

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510)567-6700 FAX (510)337-9335 cc:458

REMEDIAL ACTION COMPLETION CERTIFICATION

StID 882 - 1083 98th Ave, Oakland, CA

July 3, 1996

Mr. Walter Peterson
22590 SW 93rd Terrace
Tualatin, OR 97062

Dear Mr. Peterson:

This letter confirms the completion of site investigation and remedial action for the former underground storage tank (1-550 gallon gasoline tank) removed from the above site on August 21, 1991. Enclosed is the Case Closure Summary for the referenced site for your records.

Based upon the available information, including the current land use, and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank release 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. If changes in land use, structural configuration, or site activities are proposed such that more conservative exposure scenarios should be evaluated, the owner must promptly notify this agency.

Please contact Ms. Eva Chu at (510) 567-6700 if you have any questions regarding this matter.

Very truly yours,

Mee Ling Tung, Director

cc: Chief, Division of Environmental Protection
Kevin Graves, RWQCB
Lori Casias, SWRCB (with attachment)
files (ptrson11)

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: May 3, 1996

Agency name: Alameda County-HazMat Address: 1131 Harbor Bay Pkwy
City/State/Zip: Alameda, CA 94502 Phone: (510) 567-6700
Responsible staff person: Eva Chu Title: Hazardous Materials Spec.

II. CASE INFORMATION

Site facility name: Walter Peterson
Site facility address: 1083 98th Ave, Oakland, CA 94603
RB LUSTIS Case No: N/A Local Case No./LOP Case No.: 882
URF filing date: 3/9/92 SWEEPS No: N/A

<u>Responsible Parties:</u>	<u>Addresses:</u>	<u>Phone Numbers:</u>
Walter Peterson	2617 Buena Vista, Alameda, CA	510/769-9085

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	550	Gasoline/Fuel Oil	Removed	8/21/91

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: Leaking UST
Site characterization complete? YES
Date approved by oversight agency: 2/21/96
Monitoring Wells installed? Yes Number: 1
Proper screened interval? Yes, 8 to 18.5' bgs
Highest GW depth below ground surface: 9.90 Lowest depth: 12.05'
Flow direction: Southwest, as measured from 1031 98th Ave, which is 200' southwest of site.
Most sensitive current use: Residential
Are drinking water wells affected? No Aquifer name: Unknown
Is surface water affected? No Nearest affected SW name: NA
Off-site beneficial use impacts (addresses/locations): None

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

ENVIRONMENTAL PROTECTION
AGENCY
MAY 28 1996 3:03 PM

Treatment and Disposal of Affected Material:

<u>Material</u>	<u>Amount (include units)</u>	<u>Action (Treatment or Disposal w/destination)</u>	<u>Date</u>
Tank	1 UST	Disposed by Erickson, in Richmond	8/21/91
Soil	7 cy	Unknown	1991

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After ¹	Before	After
TPH (Gas)	1,760	1,100	<300,000 ⁴	14,400
TPH (Diesel)	290	560	150	1,400
Benzene	<1.5	1.2	19	ND
Toluene	34	2.3	ND	1
Ethylbenzene	40	18	ND	3
Xylenes	220	75	ND	7
Oil & Grease	1,335 ⁶	1,335 ⁶	60,000	NA
Heavy metals	Total Pb	160 ²	ND ³	
Other	SVOCs	see NOTE 5	see NOTE 5	

- NOTE:**
- 1 from soil boring SB-2 at 11.5' bgs
 - 2 from boring B-4 at 1.5' beneath fuel pump area
 - 3 from boring SB-3 at 1.5' bgs with CA Modified WET method
 - 4 elevated reporting limit due to hydrocarbon interference in the diesel/kerosene range
 - 5 0.04 ppm naphthalene and 0.01 ppm phenanthrene in soil; 11 ppb bis(2-ethylhexyl)phthalate in groundwater
 - 6 from tank pit after overexcavation to 12.5' bgs

Comments (Depth of Remediation, etc.):

See Section VII, Additional Comments, etc...

