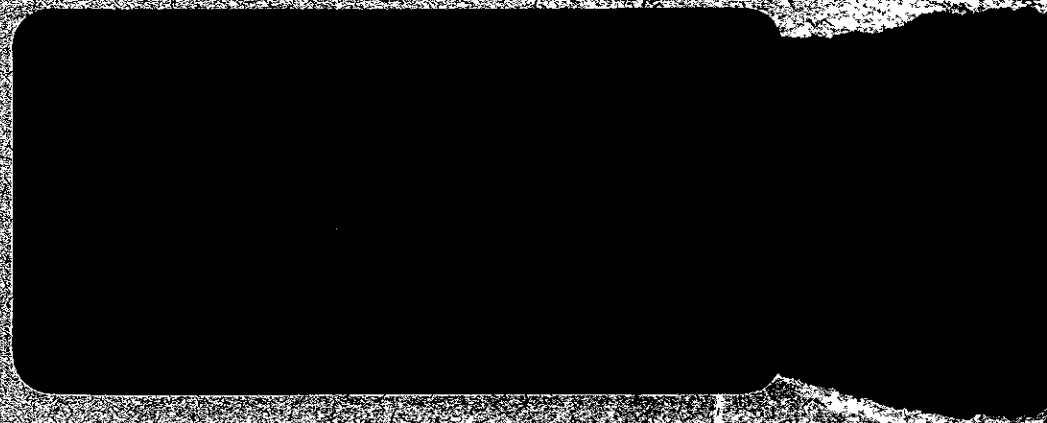
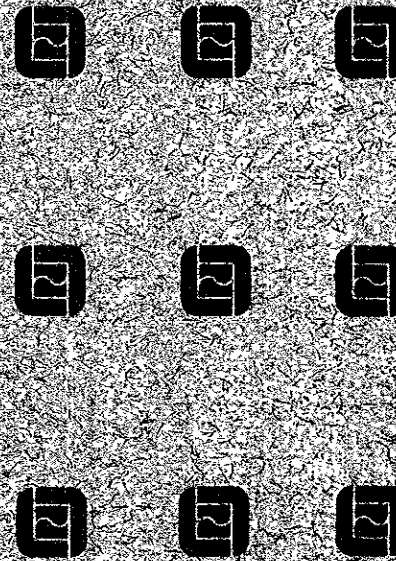


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**LEVINE FRICKE**



Underground Tank Removal and  
Soil Remediation Activities in Area A  
Yerba Buena/East Baybridge Center Project Site  
Emeryville and Oakland, California

October 29, 1993  
1649.21

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



**LEVINE·FRICKE**



# LEVINE•FRICKE

ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

October 29, 1993

LF 1649.21

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

Subject: Underground Storage Tank and Soil Remediation  
Activities in Area A, Yerba Buena/East Baybridge  
Center Project Site

Dear Ms. Hugo:

The enclosed report details tank removal and disposal activities, soil sampling procedures, laboratory analysis results, and soil remediation activities. This work was conducted by Levine-Fricke, Inc., on behalf of Catellus Development Corporation, and in accordance with your verbal authorization on October 1, 1993.

The objectives of the work were to remove the underground storage tanks (USTs) and remediate petroleum-affected soil near the USTs so that residual petroleum hydrocarbon concentrations in soil were below cleanup goals established for the Site.

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

Sincerely,

Jenifer Beatty  
Project Hydrogeologist

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

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

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- 2 Site Plan Show Approximate Locations of Former USTs
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October 29, 1993

LF 1649.21

**UNDERGROUND TANK REMOVAL AND  
SOIL REMEDIATION ACTIVITIES IN AREA A  
YERBA BUENA/EAST BAYBRIDGE CENTER PROJECT SITE  
EMERYVILLE AND OAKLAND, CALIFORNIA**

**1.0 INTRODUCTION**

This report describes activities conducted to remove two fuel underground storage tanks (USTs) and conduct soil remediation activities in Area A of the Yerba Buena/East Baybridge Project Site, located in Emeryville and Oakland, California ("the Site"; Figures 1 and 2). This work was conducted by Levine·Fricke, Inc., on behalf of Catellus Development Corporation, the property owner. The scope of work for soil remediation activities was verbally approved by Ms. Susan Hugo of the Alameda Health Care Services Agency (ACHA) on October 1, 1993.

The objectives of the work were to remove the USTs and remediate petroleum-affected soil near the USTs so that residual petroleum hydrocarbon concentrations in soil were below cleanup goals established for the Site. These cleanup goals are as follows:

- less than 100 parts per million (ppm) total petroleum hydrocarbons (TPH) as diesel (TPHd)
- less than 1,000 ppm oil and grease (O&G)
- a combined concentration of less than 1 ppm benzene, toluene, ethylbenzene, and xylenes (BTEX compounds)

**2.0 UST REMOVAL ACTIVITIES**

Two fuel oil USTs (an approximately 1,500-gallon UST and a 2,000-gallon UST) were discovered on September 24, 1993, during grading activities at the Site. The USTs were removed from the Site on October 1, 1993, under permits from the ACHA and the Emeryville Fire Department. The former UST locations and excavation boundary are shown in Figure 3.

UST removal and soil excavation activities were performed by Trumpp Bros., Inc., of San Jose, California, from October 1 to 9, 1993. A Levine·Fricke field geologist or engineer was

on site to observe UST removal and soil excavation activities, and to collect soil samples from the excavation for chemical analysis.

Ms. Susan Hugo of the ACHA and Mr. Gerald Anthony of the Emeryville Fire Department were also on site to observe UST removal activities.

### 2.1 UST Contents Disposal

When the USTs were discovered, they were observed to be almost full of floating petroleum product and water. The floating product was pumped into a vacuum truck by Evergreen Environmental Services of Newark, California, on September 24, 1993, and transported to its recycling facility. The water was pumped into a vacuum truck by Erickson Environmental, Inc. ("Erickson") of Richmond, California on September 30, 1993, and transported to the Gibson Oil recycling facility in Redwood City, California. The manifests for transporting these fluids are presented in Appendix A.

### 2.2 UST Stabilization, Inspection, and Field Observations

The empty USTs were rendered inert by inserting dry ice to remove organic vapors and oxygen. Explosivity meter readings were taken from both USTs. The USTs were removed after the combustible gas concentration had been reduced to below 15 percent of the Lower Explosive Limit (LEL) by the dry ice (both USTs had LEL percentages of 1% or below).

Excavation activities were conducted using a backhoe. Piping encountered in the excavation was removed along with the USTs. The tops of the USTs were 2 feet below ground surface (bgs) and the bottoms of the USTs were approximately 7 feet bgs. The USTs were adjacent to each other in a east-west orientation and approximately one foot apart (Figure 3).

Soil lithology in the UST excavation consisted of brown gravelly silty fill from the ground surface to 4 feet bgs. This fill was underlain by tan silty clay from 4 to 13 feet bgs, and tan gravelly clay from 13 to 14 feet bgs, the bottom of the excavation. Areas of the silty clay soil were a blue-green color, indicating the presence of petroleum hydrocarbons. Imported UST backfill material was not encountered in the excavation.

After the USTs had been removed, they were inspected. The USTs were constructed of steel with riveted seams. Both USTs were approximately 5 feet in diameter. The 1,500-gallon UST

was 10 feet long and the 2,000-gallon UST was 16 feet long. Heating elements were observed in both USTs. No holes or signs of corrosion were observed in either UST; however, petroleum product was present along the outer walls of the USTs. In addition, field PID measurements indicated the presence of petroleum-affected soil in the excavation floor and sidewalls. Soil remediation activities are discussed in Section 3.0.

On October 1, 1993, Erickson transported the USTs and piping under hazardous waste manifests to its facility in Richmond for disposal. Copies of the manifests are included in Appendix A.

### 2.3 Soil Sampling Beneath the USTs and Analysis

Soil samples were collected using a rubber mallet to drive clean brass tubes into excavated soil contained in the backhoe bucket. The soil samples were labeled and capped with aluminum foil and plastic caps. Samples were stored in a chilled container and transported for analysis to Anametrix, Inc., of San Jose, California, a state-certified laboratory. Samples were transported under chain-of-custody protocol.

As directed by Ms. Hugo, five soil samples were collected for chemical analysis from soil adjacent to and beneath the USTs (SN-8, SE-8, SW-10, TP1-8, and BS-8). One of those samples was collected at a depth of approximately 8 feet bgs in the area between the USTs. The other four samples were collected from the excavation sidewalls, at depths ranging from 8 feet bgs to 10 feet bgs.

### 2.4 Analytical Results for Soil Samples

All soil samples collected from the excavation were submitted to Anametrix, Inc. Samples were analyzed for TPHd using EPA Method 3510, O&G using Standard Method 5520EF, and TPH as gasoline (TPHg) and BTEX using EPA Methods 5030 and 8020.

Concentrations detected in one of the samples (TP1-8) were below cleanup goals. Analytical results for the other four samples indicated TPHd ranging from 87 ppm to 470 ppm, O&G from 1,700 ppm to 3,800 ppm, and BTEX compounds from 0.017 ppm to 0.081 ppm (combined concentration). Laboratory data sheets are presented in Appendix B. Based on these results, additional soil excavation was performed in the vicinity of the USTs.



### **3.0 SOIL REMEDIATION ACTIVITIES**

A total of approximately 2,500 cubic yards of soil was excavated from the vicinity of the USTs and stockpiled on site. Soil excavation continued until residual petroleum hydrocarbon concentrations in soil above ground water were reduced to below cleanup goals established for the Site (Section 1.0), based on soil sampling and analysis results.

#### **3.1 Analytical Results for Soil Samples**

Analytical results for samples collected from excavated soil are presented in Table 1. Analytical results for samples collected from the floor and sidewalls of the completed excavation are presented in Table 2 (see Figure 3 for final sample locations).

As presented in Table 1, chemical concentrations in the excavated soil ranged from 70 ppm to 470 ppm TPHd and 1,100 ppm to 3,800 ppm O&G. Combined BTEX compound concentrations in excavated soils were well below the cleanup goal of 1 ppm. Laboratory certificates are presented in Appendix B.

Eight final sidewall samples (collected at a depth of approximately 8 feet and a frequency of approximately one sample for every 25 linear feet) and five final bottom samples (collected at a depth of approximately 14 feet and a frequency of approximately one sample for every 400 square feet) were collected from the completed excavation. Analytical results for the soil samples collected indicate that cleanup goals for the Site were achieved, with the exception of BS-14, which contained 110 ppm TPHd (10 ppm over the cleanup goal for TPHd). As presented in Table 2, concentrations of TPHd in remaining soil samples ranged from below laboratory detection limits to 29 ppm, and concentrations of O&G ranged from 43 ppm to 430 ppm. With the exception of one sample (BS-14) where xylenes were detected at 0.007 ppm, BTEX compounds were not detected in any of the final samples collected.

#### **3.2 Management of Excavated Soil**

Oil- and diesel-affected soils excavated from the vicinity of the USTs were added to soil stockpiled on site, to be contained under the building parking lot in accordance with Levine·Fricke's March 10, 1992 Containment Plan for the Site (Levine·Fricke 1992).

**4.0 SUMMARY AND CONCLUSIONS**

Two fuel USTs were removed and disposed of by a licensed hazardous waste transportation company under a hazardous waste manifest. No holes or signs of corrosion were observed in either UST; however, petroleum product was observed along the outer walls of the USTs. Approximately 2,500 cubic yards of petroleum-affected soil were removed from the UST excavation and in the vicinity of the USTs during removal activities.

Soil samples collected from the final excavation floor and sidewalls indicated that affected soils had been excavated to the cleanup goals for the Site. The excavation was backfilled in October 1993 by the on-site grading contractor, in accordance with site development specifications. Results of field density tests conducted during backfilling activities will be presented in the site geotechnical report.

Based on our observation of excavation activities and the results of soil sampling and analysis, it is our opinion that the work was performed in compliance with applicable UST closure requirements.

**5.0 RECOMMENDATIONS**

On the basis of the soil-quality results presented in this report, we do not recommend any additional remedial work in this area. As discussed with Ms. Hugo at the Site on October 1, 1993, it is not practical to install a monitoring well within 10 feet of the former USTs because of planned building construction in that area. The potential effect of petroleum hydrocarbon-affected soil on shallow ground-water quality in the area of the former USTs will be monitored using other on-site wells.

