

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

December 3, 1997  
StID # 4440

REMEDIAL ACTION COMPLETION CERTIFICATION

Mr. Roy Hatton  
22985 Valley View Dr.  
Hayward, CA 94541

Mr. John Bacon Sr.  
P.O. Box 184  
So. San Francisco, CA 94080

**RE: 752 High St., Oakland CA 94621**

Dear Mssrs. Hatton and Bacon:

This letter confirms the completion of site investigation and remedial action for the three 3,000 gallon stoddard, one 2,500 gallon waste stoddard sludge and 550 gallon waste oil underground tanks 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  
Kevin Graves, RWQCB  
Mr. Dave Deaner, SWRCB Cleanup Fund  
Mr. Leroy Griffin, City of Oakland OES, 505 14th St., Suite  
702, Oakland CA 94612

RACC752

ALAMEDA COUNTY  
HEALTH CARE SERVICES



AGENCY  
DAVID J. KEARS, Agency Director

December 5, 1997  
StID# 4440

Mr. Roy Hatton  
22985 Valley View Dr.  
Hayward CA 94541

ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION (LOP)  
1131 Harbor Bay Parkway, Suite 250

Mr. John Bacon Sr.  
Alameda, CA 94502-6577  
P.O. Box 184  
So. San Francisco, 94080  
(510) 567-8700  
FAX (510) 337-9335

**RE: Fuel Leak Site Case Closure- 752 High St., Oakland CA 94621**

Dear Mssrs. Hatton and Bacon:

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:

\* 837 parts per million (ppm) Total Petroleum Hydrocarbons as gasoline (TPHg) and 0.10, 1.6, 6.0, 34 ppm BTEX, respectively remain in the soil at the site.

\* 690 parts per billion (ppb) TPHg, 470 ppb TPH as stoddard solvent, 1400 ppb TPH as diesel and 0.65, 1.7, 2.5, 8.3 ppb BTEX, respectively remain in the groundwater beneath 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)

trlt752

**CASE CLOSURE SUMMARY**  
**Leaking Underground Fuel Storage Tank Program**

**I. AGENCY INFORMATION**

**Date:** October 21, 1997

**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:** Roy Hatton Project

**Site facility address:** 752 High St., Oakland CA 94621

**RB LUSTIS Case No:** N/A **Local Case No./LOP Case No.:** 4440

**ULR filing date:** 3/8/89 **SWEEPS No:** N/A

<u>Responsible Parties:</u>	<u>Addresses:</u>	<u>Phone Numbers:</u>
1. Roy Hatton	22985 Valley View Dr. Hayward CA 94541	(510) 537-5840
2. John Bacon Sr.	P.O. Box 184 So. San Francisco, 94080	

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	3,000	stoddard solvent	Removed	4/4/89
2	3,000	" "	"	"
3	3,000	" "	"	"
4	2,500	stoddard sludge	"	"
5	550	waste oil ?	"	"

**III RELEASE AND SITE CHARACTERIZATION INFORMATION**

**Cause and type of release:** likely from holes in bottom of solvent USTs

**Site characterization complete?** Yes

**Date approved by oversight agency:**

**Monitoring Wells installed?** Yes **Number:** 1, MW14  
installed by Exxon on adjacent downgradient property

APPROVED  
07 NOV 19 09:13 PM U:34

**Leaking Underground Fuel Storage Program**

Proper screened interval? uncertain, well construction of MW14 unknown, however, MW9 also located at 720 High St. is screened from 7-33' bgs

Highest GW depth: 7.18'                      Lowest depth: 10.23'

Flow direction: w-sw based upon gradient at 720 High St.

Most sensitive current use: commercial/industrial

Are drinking water wells affected? No              Aquifer name: NA

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

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

Report(s) on file? **Yes** Where is report(s)? Alameda County  
 1131 Harbor Bay Parkway,  
 Room 250, Alameda CA 94502-6577

**Treatment and Disposal of Affected Material:**

<u>Material</u>	<u>Amount (include units)</u>	<u>Action (Treatment of Disposal w/destination)</u>	<u>Date</u>
Tanks & Piping	3-3,000 gallon	Disposed by H&H, San Francisco	4/6/89
	1-2500 gallon	unknown disposition	
	1-550 gallon	" "	
Soil	approx 400cy	aerated, treated and reused onsite	8/90
Groundwater	3500 gallon	Disposed, H&H Ship Service	2/22/89
	1500 gallon	" " " "	7/12/90

**Maximum Documented Contaminant Concentrations - - Before and After Cleanup**

<u>Contaminant</u>	<u>Soil (ppm)</u>		<u>Water (ppb)</u>	
	<u>1 Before</u>	<u>After 2</u>	<u>3 Before</u>	<u>After 4</u>
TPH gasoline		837		690
TPH stoddard			2,500,000	470
TPH diesel	13,000	ND	88,000	1400
Benzene	ND	0.10		0.65
Toluene	ND	1.6		1.7
Ethylbenzene	ND	6.0		2.5
Xylenes	ND	34		8.3
Oil and Grease			10,000	
Metals: Pb, As, Cd, Cr & Zn			1800,ND,19,ND,2100	
HVOCs	ND		1,2-DCA 4.5	ND-VOCs
PCBs			ND	

**Leaking Underground Fuel Storage Tank Program**

Comments (Depth of Remediation, etc.):

- 1 pit & sidewall samples (4/89)
- 2 from boring 8-18-MW14, 18' sample from MW14 on Exxon site
- 3 pit water samples (4/89)
- 4 3/19/97 monitoring event for MW14

**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: Health and Safety Plan required to protect workers performing subsurface excavation. Caution should be taken not to create any vertical or horizontal conduits for groundwater or vapor migration.

