

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

RO0000381

September 20, 2002

Mr. Mike Grant
Union Pacific Railroad
49 Stevenson St., 15th Floor
San Francisco, CA 94105

Re: Fuel Leak Site Case Closure for 5th Ave. and 7th St., Oakland, CA 94606

Dear Mr. Grant:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Protection Division is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- up to 12 ppm TPH as diesel and 43 ppm Total Recoverable Petroleum Hydrocarbons, exists in soil beneath the site;
- up to 690 ppb TPH as diesel, 880 ppb Total Extractable Petroleum Hydrocarbons, 0.84 ppb toluene and 1.3 ppb xylenes in groundwater beneath the site; and,
- a site safety plan must be prepared in the event excavation/trenching is proposed in the vicinity of residual soil and groundwater contamination and
- if land use changes at the site, the closure must be revisited to determine if any additional actions are required .

If you have any questions, please contact me at (510) 567-6721.

A handwritten signature in black ink, appearing to read "Donna L. Drogos". The signature is fluid and cursive.

Donna L. Drogos, P E.
LOP Program Manager

Mr. Mike Grant
Closure for 5th Ave. and 7th Street site, Oakland, CA 94606
RO0000381
September 20, 2002
Page 2.

enclosures: 1. Case Closure Letter
2. Case Closure Summary

c:

Leroy Griffin
Oakland Fire Department (OES)
1605 MLK Jr Way
Oakland, CA 94612

Ms. Betty Graham
Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Ms. Shari Knieriem
Underground Storage Tank Cleanup Fund
State Water Resources Control Board
P.O. Box 944212
Sacramento, CA 94244-2120

files, D. Drogos

ALAMEDA COUNTY
HEALTH CARE SERVICES

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DAVID J. KEARS, Agency Director



September 20, 2002

Mr. Mike Grant
Union Pacific Railroad
49 Stevenson St., 15th Floor
San Francisco, CA 94105

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

Dear Mr. Grant:

Subject: Fuel Leak Site Case Closure 5th Ave. & 7th St., Oakland, CA 94606; Case No. RO0000381

This letter confirms the completion of a site investigation and remedial action for the underground storage tank(s) formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

Please contact Mr. Barney Chan at (510) 567-6765 if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung
Director

Alameda County Environmental Health

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: July 25, 2000

Agency name: **Alameda County-HazMat**

Address: **1131 Harbor Bay Pkwy.**

City/State/Zip: **Alameda, CA 94502**

Phone: **(510) 567-6774**

Responsible staff person: **Larry Seto**

Title: **Senior HMS**

II. CASE INFORMATION

Site facility name: **Union Pacific (Southern Pacific Transportation Co.)**

Site facility address: **5th Ave. & 7th St., Oakland, CA 94606**

RB LUSTIS Case No: **Local Case No./LOP: 3748**

URF filing date: **3-3-99**

SWEEPS No: **N/A**

Responsible Parties:

Addresses:

Phone Numbers:

Union Pacific Railroad
Contact: Mike Grant

49 Stevenson Street, 15th Floor
San Francisco, CA 94105

415-541-7021

<u>Tank No</u>	<u>Size in Gallons</u>	<u>Contents:</u>	<u>Closed in-place or Removed?</u>	<u>Date:</u>
	7,000	Diesel	Removed	2-21-89
	7,000	Diesel	Removed	2-21-89
	7,000	Bunker C Oil	Removed	2-21-89
	7,000	Bunker C Oil	Removed	2-21-89

Leaking Underground Fuel Storage Tank Program

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: Deterioration of underground tanks

Monitoring Wells installed? Yes Number: 3

Site characterization complete?

Date approved by oversight agency:

Proper screened interval? Yes

Highest GW depth below ground surface: 1.1' Lowest depth: 10.5'

Flow direction: Predominately to the northeast

Most sensitive current use: railroad yard

Are drinking water wells affected? No Aquifer Name:

Is surface water affected? No Nearest affected SW name: ---

Off-site beneficial use impacts (addresses/locations): Unknown

Report(s) on file? Yes Where is report(s) filed? **Alameda County**
1131 Harbor Bay Pkwy.
Alameda, CA 94502

Oakland Fire
1605 Martin Luther King
Oakland, CA 94612

Treatment and Disposal of Affected Material:

<u>Material</u>	<u>Amount</u> <u>(include</u> <u>units)</u>	<u>Action (Treatment</u> <u>or Disposal /destination)</u>	<u>Date</u>
Underground tanks	4 - 10,000 gallon	Erickson Inc., Richmond, CA	2/89

Leaking Underground Fuel Storage Tank Program

Soil/hydrocarbon	500 Cu Yds.	Kettlemen Hills, CA ?	
Water/hydrocarbons	4,000 gallon	Petroleum Recycling Corp. Signal Hill, CA	2/89

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	<u>Soil (ppm)</u>		<u>Water (ppb)</u>	
	Before ¹	After ³	Before ²	After ⁴
TEPH-diesel	16,000	12.0	ND#	690
TEPH-motor oil	NA	NA	ND#	880
TRPH	NA	43.0	ND#	NA
Benzene	NA	ND	ND#	ND
Toluene	NA	ND	ND#	0.84
Ethylbenzene	NA	ND	ND#	ND
Xylenes	NA	ND	ND#	1.3
PCB's	NA	ND	NA	NA

ND - Non-Detect

NA - Not Analyzed

TEPH-Total Extractable Petroleum Hydrocarbon

TRPH-Total Recoverable Petroleum Hydrocarbon

1 - Samples collected during preliminary investigation prior to UGT removal

2# - Samples collected after well installation (4-28-94) **Note:** wells were installed too far from the former tank location

3 - Samples collected after over excavation, 2/89

4 - Grab water samples collected in Nov. '95 and March '96

Comments (Depth of Remediation, etc.): See "Additional Comments" section.

IV. CLOSURE

Leaking Underground Fuel Storage Tank Program

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan?

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan?

Does corrective action protect public health for current land use? Yes

Site management requirements:

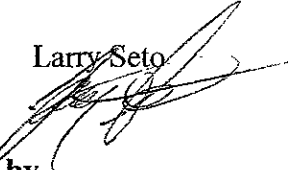
Should corrective action be reviewed if land use changes? Yes, if site is used other than a railroad yard, or an enclosed structure is proposed to be erected on site.

List enforcement actions taken: None

List enforcement actions rescinded: None

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Larry Seto


Signature: 

Title: Senior HMS

Date: 7-24-2000

Reviewed by


Name: Eva Chu

Signature: 

Title: Hazardous Materials Specialist

Date: 7/24/00

Name: Thomas Peacock

Signature: 

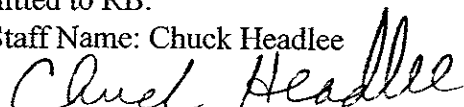
Title: Supervising HMS

Date: 7-27-00

VI. RWQCB NOTIFICATION

Date Submitted to RB:

RWQCB Staff Name: Chuck Headlee

Signature: 

RB Response: *Concur*

Title: Associate Engineering Geologist

Date: 10/11/00

VII. ADDITIONAL COMMENTS, DATA, ETC.

This site is used as a railroad yard. It is approximately 800 feet north of the Oakland Inner Harbor.