Upon completion of site development, ground-water monitoring wells that were abandoned in July 1993 in preparation for construction activities will be replaced with new wells, in accordance with Levine·Fricke's "Work Plan for Site Characterization and Remediation Activities to be Conducted in Conjunction with Site Development, Yerba Buena/East Baybridge Project Site," dated April 28, 1993.

One replacement well will be located approximately 275 feet northwest (crossgradient) of the former UST excavation (along the northern edge of the proposed building) and a second well will be installed approximately 325 feet southwest (crossgradient) of the former UST excavation (along the

southern edge of the proposed building). In addition, the ground-water extraction trench located along the western property boundary in Area A is located approximately 400 feet downgradient from the former UST excavation and likely will intercept petroleum-affected shallow ground water, if any.

REFERENCE

Levine·Fricke, Inc. 1992a. Containment plan for petroleum hydrocarbon-affected soils, Yerba Buena Project Site, Emeryville and Oakland, California. March 10.

TABLE 1  
 ANALYTICAL RESULTS FOR SAMPLES OF EXCAVATED SOIL  
 AREA A, YERBA BUENA/EAST BAYBRIDGE CENTER, OAKLAND AND EMERYVILLE, CALIFORNIA  
 (concentrations reported in milligrams per kilogram [mg/kg])

Sample ID	Date	Depth (feet bgs)	TPHd	Oil & Grease	TPHmo	Benzene	Toluene	Ethyl-benzene	Total Xylenes
SE-8	01-Oct-93	8	190	3,800	190	<0.005	<0.005	0.008	0.018
SN-8	01-Oct-93	8	230	3,600	700	<0.005	<0.005	0.006	0.016
SW-10	01-Oct-93	10	87	1,700	200	0.013	<0.005	0.013	0.055
BS-8	04-Oct-93	8	470	3,100	650	<0.005	<0.005	<0.005	0.017
SE-8-R	04-Oct-93	8	70	1,100	220	<0.005	<0.005	<0.005	<0.005
SN-8-R	04-Oct-93	8	100	2,200	210	<0.005	<0.005	<0.005	0.006
SNW-8	06-Oct-93	8	130	3,800	960	<0.005	<0.005	<0.005	<0.005

Data entered by MEK/21-Oct-93. Data proofed by JJB. QA/QC by JJB/27-Oct-93.

bgs - below ground surface

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

Benzene, toluene, ethylbenzene, and total xylenes using EPA Method 8020

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

Analyses performed by Anametrix Laboratories, San Jose, California.

TABLE 2  
 ANALYTICAL RESULTS FOR FINAL SOIL SAMPLES COLLECTED FROM THE UST EXCAVATION  
 AREA A, YERBA BUENA/EAST BAYBRIDGE CENTER, OAKLAND AND EMERYVILLE, CALIFORNIA  
 (concentrations reported in milligrams per kilogram [mg/kg])

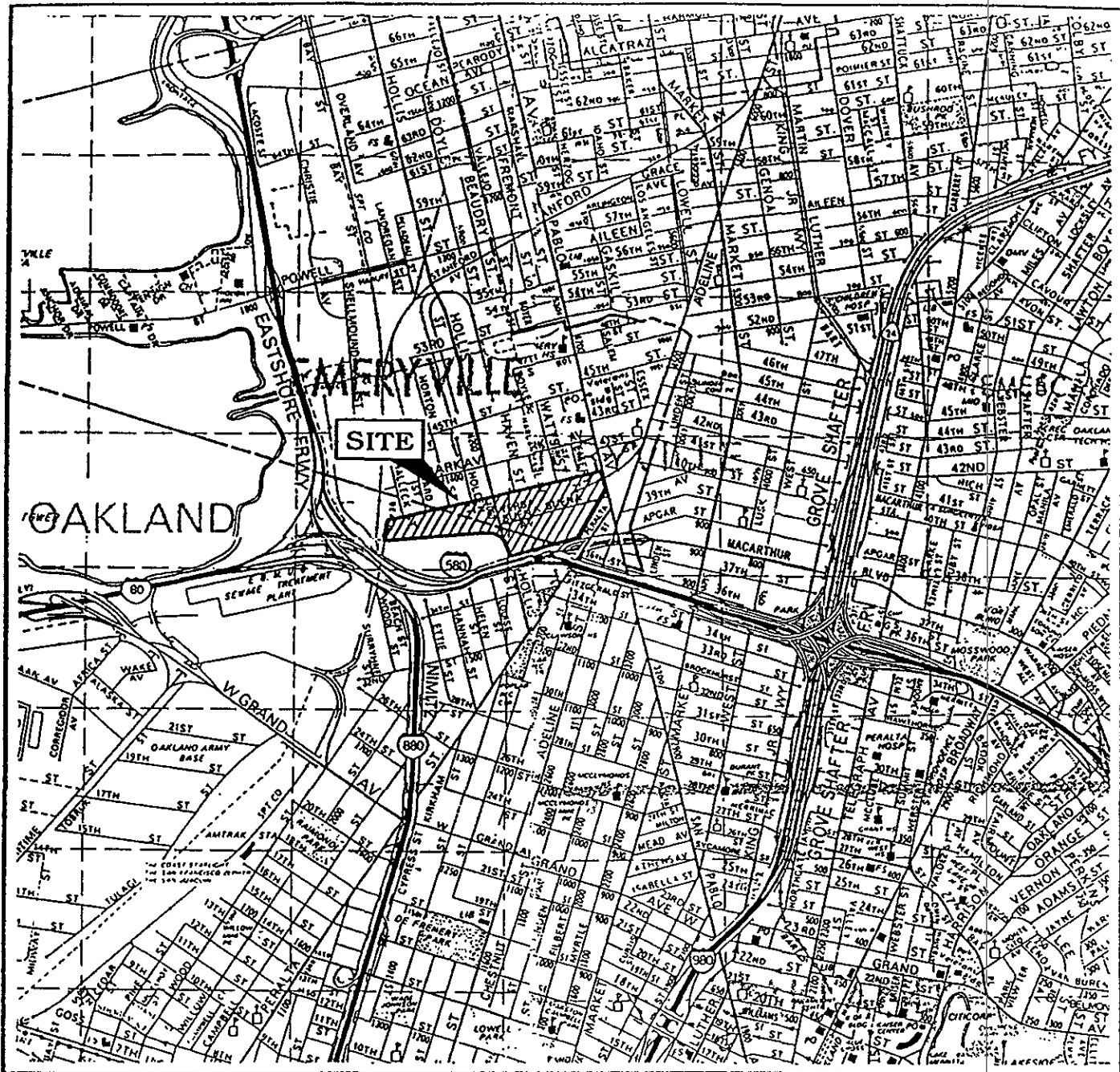
Sample ID	Date	Depth (feet bgs)	TPHd	Oil & Grease	TPHmo	Benzene	Toluene	Ethylbenzene	Total Xylenes
BS-14	01-Oct-93	14	110	410	170	<0.005	<0.005	<0.005	0.007
TP1-18	01-Oct-93	18	11	230	57	<0.005	<0.005	<0.005	<0.005
SW-9	04-Oct-93	9	<10	90	<10	<0.005	<0.005	<0.005	<0.005
SN-14	05-Oct-93	14	29	430	58	<0.005	<0.005	<0.005	<0.005
SE-14	05-Oct-93	14	24	400	58	<0.005	<0.005	<0.005	<0.005
SW-14	05-Oct-93	14	22	330	61	<0.005	<0.005	<0.005	<0.005
SSW-8	06-Oct-93	8	<10	53	<10	<0.005	<0.005	<0.005	<0.005
SSE-8	06-Oct-93	8	<10	43	<10	<0.005	<0.005	<0.005	<0.005
SNE-8	06-Oct-93	8	<10	43	<10	<0.005	<0.005	<0.005	<0.005
SE-8-RR	06-Oct-93	8	<10	150	<10	<0.005	<0.005	<0.005	<0.005
SN-8-RR	06-Oct-93	8	<10	53	26	<0.005	<0.005	<0.005	<0.005
SS-14	06-Oct-93	14	<10	53	<10	<0.005	<0.005	<0.005	<0.005
SNW-8-R	07-Oct-93	8	<10	67	<10	<0.005	<0.005	<0.005	<0.005

Data entered by MEK/21-Oct-93. Data proofed by MEK/21-Oct-93. QA/QC by JJB.

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  
 Benzene, toluene, ethylbenzene, and total xylenes using EPA Method 8020

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

Analyses performed by Anamatrix Laboratories, San Jose, California.



