

Underground Storage Tank Removal Report Peralta Street and San Pablo Avenue Emeryville, California

> November 19, 1993 1649.14

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



LEVINE-FRICKE



ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

November 19, 1993

LF 1649.14

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

Subject: Underground Storage Tank Removal Report, Peralta

Street and San Pablo Avenue, Emeryville, California

Dear Ms. Hugo:

The enclosed report details tank removal and disposal activities, soil sampling procedures, laboratory analysis, and analytical results associated with removal of an underground storage tank from beneath the sidewalk along Peralta Street in Emeryville, California. This work was conducted by Levine Fricke, Inc., on behalf of Catellus Development Corporation, in accordance with the underground storage tank closure plan submitted to the Alameda Health Care Services Agency, which was approved on August 23, 1993.

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

Sincerely,

Jenifer Beatty

Project Hydrogeologist

Richard Hiett, RWQCB cc:

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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CERTIFICATION

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

Andrew L. Wright

Senior Associate Geologist

California Registered Geologist (4592)

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November 19, 1993

LF 1649.14

UNDERGROUND STORAGE TANK REMOVAL REPORT PERALTA STREET AND SAN PABLO AVENUE EMERYVILLE, CALIFORNIA

1.0 INTRODUCTION

This report describes activities conducted to remove a fuel underground storage tank (UST) from beneath the sidewalk along Peralta Street adjacent to 3819 San Pablo Avenue ("the Site"; Figure 1) in Emeryville, California. The three-story building at 3819 San Pablo Avenue is used for retail/residential purposes and is operated by the Foxwater Group. This work was conducted by Levine.Fricke, Inc., on behalf of Catellus Development Corporation ("Catellus").

On August 23, 1993, the Alameda Health Care Services Agency (ACHA) approved the underground storage tank closure plan that described proposed UST removal activities.

2.0 BACKGROUND AND PREVIOUS INVESTIGATIONS

Levine Fricke personnel observed an approximately 8-inch by 8-inch square metal plate with the lettering "L D FRAZEE, HEATING, OAKLAND, CAL" in the sidewalk along Peralta Street on May 7, 1993, indicating that a UST was present below the sidewalk. On June 7, 1993, Levine Fricke gained access to the UST and collected a sample of the product contained in it. The sample was submitted to Friedman and Bruya, Inc., of Seattle, Washington, for fuel characterization analysis. Results indicated that the fuel product contained in the was a heating oil. Laboratory certificates are contained in Appendix A.

On June 23, 1993, approximately 900 gallons of heating oil was pumped from the UST into a vacuum truck by Evergreen Environmental Services, Inc., of Newark, California ("Evergreen"), an oil recycling company. The bottom of the UST was determined to be at approximately 9 feet below ground surface (bgs).

An encroachment permit was obtained from the City of Emeryville and two soil borings (TB-1 and TB-2; Figure 2) were drilled on June 18, 1993, near what were assumed to be the ends of the UST, based on the geophysical survey. One soil

sample was collected from each boring at a depth of 10 feet bgs and submitted for analysis of total petroleum hydrocarbons as diesel (TPHd), TPH as motor oil (TPHmo), TPH as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX compounds), oil and grease (O&G), and organic lead. None of these compounds were identified above method detection limits for either soil sample, with the exception of O&G, which was detected at 40 parts per million (ppm) in the sample collected from boring TB-1. Laboratory results are contained in Appendix B.

2.0 UST REMOVAL ACTIVITIES

One 1,500-gallon heating oil UST was removed from the Site on September 22, 1993, under permits from the ACHA and the Emeryville Fire Department (EFD). Ms. Susan Hugo of the ACHA and Mr. Gerald Anthony of the EFD were on site to observe UST removal activities. The former UST location and excavation boundary are shown in Figures 2 and 3. Water lines and meters servicing 3817, 3819, and 3823 San Pablo Avenue crossed directly over the UST (Figure 2). To avoid relocation of these utilities, the UST was removed by sliding it out of the excavation.

UST removal and backfilling activities were performed by Trumpp Bros., Inc., a general engineering contractor from San Jose, California. A Levine Fricke field geologist was on site to observe UST removal activities, and to collect soil samples from the excavation for chemical analysis. The completed excavation was backfilled using a controlled density fill (concrete mixture containing flyash and pea gravel) to just below the water lines, approximately 1 foot below the surrounding ground surface. The remainder of the excavation was backfilled with gravel.

Details of the UST removal are presented below.

2.1 UST Contents Disposal

Prior to UST removal, approximately 60 gallons of residual product and sludge in the bottom of the UST were pumped into a vacuum truck by Evergreen on September 22, 1993, and transported to its recycling facility in Newark, California.

2.2 UST Stabilization, Inspection, and Field Observations

The empty UST was rendered inert by inserting dry ice to remove organic vapors and oxygen. Explosivity meter readings

were taken after the dry ice was placed in the UST. After the combustible gas concentration had been reduced to below 15 percent of the Lower Explosive Limit (LEL), the UST was removed.

Excavation activities were conducted using a backhoe. The top of the UST was approximately 4 feet bgs and the bottom of the UST was approximately 9 feet bgs. Buried piping associated with the UST (less than 5 lineal feet) was observed to lead into the basement of the building located at 3819 San Pablo Avenue. The associated piping was removed and capped off the building face. Soil lithology beneath the sidewalk in the UST excavation consisted of a black silty clay to approximately 5 feet bgs, and a gray gravelly, silty clay layer from 5 to 6 feet bgs underlain by an olive silty clay to the depth of the excavation (approximately 9.5 feet bgs). Imported UST backfill material was not encountered in the excavation.

The UST was constructed of steel with riveted seams and was approximately 5 feet in diameter and 8 feet long. A 1-inch-diameter hole was observed in the bottom of the UST on the southwestern end, and the sides of the UST were covered with surface rust. Based on visual and olfactory observation, a small quantity of suspected petroleum-affected soil was observed in the floor of the excavation (approximately 9.5 feet bgs) and along the sidewalls at approximately 7 feet bgs. The suspected petroleum-affected soil was excavated and stockpiled adjacent to the excavation on plastic sheeting. The stockpile was then covered with plastic sheeting.

On September 22, 1993, Erickson transported the UST and piping under hazardous waste manifest to its facility in Richmond for disposal. A copy of the manifest is included in Appendix C.

2.3 Soil Sampling Methods

Soil samples were collected by driving clean brass tubes into the sidewalls of the excavation and into soil collected from the bottom of the excavation in a 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 for chemical analysis. Samples were transported under chain-of-custody protocol.

As directed by Ms. Hugo, two soil samples were collected from the bottom of the excavation at approximately 10 feet bgs

beneath the ends of the tank (BN-10 and BS-10.5), and two sidewall samples were collected from the northwest and southeast sidewalls at a depth of approximately 8.5 feet bgs (SN-8.0 and SS-8.5). In addition, Levine Fricke collected one soil sample from beneath the piping that lead from the UST into the building (sample ID: PIPE). Four soil samples were collected from the stockpile of excavated soil (approximately 20 cubic yards) and submitted to the analytical laboratory, which composited the four samples into one sample.

2.4 Analytical Results for Soil Samples

Soil samples were analyzed for TPHd and TPHmo using EPA Method 3510, O&G using Standard Method 5520EF, and BTEX compounds using EPA Method 8020. Analytical results for soil samples collected from the excavation and stockpiled soil are presented in Table 1. Laboratory data sheets are presented in Appendix B.

Analytical results did not indicate the presence of TPHd, TPHmo, or BTEX compounds above laboratory detection limits. Low concentrations of O&G (ranging from 33 ppm to 120 ppm) were detected in four of the five samples collected from the excavation.

Analytical results for the soil sample collected from the stockpile (PILE) indicated low concentrations of TPHd (17 ppm) and O&G (93 ppm). TPHmo and BTEX compounds were below laboratory detection limits.

3.0 SUMMARY AND CONCLUSIONS

One fuel UST was removed and disposed of by a licensed hazardous waste transportation company under a hazardous waste manifest. One small hole was observed in the bottom of the UST on the southwestern end. Approximately 20 cubic yards of petroleum-affected soil were removed from the UST excavation during removal activities.

With the exception of low concentrations (less than 125 mg/kg) of oil and grease, soil samples collected from the excavation floor and sidewalls indicate that soils have not been affected by petroleum hydrocarbons. The excavation was backfilled using a controlled density fill and gravel.

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

requirements. On the basis of the soil-quality results, we do not recommend any additional remedial work in this area.

TABLE 1

ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM THE UST EXCAVATION PERALTA STREET AND SAN PABLO AVENUE, OAKLAND, CALIFORNIA (concentrations reported in milligrams per kilogram [mg/kg])

Sampi ID	le	Date	Depth	TPHd	Oil & Grease	TPHmo	Benzene	Toluene	Ethyl- benzene	Total Xylenes
BN-10.0		22-Sep-93	10.0	<10 <10	120 37	<10 <10	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005
BS-10.5 SN-8.0		22-Sep-93 22-Sep-93	10.5 8.0	<10	33	<10	<0.005	<0.005	<0.005	<0.005
ss-8.5		22-Sep-93	8.5	<10	<30	<10	<0.005	<0.005	<0.005	<0.005
Pipe	(1)	22-Sep-93	2.5	<10 /17/	80	<10	<0.005	<0.005	<0.005	<0.005
Pile*		22-Sep-93	NA	(17)	93	<10	<0.005	<0.005	<0.005	<0.005

Data entered by MEK/11-Nov-93. Data proofed by MEK/11-Nov-93.

One milligram per kilogram of soil is equivalent to one part per million. TPHd - Total petroleum hydrocarbons as diesel using EPA Method 3550 TPHmo - Total petroleum hydrocarbons as motor oil using EPA Method 3550 Oil and grease using Standard Method 5520 E,F Benzene, toluene, ethylbenzene, and total xylenes using EPA Method 8020

Analyses performed by Anametrix Laboratories, San Jose, California.

^{*} Composite sample collected from stockpiled soil.

⁽¹⁾ This sample also was analyzed for total petroleum hydrocarbons as gasoline (TPHg). TPHg was not detected above the laboratory detection limit of 0.5 mg/kg.