Leaking Underground Fuel Storage Tank Program

On February 13, 1989, Canonie Environmental took soil samples from four locations around the underground storage tanks UGTs (figs. 3 & 3a). The four soil samples contained 6,200 to 16,000 ppm of total extractable petroleum hydrocarbons (see Table 1). This preliminary sampling was required before approval of their closure plan for the UGTs by Alameda County Department of Environmental Health. This sampling was to verify Canonie's proposed method of tank removal would not further impact the site. (The UGTs were filled with a sand mixture. Canonie's closure plan proposed to expose the top surface of the tanks, and use a backhoe to remove the sand mixture. Canonie contended that because hydrocarbon compounds exist in the surrounding soil, the removal of the four UGT in this matter would not further impact the site)

On February 21, 1989 four underground tanks (2-7,000 gallon diesel and 2-7,000 gallon Bunker oil) were removed from the property. The underground tank pit was over excavated, and the final limits of the excavation were 75 feet by 16 feet by 12 feet deep. The excavation at a depth of 12 feet appeared "clean" and no further excavation was performed. A total of 500 cubic yards of soil was removed. Approximately 4,000 gallons of water was pumped into a storage tank on-site and later disposed of by Petroleum Recycling Corp. No additional water entered the excavation in the remaining three days that the excavation was open. The surface of the site is granular fill material, and it appears the water has infiltrated from the surface and was trapped inside of the shoring and the low-permeability bay mud beneath the site.

On February 23, 1989, six soil samples were taken 2 feet above the bottom of the tank excavation and six samples from the bottom of the excavation. These depths correspond to 12 feet and 14 feet below ground surface (bgs). Laboratory analyses performed on the soil samples collect at 12 feet bgs identified maximum concentrations of 12 ppm TEPH and 43 ppm of total recoverable petroleum hydrocarbons (TRPH). Due to the low concentrations of hydrocarbons in the soil, the six samples collected from 14 feet bgs were not analyzed. In addition, the six samples at 12 feet bgs were composited into two samples and analyzed for PCB's. Laboratory analysis did not detect PCBs.

The excavation was backfilled with crushed rock to within one foot of the surface. Granular roadbase was placed, compacted and slightly crowned to enhance drainage away from the area.

A soil and groundwater investigation was initiated by the drilling of three soil borings that were converted to monitoring wells (MW-1, MW-2 and MW-3) on April 13, 1994. Due to the numerous railroad tracks at the site, wells MW-2 and MW-3 were located 200 feet to 300 feet west of the former UST location. The wells were developed on April 22, 1994. The results of the laboratory analyses performed on the soil samples collected from the soil borings did not identify any concentrations of TPH(d), TPH (oil & grease) and BTEX. The results of the laboratory analyses performed on the groundwater samples collected from the monitoring wells did not identify any concentration of TPH(d), oil & grease and BTEX.

Quarterly groundwater monitoring was initiated at the site in August 1994 (3rd Quarter) and continued through the fourth quarter of 1995, a total of six quarterly monitoring events. Groundwater was determined to flow predominately to the northeast. The samples were tested for the presence of TPH(d), TPH (motor oil), BTEX, sodium chloride and Total Dissolved Solids. TPH(d) and BTEX compounds were not detected in any of the site monitoring wells during the monitoring period. TPH (motor oil) was detected once in MW-2 (3rd quarter 1994) at a concentration of 750 ppb

Leaking Underground Fuel Storage Tank Program

At the time of the initial site investigation and installation of monitoring wells, it was assumed that the underground storage tanks (UST) had been located just to the southwest of MW-1 (Figure 2). This location was based on figures included in the Canonie Underground Storage Tank Removal Report. Review of other figures in the files for the UST removal, and review of rail yard maps provided by Southern Pacific indicated that the UST's had actually been located about 230 feet to the west of the originally assumed location. (Figure 2)

The change in location of the former UST's meant that MW-1 was actually on the order of 250 feet downgradient of the former USTs rather than only about 100 feet downgradient. To obtain data to better characterize potential hydrocarbon impact to groundwater closer to the former tanks, three groundwater grab samples were collected on November 17th and 22nd, 1995 (GWS-1, GWS-2 and GWS-3) and a single groundwater grab sample (GWS-4) was collected on March 14, 1996. Locations of these groundwater grab samples are shown on figure 2.

Analytical results for the groundwater grab samples are summarized in Table 2. Benzene and ethylbenzene were not detected in GWS-1, GWS-2 and GWS-3. Toluene and xylenes at concentrations just above the detection limit were reported in GWS-3 and GWS-1 respectively. Petroleum hydrocarbons in the diesel range were detected in GWS-1 and GWS-2 at concentrations of 9,000 ppb and 8,400 ppb respectively. Petroleum hydrocarbons in the motor oil range were detected in GWS-1 and GWS-2 at concentrations of 2,500 ppb and 3,100 ppb respectively. The analytical results from GWS-3, the furthest downgradient grab sampling point was non-detectable for TPH(d), TPH(motor oil), and BEX. Toluene was detected at a concentration of 0.84 ppb.

The analytical results from GWS-4 shows a large difference in petroleum hydrocarbon content between the unfilter sample with no silica gel clean up and the filtered sample with silica gel cleanup. The unfiltered/ no silica gel cleanup sample had a reported TPH(d) concentration of 120,000 ppb and a reported TPH (motor oil) concentration of 180,000 ppb. The filter/with silica gel cleanup sample had a reported TPH(d) concentration of 690 ppb and a reported TPH (motor oil) concentration of 880 ppb.

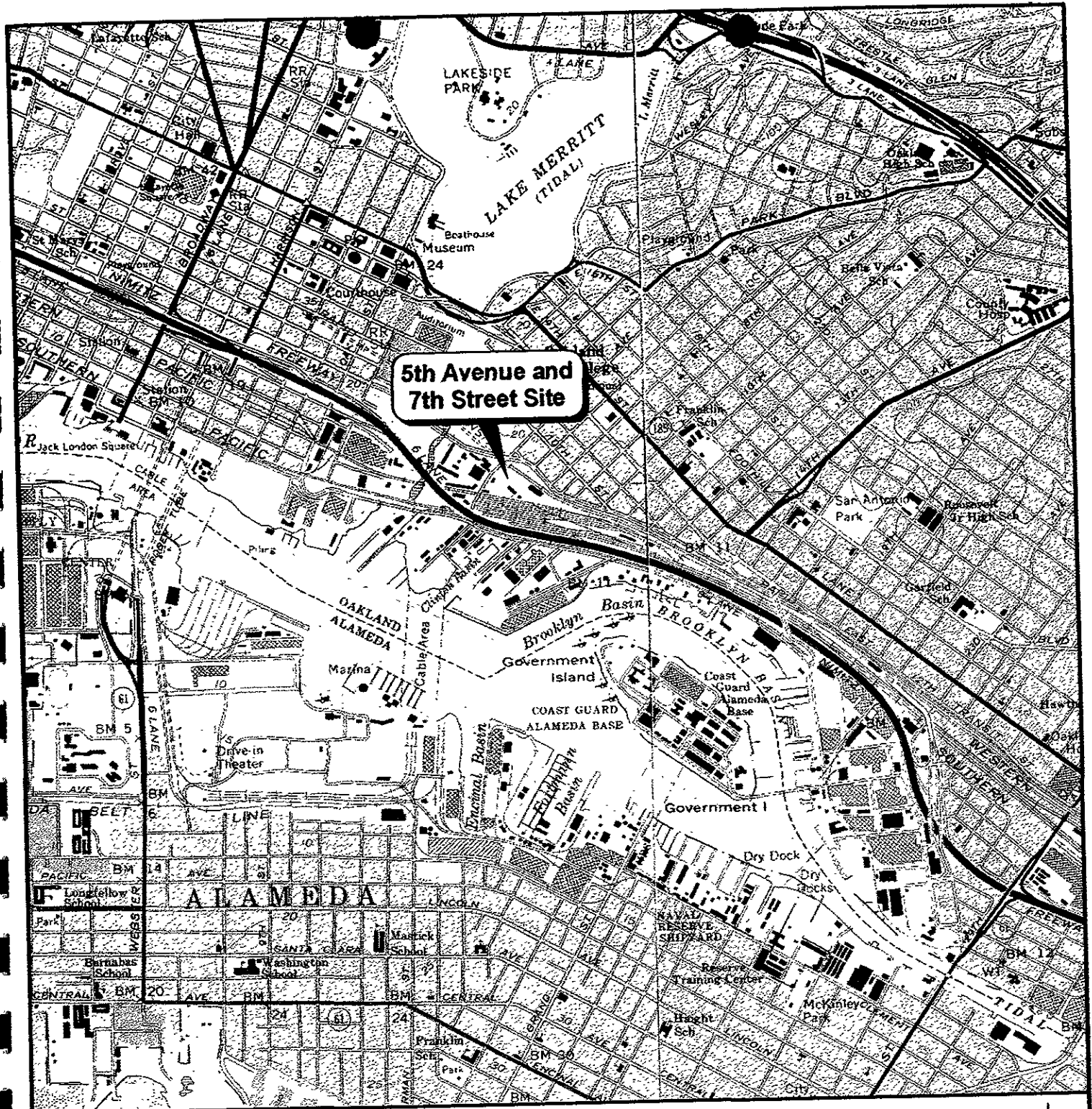
Residual TPH in groundwater ranged from ND to 880 ppb. The Tier 1 RBSL for TPH (residual fuel) provided by the RWQCB is 640 ppb. Since the hydrocarbon plume appears to be limited to the vicinity (w/100') of the former USTs, it is unlikely there will be any impact by TPH to the nearest surface body of water.