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? **Undetermined**
 Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? **Undetermined**
 Does corrective action protect public health for current land use? **YES**
 Site management requirements: **None**

Should corrective action be reviewed if land use changes? **YES**
 Monitoring wells Decommissioned: **None, pending site closure**
 Number Decommissioned: **0** Number Retained: **1**
 List enforcement actions taken: **Nov 19, 1993 pre-enforcement review panel**
 List enforcement actions rescinded: **Above, in compliance**

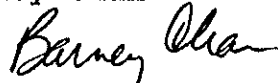
V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Eva Chu** Title: **Haz Mat Specialist**

Signature:  Date: **5/6/96**

Reviewed by

Name: **Barney Chan** Title: **Haz Mat Specialist**

Signature:  Date: **5/6/96**

Name: **Madhulla Logan** Title: **Haz Mat Specialist**

Signature:  Date: **5/6/96**

VI. RWQCB NOTIFICATION

Date Submitted to RB: **5/7/96** RB Response: 

RWQCB Staff Name: **Kevin Graves** Title: **AWRCE**

Signature:  Date: **5/23/96**

VII. ADDITIONAL COMMENTS, DATA, ETC.

When a 550 gallon UST, which had stored gasoline and fuel oil, was removed in August 21, 1991 holes were observed in the underside of the tank. A soil sample collected from the pit bottom exhibited up to 1,760 ppm TPH-G, 290 ppm TPH-D, 510 ppm TOG, and ND, 34, 40, and 220 ppm BTEX, respectively. The pit bottom was excavated vertically to 12' bgs, where a soil sample collected exhibited 490 ppm TPH-G, 32 ppm TPH-D, and 1,335 ppm TOG. Analysis for BTEX was not requested this time. (See Table 1.)

In January 1994 four soil samples (B-1 through B-4) were collected beneath the remaining piping (which was capped and closed in-place) and pump facility associated with the former UST. Only sample B-4, from the vicinity of the pump apparatus, exhibited elevated levels of petroleum hydrocarbons (520 ppm TOG) and total lead at 160 ppm. (See Fig 2, Table 1.)

A shallow groundwater monitoring well was installed approximately 10' west of the former tank pit (in the assumed downgradient direction). Groundwater was first encountered at 12.5' bgs. Soil from 14' bgs contained 380 ppm TPH-D, 340 ppm TOG, and ND for TPH-G and BTEX. Initial groundwater exhibited up to 150,000 ppb TPH-D, 60 ppm TOG, and 19 ppb benzene.

To further delineate the lateral extent of soil and groundwater contamination, four borings (HP-2 through HP-5) were advanced approximately

60' downgradient of the former tank pit, and one boring HP-1 advanced within 5' and upgradient of the former tank pit to collect "grab" groundwater samples. None of the "grab" groundwater samples contained TPH-G, BTEX, or PNAs. TPH-D concentrations ranged from ND to 200 ppb. It appears groundwater contamination is limited to within 60' downgradient of the former UST location. (See Fig 3, Table 2.)