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

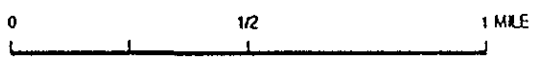
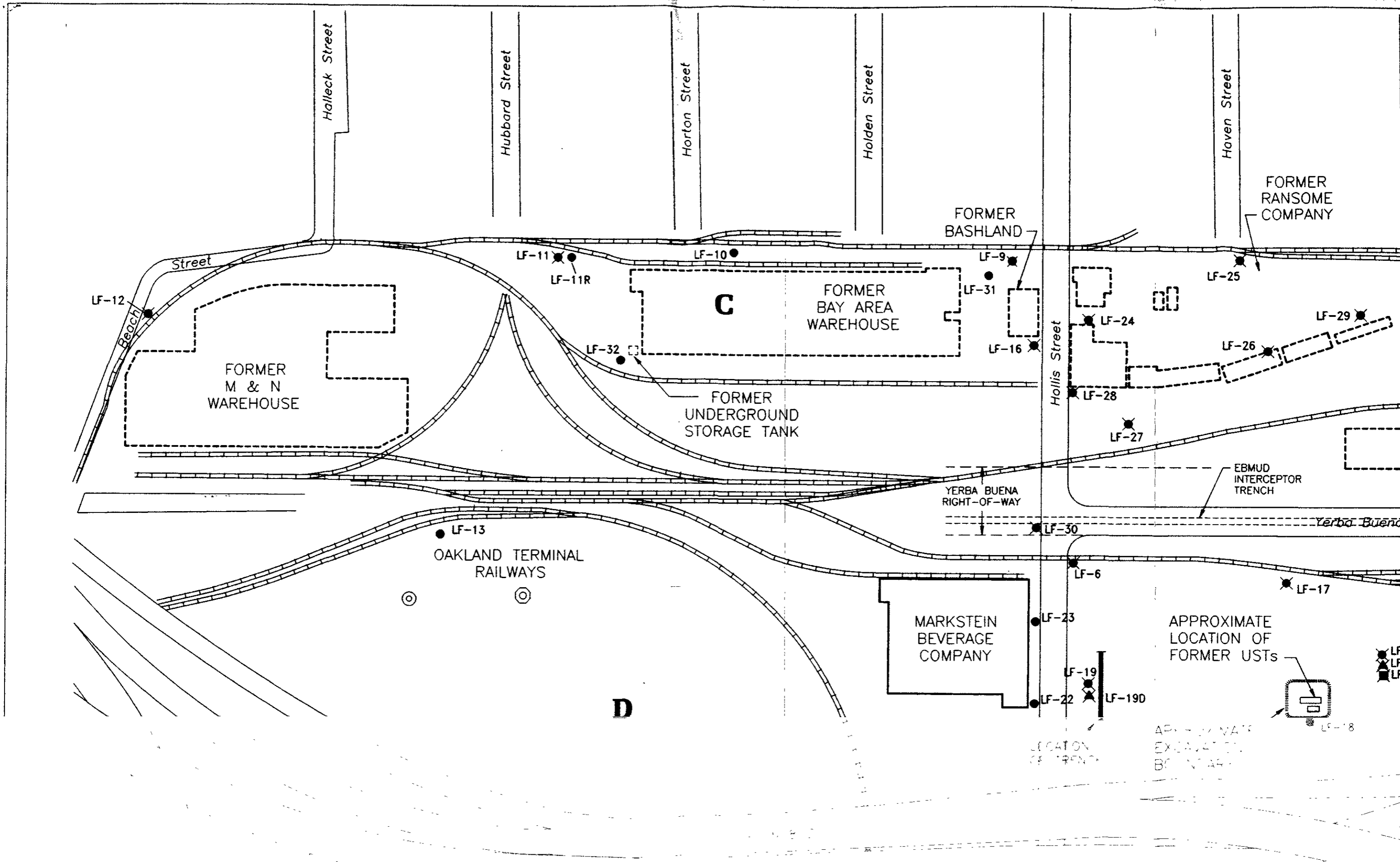
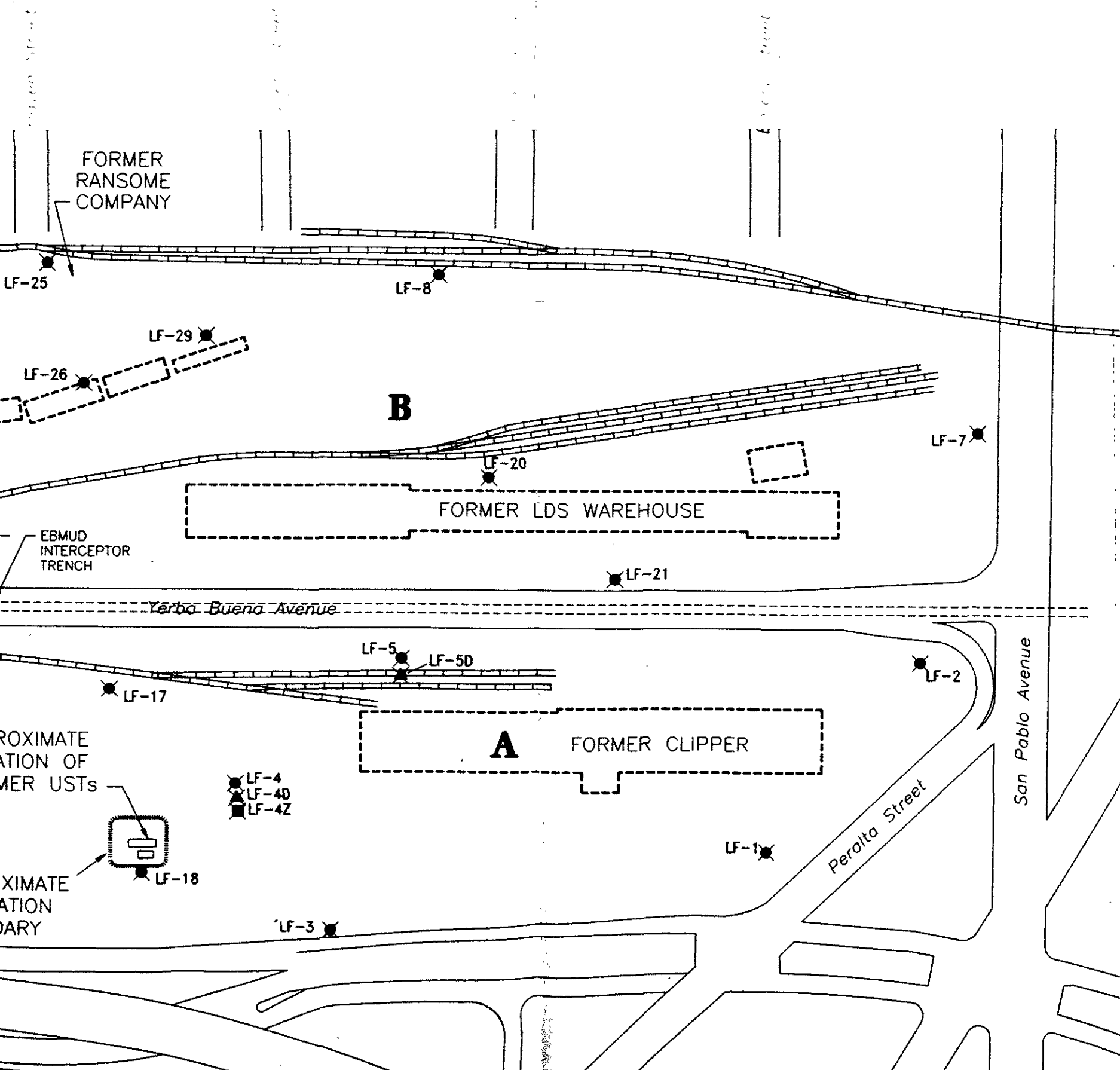


Figure 1: SITE LOCATION MAP  
YERBA BUENA PROJECT SITE







- LEGEND
- FORMER SHALLOWER (25 FEET) MONITORING WELL LOCATION
  - ▲ FORMER INTERIM (30 FEET) MONITORING WELL LOCATION
  - FORMER DEEPER (62 FEET) MONITORING WELL LOCATION
  - ✕ ABANDONED WELL
  - LOCATION OF FORMER BUSINESSES

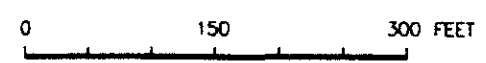


Figure 2 :  
 SITE PLAN SHOWING  
 APPROXIMATE LOCATION OF FORMER USTs  
 YERBA BUENA/EAST BAY BRIDGE  
 PROJECT SITE

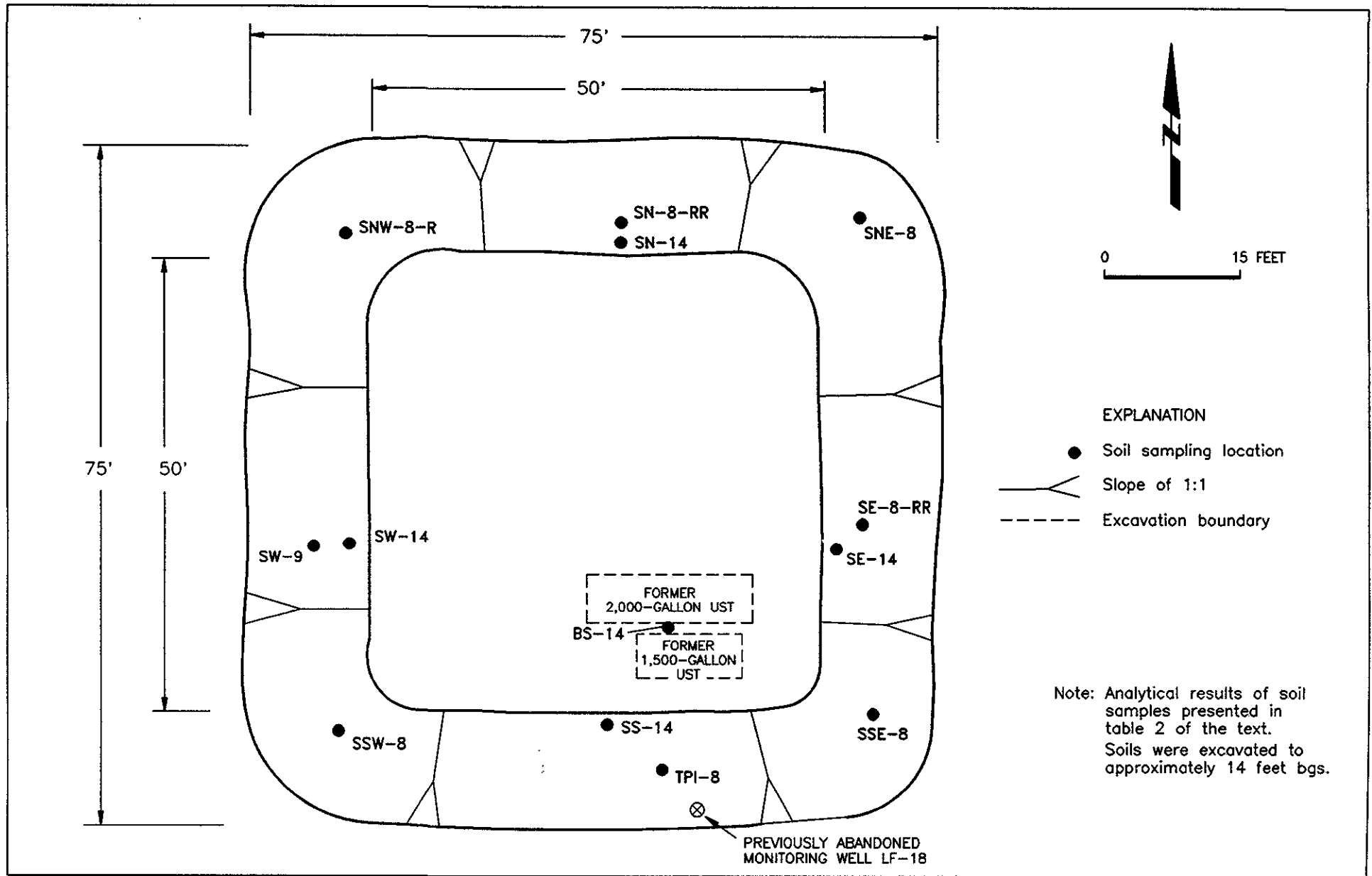


Figure 3 : FINAL EXCAVATION BOUNDARY AND FINAL CONFIRMATION SOIL SAMPLE LOCATIONS

**APPENDIX A**  
**HAZARDOUS WASTE MANIFESTS**

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. **EA1D9835857460224186**  
 Manifest Document No. **4186**

2. Page **1** of **1**

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**Catellus Development Corporation**  
**201 Mission Street, 29th Floor, San Francisco, CA 94105**

4. Generator's Phone **(415) 974-4500**

5. Transporter 1 Company Name  
**Erickson, Inc**

6. US EPA ID Number  
**CA10008466392**

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address  
**Erickson, Inc.**  
**255 Parr Blvd.**  
**Richmond, Ca. 94801**

10. US EPA ID Number  
**CA10009466392**

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers		13. Total Quantity	14. Unit Wt/Vol
No.	Type		
001	TP	21500	P

a. **Waste Empty Storage Tank**  
**NON-RCRA Hazardous Waste Solid.**

b.

c.

d.

15. Special Handling Instructions and Additional Information

**Keep away from sources of ignition. Always wear hardhats when working around U.G.S.T.'s 24 Hr. Contact Name Gary Trump & Phone (408) 292-0820**  
**East Baybridge Site**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable federal, state and international laws.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name **William Madison** Signature **William Madison Agent for Catellus** Month **10** Day **01** Year **93**

17. Transporter 1 Acknowledgement of Receipt of Materials  
 Printed/Typed Name **Robert A. Darr** Signature **Robert A. Darr** Month **10** Day **01** Year **93**

18. Transporter 2 Acknowledgement of Receipt of Materials  
 Printed/Typed Name \_\_\_\_\_ Signature \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  
 Printed/Typed Name \_\_\_\_\_ Signature \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

DO NOT WRITE BELOW THIS LINE.

800-833-8800 WITHIN CALIFORNIA 800-438-3333 OUTSIDE CALIFORNIA  
 GENERATOR RESPONSIBILITY  
 EMERGENCY SPILL, LEAK, OR TSPILL CALL THE CALIFORNIA TOXIC SUBSTANCE CONTROL BOARD  
 FACILITY

350  
CALIFORNIA  
880  
1-800  
CERTIFICATE OF INFORMATION  
RESPONSE  
PILL  
EMERGENCY  
CASE OF  
FACILITY

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		Manifest Document No.		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.									
		CA D 9 8 3 5 8 5 7 4 6 3		1 5 3 7													
3. Generator's Name and Mailing Address Catellus Development Corporation 201 Mission Street, 29th Floor San Francisco, CA 94105																	
4. Generator's Phone (415) 974-4500																	
5. Transporter 1 Company Name Erickson, Inc.					6. US EPA ID Number CA 010994166392												
7. Transporter 2 Company Name																	
8. US EPA ID Number																	
9. Designated Facility Name and Site Address Erickson, Inc. 255 Parr Blvd. Richmond, Ca. 94801					10. US EPA ID Number CA 0101094166392												
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers		13. Total Quantity	14. Unit Wt/Vol								
a. Waste Empty Storage Tank NON-RCRA Hazardous Waste Solid.						001 TP		2000	P								
b.																	
c.																	
d.																	
15. Special Handling Instructions and Additional Information Keep away from sources of ignition. Always wear hardhats when working around U.G.S.T.s 24 Hr. Contact Name Gary Trump Phone 408 292-0620 299621 1649 East Bay Bridge 1/20/93																	
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable federal, state and international laws. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.																	
Printed/Typed Name William Madison				Signature William Madison Agent for Catellus				Month 1		Day 20		Year 93					
17. Transporter 1 Acknowledgement of Receipt of Materials				Printed/Typed Name Robert A. DART				Signature Robert A. DART				Month 10		Day 01		Year 93	
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name				Signature				Month		Day		Year	
19. Discrepancy Indication Space																	
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.																	
Printed/Typed Name				Signature				Month		Day		Year					

DO NOT WRITE BELOW THIS LINE.

