

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



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

May 5, 1998
StID # 6518

REMEDIAL ACTION COMPLETION CERTIFICATION

Mr. Dale Klettke
Port of Oakland, Environmental
530 Water St., 2nd Floor
Oakland CA 94607

**RE: Port of Oakland, MOIA, Lighting Vault Bld. L-916, Port of
Oakland Tank LF-02, 8900 Air Cargo Rd., Oakland 94621**

Dear Mr. Klettke:

This letter confirms the completion of site investigation and remedial action for the one approximately 2000 gallon diesel fuel underground tank removed from 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 tank is greatly appreciated.

Based upon the available information and with provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank releases is required.

This notice is issued pursuant to a regulation contained in Title 23, Division 3, Chapter 16, Section 2721 (e) of the California Code of Regulations.

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

Sincerely,

Mee Ling Tung
Director, Environmental Health

c: B. Chan, Hazardous Materials Division-files
Chuck Headlee, RWQCB
Mr. Dave Deaner, SWRCB Cleanup Fund
Mr. Leroy Griffin, City of Oakland OES, 505 14th St., Suite
702, Oakland CA 94612

RACCLF02

ALAMEDA COUNTY
HEALTH CARE SERVICES



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DAVID J. KEARS, Agency Director

May 6, 1998
StID# 6518

Mr. Dale Klettke
Port of Oakland, Environmental
530 Water St., 2nd Floor
Oakland CA 94607

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**RE: Fuel Leak Site Case Closure- Port of Oakland, MOIA, Lighting
Vault Bld. L-916, Port of Oakland Tank LF-02, 8900 Air Cargo
Rd., Oakland CA 94621**

Dear Mr. Klettke:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with the Health and Safety Code, 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 Health Services, Local Oversight Program (LOP) is required to use this case closure letter. We are also enclosing the case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site.

Site Investigation and Cleanup Summary:

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

- * 110 parts per million (ppm) Total Petroleum Hydrocarbons as diesel (TPHd), 1.1 ppm Total Petroleum Hydrocarbons as gasoline (TPHg) and 0.017 ppm xylenes remain in the soil at the site.
- * 260 parts per billion (ppb) TPHd remain in groundwater at the site.

This site should be included in the City's permit tracking system. Please contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

enclosures: Case Closure Letter, Case Closure Summary

c: Mr. L. Griffin, City of Oakland OES, 505 14th St., Suite
702, Oakland CA 94612

*B. Chan, files (letter only) tr1tLF02

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

CALIFORNIA REGIONAL WATER
QUALITY CONTROL BOARD
APR 30 1998

I. AGENCY INFORMATION

Date: March 31, 1998

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Parkway
Rm 250, Alameda CA 94502**
City/State/Zip: **Alameda** Phone: **(510) 567-6700**
Responsible staff person: **Barney Chan** Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: **Port of Oakland, MOIA, Lighting Vault Bld. L-916, Port of Oakland Tank LF-02**

Site facility address: **8900 Air Cargo Rd., Oakland 94621**

RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **6518**

ULR filing date: **12/15/97** SWEEPS No: **N/A**

<u>Responsible Parties:</u>	<u>Addresses:</u>	<u>Phone Numbers:</u>
Port of Oakland c/o c/o Dale Klettke	530 Water St., 2nd Fl Oakland CA 94607	(510) 271-1118

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	~2,000	diesel fuel	Removed	9/29/97

III RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **presumed from overfilling of tank**

Site characterization complete? **Yes**

Date approved by oversight agency:

Monitoring Wells installed? **no** Number: **NA**

Proper screened interval? **NA**

Leaking Underground Fuel Storage Tank Program

IV. CLOSURE

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

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

Site management requirements: Site should be included in the City of Oakland's permit tracking system to inform future subsurface workers

Should corrective action be reviewed if land use changes? Yes

Monitoring wells Decommisioned: NA

Number Decommisioned: NA

Number Retained:

List enforcement actions taken: None

List enforcement actions rescinded: NA

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Barney M. Chan

Title: Hazardous Materials Specialist

Signature: *Barney M Chan*

Date: 3/31/98

Reviewed by

Name: Tom Peacock

Title: Manager

Signature: *Tom Peacock*

Date: 3-13-98

Name: Eva Chu

Title: Hazardous Materials Specialist

Signature: *Eva Chu*

Date: 3/6/98

VI. RWQCB NOTIFICATION

Date Submitted to RB: 4/10/98

RB Response: 4/20/98

RWQCB Staff Name:

Title:

Date:

Chuck Headlee
Chuck Headlee

AEG

4/22/98

Leaking Underground Fuel Storage Tank Program

VII. ADDITIONAL COMMENTS, DATA, ETC.

Underground storage tank No. LF-02 was removed by the Port of Oakland from the enclosed outdoor electrical and mechanical equipment area adjacent to Lighting Vault Building L-916 on September 29, 1997. The address of this building is 8900 Air Cargo Road, located at the Metropolitan Oakland International Airport (MOIA), North Field. See Figure 1 for a site map.

Opposite sides of the site are marshy stormwater drainage channels, the most sensitive receptor to any release. These seasonally wet channels are populated with seasonal wildlife.

The underground tank was a spherical 2000 gallon fiberglass tank which contained diesel fuel used to supply the emergency generator located in building L-916. The tank removal was witnessed by Stephen Craford of OFD, Mr. Dale Klettke of the Port and Barney Chan of ACEH. The tank showed no signs of holes, cracks or leakage. The tank was eight feet in diameter corresponding to approximately 2000 gallon capacity. Approximately 40 cubic yards of spoils was generated. Two soil samples were collected from the soils excavated at 5.5' depth and two samples were collected from the soils excavated at 9.5' depth representing the stockpiled soils. Composites of the two samples were then analyzed for TPHg, TPHd and BTEX. Up to 450 ppm TPHd, 8 ppm TPHg and ND, 7.2, 19 and 68 ppb BTEX, respectively was exhibited in the spoils samples. One soil sample was taken from the soil beneath the bottom of the tank at a depth of 11' bgs. This sample, SP-1, exhibited 110 ppm TPHd, 1.1 ppm TPHg and ND, ND, ND and 17.1 ppb BTEX, respectively. See Table 1 for these analytical results.

A grab groundwater sample was then collected at a depth of approximately 12' bgs. This sample exhibited 280,000 ppb TPHd, 2,100 ppb TPHg and ND, 1.6, 2.4 and 20.1 ppb BTEX, respectively.

Unfortunately, the contractor backfilled the tank pit with clean fill along with the stockpiled soils without County approval.

Electrical conduit ran from Building L-916 northward toward the airport runway lights. The conduit passes over the stormwater drainage channel which feeds towards San Leandro Bay, an estuary of San Francisco Bay. The grab groundwater concentrations were, therefore, compared to the proposed saltwater Tier 1 standards by Diane Mims, formerly of the SFRWQCB. The TPHd concentration exceeded the conservative Tier 1 value of 100 ppb. Because of the perceived potential impact to the bay, further characterization was requested to determine the extent of the diesel fuel release.

The County accepted the Port's work plan to advance seven (7) temporary borings radially outward from the former underground tank. Soil and grab groundwater samples would be taken for chemical analysis.

Leaking Underground Fuel Storage Tank Program

On December 22, 1997 this work occurred. See Figure 2 for the locations of these borings. Two soil samples were taken from each boring, a shallow sample and a deeper sample, just above groundwater. The soil samples (B1 through B7) were analyzed for TPHg, TPHd and BTEX. All samples exhibited ND for TPHg and BTEX while the highest TPHd soil sample was 33 ppm. Most of the samples reporting TPHd stated that heavier hydrocarbons than the standard was detected. This indicates that the release is likely aged diesel. One grab groundwater sample was taken from each temporary boring. Groundwater sample SP1 was taken from boring B1 etc. Up to 260 ug/l (ppb) TPHd was reported in these samples, while BTEX was ND in all the samples. See Tables 2 and 3 for the results of this investigation.