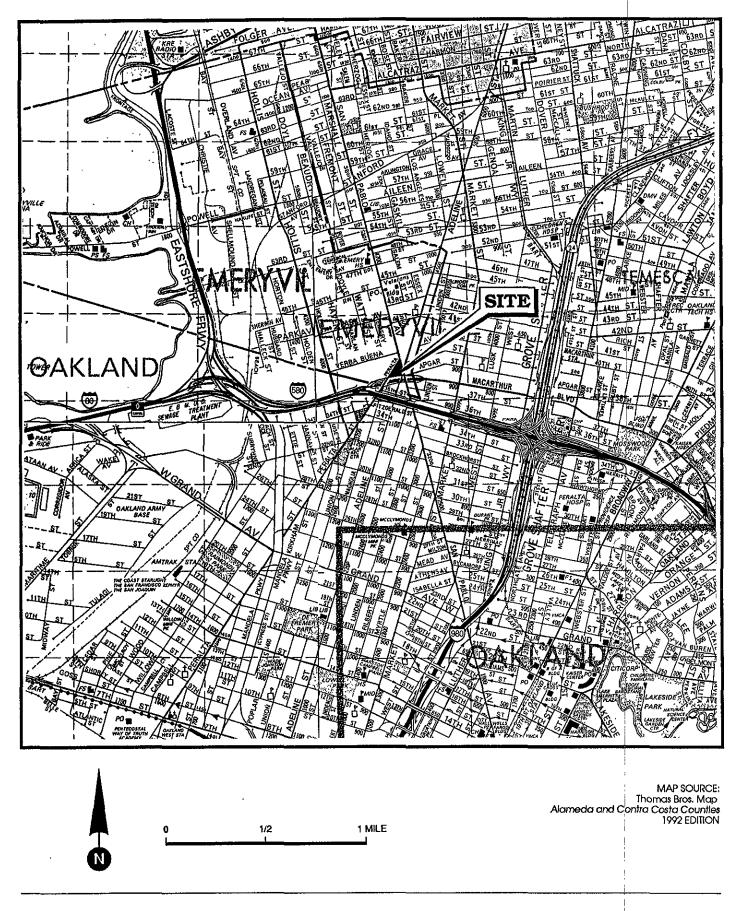


Figure 1: SITE LOCATION MAP

Project No. 1649.14

LEVINE • FRICKE ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

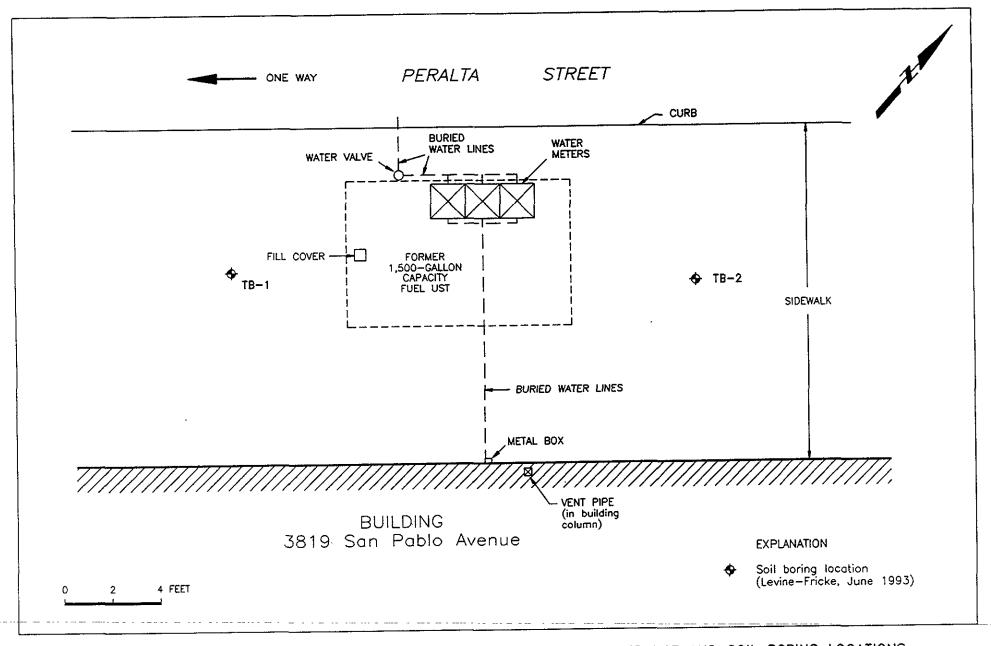


Figure 2 : SITE PLAN SHOWING APPROXIMATE LOCATION OF THE FORMER UST AND SOIL BORING LOCATIONS

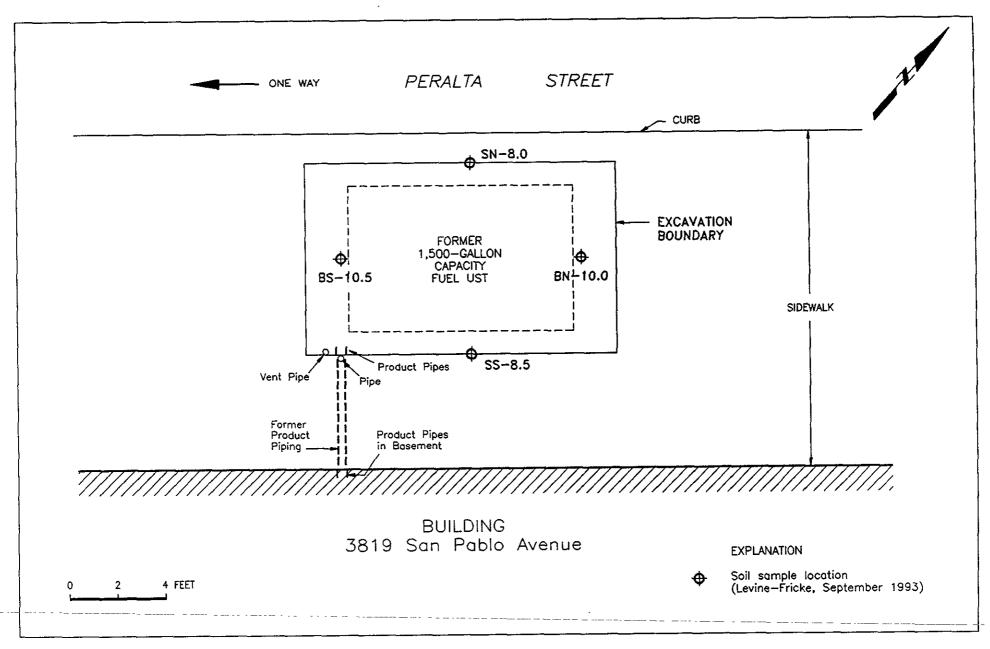


Figure 3: APPROXIMATE EXCAVATION BOUNDARIES AND SOIL SAMPLE LOCATIONS

SUSAN L. HUGC

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY DEPARTMENT OF ENVIRONMENTAL HEALTH HAZARDOUS MATERIALS DIVISION

Any changes or alteration of these plans must be on the job and available to all confractors and craftsmen involved with the removed.

Any changes or alteration of these plans and specifications menology.

Any changes or alteration of these plans and specifications menology.

By Smarth and Department and to the Fire and Building Name of State and tocal laws.

Notify this Department at least 72 hours prior to the following required inspections.

Removal of Tank(s) and Piping 10.00 by Sampling 10.00 by Sampling 10.00 by Permanent site closures is dependent on compliance with accepted plans and all age 10.00 by Sampliance with accepted p 80 SWAN WAY, ROOM 200

*THERE IS A FINANCIAL PENALTY FOR

plicable laws and regulations.

NOT OBTAINING THESE INSPECTIONS Contact Specialists

UNDERGROUND TANK CLOSURE PLAN Complete according to attached instructions

and Local Health Laws Changes to your closure plans indicated be acceptable and essentially mest the requirements of States

These closure/removal plans have been received and found

Oakland, CA 94621 Telephone: (510) 271-4320 \$0 Swan Way, Suite 200,

Underground Storage Tank Closure Permit Application Alameda County Division of Hazandous Materials

ACCEPTED

by this Department are to assure compliance with State and local laws. The project proposed herein is now released for issuance any required building permits for construction/destruction.

1.	Business Name <u>Catellus</u> <u>Development Corporation</u>
	Business Owner <u>Same as Above</u>
2.	Site Address Adjacent to Blance State Comment (Site to Manual Comment)
	city Emeryville zip 94608 Phone N/A
з.	Mailing Address 201 Mission Street, 30th Floor
	city San Francisco, CA zip 94105 Phone (415) 974-4500
4.	Land Owner Catellus Development Corporation
	Address 201 Mission St., 36th Floor City, State Son Francuso, CA zip 94105
5.	Generator name under which tank will be manifested
	Catellus Development Corporation
	EPA I.D. No. under which tank will be manifested CAO 983585746

,	
6.	Contractor Trumpp Bros. Inc.
	Address 1540 Industrial Ave
	city San Jose, CA Phone(408) 292-0820
	License Type* A,B, C21, H ID# 77 0121947 646/68 V
	*Effective January 1, 1992, Business and Professional Code Section 7058.7 requires prime contractors to also hold Hazardous Waste Certification issued by the State Contractors License Board. Indicate that the certificate has been received, in addition, to holding the appropriate contractors license type.
7.	Consultant Levine Fricke Inc.
	Address 1900 Powell Street, 12th Floor
	City Emeryville, (A Phone (510) 652-4500
8.	Contact Person for Investigation
	Name Michael Stoll Title Project Engineer
	Phone (510) 652-4500
9.	Number of tanks being closed under this plan
	Length of piping being removed under this plan estimated <20-feet
	Total number of tanks at facility 1
10.	State Registered Hazardous Waste Transporters/Facilities (see instructions).
	** Underground tanks are hazardous waste and must be handled ** as hazardous waste
	a) Product/Residual Sludge/Rinsate Transporter 980695761
	Name Evergreen Environmental Services EPA I.D. No. CAN 980 887418
	Hauler License No. 0242 License Exp. Date 7/31/94
	Address 6880 Smith Ave.
	city Newark State CA Zip 94560
	b) Product/Residual Sludge/Rinsate Disposal Site
	Name Evergreen Environmental Services EPA I.D. No. CAD 980387418
	Address 6880 Smith Ave.
	city Newark State CA Zip 94560

(o) Tank and Piping Transporter
	Name Erickson, Inc. EPA I.D. No. CAD 009466392
	Hauler License No. 0019 License Exp. Date 5/31/94
	AddressBlvd
	city Richmond State CA zip 94801
	d) Tank and Piping Disposal Site
	Name Erickson, Inc. EPA I.D. No. CAD 009466392
	Address 255 Parr Blud.
	city Richmond State CA Zip 94801
11.	Experienced Sample Collector
	Name Michael Stoll
	company Levine Fricke Inc.
	Address 1900 Powell Street, 12th Floor
	city Emeryville State CA Zip 94608 Phone (516) 652-4500
12.	Laboratory
•	Name Anametrix Inc.
	Address 1961 Concourse Drive, Suite E
	city San Jose State CA Zip 95/3/
	State Certification No. 1234
13.	Have tanks or pipes leaked in the past? Yes [] No [] Unknown[X
	If yes, describe

14. Describe methods to be used for rendering tank inert

Residual liquids in the tank will be pumped out prior to excavation and dry ice will be added to purge aromatic hydrocarbons. A gas meter will be maintained on site throughout the excavation to insure that the

Before tanks are pumped out and inerted, all associated piping must be flushed out into the tanks. All accessible associated piping must then be removed. Inaccessible piping must be plugged.

