matrix	: SOIL	Analyst	: CMB
Date Sampled	: N/A	Supervisor	: CS
Date Analyzed	: 09/22/93	Date Released	: 09/23/93
		Instrument ID	: HP4

COMPOUND	SPIKE AMT (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
BENZENE	0.020	0.020	100%	52-133
TOLUENE	0.020	0.020	100%	57-136
ETHYLBENZENE	0.020	0.021	105%	56-139
TOTAL-XYLENES	0.020	0.020	100%	56-141
P-BFB			105%	53-147

* Quality control limit established by Anametrix, Inc.

9309255 (2)

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 1649.16	Field Logbook No.:	Date: 9/20/93	Serial No.: 11164
Project Name: Beach Street	Project Location: Oakland		
Sampler (Signature) :			Samplers: WEM

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPHgas	BTEX			HOLD	RUSH	REMARKS
(1) P5-1B	9/20/93			4	soil			x	x					5-Day TAT - Results to Jenifer Beatty
(2) P6-2B	↓	|		4	↓			x	x					
(3) P7-1A				4				x	x					Please Composite ~~each sample~~ 4 tubes into one sample for each sample.

RELINQUISHED BY: (Signature) Albert Kroder	DATE 9/20/93	TIME 4:00	RECEIVED BY: (Signature) Jenny L. Conjosa	DATE 9/20/93	TIME 1600
RELINQUISHED BY: (Signature) Jenny L. Conjosa	DATE 9/20/93	TIME 1705	RECEIVED BY: (Signature)	DATE 9/20/93	TIME 17:05
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, Ca 94608 (415) 652-4500	Analytical Laboratory: Anametrix

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

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 # : 9310086
Date Received : 10/07/93
Project ID : 1649.16
Purchase Order: N/A

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

ANAMETRIX ID	CLIENT SAMPLE ID
9310086- 1	P8-3C
9310086- 2	P9-2C
9310086- 3	P10-2B
9310086- 4	P11-3B
9310086- 5	P12-2A

This report consists of 7 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.

Corinne Fraser for
Sarah Schoen, Ph.D.
Laboratory Director

10/14/93
Date

OCT 15 1993

COPY

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

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

Workorder # : 9310086
Date Received : 10/07/93
Project ID : 1649.16
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9310086- 1	P8-3C	SOIL	10/07/93	TPHgBTEX
9310086- 2	P9-2C	SOIL	10/07/93	TPHgBTEX
9310086- 3	P10-2B	SOIL	10/07/93	TPHgBTEX
9310086- 4	P11-3B	SOIL	10/07/93	TPHgBTEX
9310086- 5	P12-2A	SOIL	10/07/93	TPHgBTEX

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

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

Workorder # : 9310086
Date Received : 10/07/93
Project ID : 1649.16
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentration reported as gasoline for P11-3B is primarily due to the presence of a heavier petroleum product of hydrocarbon range C9-C14, possibly diesel fuel.

Cheryl Balman 11/11/93
Department Supervisor Date

Reggie Dawson 11/11/93
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9310086
Matrix : SOIL
Date Sampled : 10/07/93

Project Number : 1649.16
Date Released : 10/12/93

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# P8-3C -01	Sample I.D.# P9-2C -02	Sample I.D.# P10-2B -03	Sample I.D.# P11-3B -04	Sample I.D.# P12-2A -05
Benzene	0.005	ND	ND	ND	ND	ND
Toluene	0.005	ND	ND	ND	0.032	ND
Ethylbenzene	0.005	ND	ND	0.005	0.032	ND
Total Xylenes	0.005	ND	ND	0.017	0.53	ND
TPH as Gasoline	0.5	ND	ND	ND	14	ND
% Surrogate Recovery		87%	83%	87%	112%	80%
Instrument I.D.		HP4	HP4	HP4	HP4	HP4
Date Analyzed		10/08/93	10/08/93	10/11/93	10/11/93	10/08/93
RLMF		1	1	1	2.5	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Reggie Davison 10/13/93
Analyst Date

Cheryl Baerner 10/12/93
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9310086 Project Number : 1649.16
Matrix : SOIL Date Released : 10/12/93
Date Sampled : N/A

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# BO0801E2 BLANK	Sample I.D.# BO1101E2 BLANK
Benzene	0.005	ND	ND
Toluene	0.005	ND	ND
Ethylbenzene	0.005	ND	ND
Total Xylenes	0.005	ND	ND
TPH as Gasoline	0.5	ND	ND
% Surrogate Recovery		102%	103%
Instrument I.D.		HP4	HP4
Date Analyzed		10/08/93	10/11/93
RLMF		1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Reggie Dawson 10/13/93
Analyst Date

Cheryl Brenner 10/12/93
Supervisor Date

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT
EPA METHOD 5030 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1649.16 P12-2A	Anametrix I.D.	: 10086-05
Matrix	: SOIL	Analyst	: [illegible]
Date Sampled	: 10/07/93	Supervisor	: [illegible]
Date Analyzed	: 10/08/93	Date Released	: 10/12/93
		Instrument ID	: HP4

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	REC MS (mg/Kg)	% REC MS	REC MD (mg/Kg)	% REC MD	RPD	% REC LIMITS
GASOLINE	1.00	0	0.70	70%	0.80	80%	13%	48-149
P-BFB				74%		74%		53-147

* Limits established by Anametrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : SOIL
Date Sampled : N/A
Date Analyzed : 10/08/93

Anametrix I.D. : MO0802E1
Analyst : RD
Supervisor : CM
Date Released : 10/12/93
Instrument I.D.: HP4

COMPOUND	SPIKE AMT. (mg/Kg)	REC LCS (mg/Kg)	%REC LCS	% REC LIMITS
GASOLINE	0.50	0.54	108%	58-130
p-BFB			85%	53-147

* Quality control established by Anametrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : SOIL
Date Sampled : N/A
Date Analyzed : 10/11/93

Anametrix I.D. : MO1102E1
Analyst : RD
Supervisor : [illegible]
Date Released : 10/12/93
Instrument I.D.: HP4

COMPOUND	SPIKE AMT. (mg/Kg)	REC LCS (mg/Kg)	%REC LCS	% REC LIMITS
GASOLINE	0.50	0.43	86%	58-130
p-BFB			83%	53-147

* Quality control established by Anametrix, Inc.