Based on the results of this investigation, this site is recommended for closure as a "low risk" groundwater case since:

- * The source, the underground tank and associated piping has been removed.
- * The site has been adequately characterized from the advancement of additional subsurface borings and soil and groundwater sampling.
- * Based upon supplemental investigation, the hydrocarbon plume appears to be confined in extent.
- * No risk to human health or the environment is expected given the absence of BTEX and low concentrations of TPHd. Though grab groundwater samples exceed the Tier 1 proposed eco risk level for TPHd, the UST source is over 3500 feet from the nearest surface water body, the Airport Channel. Natural and physical attenuation and degradation would be expected to reduce contaminant concentrations further. The chemical analysis of the release indicates that it is old and degradation has already occurred. The proposed Tier 1 eco risk concentration for TPHd is currently being reviewed with a likelihood of increasing the value above that detected in these grab water samples.
- * Much of the airport is built upon imported fill and dredged material of uncertain origin. Other potential sources of TPH contamination exist and may account for the "heavier than standard" contamination detected in the chemical analysis.

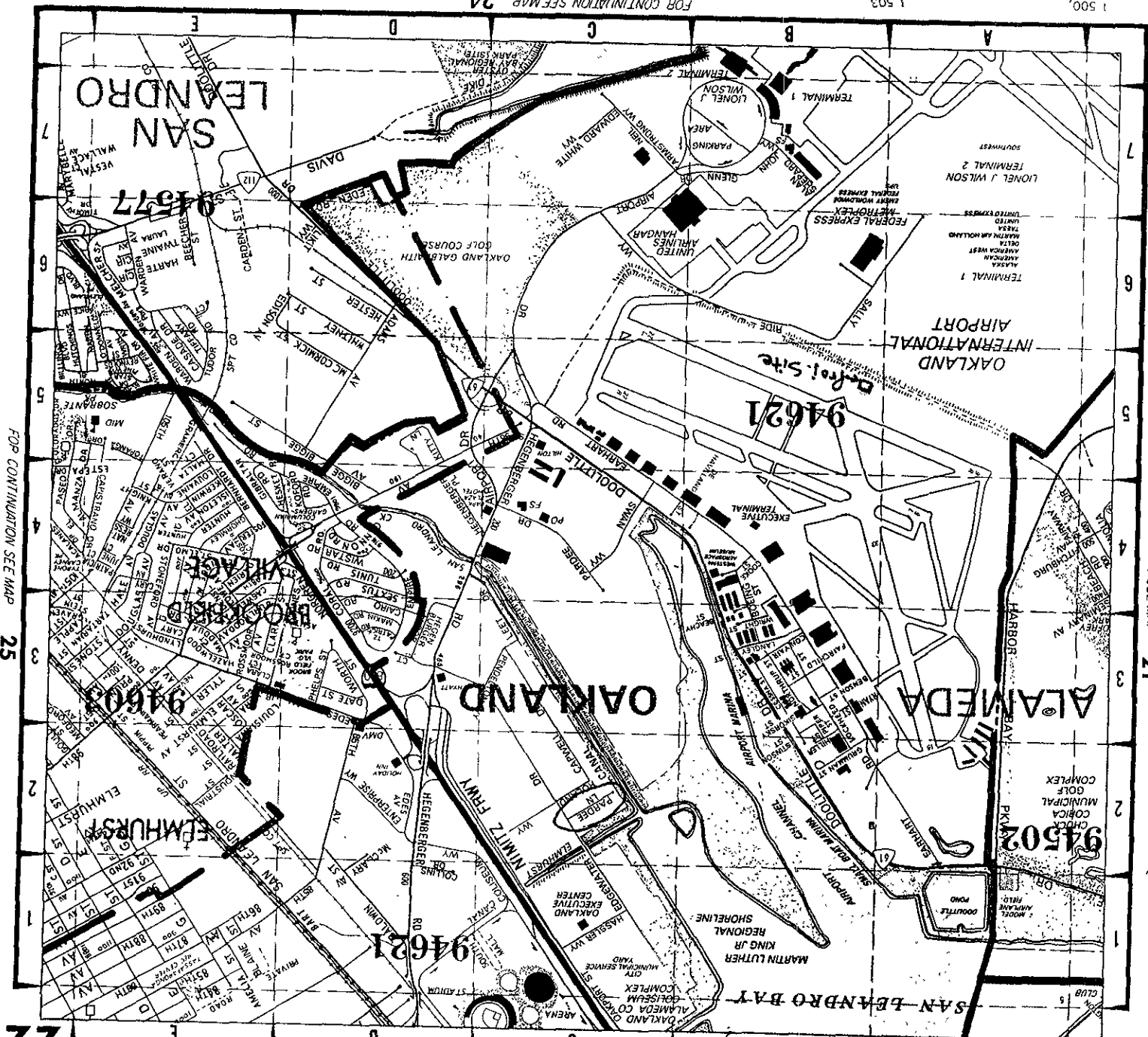


Figure 1.

FOR CONTINUATION SEE MAP 24 1,512, 1,503, 1,500.

446, 448, 449, 456, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500.

FOR CONTINUATION SEE MAP 21

ZIP ALAMEDA CO

FOR CONTINUATION SEE MAP 25

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FOR CONTINUATION SEE MAP 12

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PORT OF OAKLAND TANK NUMBER LF-02
 METROPOLITAN OAKLAND INTERNATIONAL AIRPORT (MOIA), NORTH FIELD
 8900 AIR CARGO ROAD
 OAKLAND, CALIFORNIA 94621

TABLE 1

LABORATORY RESULTS FOR UST EXCAVATION AND STOCKPILE SOIL SAMPLES

Sample ID	Sample Depth (ft)	Date	TPHg (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethylbenzene (µg/Kg)	Xylenes (µg/Kg)	TPHd (mg/Kg)
UST Stockpile Samples								
XP-(1,2)	5.5	9/29/97	8 ^{YH}	<5	7.2	19	68	450 ^H
XP-(3,4)	9.5	9/29/97	<1	<5	<5	<5	<5	280 ^H
UST Excavation Sample								
SP-1	11	9/29/97	1.1 ^{YH}	<5	<5	<5	17.1	110 ^H