The Bay Area Air Quality Management District (771-6000), along with local Fire and Building Departments, must also be contacted for tank removal permits. Fire departments typically require the use of explosion proof combustible gas meters to verify tank inertness. It is the contractor's responsibility to bring a working combustible gas meter on site to verify tank inertness.

15. Tank History and Sampling Information

Ta	nk	Material to	
Capacity	Use History (see instructions)	be sampled (tank contents, soil, ground- water, etc.)	Location and Depth of Samples
2000 gallons (estimated)	· Tank was used to store heating oil. It is unknown when the tank was last used.	Soil	No deeper than 2' beneath both. ends of the tank (2 samples)
		Water (if encountered)	l sample from the tank excavation
	· •.		

One soil sample must be collected for every 20 feet of piping that is removed. A ground water sample must be collected should any ground water be present in the excavation.

	Excavated/Stockpiled Soil
stockpiled Soil Volume (Estimated) 20 cobic yards	Sampling Plan A discrete samples from the stockfile to be composited by the laboratory into I sample for analysis.

Stockpiled soil must be placed on bermed plastic and must be completely covered by plastic sheeting.

16. Chemical methods and associated detection limits to be used for analyzing samples

The Tri-Regional Board recommended minimum verification analyses and practical quantitation reporting limits should be followed. See attached Table 2.

Çontaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Method Number	Method Detection Limit
Heating Oil (TPH3/TPHMO)	3550	GC FID, mod. EPA 8015	Anametrix Inc. 10ppm - Soil 50ppb-Water
Heating Oil (BTEX)		GC FID, EPA 8020	0.005ppm-Soil 0.5ppb-Water
Heating Oil (Oil + Brease)		SM 5520EF SM 5520BF	30ppm-Soil 5ppm-Water
	·		
	· ·.		

17. Submit Site Health and Safety Plan (See Instructions)

18. Submit Worker's Compensation Certificate copy	•
Name of Insurer Fremont Indemnity Co.	
19. Submit Plot Plan (See Instructions)	
20. Enclose Deposit (See Instructions)	

- 21. Report any leaks or contamination to this office within 5 days of discovery. The report shall be made on an Underground Storage Tank Unauthorized Leak/Contamination Site Report form. (see Instructions)
- 22. Submit a closure report to this office within 60 days of the tank removal. This report must contain all the information listed in item 22 of the instructions.

I declare that to the best of my knowledge and belief the statements and information provided above are correct and true.

I understand that information in addition to that provided above may be needed in order to obtain an approval from the Department of Environmental Health and that no work is to begin on this project until this plan is approved.

I understand that any changes in design, materials or equipment will void this plan if prior approval is not obtained.

I understand that all work performed during this project will be done in compliance with all applicable OSHA (Occupational Safety and Health Administration) requirements concerning personnel health and safety. I understand that site and worker safety are solely the responsibility of the property owner or his agent and that this responsibility is not shared nor assumed by the County of Alameda.

Once I have received my stamped, accepted closure plan, I will contact the project Hazardous Materials Specialist at least three working days in advance of site work to schedule the required inspections.

Signature of Contractor Gary Trumpp
Name (please type)
Signature Ly Chappy
Date 7-27493
Signature of Site Owner or Operator
7 Name (please type) KIMBY Brandt Agent for Oatellus
Signature KIMBERLY BRANDT AGENT FOR CATELLUS
Date 7/21/93

LEVINE-FRICKE, INC.

HSP APPROVAL REQUEST FORM

PROJECT AND SECTION NUM	BER 1649.	14	Ť
OFFICE NAME Emeryvil	le, Californ	nia .	
PACKAGE PREPARER NAME A	ND TITLE	Michael Stoll, Pr Geotechnical Engi	
CLIENT NAME Catellus	Developmen	t Corporation	
CLIENT ADDRESS 201 M	ission Stre	et, San Francisco,	CA
CLIENT CONTACT Ms. K	imberly Bra	ndt /	
START DATE OF PROJECT	7/22/93 D	URATION OF PROJECT	T 1 to 2 weeks
NAME AND TITLE OF PROJE	CT MANAGER	Jenifer Beatty, Hydrogeologist	, Project
COMMENTS This HSP is tasks scheduled at the ground-water sampling,	Site: UST	o address the followers of the following contraction of the contractio	oling,
APPROVED BY (PRINT NAME	AND TITLE)	SHARI A. SAMU	iers
	/ .	HEALTH: SAFETY	
APPROVAL SIGNATURE	to San	SHARI A. SAME HEALTH: SAFETY B DATE 7/1	4/93
OTHER APPROVALS IF NEED		,	
SIGNATURE	TITLE	DATE	
SIGNATURE	TITLE	DATE	

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FIGURE 1: HOSPITAL ROUTE MAP TO THE SUMMIT MEDICAL CENTER	

July 14, 1993 LF 1649.14

REMOVAL OF ONE HEATING OIL UNDERGROUND STORAGE TANK AND ASSOCIATED PIPING FROM THE SIDEWALK ADJACENT TO 3819 SAN PABLO AVENUE EMERYVILLE, CALIFORNIA HEALTH AND SAFETY PLAN

1.0 PURPOSE

This document defines the Health and Safety considerations for the possible management of hazardous substances by Levine Fricke personnel and subcontractors. This document is required by Levine Fricke policies and procedures and may be required by OSHA 29 CFR 1910.120. The basic requirements for the health and safety of the project workers are delineated in the Levine Fricke Health and Safety Procedures. All personnel on site will be informed about the pertinent sections of the HSP.

2.0 PROJECT STAFFING

PROJECT MANAGER Jenifer Beatty

SITE SAFETY OFFICER Michael Stoll

EMERGENCY COORDINATOR Michael Stoll

3.0 SCOPE OF WORK

CHECK OFF APPROPRIATE CATEGORIES (MORE THAN ONE MAY APPLY)

x	TANK EXCAVATION	X	SOIL SAMPLING
X	SOIL EXCAVATION	0	ASBESTOS
0	POND CLEANUP	٥	ON-SITE STORAGE
o	BUILDING DECONTAMINATION	0	CONSTRUCTION
0	MONITORING WELL INSTALLATION	0	DEMOLITION
0	ON-SITE TREATMENT SOIL	٥	VAPOR SAMPLING
X	GROUND-WATER SAMPLING	0	OTHER
0	ON-SITE TREATMENT OF		
_	GROUND WATER		

Field activities at the Site relate to the removal of one underground storage tank. Levine Fricke will observe the excavation of the tank. The tank will be removed by a subcontractor to Levine Fricke using a backhoe. Levine Fricke personnel will collect soil samples from the excavation limits. In addition, if ground—water is present in the excavation, a grab sample will be collected. Upon completion of sample collection activities, the excavation will be backfilled to grade.

3.1 Site Layout

The UST is located in the sidewalk area along Peralta Street adjacent to the side of the retail/residential building located at 3819 San Pablo Avenue.

4.0 HAZARD EVALUATION

A.

PHYSICAL HAZARDS (TRENCHES,
UTILITIES, TERRAIN, ETC.)
The use of heavy
equipment at the Site
poses potential physical
hazards. Excavations
pose a hazard for
personnel around and
entering the excavation.

в.

CHEMICAL CONTAMINANTS AND HIGHEST CONCENTRATIONS DETECTED IN SOIL OR GROUND-WATER AT THE SITE

NAME OF MATERIAL	conc.	TLV/PEL	ACTION LEVEL	MSDS AVAILABLE	HAZARD TO PERSONNEL
Oil and Grease	40				

CARCINOGENS?

O YES X

NO

IF YES, LIST --

4.1 Task Specific Hazards

TASK Soil Sampling, UST and Soil Excavation Observation

- 1. Noise and other hazards associated with the operation of heavy equipment.
- 2. Workers will not enter unsupported/non-sloped excavations deeper than 4 feet. All requirements pursuant to 29 CFR 1926.651 and 652, Excavations, Trenching and Shoring, shall be observed.

TASK Ground-Water Sampling

1. Workers will not enter unsupported/non-sloped excavations deeper than 4 feet. All requirements pursuant to 29 CFR 1926.651 and 652, Excavations, Trenching and Shoring, shall be observed.

5.0 PROJECT MANAGEMENT

CREW SIZE

PROJECT MANAGER CHEMIST SITE SAFETY OFFICER Jenifer Beatty Doug Lipton Michael Stoll and/or Shellie Fletcher

5.1 Subcontractors

Excavation contractors (Trumpp Bros. General Contractors of San Jose, California) with 40 hour OSHA training will complete the scheduled tasks.

6.0 MATERIAL HANDLING EQUIPMENT

(PROVIDE	DETAILS, E.G.,	QUANTITIES AND TYPES)
0	DRUM DOLLY	
。	PUMPS	
0	FORK TRUCK	
•	MAN LIFT	
x	HEAVY EQUIP.	backhoe/excavator to remove UST/soil and soil, compactor to compact the backfill soils
o	CRANE	Dackiti Botto
1 X	VACUUM TANKER	Licensed hauler for UST contents
o	AIR COMPRESSOR	

7.0 REPORTING AND RECORDKEEPING

7.1 General

Recordkeeping shall be consistent with OSHA regulations in all respects. The following records will be maintained in the Corporate Health and Safety Director's Office, the local Levine Fricke Office and/or at the site:

- The Health and Safety Log--The log documents the Site Safety officer's daily activities pertaining to site health and safety compliance.
- . OSHA 200 Log and Summary of Occupational Injuries and Illnesses--Current within 72 hours. Will be maintained in the appropriate local office and Health and Safety Director's office.
- . Respirator Fit Test Records
- Training and Medical Certificates
- . Tailgate Safety Meeting Records

8.0 ENVIRONMENTAL SAMPLING

SAMPLING REQUIRED X YES O NO

SOIL SAMPLING

EQUIPMENT USED A mallet will be used to drive brass tubes into the soil.

WATER/LIQUID SAMPLING

EQUIPMENT USED A disposable sampling bailer will be

used to collect the ground-water sample (if required) from the

excavation.