9310086 (2)

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 1649.16	Field Logbook No.:	Date: 10/7/93	Serial No.: 11175
Project Name: Beach Street	Project Location: Oakland		
Sampler (Signature): [signature]			Samplers: WEM

	SAMPLES						ANALYSES								
	SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPHg	BTEX			HOLD	RUSH	REMARKS
1	PB-3C	10/7/93			3	Soil			X	X				X	
2	P9-2C				3				X	X				X	Composite 3 tubes into 1 sample for each tube
3	P10-2B				3				X	X				X	
4	P11-3B				3				X	X				X	
5	P12-2A				3				X	X				X	
															Results to Jennifer Beatty
															5-DAY TAT

RELINQUISHED BY: (Signature) [signature]	DATE 10/7/93	TIME 1105	RECEIVED BY: (Signature) [signature]	DATE 10/7/93	TIME 1105
RELINQUISHED BY: (Signature) [signature]	DATE 10/7/93	TIME 1908	RECEIVED BY: (Signature) [signature]	DATE 10/8/93	TIME 14:08
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, Ca 94608
(415) 652-4500

Analytical Laboratory:
Arametrix

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

APPENDIX B

SW-846 ANALYSIS OF RESULTS OF SOIL SAMPLES COLLECTED FROM AERATION BEDS

SW-846 ANALYSIS OF RESULTS OF SOIL SAMPLES COLLECTED FROM AERATION BEDS

Aeration bed sample results were analyzed using guidelines outlined in Chapter 9 of the Environmental Protection Agency Office of Solid Waste Management Document SW-846, Test Methods for Evaluating Solid Waste (hereafter referred to as "EPA SW-846"). The results of this analysis indicate that a sufficient number of samples have been collected from the aeration beds to adequately characterize the aerated soils. A description of this method and the results of this analysis are presented below.

The statistical approach presented in EPA SW-846 suggests a random sampling process. The application of the simple random sampling process described in EPA SW-846 for aeration beds of petroleum-affected soils consists of the following protocol:

1. Divide the lateral and vertical extent of the stockpile into an imaginary three dimensional block of uniformly sized cells.

2. Assign a series of consecutive numbers to the cells.

3. Compute the mean and variance of the available representative laboratory analytical results of soil samples of the excavated petroleum-affected soils using equations listed in Table 9-1 of EPA SW-846.

4. Compute the appropriate number of samples to be collected using equation 8 of Table 9-1 in EPA SW-846.

5. Select the cells to be sampled using a random-number generator/table.

Based on the SW-846 analysis of analytical results for the soils aerated as directed by Levine·Fricke personnel, it was determined that a sufficient number of soil samples had been collected to characterize the aerated soils. Calculations and results of SW-846 analysis on soils aerated by Levine·Fricke personnel are presented below and in Table B-1.

Statistical Analysis of Soil Sampling Results Using EPA SW-846

Statistical analysis (EPA SW-846) was used to assess the number of additional samples (N) required to characterize the soil concentrations with an 95% confidence level.

Equation 8 of Table 9-1 (EPA SW-846):

$N = t_{0.95}^2 s^2 / (c-x)^2$

Parameters:

N	Appropriate number of samples to collect from a soil waste
s	Standard deviation of sample
s^2	Variance of sample
x	Mean measurements generated by sample
t	t value tabulated for various degrees of freedom confidence intervals and probabilities
n	Degrees of freedom
c	concentration criterion for constituent in soils proposed for use as backfill

Where, for example, for TPHg in aerated soils (using data presented in Table B-1):

s^2 = 0.175

x = 0.58

$t_{0.95}$ = (1.746 for n = 16 and a probability of 95)

c = 10 ppm

$N = t_{0.95}^2 s^2 / (c-x)^2 = (1.746)^2 (0.175) / (10 - 0.58)^2$

= less than 1

No additional samples are required to characterize the quality (with a 95% confidence level) of TPHg-affected soil.

TABLE B1

STATISTICAL ANALYSIS OF AERATED SOILS
BEACH STREET AREA, OAKLAND, CALIFORNIA

	Compound		
	TPHg	Benzene	Combined TEX
Count	17	17	17
Average Concentration (mg/kg)	0.58	0.0025	0.013
Standard Deviation	0.418	0.00	0.012
Maximum Value	1.9	0.0025	0.046
N	<1.0	<1.0	<1.0

Count = Number of soil samples (represents one sample per 100 cubic yards)

Average = Average concentration, presented in parts per million (50% of detection limits used as the concentration for samples with below method detection limit results).

Maximum Value = Maximum detected concentration, presented in parts per million

N = Additional samples to be collected from a solid waste using the methods described in EPA SW-846 (with a 95 percent confidence level)

TPHg = Total petroleum hydrocarbons as gasoline

TEX = Toluene, ethylbenzene, and xylenes