A risk-based corrective action (RBCA) Tier 1 evaluation was performed, and it was determined that the BTEX concentrations left in place did not pose a risk to human health and the environment at this site. Note: Volatilization from subsurface soils to enclosed space air was not included in the RBCA because future plans do not include erecting any structure over the leaking underground storage tank (LUST) location per Union Pacific letter dated 3-19-98.

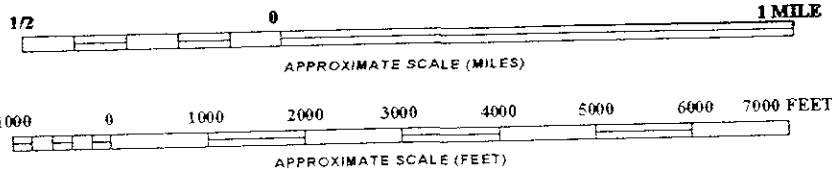
Leaking Underground Fuel Storage Tank Program

In summary, this office is recommending that this case be closed for the following reasons:

- 1) The leak has been stopped and ongoing sources have been removed and remediated
- 2) The site has been adequately characterized
- 3) Little or no groundwater impact currently exists , and no contaminates are found at level above established MCLs or other applicable water quality objectives
- 4) No water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted
- 5) The site presents no significant risk to human health and the environment



**5th Avenue and
7th Street Site**



Reference
 U S G S 7 5 Minute Series (Topographic)
 Oakland East and West Quadrangles
 California
 Dated 1959 photorevised 1980

Project No. 05100269	Figure No. 1
Scale As Above	Page No.
File No. 269SM	Drawn By Patti Decker
Date 05/24/96	Approved By Richard Bateman



SITE LOCATION MAP
 SOUTHERN PACIFIC TRANSPORTATION COMPANY
 5TH AVENUE AND 7TH STREET PROPERTY
 OAKLAND, CALIFORNIA



LEGEND

- MW-1 Approximate Location of Monitoring Well
- GWS-1 Approximate Ground Water Grab Sample Location
- TPH-D Total Petroleum Hydrocarbons As Diesel
- TPH-MO Total Petroleum Hydrocarbons As Motor Oil
- BTEX Benzene, Toluene, Ethylbenzene, and Xylenes
- mg/L Milligrams per Liter
- µg/L Micrograms per Liter
- Predominant Ground Water Flow Direction
- SPTCo Property Boundary
- Location of Former USTs
- Previously Identified Location of Former USTs
- Building
- Road
- Railroad Tracks
- SFPP Pipeline

GROUND WATER - 12/08/95

TPH-D	ND
TPH-MO	ND
BTEX	ND

MW-3

GROUND WATER - 12/08/95

TPH-D	ND
TPH-MO	ND
BTEX	ND

MW-2

GROUND WATER - 11/17/95

TPH-D	9.0 mg/L
TPH-MO	2.5 mg/L
XYLENES	1.3 µg/L

Office/
Locker
Room

GROUND WATER - 11/17/95

TPH-D	8.4 mg/L
TPH-MO	3.1 mg/L
BTEX	ND

GWS-1

GWS-2

GWS-4

GWS-3

GROUND WATER - 3/14/96

TPH-D (Unfiltered/No Silica Gel)	120 mg/L
TPH-D (Filtered/Silica Gel Clean Up)	0.69 mg/L
TPH-MO (Unfiltered/No Silica Gel)	180 mg/L
TPH-MO (Filtered/Silica Gel Clean Up)	0.88 mg/L