Blue: GENERATOR SENDS THIS COPY TO DTSC WITHIN 30 DAYS.  
To: P.O. Box 400, Sacramento, CA 95812-0400

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802 WITHIN CALIFORNIA, CALL 1-800-627-5550

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <b>CAD98358574602593</b>	Manifest Document No. <b>1 of 1</b>	2. Page 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address <b>Catellus Development Corporation 201 Mission St San Francisco Ca, 94106</b>			State Where Document Numbered <b>92222006</b>		
4. Generator's Phone <b>(415) 974-4500</b>			State Generator's ID <b>92222006</b>		
5. Transporter 1 Company Name <b>Erickson, Inc.</b>		6. US EPA ID Number <b>CAD009466392</b>		State Transporter ID <b>92222006</b>	
7. Transporter 2 Company Name		8. US EPA ID Number		State Transporter ID <b>(510) 251-0000</b>	
9. Designated Facility Name and Site Address <b>Gibson Oil/Pilot Petroleum 475 Sea Port Blvd. Redwood City, Ca. 94063</b>			State Facility ID <b>(415) 368-5511</b>		
10. US EPA ID Number <b>CAD043260702</b>			State Facility ID <b>(415) 368-5511</b>		
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers		13. Total Quantity	14. Unit Wt/Vol
a. <b>RQ Hazardous Waste Liquids NOS (Benzene) 9 NA 3082, PG III D018 ERG # 31</b>		<b>001 TT</b>		<b>3000</b>	<b>G</b>
b.					
c.					
d.					
15. Special Handling Instructions and Additional Information <b>Gibson Oil Waste Stream Profile # 10001 ERG 31 OE# 82902</b> <b>24 Hr. Contact Kirk Hayward 24 Hr. Phone# 5107954400 PO# E-11742</b> <b>Job Name: East Baybridge</b>					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable federal, state and international laws.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name <b>Michael Stoll</b>		Signature <i>Michael Stoll for Catellus Dev Corp</i>		Month <b>09</b>	Day <b>30</b>
Year <b>1993</b>					
17. Transporter 1 Acknowledgement of Receipt of Materials		Printed/Typed Name <b>Garry Adams</b>		Signature <i>Garry Adams</i>	
		Month <b>09</b>		Day <b>30</b>	
		Year <b>1993</b>			
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed/Typed Name		Signature	
		Month		Day	
		Year			
19. Discrepancy Indication Space					
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name		Signature		Month	Day

DO NOT WRITE BELOW THIS LINE.

Blue: GENERATOR SENDS THIS COPY TO DTSC WITHIN 30 DAYS.  
 To: P.O. Box 400, Sacramento, CA 95812-0400

**APPENDIX B**  
**LABORATORY CERTIFICATES**



# 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 # : 9310022  
Date Received : 10/01/93  
Project ID : 1649.21  
Purchase Order: N/A


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

ANAMETRIX ID	CLIENT SAMPLE ID
9310022- 1	SE-8
9310022- 2	SN-8
9310022- 3	SW-10

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

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 # : 9310022  
Date Received : 10/01/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9310022- 1	SE-8	SOIL	10/01/93	BTEX
9310022- 2	SN-8	SOIL	10/01/93	BTEX
9310022- 3	SW-10	SOIL	10/01/93	BTEX
9310022- 1	SE-8	SOIL	10/01/93	TPHd
9310022- 2	SN-8	SOIL	10/01/93	TPHd
9310022- 3	SW-10	SOIL	10/01/93	TPHd

Y905

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

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

Workorder # : 9310022  
Date Received : 10/01/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

QA/QC SUMMARY :

- The diesel surrogate recoveries for samples SE-8 and SW-10 are outside of quality control limits due to a soil matrix effect.

Cheryl Palmer 10/6/93  
Department Supervisor Date

Reggie Dawson 10/6/93  
Chemist Date

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

Anamatrix W.O.: 9310022  
Matrix : SOIL  
Date Sampled : 10/01/93

Project Number : 1649.21  
Date Released : 10/05/93

Reporting Limit	Sample I.D.# SE-8	Sample I.D.# SN-8	Sample I.D.# SW-10	Sample I.D.# BO0101E3
COMPOUNDS (mg/Kg)	-01	-02	-03	BLANK
Benzene	0.005	ND	ND	0.013
Toluene	0.005	ND	ND	ND
Ethylbenzene	0.005	0.008	0.006	0.013
Total Xylenes	0.005	0.018	0.016	0.055
% Surrogate Recovery	109%	106%	101%	96%
Instrument I.D.	HP12	HP12	HP12	HP12
Date Analyzed	10/01/93	10/01/93	10/01/93	10/01/93
RLMF	1	1	1	1

- ND - Not detected at or above the practical quantitation limit for the method.  
 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.

Anamatrix 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 10/5/93  
Analyst Date

Cheryl Bauman 10/5/93  
Supervisor Date

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

Anametrix W.O.: 9310022  
 Matrix : SOIL  
 Date Sampled : 10/01/93  
 Date Extracted: 10/01/93

Project Number : 1649.21  
 Date Released : 10/05/93  
 Instrument I.D.: HP19

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9310022-01	SE-8	10/02/93	20	190	21%
9310022-02	SN-8	10/02/93	100	230	40%
9310022-03	SW-10	10/02/93	20	87	18%
BO01H1F1	METHOD BLANK	10/02/93	10	ND	85%

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 is determined by GCFID following sample extraction by EPA Method 3510.

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

Charlton Burch      10-6-93  
 Analyst                      Date

Charles Balon      10/6/93  
 Supervisor                      Date

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

Anametrix W.O.: 9310022  
Matrix : SOIL  
Date Sampled : 10/01/93  
Date Extracted: 10/01/93

Project Number : 1649.21  
Date Released : 10/05/93  
Instrument I.D.: HP19

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9310022-01	SE-8	10/02/93	20	190	21%
9310022-02	SN-8	10/02/93	100	700	40%
9310022-03	SW-10	10/02/93	20	200	18%
BO01H1F1	METHOD BLANK	10/02/93	10	ND	85%

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 is determined by GCFID following sample extraction by EPA Method 3510.

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

Charles Bunch      10-6-93  
Analyst                      Date

Charles Balmer      10/6/93  
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 : 10/01/93

Anamatrix I.D. : MO0103E3  
 Analyst :  
 Supervisor :  
 Date Released : 10/05/93  
 Instrument I.D.: HP12

COMPOUND	SPIKE AMT (mg/Kg)	REC LCS (mg/Kg)	%REC LCS	REC LCS (mg/Kg)	%REC LCS	RPD	%REC LIMITS
BENZENE	0.020	0.019	95%	0.018	90%	-5%	52-133
TOLUENE	0.020	0.018	90%	0.020	100%	11%	57-136
ETHYLBENZENE	0.020	0.024	120%	0.022	110%	-9%	56-139
TOTAL XYLENES	0.020	0.022	110%	0.022	110%	0%	56-141
p-BFB			104%		104%		53-147

\* Quality control established by Anamatrix, 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  
 Matrix : SOIL  
 Date Sampled : N/A  
 Date Extracted: 10/01/93  
 Date Analyzed : 10/02/93

Anamatrix I.D. : MO01H1F1  
 Analyst : RD  
 Supervisor : *W*  
 Date Released : 10/05/93  
 Instrument I.D.: HP19

COMPOUND	SPIKE AMT (mg/Kg)	REC LCS (mg/Kg)	% REC LCS	% REC LIMITS
DIESEL	125	114	91%	48-113
SURROGATE			107%	30-130

\*Limits established by Anamatrix, Inc.

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

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

Workorder # : 9310022  
Date Received : 10/01/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : PREP  
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9310022- 1	SE-8	SOIL	10/01/93	5520EF
9310022- 2	SN-8	SOIL	10/01/93	5520EF
9310022- 3	SW-10	SOIL	10/01/93	5520EF



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

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

Workorder # : 9310022  
Date Received : 10/01/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : PREP  
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cathy Mertenberger      10/5/93  
Department Supervisor      Date

M. P. S. K. R. O. V.      10.05.93  
Chemist      Date

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

Project # : 1649.21	Anamatrix I.D. : 9310022
Matrix : SOIL	Analyst : <i>MP</i>
Date sampled : 10/01/93	Supervisor : <i>cm</i>
Date extracted: 10/01/93	Date released : 10/04/93
Date analyzed : 10/04/93	

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9310022-01	SE-8	30	3,800
9310022-02	SN-8	30	3,600
9310022-03	SW-10	30	1,700
BO01H1W7	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.

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.	: MO01H1W7
Matrix	: SOIL	Analyst	: <i>M.P.</i>
Date sampled	: N/A	Supervisor	: <i>Chi</i>
Date extracted	: 10/01/93	Date Released	: 10/04/93
Date analyzed	: 10/04/93		

COMPOUND	SPIKE AMT. (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
Motor Oil	300	310	103%	71-119%

\* Quality control established by Anametrix Laboratories.

TRPH - Total Recoverable Petroleum Hydrocarbons are determined by  
Standard Method 5520EF.

9310022

## CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: <b>1649.21</b>		Field Logbook No.:		Date: <b>10/1/93</b>		Serial No.: <b>11198</b>							
Project Name: <b>East Bay bridge</b>		Project Location: <b>Emeryville</b>											
Sampler (Signature): <i>Wilbur Gusman</i>				<b>ANALYSES</b>		Samplers: <b>WEMA</b>							
<b>SAMPLES</b>				<b>HOLD</b>		<b>RUSH</b>							
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624	THIOX	BTEX	Oil, Grease	HOLD	RUSH	REMARKS
SE-8	10/1/93			1	Soil			X	X	X	X		24-Hour TAT
SN-8	↓			1	↓			X	X	X	X		Results DUE by
SW-10	↓			1	↓			X	X	X	X		8:00 AM 10/4/93
													Results faxed to
													Jennifer Beatty
RELINQUISHED BY: <i>Wilbur Gusman</i>		DATE: <b>10/1/93</b>	TIME: <b>3:10p</b>	RECEIVED BY: <i>[Signature]</i>		DATE: <b>10/1/93</b>	TIME: <b>5:10</b>						
RELINQUISHED BY: <i>[Signature]</i>		DATE: <b>10/1/93</b>	TIME: <b>17:41</b>	RECEIVED BY: <i>[Signature]</i>		DATE: <b>10/1/93</b>	TIME: <b>17:41</b>						
RELINQUISHED BY: (Signature)		DATE	TIME	RECEIVED BY: (Signature)		DATE	TIME						
METHOD OF SHIPMENT:		DATE	TIME	LAB COMMENTS:									
Sample Collector: <b>LEVINE-FRICKE</b>		1900 Powell Street, 12th Floor		Analytical Laboratory:									
		Emeryville, Ca 94608		<i>Argentrix</i>									
		(415) 652-4500											



# 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 # : 9310027  
 Date Received : 10/04/93  
 Project ID : 1649.21  
 Purchase Order: N/A


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

ANAMETRIX ID	CLIENT SAMPLE ID
9310027- 1	SE-8-R
9310027- 2	SN-8-R
9310027- 3	SW-9
9310027- 4	BS-8

This report consists of 13 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 # : 9310027  
Date Received : 10/04/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9310027- 1	SE-8-R	SOIL	10/04/93	BTEX
9310027- 2	SN-8-R	SOIL	10/04/93	BTEX
9310027- 3	SW-9	SOIL	10/04/93	BTEX
9310027- 4	BS-8	SOIL	10/04/93	BTEX
9310027- 1	SE-8-R	SOIL	10/04/93	TPHd
9310027- 2	SN-8-R	SOIL	10/04/93	TPHd
9310027- 3	SW-9	SOIL	10/04/93	TPHd
9310027- 4	BS-8	SOIL	10/04/93	TPHd

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

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

Workorder # : 9310027  
Date Received : 10/04/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cheryl Balmer 10/6/93  
Department Supervisor Date

Peggie Dawson 10/6/93  
Chemist Date

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

Anamatrix W.O.: 9310027  
Matrix : SOIL  
Date Sampled : 10/04/93

Project Number : 1649.21  
Date Released : 10/06/93

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# SE-8-R	Sample I.D.# SN-8-R	Sample I.D.# SW-9	Sample I.D.# BS-8	Sample I.D.# B00401E3
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	0.006	ND	0.017	ND
% Surrogate Recovery		106%	106%	107%	104%	104%
Instrument I.D.		HP21	HP21	HP21	HP21	HP21
Date Analyzed		10/04/93	10/04/93	10/04/93	10/04/93	10/04/93
RLMF		1	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.