9.0 TRAINING

LEVINE•FRICKE	CREW RECEIVED	INITIAL	40-HOUR	TRAINING
K YES O NO				
IF NO, WHY? _				
				
SUBCONTRACTOR	RECEIVED REQU	JIRED TRA	INING	
X YES O NO	Trumpp Bros. the required		ors have	received
IF NO, WHY?				
_				

SAFETY BRIEFINGS ARE HELD EACH SHIFT

WHO CONDUCTS MEETING? The Levine-Fricke SSO
WHERE ARE RECORDS STORED? Levine-Fricke project files

10.0 MEDICAL REQUIREMENTS

ENTIRE CREW RECEIVED BASELINE PHYSICAL EXAMINATIONS

Х	¥.	ES O	NO	
IF	NO,	WHY?		
		<u></u>		

SPECIAL TESTS REQUIRED None

11.0 CONTAMINATION CONTROL

- The job site is partitioned into three distinct zones: clean zone, contamination reduction zone, and exclusion zone.
- Workers may only enter and exit from the exclusion zone via the contamination reduction zone.
- Only authorized personnel are allowed to enter the exclusion or the contamination reduction zone.
- . Section 16 includes a site map defining the zones.
- Section 17 describes the personnel and equipment decontamination procedures.

12.0 WORKER PROTECTION

12.1 Personal Protective Equipment

1.	WORK TASK DESCRIPTION soil and ground-water sampling, UST and soil excavation observation
2.	LEVEL OA OB OC XD
3.	RESPIRATORY PROTECTION No
4.	PROTECTIVE CLOTHING
X	HARD HAT
<u>E</u> '	YE PROTECTION
0	SAFETY GLASSES WITH SIDE SHIELDS CHEMICAL RESISTANT GOGGLES FACE SHIELD OTHER
B	ODY PROTECTION Not Applicable
<u>G</u>	LOVES -when sampling
0 X 0	LATEX O LEATHER SURGICAL RUBBER O COTTON VITON O OTHER PVC NEOPRENE NEOPRENE (MILLED) SILVERSHIELD
<u>B</u>	<u>oots</u>
0	LEATHER - STEEL TOED PVC - STEEL TOED NEOPRENE - STEEL TOED PVC BOOTIES TYVEK BOOTIES OTHER
<u>H</u>	EARING PROTECTION
X	EAR MUFFS EAR PLUGS OTHER

12.2 General Safety Equipment

- O SAFETY SHOWER
- o EYEWASH
- X BARRIERS
- o WARNING SIGNS
- X BARRIER TAPE
- o WATER/GATORADE
- O DECON BARRELS
- TECHNIC
- o LIGHTING

o LIFELINE/HARNESS

o AIR HORNS

o EXTRACTION DEVICE

X FIRE EXTINGUISHERS --to be supplied by the contractor and Levine-Fricke.

COMMUNICATION SYSTEMS -- Mobile cellular telephone on site for emergency use and pagers for Levine Fricke personnel

SANITARY FACILITIES --Potable water will be brought to the site by Levine-Fricke personnel. Toilets are available at nearby Levine-Fricke sites or at the Levine-Fricke maintenance facility.

13.0 PERSONNEL MONITORING PLAN

AIR MONITORING REQUIRED o Yes X NO

EXPLAIN STRATEGY Air monitoring is not required, however a Photoionization detector will be used to monitor volatile organic chemical concentrations in the breathing zone. If ambient air concentrations of VOCs in the breathing zone reach 25 parts per million (ppm) or greater, personnel shall upgrade to Level C using half-face air-purifying respirators equipped with NIOSH-approved high efficiency particulate/organic vapor combination cartridges.

SAMPLING EQUIPMENT

- O COMBUSTIBLE GAS/OXYGEN METER
- o DRAEGER TUBES
- X PHOTOIONIZATION DETECTOR
- O FLAME IONIZATION DETECTOR
- o INFRARED DETECTOR
- o AEROSOL MONITOR
- o SAMPLING PUMPS
- o AND MEDIA

OTHER	
~	

HEAT STRESS MONITORING X YES O NO

NAMES OF MONITORING TECHNICIANS

Michael Stoll and/or Shellie Fletcher

LOCATION OF MONITORING RECORDS Levine-Fricke project files

14.0 SITE SAFETY OFFICER RESPONSIBILITIES

The Site Safety Officer (SSO) or Designee will enter before any work begins and will verify that the established zones are identified and escape routes are clear.

The daily site entry procedure will include the following:

- Determine the wind direction and stay appraised of it throughout the stay. Identify the direction during the tailgate safety meeting or informally with each affected employee.
- Confirm the proper placement of emergency information and operational status of equipment and the decontamination facility.
- Monitor the air as necessary for conditions that may cause injury or exposure and record all data.
- Visually observe for signs of actual or potential lifeor health-threatening hazards.
- Note physical conditions of the site. Determine potential exposure pathways.
- Use survey tape or markers to identify new boundaries of the zones.
- . Document site activities in a daily log. Record observations related to field conditions and the site.

15.0 GENERAL SAFE WORK PRACTICES

- All accidents and incidents must be reported to the supervisor immediately.
- . All defects/malfunctions which appear during the course of the work shift must be reported to the supervisor.
- No eating, drinking, smoking, chewing tobacco or gum is allowed in the exclusion or contamination reduction zones.
- Employees shall inform their supervisors of any prescription medications they are using while at work that can affect their abilities.
- Employees shall not show up for work under the influence or in possession of alcohol or illicit drugs.
- Only Levine-Fricke-approved personal protective equipment shall be used by Levine-Fricke employees.
- Employees shall not remove or disturb any covering, guards, or safety devices placed on vehicles, gears, or other moving equipment or machinery, except to perform maintenance or repairs. Work on the equipment shall not commence until the equipment has been deactivated, sources of energy are removed, and controls are locked and tagged out.
- Before starting any vehicle or machinery, or turning on electricity, gas, steam, or air, employees will check the entire area to ensure that it is safe to proceed with the work. Out of service or locked out equipment is not to be started by anyone unless authorized by a supervisor.
- Employees shall maintain good housekeeping of the facilities and remove or dispose of all unnecessary materials.
- Special operations, including confined space entry, hot work, and decommissioning of equipment for repairs, require permits to be signed by authorized personnel. A description of the procedures will be included as an appendix.

Trenching or excavations must be shored or sloped or appropriately prepared as required by OSHA standards. A description of the techniques to be used is included as an appendix, if appropriate.

16.0 WORK ZONE MAP

(Can be completed on site during the first working day.)

17.0 DECONTAMINATION PROCEDURES

PERSONNEL DECONTAMINATION PROCEDURES -- Disposable gloves, sampling equipment and other disposable clothing or equipment worn by Levine Fricke personnel will be placed in a suitable disposal container on site at the end of each work day. Protective clothing will be replaced if its protective function is compromised through holes or tears.

EQUIPMENT DECONTAMINATION PROCEDURES -- Equipment that comes in contact with on-site soils or ground-water that apparently contain chemicals identified at the site will be brushed off before removal from the site area.

LAUNDERING PROCEDURE FOR WORK CLOTHES -- Wash separately.

18.0 LEVINE-FRICKE INTERNAL CALL LIST

IN THE EVENT OF INJURY, FIRE, EXPLOSION, SPILL, RELEASE, OR OTHER NONROUTINE EVENTS, IMMEDIATELY CONTACT ONE OF THE FOLLOWING PEOPLE, IN THIS ORDER:

- 1. Shari Samuels (510)652-4500 or (510)943-2303
- 2. JoAnn Weber (510)652-4500
- 3. Michael Stoll (510)652-4500
- 4. Jenifer Beatty (510)652-4500

19.0 HAZARDOUS WASTE OPERATIONS CONTINGENCY PLAN

GENERATOR'S NAME: Catellus Development Corporation

OWNER'S NAME: Foxwater Group

WORK LOCATION: 3819 San Pablo Avenue, sidewalk area along

Peralta Street, California

CONTACT: Ms. Kimberly Brandt PHONE #(415) 974-4500

(Catellus)

LEVINE-FRICKE PROJECT MANAGER: Jenifer Beatty

19.1 General Injury

. Step 1: Use first-aid kit on site, if appropriate.

- Step 2: Use off-site medical help and/or assistance if appropriate.
- . Step 3: Notify SSO, On-Site Project Manager, and Health and Safety Director.

19.2 Specific Treatments

- Eye Exposure: Flush eye with eye wash, contact ambulance.
- skin Exposure: Wash immediately with soap and water; contact ambulance, if appropriate.
- Fire (localized): Use fire extinguisher and activate alarm system, if appropriate.
- . Fire (uncontrolled): Call Fire Department.
- . Chemical Spill: Contact Fire Department and National Response Center for Toxic Chemical and Oil Spills.
- Explosion: Contact Fire Department if potential for additional explosions or fire danger exists.
- . Inhalation: Move person to clean air and cover source of chemicals, if possible.
- Swallowing: Contact ambulance service.

EMERGENCY PHONE NUMBERS:

POLICE

911

• FIRE

911

Hazardous Materials Release Response/Reporting

• National Response Center 1-800-424-8802

• California Office of Emergency Services 1-800-852-7550

Toxics Information

. CHEMTREK 1-800-424-6699

• Poison Control Center 1-415-476-6600

• AMBULANCE 911

1-510-204-1303

HOSPITAL

Emergency Room Alta Bates Hospital 2450 Ashby Avenue Berkeley, California

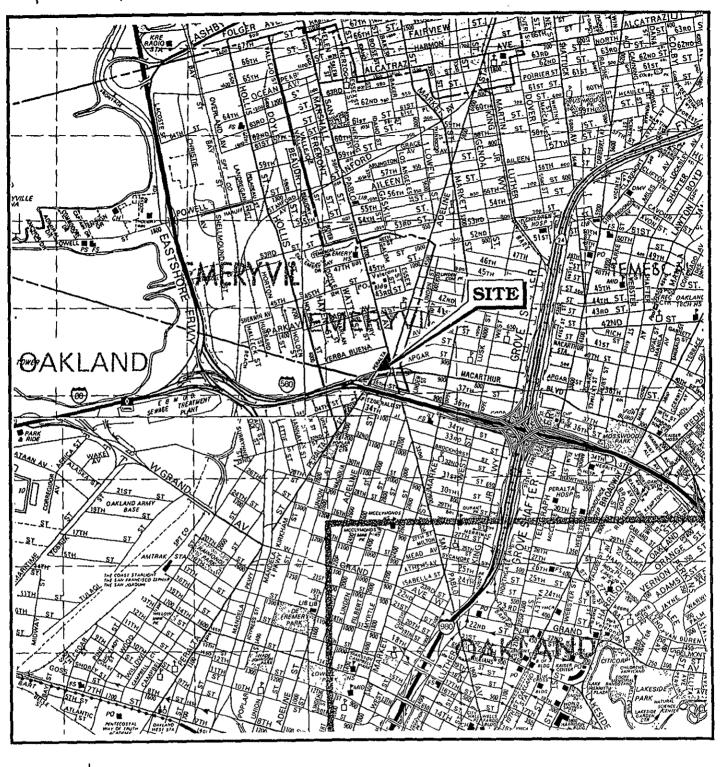
See attached map for route to hospital.