GROUND WATER - 11/22/95

TPH-D	ND
TPH-MO	ND
TOLUENE	0.84 µg/L

Previously Identified
Location of
Former USTs

MW-1

GROUND WATER - 12/08/95

TPH-D	ND
TPH-MO	ND
BTEX	ND

8th Avenue

1880

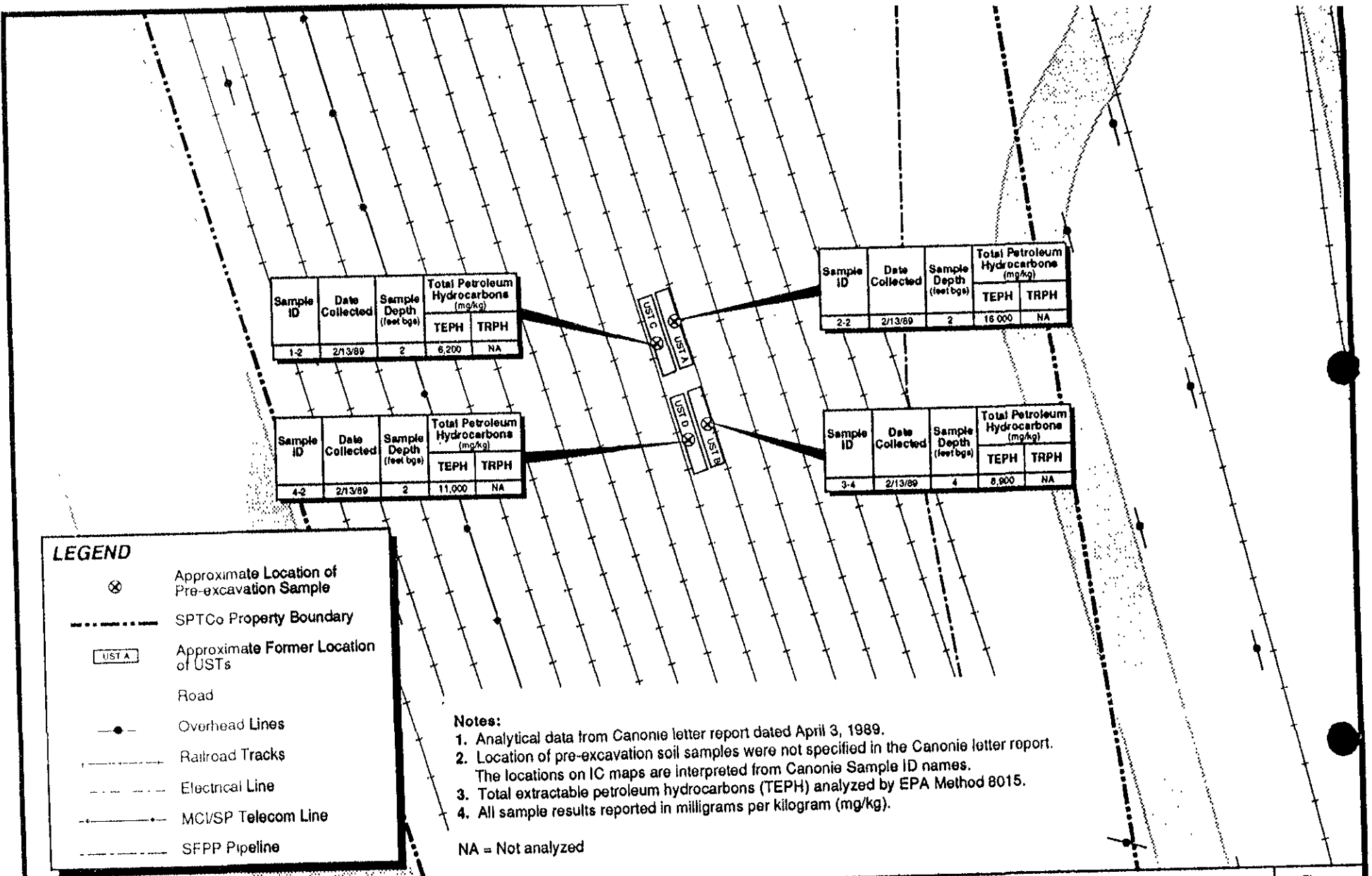


Project No 06100269	Figure No 2
Scale As Above	Page No
File No D3000408	Drawn By Patti Decker
Date 08/23/96	Approved By Richard Bateman



**MONITORING WELL AND GROUND WATER
GRAB SAMPLE LOCATIONS
AND SUMMARY ANALYTICAL RESULTS**
SOUTHERN PACIFIC TRANSPORTATION COMPANY
5TH AVENUE AND 7TH STREET PROPERTY
OAKLAND, CALIFORNIA

00274 CO 5/1989 15/682740



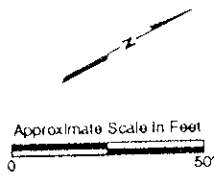
LEGEND

- ⊗ Approximate Location of Pre-excavation Sample
- SPTCo Property Boundary
- UST A Approximate Former Location of USTs
- Road
- Overhead Lines
- Railroad Tracks
- Electrical Line
- MCI/SP Telecom Line
- SFPF Pipeline

Notes:

- Analytical data from Canonie letter report dated April 3, 1989.
- Location of pre-excavation soil samples were not specified in the Canonie letter report. The locations on IC maps are interpreted from Canonie Sample ID names.
- Total extractable petroleum hydrocarbons (TEPH) analyzed by EPA Method 8015.
- All sample results reported in milligrams per kilogram (mg/kg).

NA = Not analyzed



Industrial Compliance

A Subsidiary of SP Environmental Systems, Inc.

Project No.: 05100269	Date: 08/01/94
Drawn By: Patti Decker	Checked By: James G. Jensen

**LOCATION OF PRE-EXCAVATION SOIL SAMPLES
FEBRUARY, 1989 REMOVAL ACTIVITIES
SOUTHERN PACIFIC TRANSPORTATION COMPANY
5TH AVENUE AND 7TH STREET PROPERTY
OAKLAND, CALIFORNIA**

Figure: 3
Page No.: 5
Scale: as shown

DRAWING NUMBER 88-149-B12

1-17-89

CHECKED BY

APPROVED BY

12-21-88

VZC

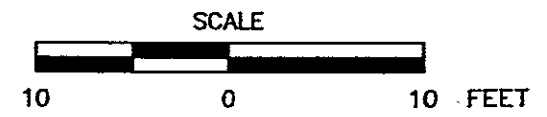
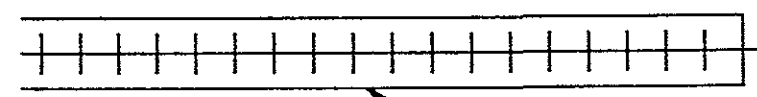
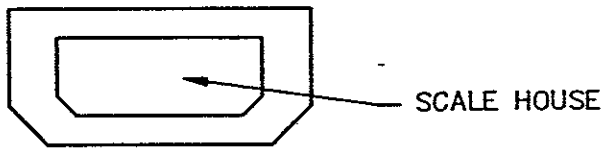
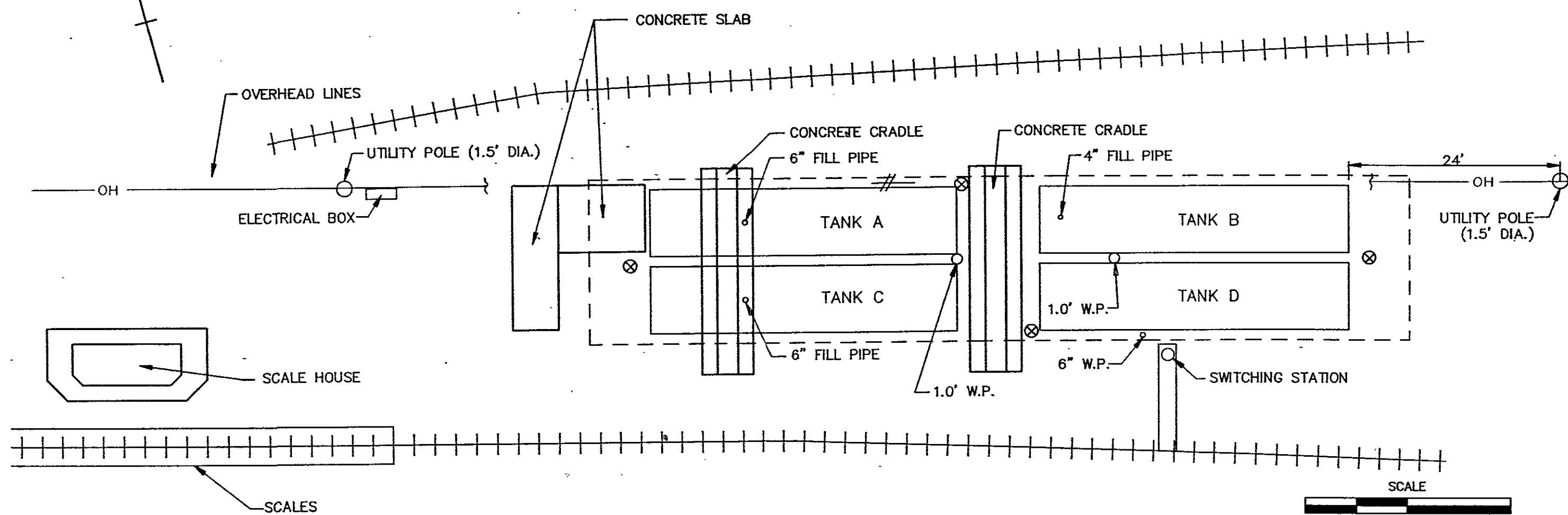
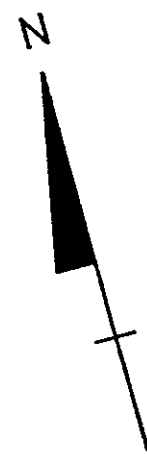
DRAWN BY

ADDED SOIL SAMPLE LOCATIONS

2-10-89

NO. DATE

REVISIONS



LEGEND:

- ⊗ SOIL SAMPLE LOCATIONS
- - - - - APPROXIMATE LIMITS OF SHORING
- W.P. WOODEN PILE (EXISTING)

NOTES:

- 1. TANKS ARE UNDERGROUND

TANK LOCATION PLAN
EAST OAKLAND, CALIFORNIA

PREPARED FOR
SOUTHERN PACIFIC
TRANSPORTATION COMPANY

Canonie Environmental

DATE: 12-21-88	FIGURE 3a	DRAWING NUMBER 88-149-B12
SCALE: AS SHOWN		

Sample ID	Date Collected	Sample Depth (feet bgs)	Total Petroleum Hydrocarbons (mg/kg)		Volatile Organic Compounds (mg/kg)			
			TEPH	TRPH	Benzene	Toluene	Ethylbenzene	Xylenes
NW-12	2/23/89	12	12	21	<0.025	<0.025	<0.025	<0.025
NW-14	2/23/89	14	NA	NA	NA	NA	NA	NA