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.

Anamatrix 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 10/6/93  
Analyst Date

Cheryl Balmer 10/6/93  
Supervisor Date



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

Anametrix W.O.: 9310027  
 Matrix : SOIL  
 Date Sampled : 10/04/93  
 Date Extracted: 10/04/93

Project Number : 1649.21  
 Date Released : 10/06/93  
 Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9310027-01	SE-8-R	10/05/93	50	70	70%
9310027-02	SN-8-R	10/05/93	50	100	69%
9310027-03	SW-9	10/04/93	10	ND	87%
9310027-04	BS-8	10/05/93	50	470	94%
BO04H1F1	METHOD BLANK	10/04/93	10	ND	89%

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 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 10/6/93  
 Analyst Date

Cheryl Bullock 10/6/93  
 Supervisor Date

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

Anamatrix W.O.: 9310027  
Matrix : SOIL  
Date Sampled : 10/04/93  
Date Extracted: 10/04/93

Project Number : 1649.21  
Date Released : 10/06/93  
Instrument I.D.: HP9

Anamatrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9310027-01	SE-8-R	10/05/93	50	220	70%
9310027-02	SN-8-R	10/05/93	50	210	69%
9310027-03	SW-9	10/04/93	10	ND	87%
9310027-04	BS-8	10/05/93	50	650	94%
BO04H1F1	METHOD BLANK	10/04/93	10	ND	89%

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 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 10/6/93  
Analyst Date

Charles Bulmer 10/6/93  
Supervisor Date

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

Sample I.D. : 1649.21 SW-9  
 Matrix : SOIL  
 Date Sampled : 10/04/93  
 Date Extracted: 10/04/93  
 Date Analyzed : 10/05/93

Anamatrix I.D. : 10027-03  
 Analyst : RD  
 Supervisor : OB  
 Date Released : 10/06/93  
 Instrument I.D.: HP9

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	REC MS (mg/Kg)	% REC MS	REC MD (mg/Kg)	% REC MD	RPD	% REC LIMITS
DIESEL	125	0	100	80%	95	76%	-5%	32-143
SURROGATE				88%		97%		30-130

\* Quality control limit established by Anamatrix, 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 : 10/04/93

Anametrix I.D. : MO0401E3  
 Analyst : RD  
 Supervisor : US  
 Date Released : 10/05/93  
 Instrument ID : HP21

COMPOUND	SPIKE AMT (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
BENZENE	0.020	0.022	110%	52-133
TOLUENE	0.020	0.024	120%	57-136
ETHYLBENZENE	0.020	0.025	125%	56-139
TOTAL-XYLENES	0.020	0.026	130%	56-141
P-BFB			112%	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  
 Matrix : SOIL  
 Date Sampled : N/A  
 Date Extracted: 10/04/93  
 Date Analyzed : 10/04/93

Anamatrix I.D. : MO04H1F1  
 Analyst : RD  
 Supervisor : OS  
 Date Released : 10/06/93  
 Instrument I.D.: HP9

COMPOUND	SPIKE AMT (mg/Kg)	REC LCS (mg/Kg)	% REC LCS	% REC LIMITS
DIESEL	125	96	77%	48-113
SURROGATE			90%	30-130

\*Limits established by Anamatrix, Inc.

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

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

Workorder # : 9310027  
Date Received : 10/04/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : PREP  
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9310027- 1	SE-8-R	SOIL	10/04/93	5520EF
9310027- 2	SN-8-R	SOIL	10/04/93	5520EF
9310027- 3	SW-9	SOIL	10/04/93	5520EF
9310027- 4	BS-8	SOIL	10/04/93	5520EF

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

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

Workorder # : 9310027  
Date Received : 10/04/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : PREP  
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

*J. Lev*      10.06.93  
Department Supervisor      Date

*L. E...*      10/6/93  
Chemist      Date

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

Project # : 1649.21	Anamatrix I.D. : 9310027
Matrix : SOIL	Analyst : HC
Date sampled : 10/04/93	Supervisor : TS
Date extracted: 10/04/93	Date released : 10/05/93
Date analyzed : 10/04/93	

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9310027-01	SE-8-R	30	1,100
9310027-02	SN-8-R	30	2,200
9310027-03	SW-9	30	90
9310027-04	BS-8	30	3,100
B004H1W9	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. : 1649.21, SW-9MS, MD  
Matrix : SOIL  
Date sampled : 10/04/93  
Date extracted : 10/04/93  
Date analyzed : 10/04/93

Anametrix I.D. : 9310027-03  
Analyst : *HIE*  
Supervisor : *TS*  
Date Released : 10/05/93

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	90	370	93%	430	113%	19%	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	Anamatrix I.D.	: MO04H1W9
Matrix	: SOIL	Analyst	: HE
Date sampled	: N/A	Supervisor	: TS
Date extracted	: 10/04/93	Date Released	: 10/05/93
Date analyzed	: 10/04/93		

COMPOUND	SPIKE AMT. (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
Motor Oil	300	330	110%	71-119%

\* Quality control established by Anamatrix Laboratories.

TRPH - Total Recoverable Petroleum Hydrocarbons are determined by  
Standard Method 5520EF.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 1649.21 Field Logbook No.: \_\_\_\_\_ Date: 10/1/93 Serial No.: 11198  
 Project Name: East Bay bridge Project Location: Emeryville

Sampler (Signature): William Quaschnick ANALYSES  
 Hold Rush  
 Samplers: WEM

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	ANALYSES						HOLD	RUSH	REMARKS
						EPA 601	EPA 624	THALOS	BTEX	Oil & Grease				
① SE-8	10/1/93			1	Soil			X	X	X			X	24-Hour TAT
② SN-8	↓			1	↓			X	X	X			X	Results DUE by
③ SW-10	↓			1	↓			X	X	X			X	8:00 AM 10/4/93
														Results faxed to
														Jenifer Beatty

RELINQUISHED BY: (Signature) <u>William Quaschnick</u>	DATE <u>10/1/93</u>	TIME <u>3:10p</u>	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE <u>10/1/93</u>	TIME <u>3:10</u>
RELINQUISHED BY: (Signature) <u>[Signature]</u>	DATE <u>10/1/93</u>	TIME <u>17:41</u>	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE <u>10/1/93</u>	TIME <u>17:41</u>
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: Anamatrix



# Inchcape Testing Services

## Anamatrix 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 # : 9310003  
 Date Received : 10/01/93  
 Project ID : 1649.21  
 Purchase Order: N/A

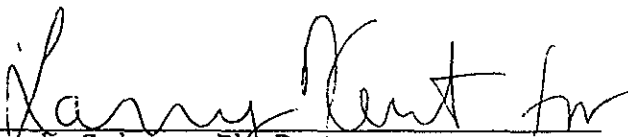
The following samples were received at Anamatrix, Inc. for analysis :

ANAMATRIX ID	CLIENT SAMPLE ID
9310003- 1	BS-14
9310003- 2	TP1-8

This report consists of 13 pages not including the cover letter, and is organized in sections according to the specific Anamatrix 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 Anamatrix 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.

Anamatrix 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 Anamatrix.

  
 Sarah Schoen, Ph.D.  
 Laboratory Director

10-7-93  
 Date

COPY

RECEIVED  
 OCT 1 1993  
 LEVINE-FRICKE

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

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

Workorder # : 9310003  
Date Received : 10/01/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9310003- 1	BS-14	SOIL	10/01/93	BTEX
9310003- 2	TP1-8	SOIL	10/01/93	BTEX
9310003- 1	BS-14	SOIL	10/01/93	TPHd
9310003- 2	TP1-8	SOIL	10/01/93	TPHd

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

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

Workorder # : 9310003  
Date Received : 10/01/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

QA/QC SUMMARY :

- Due to the heterogeneous nature of the soil sample, the relative percent difference of the diesel matrix spike and matrix spike duplicate on sample BS-14 is outside of quality control limits.

Cheryl Balmer 10/6/93  
Department Supervisor Date

Peggie Dawson 10/6/93  
Chemist Date

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

Anametrix W.O.: 9310003  
Matrix : SOIL  
Date Sampled : 10/01/93

Project Number : 1649.21  
Date Released : 10/05/93

Reporting Limit	Sample I.D.# BS-14	Sample I.D.# TP1-8	Sample I.D.# BO0101E3
COMPOUNDS (mg/Kg)	-01	-02	BLANK
Benzene	0.005	ND	ND
Toluene	0.005	ND	ND
Ethylbenzene	0.005	ND	ND
Total Xylenes	0.005	0.007	ND
% Surrogate Recovery	98%	98%	96%
Instrument I.D.	HP12	HP12	HP12
Date Analyzed	10/01/93	10/01/93	10/01/93
RLMF	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.  
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 10/5/93  
Analyst Date

Cheryl Balmer 10/5/93  
Supervisor Date

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

Anametrix W.O.: 9310003  
Matrix : SOIL  
Date Sampled : 10/01/93  
Date Extracted: 10/01/93

Project Number : 1649.21  
Date Released : 10/05/93  
Instrument I.D.: HP19

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9310003-01	BS-14	10/02/93	10	110	59%
9310003-02	TP1-8	10/02/93	10	11	58%
BO01H1F1	METHOD BLANK	10/02/93	10	ND	85%

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 is determined by GCFID following sample extraction by EPA Method 3510.

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

Peggie Dawson 10/5/93  
Analyst Date

Cheryl Balmer 10/5/93  
Supervisor Date



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

Anametrix W.O.: 9310003  
 Matrix : SOIL  
 Date Sampled : 10/01/93  
 Date Extracted: 10/01/93

Project Number : 1649.21  
 Date Released : 10/05/93  
 Instrument I.D.: HP19

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9310003-01	BS-14	10/02/93	10	170	59%
9310003-02	TP1-8	10/02/93	10	57	58%
B001H1F1	METHOD BLANK	10/02/93	10	ND	85%

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 is determined by GCFID following sample extraction by EPA Method 3510.

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

Peggie Dawson 10/5/93  
 Analyst Date

Cheyl Balmer 10/5/93  
 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 : 10/01/93

Anamatrix I.D. : M00103E3  
 Analyst : RD  
 Supervisor : US  
 Date Released : 10/05/93  
 Instrument I.D.: HP12

COMPOUND	SPIKE AMT (mg/Kg)	REC LCS (mg/Kg)	%REC LCS	REC LCSD (mg/Kg)	%REC LCSD	RPD	%REC LIMITS
BENZENE	0.020	0.019	95%	0.018	90%	-5%	52-133
TOLUENE	0.020	0.018	90%	0.020	100%	11%	57-136
ETHYLBENZENE	0.020	0.024	120%	0.022	110%	-9%	56-139
TOTAL XYLENES	0.020	0.022	110%	0.022	110%	0%	56-141
p-BFB			104%		104%		53-147

\* Quality control established by Anamatrix, Inc.

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

Sample I.D. : 1649.21 BS-14	Anamatrix I.D. : 10003-01
Matrix : SOIL	Analyst : RD
Date Sampled : 10/01/93	Supervisor : <i>Ø</i>
Date Extracted: 10/01/93	Date Released : 10/05/93
Date Analyzed : 10/02/93	Instrument I.D.: HP19

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	REC MS (mg/Kg)	% REC MS	REC MD (mg/Kg)	% REC MD	RPD	% REC LIMITS
DIESEL	250	110	274	66%	388	111%	34%	32-143
SURROGATE				112%		106%		30-130

\* Quality control limit established by Anamatrix, 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  
 Matrix : SOIL  
 Date Sampled : N/A  
 Date Extracted: 10/01/93  
 Date Analyzed : 10/02/93

Anamatrix I.D. : MO01H1F1  
 Analyst : RD  
 Supervisor : *cm*  
 Date Released : 10/05/93  
 Instrument I.D.: HP19

COMPOUND	SPIKE AMT (mg/Kg)	REC LCS (mg/Kg)	% REC LCS	% REC LIMITS
DIESEL	125	114	91%	48-113
SURROGATE			107%	30-130

\*Limits established by Anamatrix, Inc.