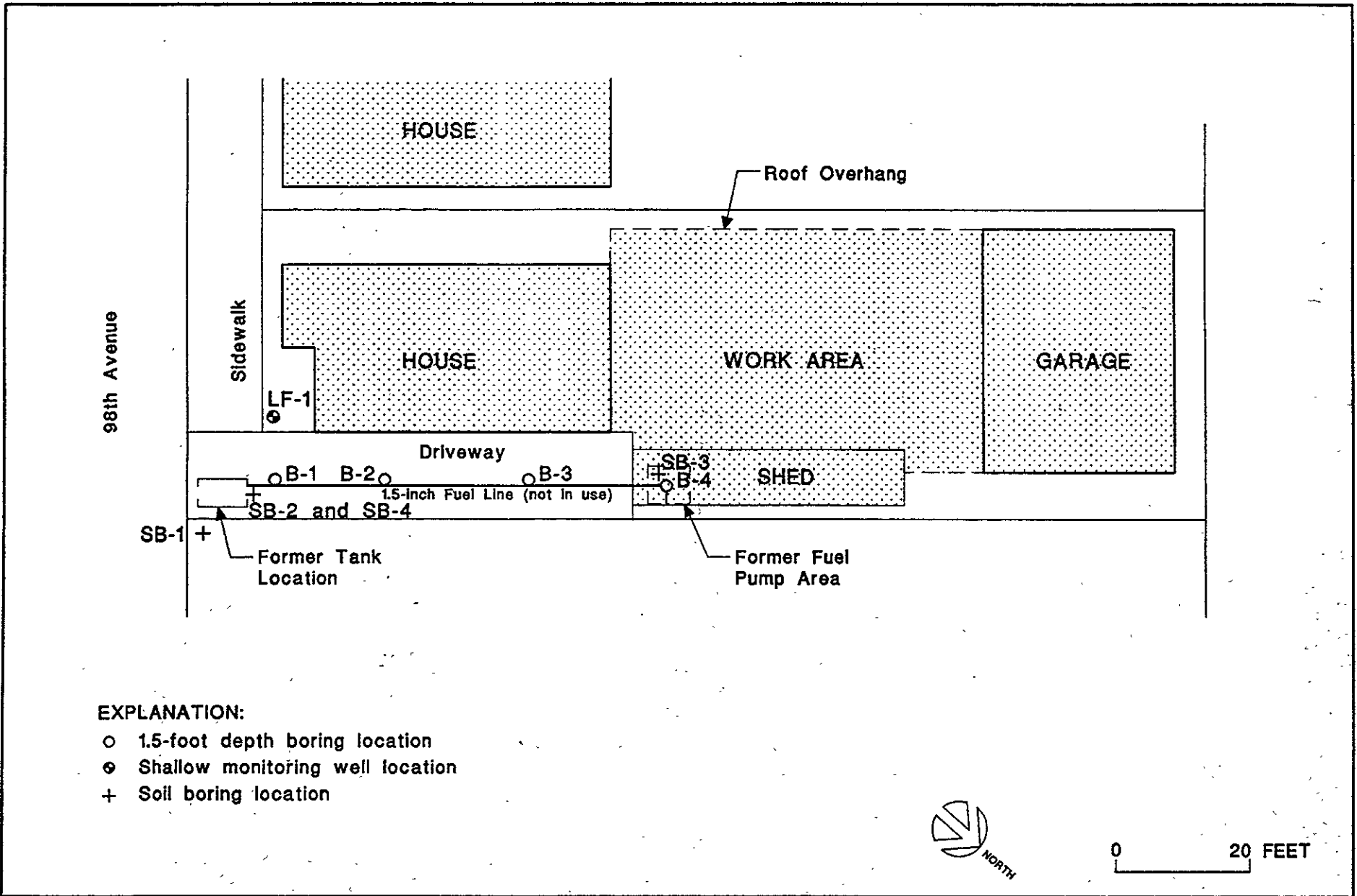
Two soil borings (SB-1 and SB-2) were also advanced within 5' of the south and north ends of the former tank pit, and one boring (SB-3) adjacent to the former fuel pump area. The CA modified WET method for lead was used on a soil sample collected from 1.5' bgs near the former pump area. Lead was not detected. Boring SB-2 (north of the former tank pit) at 11.5' bgs revealed up to 550 ppm TOG, 560 ppm TPH-D, 1,100 ppm TPH-G, and 1.2, 2.3, 18, and 75 ppm BTEX, respectively, and 0.04 ppm naphthalene and 0.01 ppm phenanthrene. (See Fig 2, Table 1.)

Additional investigations were conducted to assess the potential for further petroleum hydrocarbon migration and groundwater degradation at the site. A soil sample SB-4 was collected within 0.5' of the previous boring SB-2 where relatively high concentrations of petroleum hydrocarbons were detected. The soil sample from 11.5' bgs was analyzed for extractable petroleum hydrocarbons using the CA Modified Waste Extraction Test (WET) procedure. Results of the WET analysis indicated extractable diesel was not detected above the detection limit of 0.2 ppm. Therefore, residual petroleum hydrocarbons remaining in soil is not expected to further impact groundwater quality at the site.

A hydraulic (slug) test was also conducted to assess the potential for further petroleum hydrocarbon migration at the site. The estimated hydraulic conductivity (K) of the shallow groundwater zone at well LF-1 is approximately 1.2×10^{-3} cm/s (3.3 ft/day), which is typical of silty sand or clay sediments. The calculated groundwater flow velocity is 0.026 ft/day. These results indicate the relatively low permeability of the shallow zone sediments at the site.

Groundwater has been sampled for five non-consecutive quarters. TPH-D levels have decreased from 150,000 to 14,000 ppb between February 1994 and November 1995. Analysis for PNAs in November 1995 detected only 11 ppb Bis(2-ethylhexyl)Phthalate. Up to 1,400 ppb TPH-G, and non-detectable to trace levels of BTEX have been detected. It appears biodegradation and/or other attenuation processes (eg. sorption) are actively reducing petroleum hydrocarbon concentrations in groundwater. (See Table 2.)

Shallow groundwater at the site is not a potential source for drinking water. Residual levels of the chemicals of concern (namely BTEX and PNAs) in groundwater are extremely low. Residual soil contamination is also limited to depths below the groundwater surface (at approximately 11 to 14' bgs). Therefore, potential exposure to human health appears to be minimal. Continued monitoring at this site is not warranted.