Former USAs Site

Sample ID	Date Collected	Sample Depth (feet bgs)	Total Petroleum Hydrocarbons (mg/kg)		Volatile Organic Compounds (mg/kg)			
			TEPH	TRPH	Benzene	Toluene	Ethylbenzene	Xylenes
N-12	2/23/89	12	<10	8	<0.025	<0.025	<0.025	<0.025
N-14	2/23/89	14	NA	NA	NA	NA	NA	NA

Sample ID	Date Collected	Sample Depth (feet bgs)	Total Petroleum Hydrocarbons (mg/kg)		Volatile Organic Compounds (mg/kg)			
			TEPH	TRPH	Benzene	Toluene	Ethylbenzene	Xylenes
SW-12	2/23/89	12	<10	12	<0.025	<0.025	<0.025	<0.025
SW-14	2/23/89	14	NA	NA	NA	NA	NA	NA

Sample ID	Date Collected	Sample Depth (feet bgs)	Total Petroleum Hydrocarbons (mg/kg)		Volatile Organic Compounds (mg/kg)			
			TEPH	TRPH	Benzene	Toluene	Ethylbenzene	Xylenes
NE-12	2/23/89	12	<10	12	<0.025	<0.025	<0.025	<0.025
NE-14	2/23/89	14	NA	NA	NA	NA	NA	NA

Sample ID	Date Collected	Sample Depth (feet bgs)	Total Petroleum Hydrocarbons (mg/kg)		Volatile Organic Compounds (mg/kg)			
			TEPH	TRPH	Benzene	Toluene	Ethylbenzene	Xylenes
S-12	2/23/89	12	<10	11	<0.025	<0.025	<0.025	<0.025
S-14	2/23/89	14	NA	NA	NA	NA	NA	NA

Sample ID	Date Collected	Sample Depth (feet bgs)	Total Petroleum Hydrocarbons (mg/kg)		Volatile Organic Compounds (mg/kg)			
			TEPH	TRPH	Benzene	Toluene	Ethylbenzene	Xylenes
SE-12	2/23/89	12	<10	43	<0.025	<0.025	<0.025	<0.025
SE-14	2/23/89	14	NA	NA	NA	NA	NA	NA

LEGEND



Approximate Location of Excavation Sample

----- SPTCo Property Boundary



Approximate Limits of Excavation

Road



Overhead Lines



Railroad Tracks



Electrical Line



MCI/SP Telecom Line



SFPP Pipeline

Notes:

- Analytical data from Canonie letter report dated April 3, 1989.
- Location of post-excavation soil samples were not specified in the Canonie letter report. The locations on IC maps are interpreted from Canonie Sample ID names.
- Total extractable petroleum hydrocarbons (TEPH) analyzed by EPA Method 8015.
- Total recoverable petroleum hydrocarbons (TRPH) analyzed by EPA Method 418.1.
- Volatile organic compounds analyzed by EPA Method 8020.
- All sample results reported in milligrams per kilogram (mg/kg).
- < = Indicates concentration not detected at or above method practical quantitation limit as noted.

NA = Not analyzed.

Industrial Compliance

A Subsidiary of SP Environmental Systems, Inc.

Project No.: 05100269	Date: 08/01/94
Drawn By: Patti Decker	Checked By: James G. Jensen

**LOCATION OF POST-EXCAVATION SOIL SAMPLES
FEBRUARY, 1989 REMOVAL ACTIVITIES
SOUTHERN PACIFIC TRANSPORTATION COMPANY
5TH AVENUE AND 7TH STREET PROPERTY
OAKLAND, CALIFORNIA**

Figure:
4
Page No.:
8
Scale:
as shown

Approximate Scale in Feet
0 50'

TABLE 1
ANALYTICAL RESULTS
UNDERGROUND STORAGE TANK SOIL SAMPLES
FEBRUARY, 1989 - REMOVAL ACTIVITIES

Sample Location	Sample ID ^a	Date Collected	Sample Depth (feet bgs)	TEPH ^b (mg/kg)	TRPH ^c (mg/kg)	Benzene ^d (mg/kg)	Toluene ^d (mg/kg)	Ethylbenzene ^d (mg/kg)	Xylenes ^d (mg/kg)	PCBs ^e (mg/kg)	
Pre-excavation Perimeter of USTs	Sample 1-2	02/13/89	2	6,200	NA	NA	NA	NA	NA	NA	
	Sample 2-2		2	16,000	NA	NA	NA	NA	NA	NA	
	Sample 3-4		4	8,900	NA	NA	NA	NA	NA	NA	
	Sample 4-2		2	11,000	NA	NA	NA	NA	NA	NA	
UST Excavation <i>after over excavation</i>	N-12	02/23/89	12	<10	8	<0.025	<0.025	<0.025	<0.025	NA	
	NE-12		12	<10	12	<0.025	<0.025	<0.025	<0.025	NA	
	NW-12		12	12	21	<0.025	<0.025	<0.025	<0.025	NA	
	S-12		12	<10	11	<0.025	<0.025	<0.025	<0.025	NA	
	SE-12		12	<10	43	<0.025	<0.025	<0.025	<0.025	NA	
	SW-12		12	<10	12	<0.025	<0.025	<0.025	<0.025	NA	
	Composite S-12, SE-12, and SW-12		12	NA	NA	NA	NA	NA	NA	NA	ND
	Composite N-12, NE-12, and NW-12		12	NA	NA	NA	NA	NA	NA	NA	ND

a See Figures 3 and 4 for approximate location of soil samples. These locations were not specified in the Canonie reports. The locations on IC maps are interpreted from Canonie's sample ID numbers.

b Total extractable petroleum hydrocarbons (TEPH) analyzed by EPA Method 8015 (California Regional Water Quality Control Board Guidelines, September, 1985).

c Total recoverable petroleum hydrocarbons (TRPH) analyzed by EPA Method 418.1.

d Benzene, toluene, ethylbenzene, and xylenes (BTEX) analyzed by EPA Method 8020.

e Polychlorinated biphenyls (PCBs) analyzed by EPA Method 8080.3

mg/kg Milligrams per kilogram, approximately equal to parts per million (ppm)

ND Not detected at or above the practical quantitation limit for analyte analyzed for. See laboratory sheets in Appendix A.

< Indicates the constituent was not detected at a concentration at or above the method practical quantitation limit as listed.