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

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

Workorder # : 9310003  
Date Received : 10/01/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : PREP  
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9310003- 1	BS-14	SOIL	10/01/93	5520EF
9310003- 2	TP1-8	SOIL	10/01/93	5520EF

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

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

Workorder # : 9310003  
Date Received : 10/01/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : PREP  
Sub-Department: PREP

QA/QC SUMMARY :

. No QA/QC problems encountered for these samples.

Cathy Meltzer      10/5/93  
Department Supervisor      Date

MPO Shitkov      10.05.93  
Chemist      Date

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

Project # : 1649.21	Anamatrix I.D. : 9310003
Matrix : SOIL	Analyst : <i>M.P.</i>
Date sampled : 10/01/93	Supervisor : <i>CW</i>
Date extracted: 10/01/93	Date released : 10/04/93
Date analyzed : 10/04/93	

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9310003-01	BS-14	30	410
9310003-02	TP1-8	30	230
BO01H1W7	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. : 1649.21, TP1-8MS, MD      Anamatrix I.D. : 9310003-02  
Matrix : SOIL      Analyst : *M.P.*  
Date sampled : 10/01/93      Supervisor : *CM*  
Date extracted : 10/01/93      Date Released : 10/04/93  
Date analyzed : 10/04/93

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	230	560	110%	560	110%	0%	48-114%

\* Quality control limits established by Anamatrix 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. : MO01H1W7  
Matrix : SOIL    Analyst : *K.P.*  
Date sampled : N/A                                        Supervisor : *Ch*  
Date extracted : 10/01/93                              Date Released : 10/04/93  
Date analyzed : 10/04/93

COMPOUND	SPIKE AMT. (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
Motor Oil	300	310	103%	71-119%

\* Quality control established by Anametrix Laboratories.

TRPH - Total Recoverable Petroleum Hydrocarbons are determined by  
Standard Method 5520EF.

1310003 (2) 131503

### CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 1649.2 Field Logbook No.: \_\_\_\_\_ Date: 10/1/93 Serial No.: 11197

Project Name: East Bay Bridge Project Location: Emeryville

Sampler (Signature): \_\_\_\_\_ ANALYSES  
 Hold RUSH Samplers: WFEA

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	ANALYSES						REMARKS	
						EPA 604	EPA 624	TPH	HEX	Dil Hex	HOLD		RUSH
① BS-14	<u>10/1/93</u>	<u>1</u>		<u>1</u>	<u>Soil</u>			<u>X</u>	<u>X</u>	<u>X</u>		<u>X</u>	<u>24-Hour 8:00 AM 10/4/93 Results to Jennifer Blatty</u>
② TPI-8	<u>10/1/93</u>	<u>1</u>		<u>1</u>	<u>Soil</u>			<u>X</u>	<u>X</u>	<u>X</u>		<u>X</u>	

RELINQUISHED BY: <u>William Proeliv</u>	DATE: <u>10/1/93</u>	TIME: <u>11:15</u>	RECEIVED BY: <u>Jenny S. Conyore</u>	DATE: <u>10/1/93</u>	TIME: <u>11:15</u>
RELINQUISHED BY: <u>Jenny S. Conyore</u>	DATE: <u>10/1/93</u>	TIME: <u>13:05</u>	RECEIVED BY: <u>Jandy C. Falcon</u>	DATE: <u>10/1/93</u>	TIME: <u>13:05</u>
RELINQUISHED BY: _____	DATE: _____	TIME: _____	RECEIVED BY: _____	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: Arametric



# Inchcape Testing Services

## Anamatrix 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 # : 9310084  
 Date Received : 10/07/93  
 Project ID : 1649.21  
 Purchase Order: N/A

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

ANAMATRIX ID	CLIENT SAMPLE ID
9310084- 1	SNW-8-R

This report consists of 11 pages not including the cover letter, and is organized in sections according to the specific Anamatrix 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 Anamatrix 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.

Anamatrix 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 Anamatrix.

*Corinne Bran* for  
 Sarah Schoen, Ph.D.  
 Laboratory Director

10/13/93  
 Date

OCT 14 1993

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

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

Workorder # : 9310084  
Date Received : 10/07/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9310084- 1	SNW-8-R	SOIL	10/07/93	BTEX
9310084- 1	SNW-8-R	SOIL	10/07/93	TPHd

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

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

Workorder # : 9310084  
Date Received : 10/07/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for this sample.

Cheryl Balma 10/11/93  
Department Supervisor Date

Reggie Dawson 10/12/93  
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS  
(BTEX)

ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9310084  
Matrix : SOIL  
Date Sampled : 10/07/93

Project Number : 1649.21  
Date Released : 10/08/93

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# SNW-8-R	Sample I.D.# BO0701E3
Benzene	0.005	ND	ND
Toluene	0.005	ND	ND
Ethylbenzene	0.005	ND	ND
Total Xylenes	0.005	ND	ND
% Surrogate Recovery		95%	98%
Instrument I.D.		HP21	HP21
Date Analyzed		10/07/93	10/07/93
RLMF		1	1

ND - Not detected at or above the practical quantitation limit for the method.

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.

Anamatrix 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* 10/12/93  
Analyst Date

*Cheryl Balmer* 10/11/93  
Supervisor Date

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

Anametrix W.O.: 9310084  
 Matrix : SOIL  
 Date Sampled : 10/07/93  
 Date Extracted: 10/07/93

Project Number : 1649.21  
 Date Released : 10/08/93  
 Instrument I.D.: HP19

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9310084-01	SNW-8-R	10/08/93	10	ND	87%
BO07H1F1	METHOD BLANK	10/07/93	10	ND	87%

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 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 10/12/93  
 Analyst Date

Cheryl Balman 10/11/93  
 Supervisor Date

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

Anametrix W.O.: 9310084  
Matrix : SOIL  
Date Sampled : 10/07/93  
Date Extracted: 10/07/93

Project Number : 1649.21  
Date Released : 10/08/93  
Instrument I.D.: HP19

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9310084-01	SNW-8-R	10/08/93	10	ND	87%
BO07H1F1	METHOD BLANK	10/07/93	10	ND	87%

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 is determined by GCFID following sample extraction by EPA Method 3510.

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

Peggie Davison 10/12/93  
Analyst Date

Cheryl Balmer 10/11/93  
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 : 10/07/93

Anametrix I.D. : MO0701E3  
 Analyst : ED  
 Supervisor :  
 Date Released : 10/11/93  
 Instrument ID : HP21

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	0.022	110%	56-139
TOTAL-XYLENES	0.020	0.022	110%	56-141
SURROGATE			101%	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  
 Matrix : SOIL  
 Date Sampled : N/A  
 Date Extracted: 10/07/93  
 Date Analyzed : 10/07/93

Anametrix I.D. : MO07H1F1  
 Analyst : AD  
 Supervisor : *[Signature]*  
 Date Released : 10/08/93  
 Instrument I.D.: HP19

COMPOUND	SPIKE AMT (mg/Kg)	REC LCS (mg/Kg)	% REC LCS	% REC LIMITS
DIESEL	125	92	74%	48-113
SURROGATE			90%	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 # : 9310084  
Date Received : 10/07/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : PREP  
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9310084- 1	SNW-8-R	SOIL	10/07/93	5520EF

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

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

Workorder # : 9310084  
Date Received : 10/07/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : PREP  
Sub-Department: PREP

QA/QC SUMMARY :

-No QA/QC problems encountered for this sample.

Cathy Miller 10/11/93  
Department Supervisor Date

H. E. Smith 10/12/93  
Chemist Date

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

Project # : 1649.21 Anamatrix I.D. : 9310084  
Matrix : SOIL Analyst : HE  
Date sampled : 10/07/93 Supervisor : CM  
Date extracted: 10/07/93 Date released : 10/08/93  
Date analyzed : 10/08/93

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9310084-01	SNW-8-R	30	67
BO07H1W9	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.

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. : M007H1W9  
Matrix : SOIL    Analyst : HE  
Date sampled : N/A                                        Supervisor : CW  
Date extracted : 10/07/93                              Date Released : 10/08/93  
Date analyzed : 10/08/93

COMPOUND	SPIKE AMT. (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
Motor Oil	300	300	100%	71-119%

\* Quality control established by Anametrix Laboratories.

TRPH - Total Recoverable Petroleum Hydrocarbons are determined by  
Standard Method 5520EF.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 1649.21 Field Logbook No.: Date: 10/7/93 Serial No.: 11168  
 Project Name: East Bay bridge Project Location: Oakland

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES						HOLD	RUSH	REMARKS
						EPA 601	EPA 624	TOT	Metals	BTEX	OT6			
1) SAW-8-R	10/7/93			1	Soil			x	x	x			x	Same Day TAT Results to Teafer Beatty Faxed  Results are due at 9:00 am on 10/8/93. <del>31</del>

RELINQUISHED BY: (Signature) <i>William Madrin</i>	DATE 10/7/93	TIME 12:25	RECEIVED BY: (Signature) <i>Benny L. Canyon</i>	DATE 10/7/93	TIME 12:25
RELINQUISHED BY: (Signature) <i>Benny L. Canyon</i>	DATE 10/7/93	TIME 14:08	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE 10/7/93	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:  
*Ana metrix*



# 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 # : 9310055  
 Date Received : 10/06/93  
 Project ID : 1649.21  
 Purchase Order: N/A

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

ANAMETRIX ID	CLIENT SAMPLE ID
9310055- 1	SS-14
9310055- 2	EASTPILE
9310055- 3	WESTPILE
9310055- 4	CENTRAL

*A New report  
 for SS-14  
 to be written*

This report consists of 12 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*

Sarah Schoen, Ph.D.  
 Laboratory Director

10-18-93  
 Date

OCT 19 1993



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

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

Workorder # : 9310055  
Date Received : 10/06/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9310055- 1	SS-14	SOIL	10/06/93	BTEX
9310055- 2	EASTPILE	SOIL	10/05/93	BTEX
9310055- 3	WESTPILE	SOIL	10/05/93	BTEX
9310055- 4	CENTRAL	SOIL	10/05/93	BTEX
9310055- 1	SS-14	SOIL	10/06/93	TPHd
9310055- 2	EASTPILE	SOIL	10/05/93	TPHd
9310055- 3	WESTPILE	SOIL	10/05/93	TPHd
9310055- 4	CENTRAL	SOIL	10/05/93	TPHd

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

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

Workorder # : 9310055  
Date Received : 10/06/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Charles Palmer 10/7/93  
Department Supervisor Date

Reggie Dawson 10/7/93  
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS  
(BTEX)

ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9310055  
Matrix : SOIL  
Date Sampled : 10/05-06/93

Project Number : 1649.21  
Date Released : 10/07/93

Reporting Limit	Sample I.D.# SS-14	Sample I.D.# EASTPILE	Sample I.D.# WESTPILE	Sample I.D.# CENTRAL	Sample I.D.# BO0601E3
COMPOUNDS (mg/Kg)	-01	-02	-03	-04	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
% Surrogate Recovery	95%	84%	84%	89%	95%
Instrument I.D.	HP21	HP21	HP21	HP21	HP21
Date Analyzed	10/06/93	10/06/93	10/06/93	10/06/93	10/06/93
RLMF	1	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.

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.

Anamatrix 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 10/7/93  
Analyst Date

Cheryl Balmer 10/7/93  
Supervisor Date

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

Anametrix W.O.: 9310055  
 Matrix : SOIL  
 Date Sampled : 10/05-06/93  
 Date Extracted: 10/06/93

Project Number : 1649.21  
 Date Released : 10/07/93  
 Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9310055-01	SS-14	10/07/93	10	ND	71%
9310055-02	EASTPILE	10/07/93	50	ND	65%
9310055-03	WESTPILE	10/07/93	100	ND	60%
9310055-04	CENTRAL	10/07/93	50	ND	58%
BO06H1F1	METHOD BLANK	10/07/93	10	ND	71%

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 is determined by GCFID following sample extraction by EPA Method 3510.