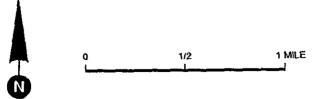
20.0 CONTRACTOR AND SUBCONTRACTOR AGREEMENTS

Contractor and Subcontractor Agreements:

- 1. Contractor certifies that the following personnel to be employed on the Site adjacent to 3819 San Pablo Avenue, Emeryville have met the Hazards and Protection requirements of the OSHA Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120) and other applicable standards.
- 2. Contractor certifies that, in addition to meeting the OSHA requirements, she/he has received a copy of this HSP and will insure that the employees and subcontractors of the Contractor are informed, and will comply with both OSHA requirements and the guidelines in this HSP.
- 3. Contractor further certifies that she/he has read, understands, and will comply with all provisions of this HSP and will not hold Levine. Fricke responsible or liable for any injury or health problems that may occur.

Contractor Personnel	Training/ Certification/ Medical Examination	Signature	Date





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

Figure 1: SITE LOCATION MAP

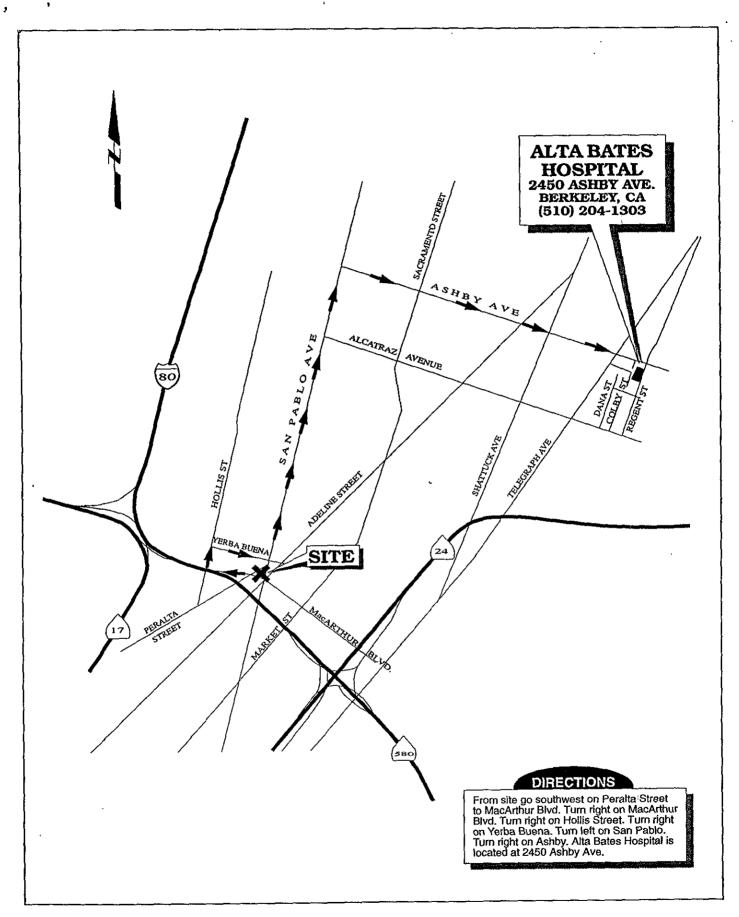
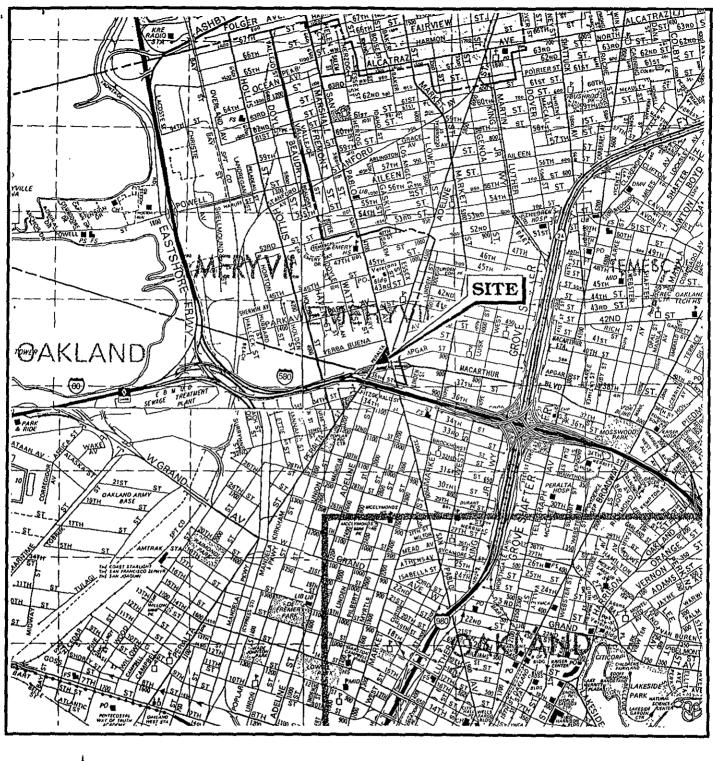
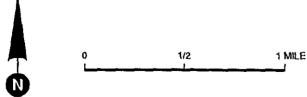


Figure 2: HOSPITAL ROUTE MAP





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

Figure 1: SITE LOCATION MAP

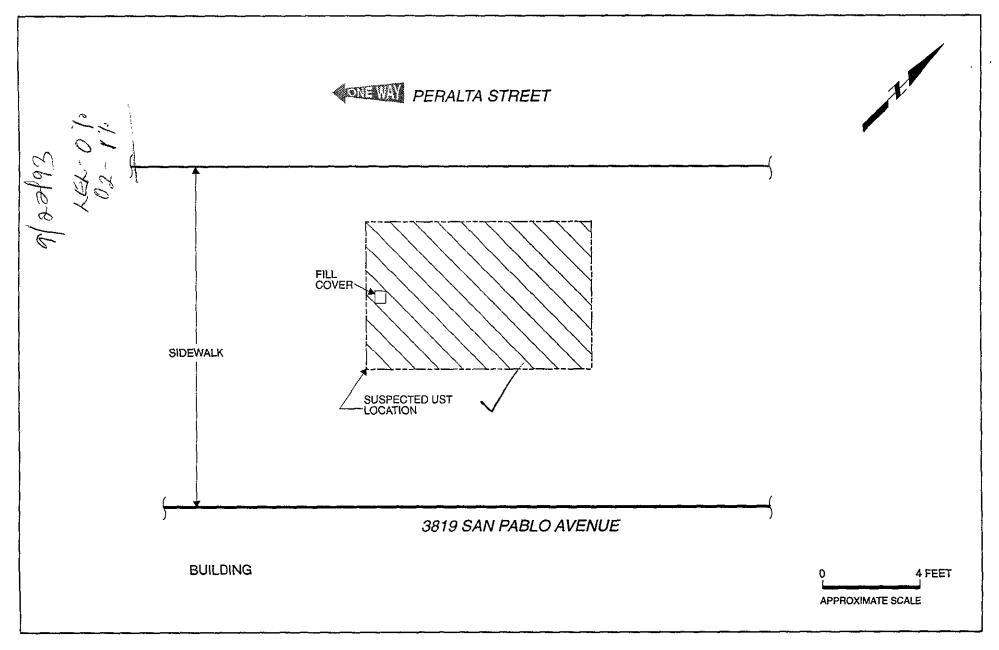


Figure 2: SITE PLAN

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LEVINE-FRICKE

ENGINEERS, HYDROGEOLOGIS IS & APPLIED SCIENTISTS

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Alameda County Tonk C Health + Safety Plan	(3 copies)-includes	Plot Plan	
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Other offices in Irvine, CA; Sacramento/Roseville, CA, Tallahassee, FL; Honolulu, HI

(510) 652-4500 Fax (510) 652-2246 Returned to LF. 8/9/33



LEVINE·FRICKE

CONSULTING ENGINEERS AND HYDROGEOLOGISTS
1900 POWELL STREET, SUITE #1200
EMERYVILLE, CALIFORNIA 94608
(510) 652-4500

CivicBank of Commerce 1814 Franklin Street Oakland, CA 94612 9<u>0-409</u>5 1211

42437

FOUR HUNDRED EIGHTY THREE DOLLARS AND 00/100---

DATE

CHECK NO.

AMOUNT

7/30/93

42437

\$483.00

PAY TO THE ORDER OF ALAMEDA COUNTY HEALTH CARE SERVICE AGENCY 80 SWON WAY, ROOM 200 OAKLAND, CA 94621

LEVINE+FRICKE, INC.

#O42437# #121140959#

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ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

80 Swan Way, #200 Oakland, CA 94621 (415) 271-4320

	pink -files Ha	zardous Materials Inspection Form
		Catellus 0 7
1444		Site # 1667 Site Name YERBA BUENA Projectioday's 722,93
II.A	BUSINESS PLANS (Title 19)	la Rill & Par Uta
	1. Immediate Reporting 2703 2. 8us. Plan Stds 25503(b) 3. RR Cars > 30 days 25503.7 4. Inventory Information 25504(a) 5. Inventory Complete 2730 6. Emergency Response 25504(b) 7. Training 25504(c) 8. Deticiency 25505(a)	City
	8. Deficiency 25505(d) 9. Modification 25505(b)	Inspection Categories:
II.B	ACUTELY HAZ. MAT'LS	I. Haz. Mat/Waste GENERATOR/TRANSPORTER
		II. Business Plans, Acute Hazardous Materials III. Underground Tanks III. Underground Tanks
	14. OffSite Conseq. Assess. 25524(c) 15. Probable Risk Assessment 25534(d)	Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)
	16. Persons Responsible 25534(g) 17. Certification 25534(g) 18. Exemption Request? (Y/N) 25536(b) 19. Trade Secret Requested? 25538	comments: Energeille Fire Lyt (buard anthoney)
Ш.	UNDERGROUND TANKS (Title 23)	1- gallon heating ful took
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Rev	6/88	

11, 111

Contact: ______

Signature:

Inspector:

Signature:

Susan & Hugo

APPENDIX A FUEL CHARACTERIZATION LABORATORY RESULTS

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Andrew John Friedman James E. Bruya, Ph.D. (206) 285-8282 3008-B 16th Avenue West Seattle, WA 98119 FAX: (206) 283-5044

June 10, 1993

Jennifer Beatty, Project Leader Levine-Fricke, Inc. 1900 Powell Street, 12th Floor Emeryville, CA 94608

Dear Ms Beatty:

Enclosed are the results from the testing of material submitted on June 8, 1993 from Project 1649.14, Yerba Buena.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

Stephen D. Zappone

Chemist

SDZ/dp

Enclosures

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: June 10, 1993 Date Received: June 8, 1993 Project: 1649.14, Yerba Buena