TABLE 2
SUMMARY OF GROUND WATER ANALYTICAL RESULTS

Sample Location	Date Sampled	TEPH (mg/L)		Volatile Organic Compounds ^c (µg/L)				Sodium Chloride ^d (mg/L)	Total Dissolved Solids ^e (mg/L)
		Diesel ^a	Motor Oil ^b	Benzene	Toluene	Ethylbenzene	Xylenes		
MW-1	04/28/94	<0.05	<0.20	<0.5	<0.5	<0.5	<0.5	61	530
	08/16/94	<0.12	<0.75	<0.3	<0.3	<0.5	<0.5	86	600
	11/09/94	<0.05	<0.50	<0.5	<0.5	<0.5	<0.5	25	470
	02/16/95 ^f	NS	NS	NS	NS	NS	NS	NS	NS
	05/11/95	<0.05	<0.50	<0.5	<0.5	<0.5	<0.5	46	550
	08/08/95	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	NA	NA
	12/08/95	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	NA	NA
MW-2	04/28/94	<0.05	<0.20	<0.5	<0.5	<0.5	<0.5	77	460
	08/16/94	<0.12	0.75	<0.3	<0.3	<0.5	<0.5	170	690
	11/10/94	<0.05	<0.50	<0.5	<0.5	<0.5	<0.5	35	370
	02/16/95	<0.05	<0.50	<0.5	<0.5	<0.5	<0.5	190	370
	05/11/95	<0.05	<0.50	<0.5	<0.5	<0.5	<0.5	112	490
	08/08/95	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	NA	NA
	12/08/95	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	NA	NA
MW-3	04/28/94	<0.05	<0.20	<0.5	<0.5	<0.5	<0.5	300	680
	08/16/94	<0.12	<0.75	<0.3	<0.3	<0.5	<0.5	1,200	3,700
	11/10/94	<0.05	<0.50	<0.5	<0.5	<0.5	<0.5	140	620
	02/16/95	<0.05	<0.50	<0.5	<0.5	<0.5	<0.5	630	1,330
	05/11/95	<0.05	<0.50	<0.5	<0.5	<0.5	<0.5	692	1,350
	08/08/95	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	NA	NA
	12/08/95	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	NA	NA
GWS-1	11/17/95	9.0	2.5	<0.5	<0.5	<0.5	1.3 ^g	NA	NA
GWS-2	11/17/95	8.4	3.1	<0.5	<0.5	<0.5	<1.0	NA	NA
GWS-3	11/22/95	<0.05 ^h		<0.5	0.84	<0.5	<1.0	NA	NA
GWS-4 (Unfiltered/No Silica Gel Cleanup)	03/14/96	120	180 ⁱ	NA	NA	NA	NA	NA	NA
GWS-4 (Filtered/Silica Gel Cleanup)	03/14/96	0.69	0.88 ⁱ	NA	NA	NA	NA	NA	NA
Cal DHS MCLs		NE	NE	1	150	700	1,750	NE	500

Well Construction Log

Well Location	East Oakland Yard (North of Railroad Tracks)	Well Name	MW-1
Drilling Company	West Hazmat (Contractor No. 554979)	Project Name	5th Avenue and 7th Street
Drilling Method	Hollow Stem Auger/Continuous Core	Rig Type	Mobile B-61
Hole Diameter	8 & 10 In.	Driller	Jeff Smith
Ground Elevation	est. 10' AMSL	Date	4/13/94
Water Depth	5' at time of drilling	Logged By	James G. Jensen
		Project Number	05100269
		Total Depth	15' (8" Auger)/15' (10" Auger)

Well Construction Specifics

Screen Placement	from 14 ft. to 4 ft.	Slot Size	0.020 inches	Diameter	4 inches	Completion Type:	
Blank Casing	from 4 ft. to surf ft.	Schedule	40 PVC	Diameter	4 inches		Aboveground
Filter Pack	from 15 ft. to 3 ft.	Size	1C (4.5 sx)	Type	Lonestar/Monterey		At Grade <input checked="" type="checkbox"/>
Bentonite Pellets	from 3 ft. to 2 ft.	Type	Pellets (2/3 bucket)	Size	3/8 inches	Hydrated	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Cement/Bentonite	from 2 ft. to surf ft.	Size		Percent Bentonite	2%		

Sample Number	Recov.	Blows/6-inches	Depth Feet	Well Detail	Lithology	USCS Log	Sample Description	FID/ID
MW-1 (0.5)		14	1	Cement/Bentonite Grout		SM	Ballast material at surface.	
	1'	17	2			SM	Gravelly Silty Sand: dark brown, 60% fine grained sand, 30% silt to very fine grained, 10% gravel, loose, damp.	0.0
		17	3	Bentonite Seal		?		
	1'	continuous core	4	#1C Sand		ML	Sandy Silt: gray, 50% silt to very fine grained, 30% fine grained sand, 20% small gravel, subangular, loose, damp.	
		4	5	Screen		SM	Silty Sand: dark brown, 60% fine grained sand, 30% silt to very fine grained, 10% gravel, subangular, poorly sorted, loose, damp.	0.0
	4"	7	6			SM	Silty Sand: brown, 60% fine to medium grained sand, 40% silt, subangular, poorly sorted, sticky, wet, 5% dark minerals.	
		7	7			?		
	2'	continuous core	8			CL	Sandy Clay: orange brown, 60% clay, 40% fine to medium grained sand, subangular, sticky, wet.	0.0
		4	9			SM	Clayey Silty Sand: orange brown, 50% fine to medium grained sand, 25% silt to very fine grained, 25% clay, subangular, poorly sorted, sticky, wet.	
		7	10			CL	Silty Clay: orange brown, slight gray mottling, 80% clay, 20% silt, firm, sticky, moist.	
	18"	1	11			CH	Clay: gray, firm, sticky, moist, shell debris at 10 feet, trace fine grained sand in burrows, slight organic odor.	
		1	12			CH	Clay: gray, firm, sticky, moist, shell debris at 11.5 feet, medium grained sand at 13 feet, slight organic odor.	
		1	13			CH		
	3.5'	continuous core	14			SC	Clayey Sand: gray, mottled with gray green, 70% fine to medium grained sand, 30% clay, subrounded, moderately sorted, firm, moist, trace angular gravel, slight organic odor.	
				15				

Total Depth 15 feet bgs

Construction Log

DRAFT

INDUSTRIAL COMPLIANCE

Location	East Oakland Yard (South of Railroad Tracks)		Well Name	MW-2	
Company	West Hazmat (Contractor No. 554979)		Project Name	5th Avenue and 7th Street	
Method	Hollow Stem Auger/Continuous Core		Rig Type	Mobile B-61	
Project Number	05100269				
Auger Diameter	8 & 10 In.	Driller	Jeff Smith	Date	4/13/94
Logged By	James G. Jensen				
Elevation	est. 10' AMSL	Water Depth	3' at time of drilling	Total Depth	15' (8" Auger)/14.5 (10" Auger)

Construction Specifics

Placement	from 14 ft to 4 ft	Slot Size	0.020 inches	Diameter	4 inches	Completion Type:	
casing	from 4 ft to surf ft	Schedule	40 PVC	Diameter	4 inches	Aboveground	
sock	from 14.5 ft to 3.5 ft	Size	1C (2.75 sx)	Type	Lonestar/Monterey	At Grade	X
Pellets	from 3.5 ft to 3.0 ft	Type	Pellets (1/2 bucket)	Size	3/8 inches	Hydrated	X yes ___ no
Bentonite	from 3.0 ft to surf ft	Size		Percent Bentonite	2%		

Recov.	Blows/ 6-inches	Depth Feet	Well Detail	Lithology	USCS Log	Sample Description	FID/PID
						Ballast material at surface.	
0.5'	6	1	Cement/ Bentonite Grout		ML	Sandy Silt: gray brown, 60% silt to very fine grained, 40% fine grained sand, subangular, poorly sorted, loose, damp.	
	3	2			?	Gravelly Sandy Silt: gray brown, 50% silt to very fine grained, 30% fine grained sand, 20% small gravel, subrounded, poorly sorted, loose, damp.	
1.5'	continuous core	3	Bentonite Seal		CL	Sandy Silty Clay: mottled orange brown, 60% clay, 30% fine grained sand, 20% silt to very fine grained, subrounded, sticky, wet.	0.0
		4	#1C Sand				
		5	Screen		SM	Clayey Silty Sand: brown, 60% medium grained sand, 20% silt to very fine grained, 20% clay, subrounded, poorly sorted, sticky, wet.	
		6			?	Clay: gray, firm, sticky, mottled with dark gray.	
4'	continuous core	7			CH		
		8					
		9				Sandy Clay: gray, 70% clay, 30% fine grained sand, subrounded, sticky, wet. Clay: orange brown mottled, firm, sticky, moist.	
		10			CL		
		11				Silty Clay: gray, mottled with dark gray streaks, 70% clay, 30% silt, sticky, moist, trace shell fragments, slight organic odor.	
4'	continuous core	12					
		13				Clay: gray, firm, sticky, moist, trace dark gray mottling, trace rounded gravel, moderate organic odor	
		14			CH		
		15					

Total Depth 15 feet bgs.