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

Peggie Dawson 10/7/93  
 Analyst Date

Cheryl Balmer 10/7/93  
 Supervisor Date

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

Anamatrix W.O.: 9310055  
Matrix : SOIL  
Date Sampled : 10/05-06/93  
Date Extracted: 10/06/93

Project Number : 1649.21  
Date Released : 10/07/93  
Instrument I.D.: HP9

Anamatrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9310055-01	SS-14	10/07/93	10	ND	71%
9310055-02	EASTPILE	10/07/93	50	260	65%
9310055-03	WESTPILE	10/07/93	100	570	60%
9310055-04	CENTRAL	10/07/93	50	100	58%
BO06H1F1	METHOD BLANK	10/07/93	10	ND	71%

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 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 10/7/93  
Analyst Date

Cheyl Balmer 10/7/93  
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 : 10/06/93

Anamatrix I.D. : MO0601E3  
 Analyst : RJ  
 Supervisor : US  
 Date Released : 10/07/93  
 Instrument ID : HP21

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

\* Quality control limit established by Anamatrix, 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  
 Matrix : SOIL  
 Date Sampled : N/A  
 Date Extracted: 10/06/93  
 Date Analyzed : 10/07/93

Anamatrix I.D. : MO06H1F1  
 Analyst : RD  
 Supervisor : CS  
 Date Released : 10/07/93  
 Instrument I.D.: HP9

COMPOUND	SPIKE AMT (mg/Kg)	REC LCS (mg/Kg)	% REC LCS	% REC LIMITS
DIESEL	125	95	76%	48-113
SURROGATE			67%	30-130

\*Limits established by Anamatrix, Inc.

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

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

Workorder # : 9310055  
Date Received : 10/06/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : PREP  
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9310055- 1	SS-14	SOIL	10/06/93	5520EF
9310055- 2	EASTPILE	SOIL	10/05/93	5520EF
9310055- 3	WESTPILE	SOIL	10/05/93	5520EF
9310055- 4	CENTRAL	SOIL	10/05/93	5520EF



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

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

Workorder # : 9310055  
Date Received : 10/06/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : PREP  
Sub-Department: PREP

QA/QC SUMMARY :

- Due to high concentration of oil and grease in sample WESTPILE, the percent recovery of the Matrix Spike Duplicate and the Relative Percent Difference between the Matrix Spike and Matrix Spike Duplicate are outside of quality control limits.

Cathy Neely  
Department Supervisor

10/08/93  
Date

W. Povallitkov 10-08-93  
Chemist Date

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

Project #	: 1649.21	Anamatrix I.D.	: 9310055
Matrix	: SOIL	Analyst	: <i>M.P.</i>
Date sampled	: 10/05&06/93	Supervisor	: <i>Ch</i>
Date extracted:	10/06/93	Date released	: 10/08/93
Date analyzed	: 10/06/93		

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9310055-01	SS-14	30	53
9310055-02	EASTPILE	30	1,200
9310055-03	WESTPILE	30	3,300
9310055-04	CENTRAL	30	360
BO06H1W9	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  
 ANAMETRIX LABORATORIES (408) 432-8192

Sample I.D. : 1649.21, WESTPILE  
 Matrix : SOIL  
 Date sampled : 10/05/93  
 Date extracted : 10/06/93  
 Date analyzed : 10/06/93

Anamatrix I.D. : 9310055-03  
 Analyst : *MB*  
 Supervisor : *Em*  
 Date Released : 10/08/93

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	3300	3500	67%	3700	133%	67%	48-114%

\* Quality control limits established by Anamatrix Laboratories.

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

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

Sample I.D. : LAB CONTROL SAMPLE  
Matrix : SOIL  
Date sampled : N/A  
Date extracted : 10/06/93  
Date analyzed : 10/06/93

Anamatrix I.D. : MO06H1W9  
Analyst : *MP*  
Supervisor : *CM*  
Date Released : 10/08/93

COMPOUND	SPIKE AMT. (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
Motor Oil	300	300	100%	71-119%

\* Quality control established by Anamatrix Laboratories.

TRPH - Total Recoverable Petroleum Hydrocarbons are determined by  
Standard Method 5520EF.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 1049.21 Field Logbook No.: \_\_\_\_\_ Date: 10/6/93 Serial No.: 11172  
 Project Name: East Bay bridge Project Location: Emeryville

Sampler (Signature): William Cradock ANALYSES  
 Samplers: WEM

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES						HOLD	RUSH	REMARKS
						EPA 601	EPA 624	THAL	BTEX	OTG				
① SS-14	10/6/93			1	Soil			x	x	x			x	24-Hour TAT  FOR all samples, Results Faxed to Jennifer Beatty
② East Pile	10/5/93			2	Soil			x	x	x			x	
<del>East Pile</del>														
③ West Pile	10/5/93			2	Soil			x	x	x			x	
④ Central Pile	10/5/93			3	Soil			x	x	x			x	

RELINQUISHED BY: <u>William Cradock</u> (Signature)	DATE: <u>10/6/93</u>	TIME: <u>9:35a</u>	RECEIVED BY: <u>Jimmy S. Carrigan</u> (Signature)	DATE: <u>10/6/93</u>	TIME: <u>0935</u>
RELINQUISHED BY: <u>Jimmy S. Carrigan</u> (Signature)	DATE: <u>10/6/93</u>	TIME: <u>1020</u>	RECEIVED BY: <u>William Cradock</u> (Signature)	DATE: <u>10-6-93</u>	TIME: <u>10:20a</u>
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:  
Anametric



# Inchcape Testing Services

## Anamatrix 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 # : 9310042  
 Date Received : 10/05/93  
 Project ID : 1649.21  
 Purchase Order: N/A

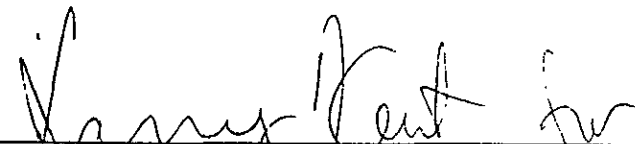
The following samples were received at Anamatrix, Inc. for analysis :

ANAMATRIX ID	CLIENT SAMPLE ID
9310042- 1	SN-14
9310042- 2	SE-14
9310042- 3	SW-14

This report consists of 13 pages not including the cover letter, and is organized in sections according to the specific Anamatrix 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 Anamatrix 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.

Anamatrix 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 Anamatrix.

  
 Sarah Schoen, Ph. D.  
 Laboratory Director

10-8-93  
 Date

COPY

RECEIVED
OCT 11 1993
LEVINE FRICKE

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

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

Workorder # : 9310042  
Date Received : 10/05/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9310042- 1	SN-14	SOIL	10/05/93	BTEX
9310042- 2	SE-14	SOIL	10/05/93	BTEX
9310042- 3	SW-14	SOIL	10/05/93	BTEX
9310042- 1	SN-14	SOIL	10/05/93	TPHd
9310042- 2	SE-14	SOIL	10/05/93	TPHd
9310042- 3	SW-14	SOIL	10/05/93	TPHd

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

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

Workorder # : 9310042  
Date Received : 10/05/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cheryl Balmer 10/6/93  
Department Supervisor Date

Reggie Dawson 10/7/93  
Chemist Date



ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS  
(BTEX)

ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9310042  
Matrix : SOIL  
Date Sampled : 10/05/93

Project Number : 1649.21  
Date Released : 10/06/93

Reporting Limit	Sample I.D.# SN-14	Sample I.D.# SE-14	Sample I.D.# SW-14	Sample I.D.# BO0501E3
COMPOUNDS (mg/Kg)	-01	-02	-03	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
% Surrogate Recovery	94%	94%	95%	109%
Instrument I.D.	HP21	HP21	HP21	HP21
Date Analyzed	10/05/93	10/05/93	10/05/93	10/05/93
RLMF	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.

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.

Anamatrix 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 10/7/93  
Analyst Date

Cheryl Paulman 10/6/93  
Supervisor Date

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

Anamatrix W.O.: 9301042  
Matrix : SOIL  
Date Sampled : 10/05/93  
Date Extracted: 10/05/93

Project Number : 1649.21  
Date Released : 10/06/93  
Instrument I.D.: HP9

Anamatrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9310042-01	SN-14	10/05/93	10	29	78%
9310042-02	SE-14	10/05/93	10	24	79%
9310042-03	SW-14	10/06/93	10	22	76%
BO05H1F1	METHOD BLANK	10/05/93	10	ND	78%

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 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 10/7/93  
Analyst Date

Cheryl Buelmer 10/6/93  
Supervisor Date

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

Anamatrix W.O.: 9301042  
Matrix : SOIL  
Date Sampled : 10/05/93  
Date Extracted: 10/05/93

Project Number : 1649.21  
Date Released : 10/06/93  
Instrument I.D.: HP9

Anamatrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9310042-01	SN-14	10/05/93	10	58	78%
9310042-02	SE-14	10/05/93	10	58	79%
9310042-03	SW-14	10/06/93	10	61	76%
BO05H1F1	METHOD BLANK	10/05/93	10	ND	78%

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 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 10/7/93  
Analyst Date

Cheyl Palmer 10/6/93  
Supervisor Date

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

Sample I.D. : 1649.21 SN-14  
 Matrix : SOIL  
 Date Sampled : 10/05/93  
 Date Extracted: 10/05/93  
 Date Analyzed : 10/06/93

Anamatrix I.D. : 10042-01  
 Analyst : *FD*  
 Supervisor : *MB*  
 Date Released : 10/06/93  
 Instrument I.D.: HP9

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	REC MS (mg/Kg)	% REC MS	REC MD (mg/Kg)	% REC MD	RPD	% REC LIMITS
DIESEL	125	87	248	129%	242	124%	-2%	32-143
SURROGATE				78%		79%		30-130

\* Quality control limit established by Anamatrix, 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 : 10/05/93

Anamatrix I.D. : MO0503E3  
 Analyst : RD  
 Supervisor : CA  
 Date Released : 10/06/93  
 Instrument ID : HP21

COMPOUND	SPIKE AMT (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC. LIMITS
BENZENE	0.020	0.022	110%	52-133
TOLUENE	0.020	0.024	120%	57-136
ETHYLBENZENE	0.020	0.024	120%	56-139
TOTAL-XYLENES	0.020	0.025	125%	56-141
SURROGATE			98%	53-147

\* Quality control limit established by Anamatrix, 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  
 Matrix : SOIL  
 Date Sampled : N/A  
 Date Extracted: 10/05/93  
 Date Analyzed : 10/05/93

Anamatrix I.D. : MO05H1F1  
 Analyst : RD  
 Supervisor : LS  
 Date Released : 10/06/93  
 Instrument I.D.: HP9

COMPOUND	SPIKE AMT (mg/Kg)	REC LCS (mg/Kg)	% REC LCS	% REC LIMITS
DIESEL	125	92	74%	48-113
SURROGATE			78%	30-130

\*Limits established by Anamatrix, Inc.

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

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

Workorder # : 9310042  
Date Received : 10/05/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : PREP  
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9310042- 1	SN-14	SOIL	10/05/93	5520EF
9310042- 2	SE-14	SOIL	10/05/93	5520EF
9310042- 3	SW-14	SOIL	10/05/93	5520EF

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

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

Workorder # : 9310042  
Date Received : 10/05/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : PREP  
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

*J. Frick*      10/06/93  
Department/Supervisor      Date

*J. Emery*      10/16/93  
Chemist      Date



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

Project # : 1649.21 Anamatrix I.D. : 9310042  
Matrix : SOIL Analyst : 'C  
Date sampled : 10/05/93 Supervisor : TS  
Date extracted: 10/05/93 Date released : 10/06/93  
Date analyzed : 10/06/93

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9310042-01	SN-14	30	430
9310042-01	SE-14	30	400
9310042-01	SW-14	30	330
BO05H1W9	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. : 1649.21, SN-14MS, MD      Anamatrix I.D. : 9310042-01  
 Matrix : SOIL      Analyst : ~~AT~~  
 Date sampled : 10/05/93      Supervisor : RS  
 Date extracted : 10/05/93      Date Released : 10/06/93  
 Date analyzed : 10/06/93

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	430	660	77%	680	83%	8%	48-114%

\* Quality control limits established by Anamatrix 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	Anamatrix I.D.	: MO05H1W9
Matrix	: SOIL	Analyst	: <i>HE</i>
Date sampled	: N/A	Supervisor	: <i>TS</i>
Date extracted	: 10/05/93	Date Released	: 10/06/93
Date analyzed	: 10/06/93		

COMPOUND	SPIKE AMT. (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
Motor Oil	300	290	97%	71-119%

\* Quality control established by Anamatrix Laboratories.