EXPLANATION:

- 1.5-foot depth boring location
- Shallow monitoring well location
- + Soil boring location

Figure 2: Site Map Showing Sampling Locations

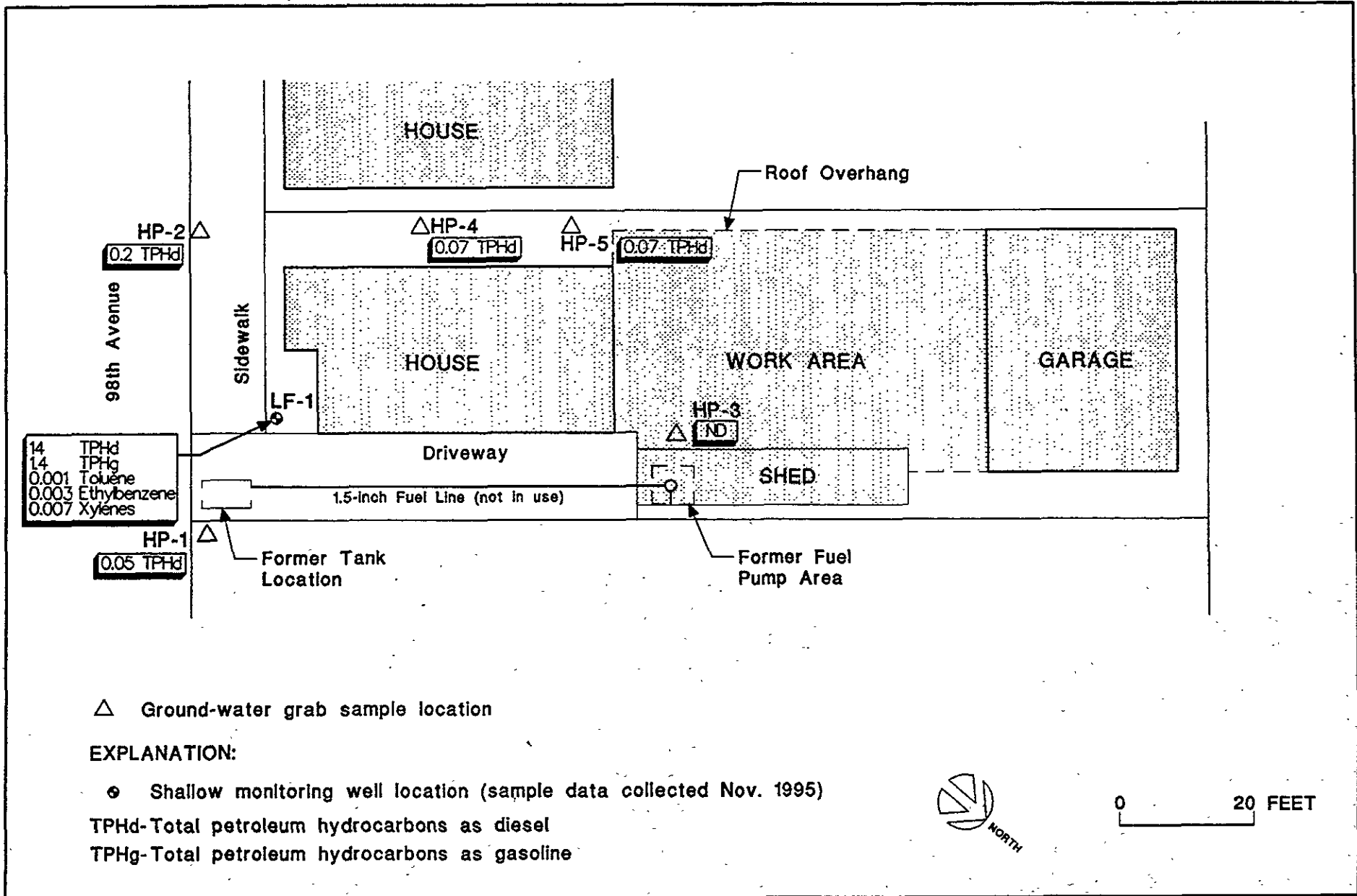


Figure 3: Site Map Showing Ground-Water Sampling Results (ppm)

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYSIS RESULTS (ppm)
 1083 98th Avenue, Oakland, CA