^H Heavier hydrocarbons than indicated standard

^Y Sample exhibits fuel pattern which does not resemble standard

LABORATORY RESULTS FOR GROUNDWATER SAMPLE

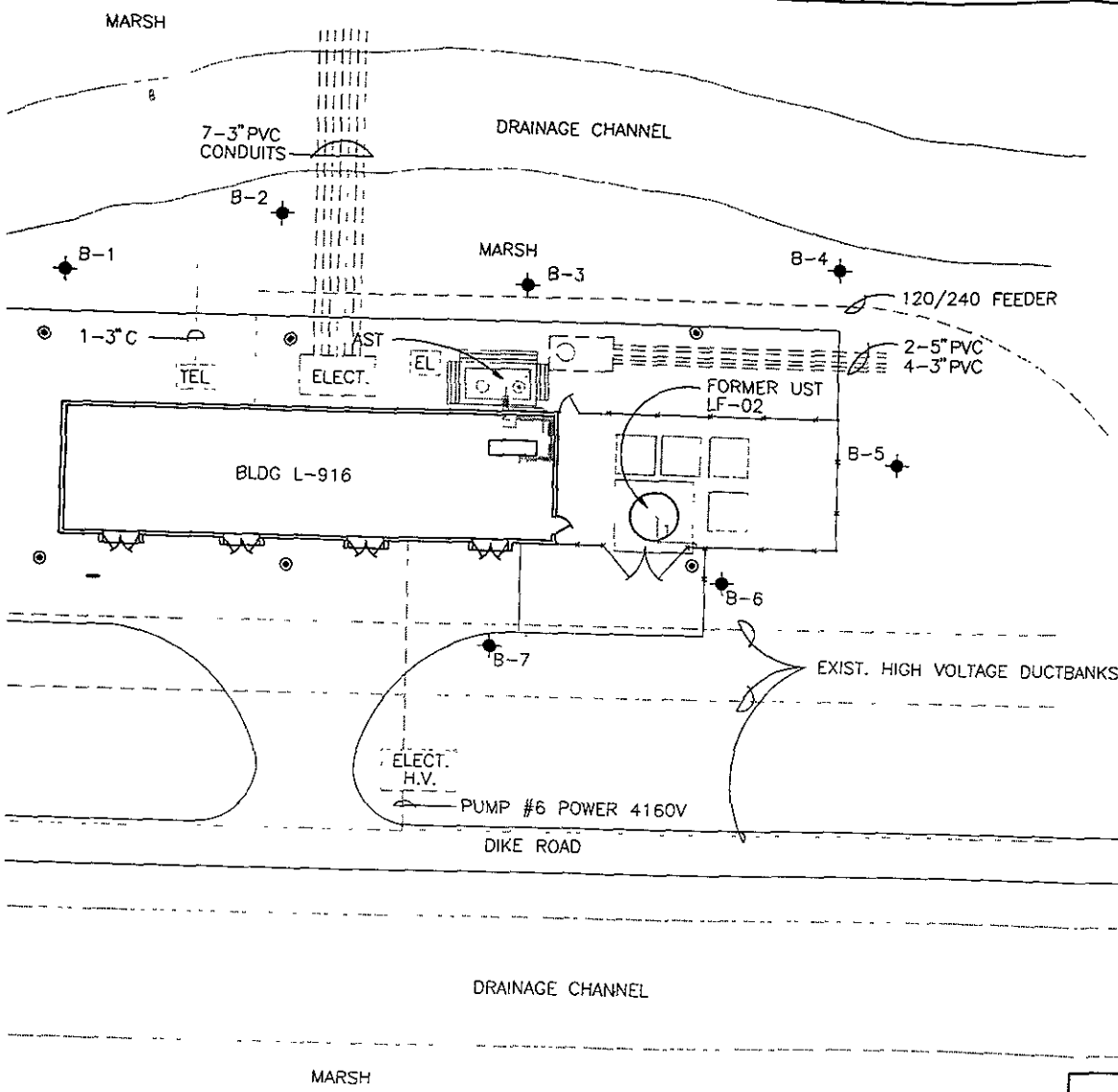
Saltwater level 1 eco standards (proposed.)
 TPH_{gf} 100 TPH_d 100 Pb 71 X 2200 Pb 5.6
 µg/l (ppb)

Sample ID	Sample Depth (ft)	Date	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPHd (µg/L)
UST Excavation Groundwater Sample								
SW-1	12	10/13/97	2,100 ^{YH}	<0.5	1.6	2.4	20.1	280,000

^H Heavier hydrocarbons than indicated standard

^Y Sample exhibits fuel pattern which does not resemble standard

Note: TVH as gasoline by EPA Modified 8015: Bromofluorobenzene was observed to be co-eluting with the heavier hydrocarbons present in sample SW-1.



SCALE: 1"=20'
 (ALL LOCATIONS ARE APPROXIMATE)

LEGEND

- B-7 ◆ SAMPLE LOCATION
- GROUND WELL

FIGURE 2
SAMPLING LOCATIONS 12/22/97
 FORMER UST LF-02
 METROPOLITAN OAKLAND INTERNATIONAL AIRPORT
 8900 AIR CARGO ROAD
 OAKLAND, CALIFORNIA

PORT OF OAKLAND BLDG L-916 SITE INVESTIGATION 12/22/97.
 METROPOLITAN OAKLAND INTERNATIONAL AIRPORT (MOIA), NORTH FIELD
 8900 AIR CARGO ROAD
 OAKLAND, CALIFORNIA 94621