TRPH - Total Recoverable Petroleum Hydrocarbons are determined by  
Standard Method 5520EF.

9310042 (2)

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 1649.21      Field Logbook No.:      Date: 10/5/93      Serial No.: 8853

Project Name: East Bay bridge      Project Location: Emeryville

Sampler (Signature): *William Wochner*      ANALYSES      Samplers: WEM

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES			HOLD	RUSH	REMARKS
						EPA 601	EPA 624	OTHER			
① SN-14	10/5/93	1		1	Soil		x	x	x		Sample results Due 10:00 AM 10/6/93 Faxed to Jennifer Beatty 510 652-2246
② SE-14	↓	1		1	↓		x	x	x		
③ SW-14	↓	1		1	↓		x	x	x		

RELINQUISHED BY: <i>William Wochner</i>	DATE: 10/5/93	TIME: 3:30	RECEIVED BY: <i>Sunny B. Langston</i>	DATE: 10/5/93	TIME: 1530
RELINQUISHED BY: <i>Sunny B. Langston</i>	DATE: 10/5/93	TIME: 1705	RECEIVED BY: <i>John [Signature]</i>	DATE: 10/5/93	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:  
*Anamatrix*



# 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 # : 9310067  
 Date Received : 10/06/93  
 Project ID : 1649.21  
 Purchase Order: N/A

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

ANAMETRIX ID	CLIENT SAMPLE ID
9310067- 1	SSW-8
9310067- 2	SSE-8
9310067- 3	SNE-8
9310067- 4	SNW-8
9310067- 5	SE-8-RR
9310067- 6	SN-8-RR

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.

*Corinne Ham*  
 Sarah Schoen, Ph.D.  
 Laboratory Director

*for*

OCT 13 1993

*10/11/93*  
 Date

COPY

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

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

Workorder # : 9310067  
Date Received : 10/06/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9310067- 1	SSW-8	SOIL	10/06/93	BTEX
9310067- 2	SSE-8	SOIL	10/06/93	BTEX
9310067- 3	SNE-8	SOIL	10/06/93	BTEX
9310067- 4	SNW-8	SOIL	10/06/93	BTEX
9310067- 5	SE-8-RR	SOIL	10/06/93	BTEX
9310067- 6	SN-8-RR	SOIL	10/06/93	BTEX
9310067- 1	SSW-8	SOIL	10/06/93	TPHd
9310067- 2	SSE-8	SOIL	10/06/93	TPHd
9310067- 3	SNE-8	SOIL	10/06/93	TPHd
9310067- 4	SNW-8	SOIL	10/06/93	TPHd
9310067- 5	SE-8-RR	SOIL	10/06/93	TPHd
9310067- 6	SN-8-RR	SOIL	10/06/93	TPHd

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

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

Workorder # : 9310067  
Date Received : 10/06/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cheryl Bauman 10/8/93  
Department Supervisor Date

Reggie Dawson 10/8/93  
Chemist Date

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

Anametrix W.O.: 9310067  
Matrix : SOIL  
Date Sampled : 10/06/93

Project Number : 1649.21  
Date Released : 10/07/93

Reporting Limit	Sample I.D.# SSW-8	Sample I.D.# SSE-8	Sample I.D.# SNE-8	Sample I.D.# SNW-8	Sample I.D.# SE-8-RR
COMPOUNDS (mg/Kg)	-01	-02	-03	-04	-05
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
% Surrogate Recovery	100%	98%	97%	83%	96%
Instrument I.D.	HP21	HP21	HP21	HP21	HP21
Date Analyzed	10/06/93	10/06/93	10/06/93	10/06/93	10/07/93
RLMF	1	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.  
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 Dawson 10/8/93  
Analyst Date

Cheryl Baerman 10/8/93  
Supervisor Date



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

Anamatrix W.O.: 9310067  
Matrix : SOIL  
Date Sampled : 10/06/93

Project Number : 1649.21  
Date Released : 10/07/93

Reporting Limit	Sample I.D.# SN-8-RR	Sample I.D.# BO0601E3	Sample I.D.# BO0701E3
COMPOUNDS (mg/Kg)	-06	BLANK	BLANK
Benzene	0.005	ND	ND
Toluene	0.005	ND	ND
Ethylbenzene	0.005	ND	ND
Total Xylenes	0.005	ND	ND
% Surrogate Recovery	94%	99%	98%
Instrument I.D.	HP21	HP21	HP21
Date Analyzed	10/06/93	10/06/93	10/07/93
RLMF	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.  
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.

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

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

Peggie Dawson 10/8/93  
Analyst Date

Cheryl Paulina 10/8/93  
Supervisor Date

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

Anamatrix W.O.: 9310067  
Matrix : SOIL  
Date Sampled : 10/06/93  
Date Extracted: 10/06/93

Project Number : 1649.21  
Date Released : 10/07/93  
Instrument I.D.: HP9

Anamatrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9310067-01	SSW-8	10/07/93	10	ND	71%
9310067-02	SSE-8	10/07/93	10	ND	75%
9310067-03	SNE-8	10/07/93	10	ND	75%
9310067-04	SNW-8	10/07/93	100	130	50%
9310067-05	SE-8-RR	10/07/93	10	ND	74%
9310067-06	SN-8-RR	10/07/93	10	ND	74%
BS06H1F1	METHOD BLANK	10/07/93	10	ND	71%

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 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 10/8/93  
Analyst Date

Cheryl Balmer 10/8/93  
Supervisor Date

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

Anamatrix W.O.: 9310067  
Matrix : SOIL  
Date Sampled : 10/06/93  
Date Extracted: 10/06/93

Project Number : 1649.21  
Date Released : 10/07/93  
Instrument I.D.: HP9

Anamatrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9310067-01	SSW-8	10/07/93	10	ND	71%
9310067-02	SSE-8	10/07/93	10	ND	75%
9310067-03	SNE-8	10/07/93	10	ND	75%
9310067-04	SNW-8	10/07/93	100	960	50%
9310067-05	SE-8-RR	10/07/93	10	26	74%
9310067-06	SN-8-RR	10/07/93	10	ND	74%
BS06H1F1	METHOD BLANK	10/07/93	10	ND	71%

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 is determined by GCFID following sample extraction by EPA Method 3510.

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

Peggie Davison 10/8/93  
Analyst Date

Cheryl Beelman 10/8/93  
Supervisor Date

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

Sample I.D. : 1649.21 SSW-8	Anamatrix I.D. : 10067-01
Matrix : SOIL	Analyst : AD
Date Sampled : 10/06/93	Supervisor : CA
Date Extracted: 10/06/93	Date Released : 10/07/93
Date Analyzed : 10/07/93	Instrument I.D.: HP9

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	REC MS (mg/Kg)	% REC MS	REC MD (mg/Kg)	% REC MD	RPD	% REC LIMITS
DIESEL	125	0	91	73%	96	77%	5%	32-143
SURROGATE				76%		77%		30-130

\* Quality control limit established by Anamatrix, 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 : 10/06/93

Anamatrix I.D. : MO0601E3  
 Analyst : RD  
 Supervisor : *CS*  
 Date Released : 10/07/93  
 Instrument ID : HP21

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

\* Quality control limit established by Anamatrix, 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 : 10/07/93

Anamatrix I.D. : MO0701E3  
 Analyst : RD  
 Supervisor : CS  
 Date Released : 10/08/93  
 Instrument ID : HP21

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	0.022	110%	56-139
TOTAL-XYLENES	0.020	0.022	110%	56-141
SURROGATE			101%	53-147

\* Quality control limit established by Anamatrix, 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  
 Matrix : SOIL  
 Date Sampled : N/A  
 Date Extracted: 10/06/93  
 Date Analyzed : 10/07/93

Anamatrix I.D. : MO06H1F1  
 Analyst : RD  
 Supervisor :  
 Date Released : 10/07/93  
 Instrument I.D.: HP9

COMPOUND	SPIKE AMT (mg/Kg)	REC LCS (mg/Kg)	% REC LCS	% REC LIMITS
DIESEL	125	95	76%	48-113
SURROGATE			67%	30-130

\*Limits established by Anamatrix, Inc.

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

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

Workorder # : 9310067  
Date Received : 10/06/93  
Project ID : 1649.21  
Purchase Order: N/A  
Department : PREP  
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9310067- 1	SSW-8	SOIL	10/06/93	5520EF
9310067- 2	SSE-8	SOIL	10/06/93	5520EF
9310067- 3	SNE-8	SOIL	10/06/93	5520EF
9310067- 4	SNW-8	SOIL	10/06/93	5520EF
9310067- 5	SE-8-RR	SOIL	10/06/93	5520EF
9310067- 6	SN-8-RR	SOIL	10/06/93	5520EF



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Project ID : 1649.21  
Purchase Order: N/A  
Department : PREP  
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

*Cathy Meltonberg*      10/8/93  
Department Supervisor      Date

*Leifas*      *Yu*      10.08.93  
Chemist           Date

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

Project # : 1649.21 Anamatrix I.D. : 9310067  
 Matrix : SOIL Analyst :  
 Date sampled : 10/06/93 Supervisor : *cm*  
 Date extracted: 10/06/93 Date released : 10/08/93  
 Date analyzed : 10/06/93

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9310067-01	SSW-8	30	53
9310067-02	SSE-8	30	43
9310067-03	SNE-8	30	43
9310067-04	SNW-8	30	3,800
9310067-05	SE-8-RR	30	150
9310067-06	SN-8-RR	30	53
B006H1W9	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.

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

Sample I.D. : LAB CONTROL SAMPLE  
Matrix : SOIL  
Date sampled : N/A  
Date extracted : 10/06/93  
Date analyzed : 10/06/93  
Anamatrix I.D. : MO06H1W9  
Analyst :  
Supervisor : *cm*  
Date Released : 10/08/93

COMPOUND	SPIKE AMT. (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
Motor Oil	300	300	100%	71-119%

\* Quality control established by Anamatrix Laboratories.

TRPH - Total Recoverable Petroleum Hydrocarbons are determined by  
Standard Method 5520EF.

**CHAIN OF CUSTODY / ANALYSES REQUEST FORM**

Project No.: <b>1649.21</b>	Field Logbook No.:	Date: <b>10/6/93</b>	Serial No.: <b>11173</b>
Project Name: <b>East Bay Bridge</b>	Project Location: <b>Emeryville</b>		

Sampler (Signature): <i>William Prodan</i>	ANALYSES	Samplers: <b>WEM</b>
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SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES						HOLD	RUSH	REMARKS
						EPA 601	EPA 624	TPL	Triolein	BTEX	OTG			
① SSW-8	10/6/93			1	Soil			X	X	X			X	As Early TAT as possible 10/7/93 Results faxed to Jennifer Beatty
② SSE-8				1				X	X	X			X	
③ SNE-8				1				X	X	X			X	
④ SNW-8				1				X	X	X			X	
⑤ SE-8-RR				1				X	X	X			X	
⑥ SN-8-RR				1				X	X	X			X	

RELINQUISHED BY: (Signature) <i>William Prodan</i>	DATE: <b>10/6/93</b>	TIME: <b>5:00</b>	RECEIVED BY: (Signature) <i>Ermy L. Gonzalez</i>	DATE: <b>10/6/93</b>	TIME: <b>1500</b>
RELINQUISHED BY: (Signature) <i>Ermy L. Gonzalez</i>	DATE: <b>10/6/93</b>	TIME: <b>1629</b>	RECEIVED BY: (Signature) <i>William Prodan</i>	DATE: <b>10/6/93</b>	TIME: <b>16:29</b>
RELINQUISHED BY: (Signature)	DATE:	TIME:	RECEIVED BY: (Signature)	DATE:	TIME:
METHOD OF SHIPMENT:	DATE:	TIME:	LAB COMMENTS:		

Sample Collector: <b>LEVINE-FRICKE</b> 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory: <b>Anametric</b>
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