Date Samples Extracted: June 8, 1993 Date Extracts Analyzed: June 8, 1993

RESULTS FROM THE ANALYSIS OF THE PRODUCT SAMPLE
FOR FINGERPRINT CHARACTERIZATION
BY CAPILLARY GAS CHROMATOGRAPHY
USING A FLAME IONIZATION DETECTOR (FID)
AND ELECTRON CAPTURE DETECTOR (ECD)

Sample #

Tank

GC Characterization

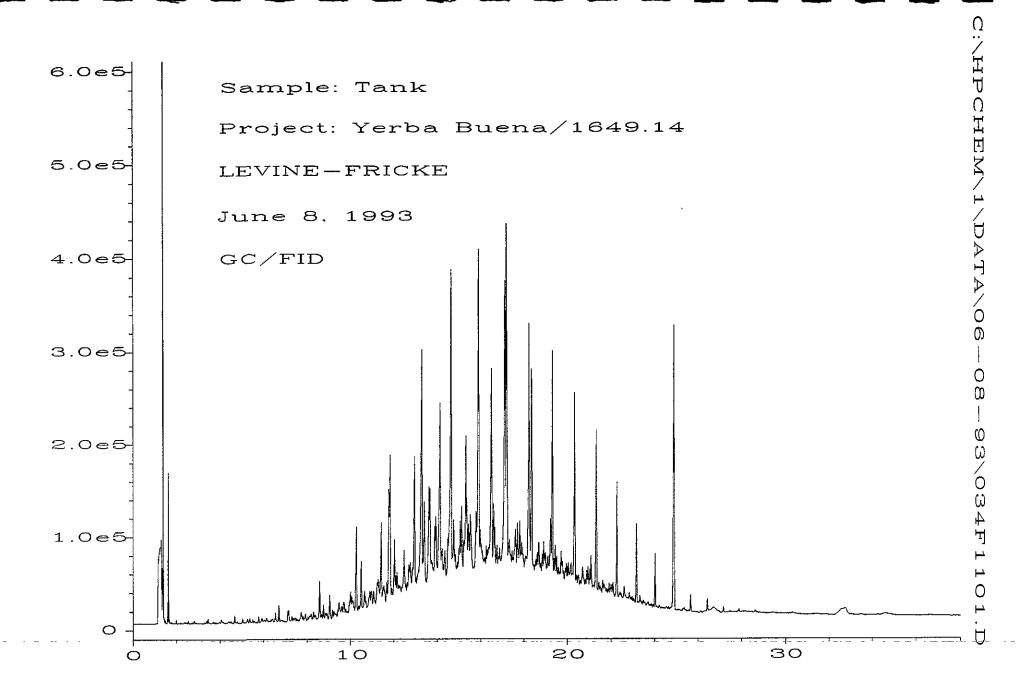
The GC trace using the flame ionization detector (FID) showed the presence of medium boiling compounds. The patterns displayed by these peaks are indicative of diesel fuel or fuel oil.

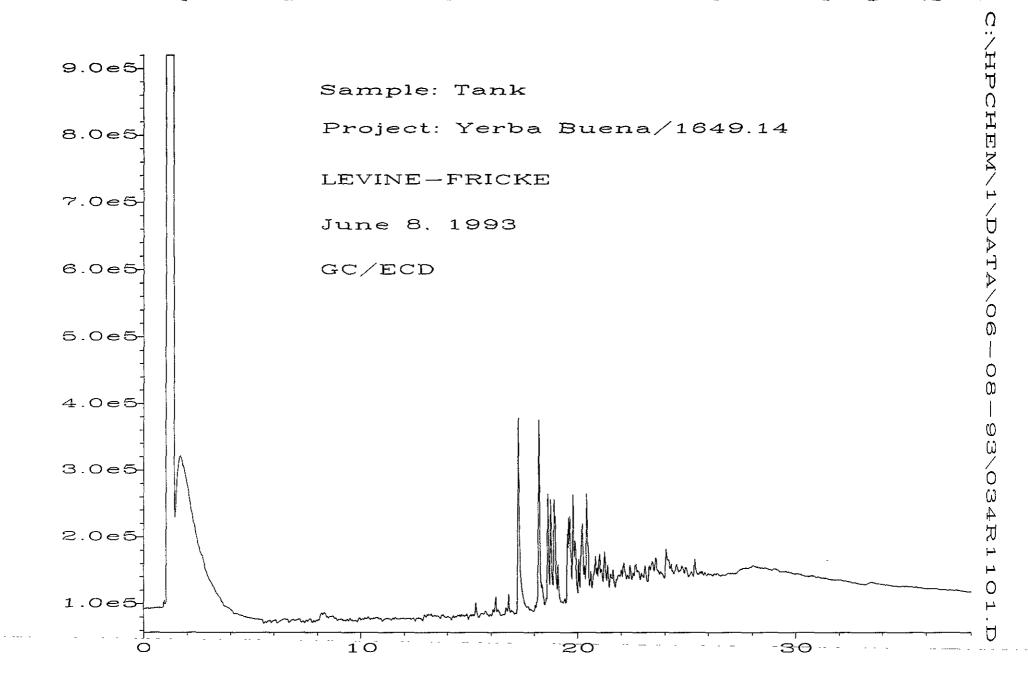
The medium boiling compounds appeared as a regular broad hump of an unresolved pattern of peaks eluting from $n\text{-}C_{10}$ to $n\text{-}C_{28}$ showing a maximum near $n\text{-}C_{17}$. A regular pattern of the n-alkanes is seen for this product. Peaks are seen on the GC/ECD trace indicative of halogenated or oxidized hydrocarbons, possibly due to the presence of PCBs. The material appears to be unweathered due to the abundance of the n-alkanes. The large peak at 25 minutes is pentacosane, a compound added in the laboratory as a QA/QC check.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM



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APPENDIX B LABORATORY CERTIFICATES FOR SOIL SAMPLES



Inchcape Testing Services Anametrix Laboratories

1901 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 # : 9306267
Date Received : 06/18/93
Project ID : 1649.14

Purchase Order: N/A

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

ANAMETRIX ID	CLIENT SAMPLE ID
9306267- 1	TB-1-10
9306267- 2	TB1-13.5
9306267- 3	TB-2A-10

This report consists of 18 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 07-06-93

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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 # : 9306267 Date Received : 06/18/93 Project ID : 1649.14

Purchase Order: N/A Department : GC

Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9306267- 1	TB-1-10	SOIL	06/18/93	TPHd
9306267- 3	TB-2A-10	SOIL	: 06/18/93	TPHd
9306267- 1	TB-1-10	SOIL	06/18/93	TPHgBTEX

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

MS. JENIFER BEATTY

LEVINE-FRICKE

1900 POWELL STREET 12TH FLOOR

EMERYVILLE, CA 94608

Workorder # : 9306267 Date Received: 06/18/93

Project ID : 1649.14 Purchase Order: N/A

Department : GC

Sub-Department: TPH

QA/QC SUMMARY :

- The concentrations reported as the C22-C36 range hydrocarbons were calculated using a diesel initial calibration.

Department Supervisor

harlest Burch 7 6.93

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS C4-C12 (GASOLINE WITH BTEX) ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9306267
Matrix : SOIL

Date Sampled : 06/18/93

Project Number: 1649.14
Date Released: 07/02/93

Sample Sample
Reporting I.D.# I.D.#
Limit TB-1-10 BU2902E3

	Limit	TB-1-10	BU2902E3	 	
COMPOUNDS	(mg/Kg)	-01	BLANK	 	
Benzene Toluene Ethylbenzene Total Xylenes TPH as Gasoline	0.005 0.005 0.005 0.005 0.05	ND ND ND ND ND	ND ND ND ND ND		:
<pre>% Surrogate Reco Instrument I.D Date Analyzed RLMF</pre>		87% HP4 06/29/93	84% HP4 06/29/93		· · · · · · · · · · · · · · · · · · ·

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

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

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

Charles Burch 7.2.43 Analyst Date

Supervisor Barney 7/2/53

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

Anametrix W.O.: 9306267
Matrix : SOIL
Date Sampled : 06/18/93

Project Number: 1649.14
Date Released: 07/02/93
Instrument I.D.: HP09

Date Extracted: 06/21/93

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9306267-01	TB-1-10	06/30/93	10	ND
9306267-03	TB-2A-10	06/30/93	10	ND
BU21H1F1	METHOD BLANK	06/30/93	10	ND

Note: Reporting limit is obtained by multiplying the dilution factor times 10 mg/Kg.

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 3550.

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

Charles Burch 7.6.43
Analyst Date

Supervisor Some 7/6/53

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

Anametrix W.O.: 9306267
Matrix : SOIL
Date Sampled : 06/18/93
Date Extracted: 06/21/93

Project Number: 1649.14
Date Released: 07/02/93
Instrument I.D.: HP09

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9306267-01 9306267-03	TB-1-10 TB-2A-10	06/30/93 06/30/93	10 10	ND ND
BU21H1F1	METHOD BLANK	06/30/93	10	ND

Note: Reporting limit is obtained by multiplying the dilution factor times 10 mg/Kg.

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 3550.

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

Charlesto Birch 7.6.93
Analyst Date

Supervisor Date

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

Sample I.D. : 1649.14 TB-2A-10

Matrix : SOIL Date Sampled : 06/18/93 Date Extracted: 06/21/93

Date Analyzed: 06/30/93

Anametrix I.D.: 06267-03

Analyst : CMB Supervisor : 07/02/93

Instrument I.D.: HP9

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	REC MS (mg/Kg)	Ī	REC MS	REC: MD (mg/Kg)	જ	REC MD	RPD	REC
Diesel	125	0	66		53%	64		51%	-3%	 32-143

^{*} Quality control limit established by Anametrix, Inc.

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

Sample I.D. : LAB CONTROL SAMPLE

Anametrix I.D.: MU2901E1

: SOIL Matrix

Analyst : CMB Supervisor : CMB

Date Sampled : N/A
Date Analyzed : 06/29/93

Supervisor

Date Released : 07/02/93

Instrument I.D.: HP4

COMPOUND	SPIKE AMT. (mg/Kg)	REC LCS (mg/Kg)	%REC LCS	% REC LIMITS
GASOLINE	0.50	0.49	98%	58-130
p-BFB			58%	53-147

^{*} Quality control 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

Anametrix I.D.: MU21H1F1
Analyst: CMB
Supervisor: CF
Date Released: 07/02/93 Matrix Date Sampled : N/A

Date Extracted: 06/21/93

Instrument I.D.: HP9 Date Analyzed: 06/30/93

COMPOUND	SPIKE AMT (mg/Kg)	REC LCS (mg/Kg)	% REC LCS	! ! !	% REC LIMITS
Diesel	125	96	77%	! !	72-143

^{*}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 # : 9306267
Date Received : 06/18/93
Project ID : 1649.14
Purchase Order: N/A

Department : PREP Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9306267- 1	TB-1-10	SOIL	06/18/93	5520EF
9306267- 3	TB-2A-10	SOIL	06/18/93	5520EF

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

MS. JENIFER BEATTY

LEVINE-FRICKE

1900 POWELL STREET 12TH FLOOR

EMERYVILLE, CA 94608

Workorder # : 9306267 Date Received : 06/18/93

Project ID : 1649.14 Purchase Order: N/A

Department : PREP Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

athy Multer 5 425/93 Department/Supervisor

ANALYSIS DATA SHEET - TOTAL RECOVERABLE PETROLEUM HYDROCARBONS AS OIL AND GREASE

ANAMETRIX LABORATORIES (408) 432-8192

4	Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
	9306267-01	TB-1-10	30	40
	9306267-03	TB-2A-10	30	ND
	BU21H1W9	METHOD BLANK	30	ND

- Not detected above the reporting limit for the method.