Appendix E

Appendix F

Appendix G

Appendix D

II Construction Log

DRAFT

INDUSTRIAL COMPLIANCE

Location	East Oakland Yard (South of Railroad Tracks)		Well Name	MW-3	
Drilling Company	West Hazmat (Contractor No. 554979)		Project Name	5th Avenue and 7th Street	
Drilling Method	Hollow Stem Auger/Continuous Core	Rig Type	Mobile B-61	Project Number	05100269
Diameter	8 & 10 In.	Driller	Jeff Smith	Date	4/13/94
Ground Elevation	est. 10' AMSL	Water Depth	5' at time of drilling	Logged By	James G. Jensen
				Total Depth	15' (8" Auger)/15' (10" Auger)

II Construction Specifics

Annular Placement	from 14 ft. to 4 ft.	Slot Size	0.020 inches	Diameter	4 inches	Completion Type:	
Casing	from 4 ft. to surf ft.	Schedule	40 PVC	Diameter	4 inches	Aboveground	
Pack	from 15 ft. to 3.5 ft.	Size	1C (4 sx)	Type	Lonestar/Monterey	At Grade	<input checked="" type="checkbox"/>
Grout Pellets	from 3.5 ft. to 3.0 ft.	Type	Pellets (1/2 bucket)	Size	3/8 inches	Hydrated	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Annular Bentonite	from 3.0 ft. to surf ft.	Size		Percent Bentonite	2%		

Number	Recov.	Blows/ 6-inches	Depth Feet	Well Detail	Lithology	USCS Log	Sample Description	FID/ID				
3 (0.5')	1'	5	1			GM ? SM ? CH CL CH	Ballast material at surface.	0.0				
		12	2				Cement/Bentonite Grout		Silty Gravel: brown, 60% gravel, 40% silt to very fine grained, subangular, poorly sorted, loose, damp.			
	15	3	Bentonite Seal				Silty Sand: brown, 80% fine to medium grained, 20% silt to very fine grained, subrounded, moderately sorted, loose, moist, trace gravel.					
	1'	continuous core	4				#1C Sand		Silty Sand: brown with red brown mottling, 60% fine grained, 40% silt, subangular, poorly sorted, firm, moist.			
			5						Silty Sand: brown, 70% fine to medium grained, 30% silt to very fine grained, subrounded, moderately sorted, loose, wet.			
			6				Screen		Clay: gray, firm, sticky, moist, trace dark gray mottling.			
	2.5'	continuous core	7						Clay: gray, firm, sticky, moist, trace dark gray mottling, slight organic odor.			
			8						Sandy Clay: mottled gray and brown, 70% clay, 30% fine grained sand, subrounded, firm, sticky, moist.			
			9									
	3'	continuous core	10									
			11									
			12						Sandy Silty Clay: mottled orange brown, 50% clay, 25% fine grained sand, 25% silt to very fine grained, firm, sticky, moist.			
							13					
							14					
							15					

Total Depth 15 feet bgs.

Appendix E
 Appendix F
 Appendix G
 Appendix D

Table 2
 Results of Total Ext. Petroleum Hydrocarbons Analysis on Soil
 Samples Received From SPT. Co. East Oakland
 Results in mg/kg

02-15-1989
 88-149-07-6129
 Page 2

Sampler ID:	Sample 1-2'	Sample 2-2'	Sample 3-4'	Sample 4-2'
Lab ID#:	<u>835229</u>	<u>835230</u>	<u>835231</u>	<u>835232</u>
<u>Analyte(s)</u> Total Extractable Petroleum Hydrocarbons	6200.	16000.	8900.	11000.

BFS DT
 Analyst Checked by

Preliminary Sample

Note:
 ND X denotes none detected to a level of X.
 #ND X denotes none detected to a level of X due to an interfering peak.

Table 1
Codes of Samples Received
From SPT. Co. East Oakland
Project: 88-150-07

<u>Sampler ID</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Lab ID#</u>	<u>Sample Type</u>	<u>Container</u>
Analysis: Benzene-Toluene-Et-Benzene-Xylene					
N-12	02-23-89	02-24-89	835684	Soil	Brass Tube
NE-12	02-23-89	02-24-89	835682	Soil	Brass Tube
NW-12	02-23-89	02-24-89	835680	Soil	Brass Tube
S-12	02-23-89	02-24-89	835686	Soil	Brass Tube
SE-12	02-23-89	02-24-89	835688	Soil	Brass Tube
SW-12	02-23-89	02-24-89	835690	Soil	Brass Tube
Analysis: Total Ext. Petroleum Hydrocarbons					
N-12	02-23-89	02-24-89	835684	Soil	Brass Tube
NE-12	02-23-89	02-24-89	835682	Soil	Brass Tube
NW-12	02-23-89	02-24-89	835680	Soil	Brass Tube
S-12	02-23-89	02-24-89	835686	Soil	Brass Tube
SE-12	02-23-89	02-24-89	835688	Soil	Brass Tube
SW-12	02-23-89	02-24-89	835690	Soil	Brass Tube

Confirmatory Samples

Table 2
 Results of Benzene-Toluene-Et-Benzene-Xylene Analysis on Soil
 Samples Received From SPT. Co. East Oakland
 Results in mg/kg

03-02-1989
 88-150-07-6194
 Page 2

Sampler ID:	N-12	NE-12	NW-12	S-12	SE-12
Lab ID#:	<u>835684</u>	<u>835682</u>	<u>835680</u>	<u>835686</u>	<u>835688</u>
<u>Analyte(s)</u>					
Benzene	ND 0.025	ND 0.025	ND 0.025	ND 0.025	ND 0.025
Toluene	ND 0.025	ND 0.025	ND 0.025	ND 0.025	ND 0.025
Ethyl Benzene	ND 0.025	ND 0.025	ND 0.025	ND 0.025	ND 0.025
Xylene	ND 0.025	ND 0.025	ND 0.025	ND 0.025	ND 0.025

AA DS
 Analyst Checked by

confirmatory sample

Note:
 ND X denotes none detected to a level of X
 #ND X denotes none detected to a level of X due to an interfering peak

Table 2 (Cont.)
Results of Benzene-Toluene-Et-Benzene-Xylene Analysis on Soil
Samples Received From SPT. Co. East Oakland
Results in mg/kg

03-02-1989
88-150-07-6194
Page 3

Sampler ID:	SW-12
Lab ID#:	<u>835690</u>
<u>Analyte(s)</u>	
Benzene	ND 0.025
Toluene	ND 0.025
Ethyl Benzene	ND 0.025
Xylene	ND 0.025
<u>MA</u>	<u>DJ</u>
Analyst	Checked by

confirmatory sample

Note:

ND X denotes none detected to a level of X.

#ND X denotes none detected to a level of X due to an interfering peak.

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

METHOD 503E/418.1

March 3, 1989
Lab No. 13125-6

Client: #03-8624
Canonie
Mr. Brian Wetzsteon
1825 S. Grant Street, Suite 260
San Mateo, CA 94402

Project #88-150-07

Sample Description: SW-12

Confirmatory Sample

Sampled by: Brian Wetzsteon
Date Sampled: February 23, 1989
Date Received: February 27, 1989

REPORT OF ANALYSIS

<u>Parameter</u>	<u>Test Results</u>	<u>Reporting Unit</u>	<u>Detection Limit</u>
TPH (418.1)	12	mg/kg	5

ND = Not detected at or above the concentration of the detection limit.

mg/kg = ppm_f

Maximum contaminant levels/action levels are dependent upon local conditions. Please check with your local Environmental Health office for this information.