Sampling Location	Depth (ft.)	Date Sampled	Chemical Concentrations Detected (ppm)									
			TOG	TPHg	TPHd	TPHd WET	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total Lead	PNAs
Tank excavation floor	8	8/27/91	510	1,760	290	NA	<1.5	34	40	220	NA	NA
	12	10/17/91	1,335	490	34	NA	NA	NA	NA	NA	NA	NA
LEVINE-FRICKE												
B-1	1.5	1/21/94	10	<0.2	<1	NA	<0.005	<0.005	<0.005	<0.005	10	NA
B-2	1.5	1/21/94	<10	<0.2	<1	NA	<0.005	<0.005	<0.005	<0.005	9	NA
B-3	1.5	1/21/94	<10	<0.2	<1	NA	<0.005	<0.005	<0.005	<0.005	8	NA
B-4	1.5	1/21/94	190	<0.2	520	NA	<0.005	<0.005	<0.005	<0.005	160	NA
LF-1-14	14	1/21/94	340	<50	380	NA	<0.1	<0.1	<0.1	<0.1	10	NA
AZURE ENVIRONMENTAL												
SB-1	5	4/3/95	<10	<0.2	<1	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.2
	11.5	4/3/95	<10	<0.2	<1	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.2
SB-2	5	4/3/95	<10	<0.2	<1	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.2
	11.5	4/3/95	550	1,100	560	NA	1.2	2.3	18	75	NA	*
SB-3	1.5	4/3/95	0.42	<0.2	0.08	NA	<0.005	<0.005	<0.005	<0.005	<0.1#	NA
	5	4/3/95	<10	<0.2	<1	NA	<0.005	<0.005	<0.005	<0.005	NA	NA
	11.5	4/3/95	<10	<0.2	<1	NA	<0.005	<0.005	<0.005	<0.005	NA	NA
SB-4	11.5	11/20/95	20	<0.2	16	<0.2^	<0.005	<0.005	<0.005	<0.005	NA	NA

NOTES:

- TOG - Total Petroleum Hydrocarbons as Oil and Grease
- TPHg - Total Petroleum Hydrocarbons as Gas
- TPHd - Total Petroleum Hydrocarbons as Diesel
- PNAs - Polynuclear Aromatics (EPA Method 8270)
- ND - Not Detected
- NA - Not Analyzed
- * - 0.04 ppm Naphthalene and 0.01 ppm Phenanthrene detected
- # - extractable lead analysis using a deionized water Waste Extraction Test (WET) method
- ^ - extractable diesel analysis using a citric and sulfuric acid WET method (EPA Method 1312)

TABLE 2
SUMMARY OF GROUND-WATER SAMPLE ANALYSIS RESULTS (ppm)
 1083 98th Avenue, Oakland, CA

Well Number	Date Sampled	Chemical Concentrations Detected (ppm)							
		TOG	TPHg	TPHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	PNAs
LF-1	2/2/94	60	<300	150	0.019	<0.01	<0.0005	<0.002	NA
LF-1-dup	2/2/94	40	<200	140	0.019	<0.01	<0.0005	<0.002	NA
LF-1	6/29/94	NA	<90	74	<0.003	<0.003	<0.040	<0.050	NA
LF-101	6/29/94	NA	<200	160	<0.003	<0.040	<0.090	<0.200	NA
LF-1	5/10/95	NA	1.3	29	<0.0005	<0.0005	<0.0005	0.003	NA
LF-1	8/29/95	NA	14	7.3	<0.01	<0.01	<0.01	<0.04	NA
LF-1	11/20/95	NA	1.4	14	<0.0005	0.001	0.003	0.007	*
Blanks									
LF-1-FB	2/2/94	NA	<0.05	NA	<0.0005	<0.0005	<0.0005	<0.002	NA
LF-1-FB	6/29/94	NA	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.002	NA
Trip Blank	1/31/94	NA	<0.05	NA	<0.0005	<0.0005	<0.0005	<0.002	NA
Grab Samples									
HP-1	4/3/95	<0.5	<0.05	0.05	<0.0005	<0.0005	<0.0005	<0.002	<0.01
HP-2	4/3/95	<0.5	<0.05	0.2	<0.0005	<0.0005	<0.0005	<0.002	<0.01
HP-3	4/3/95	<0.5	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.002	<0.01
HP-4	4/3/95	<0.5	<0.05	0.07	<0.0005	<0.0005	<0.0005	<0.002	<0.01
HP-5	4/3/95	<0.5	<0.05	0.07	<0.0005	<0.0005	<0.0005	<0.002	<0.01

NOTES:

- TOG - Total Petroleum Hydrocarbons as Oil and Grease
- TPHg - Total Petroleum Hydrocarbons as Gas
- TPHd - Total Petroleum Hydrocarbons as Diesel
- PNAs - Polynuclear Aromatics (EPA Method 8270)
- NA - Not Analyzed
- * - 0.011 ppm Bis(2-ethylhexyl) Phthalate detected.