RPH - 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. : 1649.14, TB-1-10

trix : SOIL lete sampled : 06/18/93 late extracted : 06/21/93 Date analyzed : 06/22/93

Anametrix I.D.: 9306267

Analyst

Analyst : M.P.
Supervisor : 06/25/93

MPOUND	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	40	340	100%	350	103%	3%	48-114%	

Quality control limits established by Anametrix Laboratories.

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

AB CONTROL SAMPLE REPORT - TOTAL RECOVERABLE PETROLEUM HYDROCARBONS AS OIL AND GREASE

ANAMETRIX LABORATORIES (408) 432-8192

: LAB CONTROL SAMPLE Sample I.D.

atrix : SOIL

ate sampled : N/A sate extracted : 06/21/93 Date analyzed : 06/22/93

Anametrix I.D.: MU21H1W9

CAE EN Analyst

Supervisor : 06/25/93 Date Released

OMPOUND	SPIKE AMT. (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
Motor Oil	300	310	103%	68-113%
Quality control	established by A	nametrix Labo	ratories.	

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

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

MS. JENIFER BEATTY

LEVINE-FRICKE

1900 POWELL STREET 12TH FLOOR EMERYVILLE, CA 94608

Workorder # : 9306267
Date Received : 06/18/93
Project ID : 1649.14
Purchase Order: N/A
Department : METALS

Sub-Department: METALS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9306267- 1	TB-1-10	SOIL	06/18/93	ORG Pb

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

MS. JENIFER BEATTY

LEVINE-FRICKE

1900 POWELL STREET 12TH FLOOR

EMERYVILLE, CA 94608

Workorder # : 9306267
Date Received : 06/18/93

Project ID : 1649.14

Purchase Order: N/A
Department : METALS

Sub-Department: METALS

QA/QC SUMMARY :

- No QA/QC problems encountered for sample.

Manufally Department Supervisor

7-2-93 Date

e Chemist

7/02/43

Date

INORGANICS - PAGE :

INORGANIC ANALYSIS DATA SHEET ANAMETRIX, INC. (408) 432-8192

nalyte-Method: Org-Lead Troject I.D. : 1649.14 Matrix : SOIL Reporting Unit: mg/Kg

MK Analyst : MW Supervisor

Date Sampled : 06/1
Date Released : 07/0
Instrument I.D. : AA1 : 06/18/93 : 07/01/93

NAMETRIX SAMPLE I.D.	CLIENT I.D.	DATE PREPARED	DATE ANALYZED	REP. LIMIT	DIL. FACTOR	RESULT	Q
9306267-1 MB0625S	TB-1-10 METHOD BLANK	06/25/93 06/25/93	06/29/93 06/29/93	0.30	1 1	ND	بہ جب جب فعا فعا

OMMENT:

MATRIX SPIKE REPORT ANAMETRIX, INC. (408) 432-8192

: 9306267-01MS,MD

Sike I.D. : 9306267-Client I.D. : TB-1-10

Project I.D.: 1649.14
Hetrix: SOIL

Porting Unit: mg/Kg

Date Prepared : 06/25/93 Date Analyzed : 06/29/93
Analyst : MK
Supervisor : MM
Date Released : 07/01/93

Instrument I.D.: AA1

						··· ··· ··· ··· ·· ·· ·· ·· ··		
ANALYTE-METHOD	SPIKE AMOUNT	SAMPLE CONC.	M.S. CONC.	% REC.	M.S.D. CONC.	% REC.	RPD	Q
RG-Lead	2.00	0.0	2.4	120	2.4	120	0.0	

MMENT:

LABORATORY CONTROL SAMPLE REPORT ANAMETRIX, INC. (408) 432-8192

mametrix W.O.# : 9306267

: LCS0625S Project I.D. : 1649.14 Matrix : SOIL

porting Unit : mg/Kg

Analyst Supervisor Date Released: 07/01/93 Instrument I.D: AA1

.MK · MN

ANALYTE-METHOD	DATE PREPARED	DATE ANALYZED	SPIKE AMT.	METHOD SPIKE	% REC.	Q
RG-Lead	06/25/93	06/29/93	2.0	2.4	120	~~~~~

OMMENT:

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

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				Emeryville, (415) 652-4		8						1	Avai	nê 1	rx			

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FORM NO. 86/COC/ARF



Inchcape Testing Services Anametrix Laboratories

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

MS. JENIFER BEATTY LEVINE-FRICKE 1900 POWELL STREET 12TH FLOOR EMERYVILLE, CA 94608 Workorder # : 9309289
Date Received : 09/22/93
Project ID : 1649.14

Purchase Order: N/A

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

ANAMETRIX ID	CLIENT SAMPLE ID
9309289- 1	PIPE

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.

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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

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SEF 2 7 and

LEVINE-FRICKE

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

MS. JENIFER BEATTY

LEVINE-FRICKE

1900 POWELL STREET 12TH FLOOR EMERYVILLE, CA 94608

Workorder # : 9309289
Date Received : 09/22/93
Project ID : 1649.14
Purchase Order: N/A
Department : GC

Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9309289- 1	PIPE	SOIL	09/22/93	BTEX
9309289- 1	PIPE	SOIL	09/22/93	TPHd

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

MS. JENIFER BEATTY

LEVINE-FRICKE

1900 POWELL STREET 12TH FLOOR

EMERYVILLE, CA 94608

Workorder # : 9309289 Date Received: 09/22/93

Project ID : 1649.14

Purchase Order: N/A Department : GC Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Department Supervisor

Thereto Buch 9.24.93
Date

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

Anametrix W.O.: 9309289 Matrix : SOIL Date Sampled : 09/22/93 Project Number: 1649.14
Date Released: 09/24/93

	Reporting Limit	Sample I.D.# PIPE	Sample I.D.# BS2301E2	 	
COMPOUNDS	(mg/Kg)	-01	BLANK	 	
			1.7 m		
Benzene	0.005	ND	ND		
Toluene	0.005	ND	ND		
Ethylbenzene	0.005	ND	ND		
Total Xylenes	0.005	ND	ND		
TPH as Gasoline	0.5	ND	ND		
% Surrogate Rec	overv	107%	108%		
Instrument I.		HP4	HP4		
Date Analyzed		09/23/93	09/23/93		
RLMF		1	1		

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

TPHg - Total Petroleum Hydrocarbons as C4-C12 are determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.

BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.

RLMF - Reporting Limit Multiplication Factor.

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

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

Charlet Buch 9.24.43
Analyst Date

Church Balmer 9/24/93 Supervisor Date

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

Anametrix W.O.: 9309289 Matrix : SOIL

Project Number: 1649.14 Date Released : 09/24/93

Date Sampled: 09/22/93

Instrument I.D.: HP9

Date Extracted: 09/22/93

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9309289-01	PIPE	09/23/93	10	ND	74%
BS22H1F1	METHOD BLANK	09/22/93	10	ND	79%

Note: Reporting limit is obtained by multiplying the dilution factor times 10 mg/Kg.

The surrogate recovery limits for C25 are 30-130%.

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

TPHd - Total Petroleum Hydrocarbons as C12-C22 are determined by GCFID following sample extraction by EPA Method 3510.

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

galesta Bruch 9.24.93

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

Project Number: 1649.14
Date Released: 09/24/93
Instrument I.D.: HP9

Anametrix W.O.: 9309289
Matrix : SOIL
Date Sampled : 09/22/93
Date Extracted: 09/22/93

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9309289-01	PIPE	09/23/93	10	ND	74%
BS22H1F1	METHOD BLANK	09/22/93	10		79%

Note: Reporting limit is obtained by multiplying the dilution factor times 10 mg/Kg. The surrogate recovery limits for C25 are 30-130%.

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

TPHd - Total Petroleum Hydrocarbons as C22-C36 are determined by GCFID following sample extraction by EPA Method 3510.

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

Jeshy Bruch 9.24.93

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

Sample I.D. : 1649.14 PIPE

: SOIL Matrix

Date Sampled: 09/22/93 Date Analyzed: 09/23/93

Anametrix I.D.: 09289-01

Analyst : CmB Supervisor : is

Date Released: 09/24/93

Instrument I.D.: HP4

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	REC MS (mg/Kg)	% REC MS	REC MD (mg/Kg)	% REC MD	RPD	% REC LIMITS
BENZENE TOLUENE ETHYLBENZENE TOTAL XYLENES	0.040 0.040 0.040 0.040	0.000 0.000 0.000 0.000	0.039 0.041 0.041 0.040	98% 102% 102% 100%	0.042 0.043 0.043 0.041	105% 108% 108% 102%	7% 5% 5% 2%	45-139 51-138 48-146 50-139
p-BFB				101%		97%		53-147

^{*} Quality control limit established by Anametrix, Inc.

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

Sample I.D. : LAB CONTROL SAMPLE Anametrix I.D.: MS2301E3

Matrix : SOIL Date Sampled : N/A

: CmB Analyst

Date Analyzed: 09/23/93

Supervisor : A
Date Released : 09/24/93
Instrument ID : HP4

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

^{*} Quality control limit established by Anametrix, Inc.

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

Sample I.D. : LAB CONTROL SAMPLE Anametrix I.D. : MS22H1F1

: SOIL Matrix

Analyst : ams

Date Sampled : N/A
Date Extracted: 09/22/93
Date Analyzed : 09/22/93

Supervisor : 09/24/93

Instrument I.D.: HP9

COMPOUND	SPIKE AMT (mg/Kg)	REC LCS (mg/Kg)	% REC LCS	% REC LIMITS
DIESEL	125	90	72%	48-113
SURROGATE			79%	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 # : 9309289 Date Received: 09/22/93

Project ID : 1649.14

Purchase Order: N/A

Department : PREP Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9309289- 1	PIPE	SOIL	09/22/93	5520EF

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

MS. JENIFER BEATTY

LEVINE-FRICKE

1900 POWELL STREET 12TH FLOOR EMERYVILLE, CA 94608

Workorder # : 9309289 Date Received : 09/22/93 Project ID : 1649.14 Purchase Order: N/A

Department : PREP Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for this sample.