Very truly yours,

Nicki Heath
NICKI HEATH
Environmental Chemist

NH/JFQ:cat

John F. Quinn
JOHN F. QUINN, Ph.D.
Laboratory Director

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

METHOD 503E/418.1

March 3, 1989
Lab No. 13125-5

Client: #03-8624
Canonie
Mr. Brian Wetzsteon
1825 S. Grant Street, Suite 260
San Mateo, CA 94402

Project #88-150-07

Confirmatory Sample

Sample Description: SE-12

Sampled by: Brian Wetzsteon
Date Sampled: February 23, 1989
Date Received: February 27, 1989

REPORT OF ANALYSIS

<u>Parameter</u>	<u>Test Results</u>	<u>Reporting Unit</u>	<u>Detection Limit</u>
TPH (418.1)	43	mg/kg	5

ND = Not detected at or above the concentration of the detection limit.

mg/kg = ppm_f

Maximum contaminant levels/action levels are dependent upon local conditions. Please check with your local Environmental Health office for this information.

Very truly yours,

Nicki Heath
NICKI HEATH
Environmental Chemist

NH/JFQ:cat

John F. Quinn
JOHN F. QUINN, Ph.D.
Laboratory Director

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

METHOD 503E/418.1

March 3, 1989
Lab No. 13125-4

Client: #03-8624
Canonie
Mr. Brian Wetzsteon
1825 S. Grant Street, Suite 260
San Mateo, CA 94402

Project #88-150-07

Sample Description: NW-12

Confirmatory Sample

Sampled by: Brian Wetzsteon
Date Sampled: February 23, 1989
Date Received: February 27, 1989

REPORT OF ANALYSIS

<u>Parameter</u>	<u>Test Results</u>	<u>Reporting Unit</u>	<u>Detection Limit</u>
TPH (418.1)	21	mg/kg	5

ND = Not detected at or above the concentration of the detection limit.

mg/kg = ppm

Maximum contaminant levels/action levels are dependent upon local conditions. Please check with your local Environmental Health office for this information.

Very truly yours,

Nicki Heath
NICKI HEATH
Environmental Chemist

John F. Quinn
JOHN F. QUINN, Ph.D.
Laboratory Director

NH/JFQ:cat

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

METHOD 503E/418.1

March 3, 1989
Lab No. 13125-3

Client: #03-8624
Canonie
Mr. Brian Wetzsteon
1825 S. Grant Street, Suite 260
San Mateo, CA 94402

Project #88-150-07

Sample Description: NE-12

Confirmatory Sample

Sampled by: Brian Wetzsteon
Date Sampled: February 23, 1989
Date Received: February 27, 1989

REPORT OF ANALYSIS

<u>Parameter</u>	<u>Test Results</u>	<u>Reporting Unit</u>	<u>Detection Limit</u>
TPH (418.1)	12	mg/kg	5

ND = Not detected at or above the concentration of the detection limit.

mg/kg = ppm

Maximum contaminant levels/action levels are dependent upon local conditions. Please check with your local Environmental Health office for this information.

Very truly yours,

Nicki Heath

NICKI HEATH
Environmental Chemist

NH/JFQ:cat

John F. Quinn
JOHN F. QUINN, Ph.D.
Laboratory Director

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

METHOD 503E/418.1

March 3, 1989
Lab No. 13125-2

Client: #03-8624
Canonie
Mr. Brian Wetzsteon
1825 S. Grant Street, Suite 260
San Mateo, CA 94402

Project #88-150-07

Sample Description: S-12

Confirmatory Sample

Sampled by: Brian Wetzsteon
Date Sampled: February 23, 1989
Date Received: February 27, 1989

REPORT OF ANALYSIS

<u>Parameter</u>	<u>Test Results</u>	<u>Reporting Unit</u>	<u>Detection Limit</u>
TPH (418.1)	11	mg/kg	5

ND = Not detected at or above the
concentration of the detection limit.

mg/kg = ppm

Maximum contaminant levels/action levels are dependent upon local conditions. Please check with your local Environmental Health office for this information.

Very truly yours,

Nicki Heath

NICKI HEATH
Environmental Chemist

NH/JFQ:cat

John F. Quinn
JOHN F. QUINN, Ph.D.
Laboratory Director

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

METHOD 503E/418.1

RECEIVED

MAR 7 1989

Ans'd.....

March 3, 1989
Lab No. 13125-1

Client: #03-8624
 Canonie
 Mr. Brian Wetzsteon
 1825 S. Grant Street, Suite 260
 San Mateo, CA 94402

Project #88-150-07

Sample Description: N-12

Confirmatory Sample

Sampled by: Brian Wetzsteon
Date Sampled: February 23, 1989
Date Received: February 27, 1989

REPORT OF ANALYSIS

<u>Parameter</u>	<u>Test Results</u>	<u>Reporting Unit</u>	<u>Detection Limit</u>
TPH (418.1)	8	mg/kg	5

ND = Not detected at or above the concentration of the detection limit.

mg/kg = ppm

Maximum contaminant levels/action levels are dependent upon local conditions. Please check with your local Environmental Health office for this information.

Very truly yours,

Nicki Heath

NICKI HEATH
Environmental Chemist

NH/JFQ:cat

John F. Quinn

JOHN F. QUINN, Ph.D.
Laboratory Director

Table 3 (Cont.)
Results of Total Ext. Petroleum Hydrocarbons Analysis on Soil
Samples Received From SPT. Co. East Oakland
Results in mg/kg

03-02-1989
88-150-07-6194
Page 5

Sampler ID: SW-12
Lab ID#: 835690
Analyte(s)
Total Extractable Petroleum ND 10.
Hydrocarbons
BTS/DEC DJ
Analyst Checked by

Confirmatory Sample

Note:

ND X denotes none detected to a level of X.

#ND X denotes none detected to a level of X due to an interfering peak.

Table 3
 Results of Total Ext. Petroleum Hydrocarbons Analysis on Soil
 Samples Received From SPT. Co. East Oakland
 Results in mg/kg

03-02-1989
 88-150-07-6194
 Page 4

Sampler ID:	N-12	NE-12	NW-12	S-12	SE-12
Lab ID#:	<u>835684</u>	<u>835682</u>	<u>835680</u>	<u>835686</u>	<u>835688</u>
<u>Analyte(s)</u>					
Total Extractable Petroleum Hydrocarbons	ND 10.	ND 10.	*ND 10.	ND 10.	ND 10.

BTS/PEG DT
 Analyst Checked by

*Extractable Hydrocarbons 12.

Congirmatory Sample

Note:

ND X denotes none detected to a level of X
 #ND X denotes none detected to a level of X due to an interfering peak

Table 2
Results of PCB Analysis on Soil
Samples Received From SPT.Co. East Oakland
Results in mg/kg

03-20-1989
88-150-07-6239
Page 2

Sampler ID:	Composite
Lab ID#:	<u>835680</u>
<u>Analyte(s)</u>	
Aroclor 1016	ND 0.05
Aroclor 1221	ND 0.05
Aroclor 1232	ND 0.05
Aroclor 1242	ND 0.05
Aroclor 1248	ND 0.05
Aroclor 1254	ND 0.10
Aroclor 1260	ND 0.10

MA DJ
Analyst Checked by

Confirmatory Sample

Note:

ND X denotes none detected to a level of X.

//ND X denotes none detected to a level of X due to an interfering peak.

Table 2
Results of PCB Analysis on Soil
Samples Received From S.P. Oakland
Results in mg/kg

03-20-1989
88-150-07-6328
Page 2

Sampler ID:	S-12, SE-12- .SW-12
Lab ID#:	<u>835686</u>
<u>Analyte(s)</u>	
Aroclor 1016	ND 0.05
Aroclor 1221	ND 0.05
Aroclor 1232	ND 0.05
Aroclor 1242	ND 0.05
Aroclor 1248	ND 0.05
Aroclor 1254	ND 0.10
Aroclor 1260	ND 0.10

Analyst Checked by

Confirmatory Sample

Note:

ND X denotes none detected to a level of X.

#ND X denotes none detected to a level of X due to an interfering peak