TABLE 2

LABORATORY RESULTS FOR SOIL SAMPLES

Sample ID	Sample Depth (ft)	Date	TPHg (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethylbenzene (µg/Kg)	Xylenes (µg/Kg)	TPHd (mg/Kg)
B1-8.0	8.0	12/22/97	<1	<5	<5	<5	<5	4.2 ^{YH}
B1-12.0	12.0	12/22/97	<1	<5	<5	<5	<5	<1
B2-5.0	5.0	12/22/97	<1	<5	<5	<5	<5	4.6 ^{YH}
B2-8.0	8.0	12/22/97	<1	<5	<5	<5	<5	3.6 ^{YH}
B3-5.0	5.0	12/22/97	<1	<5	<5	<5	<5	<1
B3-9.0	9.0	12/22/97	<1	<5	<5	<5	<5	23 ^{YH}
B4-5.0	5.0	12/22/97	<1	<5	<5	<5	<5	1.5 ^Y
B4-9.0	9.0	12/22/97	<1	<5	<5	<5	<5	33 ^{YH}
B5-5.0	5.0	12/22/97	<1	<5	<5	<5	<5	1.1 ^{YH}
B5-10.0	10.0	12/22/97	<1	<5	<5	<5	<5	5.9 ^{YH}
B6-5.0	5.0	12/22/97	<1	<5	<5	<5	<5	3.1 ^Y
B6-10.0	10.0	12/22/97	<1	<5	<5	<5	<5	16 ^{YH}
B7-5.0	5.0	12/22/97	<1	<5	<5	<5	<5	3.2 ^Y
B7-10.0	10.0	12/22/97	<1	<5	<5	<5	<5	3.2 ^{YH}

^H Heavier hydrocarbons than indicated standard

^Y Sample exhibits fuel pattern which does not resemble standard

Note: **TEH-Diesel by EPA 8015 Modified:** All samples were treated with silica gel prior to analysis. All water samples in this data set (batch 38351) had low surrogate recoveries. The samples were re-extracted and re-analyzed with identical results, confirming matrix interference. All QC samples had passing surrogates.

TVH-Gasoline by EPA 8015: The surrogate bromofluorobenzene was observed to be above QC limits for the laboratory control spike of batch 38366. This surrogate was within QC limits for all samples in this batch.

No analytical problems were encountered.

PORT OF OAKLAND BLDG L-916 SITE INVESTIGATION 12/22/97
 METROPOLITAN OAKLAND INTERNATIONAL AIRPORT (MOIA), NORTH FIELD
 8900 AIR CARGO ROAD
 OAKLAND, CALIFORNIA 94621

TABLE 3

LABORATORY RESULTS FOR GROUNDWATER SAMPLES

Sample ID	Groundwater Depth (ft)	Date	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPHd (µg/L)
SP1	8	12/22/97	<50	<0.5	<0.5	<0.5	<0.5	240 ^{YH}
SP2	7	12/22/97	<50	<0.5	<0.5	<0.5	<0.5	110 ^{YH}
SP3	7	12/22/97	<50	<0.5	<0.5	<0.5	<0.5	260 ^{YH}
SP4	6.5	12/22/97	<50	<0.5	<0.5	<0.5	<0.5	190 ^{YH}
SP5	8	12/22/97	<50	<0.5	<0.5	<0.5	<0.5	150 ^{YH}
SP6	6	12/22/97	<50	<0.5	<0.5	<0.5	<0.5	99 ^{YH}
SP7	6	12/22/97	<50	<0.5	<0.5	<0.5	<0.5	88 ^{YH}

^H Heavier hydrocarbons than indicated standard
^Y Sample exhibits fuel pattern which does not resemble standard

Note: TEH-Diesel by EPA 8015 Modified: All samples were treated with silica gel prior to analysis. All water samples in this data set (batch 38351) had low surrogate recoveries. The samples were re-extracted and re-analyzed with identical results, confirming matrix interference. All QC samples had passing surrogates.
 TVH-Gasoline by EPA 8015: The surrogate bromofluorobenzene was observed to be above QC limits for the laboratory control spike of batch 38366. This surrogate was within QC limits for all samples in this batch.

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