(Othy Multinburg Department Supervisor

AB CONTROL SAMPLE REPORT - TOTAL RECOVERABLE PETROLEUM HYDROCARBONS AS OIL AND GREASE

ANAMETRIX LABORATORIES (408) 432-8192

: LAB CONTROL SAMPLE Sample I.D.

Anametrix I.D.: MS22H1W9

atrix : SOIL Analyst HE con

ate sampled : N/A Date extracted: 09/22/93 Date analyzed: 09/23/93 Supervisor : CVV Date Released : 09/24/93

COMPOUND	SPIKE AMT. (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
ptor Oil	300	240	80%	71-119%
* Quality control	established by A	nametrix Labo	ratories.	

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

- }	Project No	1 4	49.1	4	<u> </u>	Field	Log	book	No.:				Date:	9/2	2/93	Serial No	11191	
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-	Sampler (Si	gnature)		AMPLES				_/.		Ā	NAL			/	/ × /	Sample	rs:	
	SAMPLE NO.	DATE	TIME	LAB SAMPLE	NO. OF CON- TAINERS	SAMPLE TYPE		18 kg,	EPA SIL					101	2/5t/_		EMARKS	
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	Sample Co			LEVINE-FRIC 1900 Powell Emeryville, ((415) 652-4	Street, Da 9460	12th Flo		. IPIG	_			Lab	orato Ana	ry: jm(etr);	X		



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 # : 9309288
Date Received : 09/22/93
Project ID : 1649.14
Purchase Order: N/A

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

ANAMETRIX ID	CLIENT SAMPLE ID
9309288- 1	PILE
9309288- 2	BN-10.0
9309288- 3	BS-10.5
9309288- 4	SN-8.0
9309288- 5	SS-8.5

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.

Sarah Schoen, Ph.D. Laboratory Director

Date

RECEIVED
2 9 TO
LEVINE-FRICKE

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

MS. JENIFER BEATTY

LEVINE-FRICKE

1900 POWELL STREET 12TH FLOOR

EMERYVILLE, CA 94608

Workorder # : 9309288
Date Received : 09/22/93
Project ID : 1649.14
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9309288- 1	PILE	SOIL	09/22/93	BTEX
9309288- 2	BN-10.0	SOIL	09/22/93	BTEX
9309288- 3	BS-10.5	SOIL	09/22/93	BTEX
9309288- 4	SN-8.0	SOIL	09/22/93	BTEX
9309288- 5	SS-8.5	SOIL	09/22/93	BTEX
9309288- 1	PILE	SOIL	09/22/93	трна
9309288- 2	BN-10.0	SOIL	09/22/93	трна I
9309288- 3	BS-10.5	SOIL	09/22/93	TPHd
9309288- 4	SN-8.0	SOIL	09/22/93	трна
9309288- 5	SS-8.5	SOIL	09/22/93	трна

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

MS. JENIFER BEATTY

LEVINE-FRICKE

1900 POWELL STREET 12TH FLOOR EMERYVILLE, CA 94608

Workorder # : 9309288 Date Received: 09/22/93 Project ID : 1649.14

Purchase Order: N/A Department : GC Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Department Supervisor

Date

Dawson

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

Anametrix W.O.: 9309288
Matrix : SOIL

Project Number: 1649.14
Date Released: 09/28/93

Date Sampled: 09/22/93

	Reporting Limit	Sample I.D.# PILE	Sample I.D.# BN-10.0	Sample I.D.# BS-10.5	Sample I.D.# SN-8.0	Sample I.D.# SS-8.5
COMPOUNDS	(mg/Kg)	-01	-02	-03	-04	-05
Benzene Toluene Ethylbenzene Total Xylenes % Surrogate Rec Instrument I.	D.	ND ND ND ND 109% HP4 09/23/93	ND ND ND ND 108% HP4 09/23/93	ND ND ND ND 108% HP4 09/23/93	ND ND ND ND 109% HP4 09/23/93	ND ND ND ND 108% HP4 09/23/93
Date Analyzed RLMF		1	1	1	1	1

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

TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.

BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.

RLMF - Reporting Limit Multiplication Factor.

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

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

Peggie Dawson 9/28/93 Analyst Date Cheurl Balma 4/28/43
Supervisor Date

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

Anametrix W.O.: 9309288
Matrix : SOIL

Project Number: 1649.14
Date Released: 09/28/93

Date Sampled : N/A

Sample
Reporting I.D.#
Limit BS2301E2

	Limit	B22301E2	 	
COMPOUNDS	(mg/Kg)	BLANK	 	
Benzene Toluene Ethylbenzene Total Xylenes * Surrogate Reco Instrument I.I Date Analyzed RLMF		ND ND ND ND 108% HP4 09/23/93		

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

TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.

BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.

RLMF - Reporting Limit Multiplication Factor.

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

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

Analyst Dawson 9/28/93

Cheugh Balmer 9/28/53 Supervisor Date

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

Anametrix W.O.: 9309288

Project Number: 1649.14
Date Released: 09/28/93

Matrix : SOIL
Date Sampled : 09/22/93
Date Extracted: 09/22/93

Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9309288-01	PILE	09/27/93	10	17	71%
9309288-02	BN-10.0	09/27/93	10	ND	73%
9309288-03	BS-10.5	09/27/93	10	ND	76%
9309288-04	SN-8.0	09/23/93	10	ND	76%
9309288-05	SS-8.5	09/23/93	10	ND	79%
BS22H1F1	METHOD BLANK	09/22/93	10	ND	79%
					1

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 9/2 Analyst Da

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

Anametrix W.O.: 9309288

Project Number: 1649.14
Date Released: 09/28/93

Matrix : SOIL
Date Sampled : 09/22/93
Date Extracted: 09/22/93

Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)	Surrogate %Rec
9309288-01	PILE	09/27/93	10	ND	71%
9309288-02	BN-10.0	09/27/93	10	ND	73%
9309288-03	BS-10.5	09/27/93	10	ND	76%
9309288-04	SN-8.0	09/23/93	10	ND	76%
9309288-05	SS-8.5	09/23/93	10	ND	79%
BS22H1F1	METHOD BLANK	09/22/93	10	ND	79%

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.

ggie Dawson 9/2

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

Anametrix I.D.: 09288-04

Sample I.D.: 1649.14 SN-8.0 Matrix: SOIL Date Sampled: 09/22/93 Date Extracted: 09/22/93

Analyst : pp Supervisor : >>> Date Released : 09/28/93

Date Analyzed: 09/23/93

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	o	106	85%	105	84%	-1%	32-143
SURROGATE				78%		76%		30-130

^{*} Quality control limit established by Anametrix, Inc.

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

Anametrix I.D.: MS2301E3

Sample I.D. : LAB CONTROL SAMPLE Matrix : SOIL Date Sampled : N/A

Date Analyzed: 09/23/93

Analyst : PD Supervisor : 09/28/93

Instrument ID : HP4

COMPOUND	SPIKE (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS	
BENZENE TOLUENE ETHYLBENZENE TOTAL-XYLENES	0.020 0.020 0.020 0.020	0.022 0.022 0.023 0.022	110% 110% 115% 110%	52-133 57-136 56-139 56-141	
P-BFB			106%	53-147	

^{*} Quality control limit established by Anametrix, Inc.

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

Sample I.D. : LAB CONTROL SAMPLE

Anametrix I.D.: MS22H1F1

: SOIL Matrix

Analyst : 80

Date Sampled : N/A

Supervisor : 09/24/93
Date Released : 09/24/93

Date Extracted: 09/22/93 Date Analyzed: 09/22/93

Instrument I.D.: HP9

COMPOUND	SPIKE AMT (mg/Kg)	REC LCS (mg/Kg)	% REC LCS	% REC LIMITS
DIESEL	125	90	72%	48-113
SURROGATE			79%	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 # : 9309288 Date Received : 09/22/93

Project ID : 1649.14 Purchase Order: N/A

Department : PREP Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9309288- 1	PILE	SOIL	09/22/93	5520EF
9309288- 2	BN-10.0	SOIL	09/22/93	5520EF
9309288- 3	BS-10.5	SOIL	09/22/93	5520EF
9309288- 4	SN-8.0	SOIL	09/22/93	5520EF
9309288- 5	SS-8.5	SOIL	09/22/93	5520EF

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

MS. JENIFER BEATTY

LEVINE-FRICKE

1900 POWELL STREET 12TH FLOOR EMERYVILLE, CA 94608

Workorder # : 9309288 Date Received: 09/22/93

Project ID : 1649.14 Purchase Order: N/A

Department : PREP Sub-Department: PREP

QA/QC SUMMARY :

-No QA/QC problems encountered for these samples.

Department Supervisor

ANALYSIS DATA SHEET - TOTAL RECOVERABLE PETROLEUM HYDROCARBONS AS OIL AND GREASE

ANAMETRIX LABORATORIES (408) 432-8192

Project # : 1649.14 Anametrix I.D. : 9309288 Matrix : SOIL Date sampled : 09/22/93 Analyst : HE Supervisor : CW Matrix Date extracted: 09/22/93 Date analyzed: 09/23/93 Date released : 09/24/93

 Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9309288-01	PILE	30	93
9309288-02	BN-10.0	30	120
9309288-03	BS-10.5	30	37 /
9309288-04	SN-8.0	30	33
9309288-05	SS-8.5	30	ND
BS22H1W9	METHOD BLANK	30	ND

- Not detected above the reporting limit for the method. - 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

: 1649.14, SN-8.0MS, MD Anametrix I.D.: 9309288-04 ample I.D.

: HE : Ch Tatrix : SOIL Sate sampled : 09/22/93 Date extracted : 09/22/93 Cate analyzed : 09/23/93 Analyst Supervisor com Date Released : 09/24/93

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	MS AMT (mg/Kg)	%REC MS	MD AMT (mg/Kg)	%REC MD	%RPD	% REC LIMITS
otor Oil	300	33	240	69%	270	79%	14%	48-114%

^{*} Quality control limits established by Anametrix Laboratories.

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

AB CONTROL SAMPLE REPORT - TOTAL RECOVERABLE PETROLEUM HYDROCARBONS AS OIL AND GREASE

ANAMETRIX LABORATORIES (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE Matrix : SOIL

ate sampled : N/A

Date extracted: 09/22/93 Date analyzed: 09/23/93

Anametrix I.D.: MS22H1W9

Analyst Supervisor om

Date Released: 09/24/93

OMPOUND	SPIKE AMT. (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
Motor Oil	300	240	80%	71-119%
Quality control	established by A	nametrix Labor	catories.	

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

APPENDIX C HAZARDOUS WASTE MANIFEST