Should corrective action be reviewed if land use changes? Yes

Monitoring wells Decommissioned: NA

Number Decommissioned: 0

Number Retained: 0

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: 10/21/97

Reviewed by

Name: Tom Peacock

Title: Manager

Signature: *Tom Peacock*

Date: 10-28-97

Name: ~~Susan Hugo~~ Pamela J. Evans

Title: <sup>Senior</sup> Hazardous Materials Specialist

Signature: *Pamela J Evans*

Date: 10/17/97

**Leaking Underground Fuel Storage Tank Program**

**VI. RWQCB NOTIFICATION**

Date Submitted to RB:  RB Response: *Approved*

RWQCB Staff Name: K. Graves Title: AWRCE Date: *11/9/97*

**VII. ADDITIONAL COMMENTS, DATA, ETC.**

see site summary

Site summary for 752 High St., Oakland CA 94601  
StID # 4440, Hatton Property

This site was formerly a laundry and dry cleaning facility. Based upon chemical analysis of underground tanks removed from this site, stoddard solvent was used for dry cleaning, not chlorinated solvent. Three 3000 gallon conical underground tanks were situated side by side, vertically, along the current border of 752 High St. and the former Exxon station at 720 High St.. Next to the group of three tanks to the east was smaller wooden underground tank (approx. 2500 gallon) reported to contain the sludge from the dry cleaning process. Another 550 gallon concrete tank, believed to contain waste oil, was located next to the wooden tank. The exact number of USTs is unclear because the underground tank closure report doesn't contain any disposal records for the wooden or concrete tanks, just receipts for the three steel tanks. Also, it is unclear whether 2TP referenced in the removal report represents the former wooden UST pit or the former 550 gallon concrete tank pit plus the wooden UST pit. It's likely that 2TP represents the pit for both former tanks.

South of the tanks, but still on the property, there were locations of visual surface oil contamination associated with the operation of Ed's Auto Parts who operated this portion of the property through a lease with the owner.

**January 17, 1989-** Thirteen borings ranging from 1-5' depth were advanced in the area of the observed oil contamination. Oil and Grease up to 15,000 ppm were detected in these samples. Only one sample, EB2-2, which detected 510 ppm Oil and Grease, was tested for the additional analytes, TPHd, BTEX and HVOCS all of which were ND. Total lead was detected at 370 ppm in sample EB3-3. The May 15, 1990 Earth Metrics report recommended the scraping and removal of the limited area where total lead was detected at 370 ppm. Unfortunately, there is no information confirming that this was done nor any confirmatory sampling. However, confirmatory samples of the biologically treated stockpiled soils were analyzed for TOG and TPHd, indicating that the oil and grease areas may have been excavated.

**April 4, 1989-** The three underground stoddard solvent tanks were removed. It is assumed that the other two tanks were also removed at the same time. The stoddard tank pit was referred to as Tank X3 and the other tank pit containing the wooden and concrete tanks was referred to as Tank X4. Ten pit and sidewall soil samples were taken from the excavations. Up to 13,000 ppm TPHd was detected in these samples. The TPH detected in these samples was characterized as either diesel or stoddard solvent. Selective samples were also tested for Tetrachloroethylene and

Site summary 752 High St.  
StID # 4440  
Page 2.

BTEX. None of these analytes were detected. Groundwater encountered in the pits during the removal was also tested. TPHstoddard up to 2,500 ppm and TPHd up to 88 ppm was detected in the water samples.

Due to the uncertainty of the location of samples and the apparent need to overexcavate, additional sampling occurred in August of 1990 after overexcavation. The contractor, J. Quarle', stated that the solvent tank pit was overexcavated to a depth of 20'.

**August 1990-** Because of the lack of confidence in the initial tank removal results, additional sampling of the tank pits and sampling of the stockpiled soils was done. Six sidewall samples were taken from the solvent pit and four from the smaller pit. All samples were taken at a depth of 8', just above static groundwater level. These samples were analyzed for TPH high boilers. This would adequately detect TPHd, however, would not detect the lighter fraction of stoddard solvent, (C7-C12). Although the sidewalls samples indicated little lateral contamination, soil contamination at the bottom of the pit may still remain. However, since the pit was excavated to approximately 20' bgs, a large part of contamination was removed.

The stockpile soil was also sampled. Thirty-two discrete samples from a depth of 4' from the approximate 400 cy of spoils was sampled and analyzed for TPH high boilers. Up to 410 ppm TPH high boilers was detected. A plan to bioremediate these soils was approved by our office. The stockpiled soils were spread on visqueen and leveled to a depth of one foot. An irrigation system was installed to maintain moisture content. Nutrients were added along with a bacteria culture. Oil and grease and TPHd was sampled in the spoils. TPHd was detected up to 2.3 ppm and oil and grease up to 410 ppm. The February 6, 1991 Earth Metrics report left out some information (total volume of spoils and the analysis for TPHstoddard), however, it concludes that two of the three stockpiles could be reused to backfill the tank pits while the third should be disposed at an acceptable landfill based upon the detection of lead.

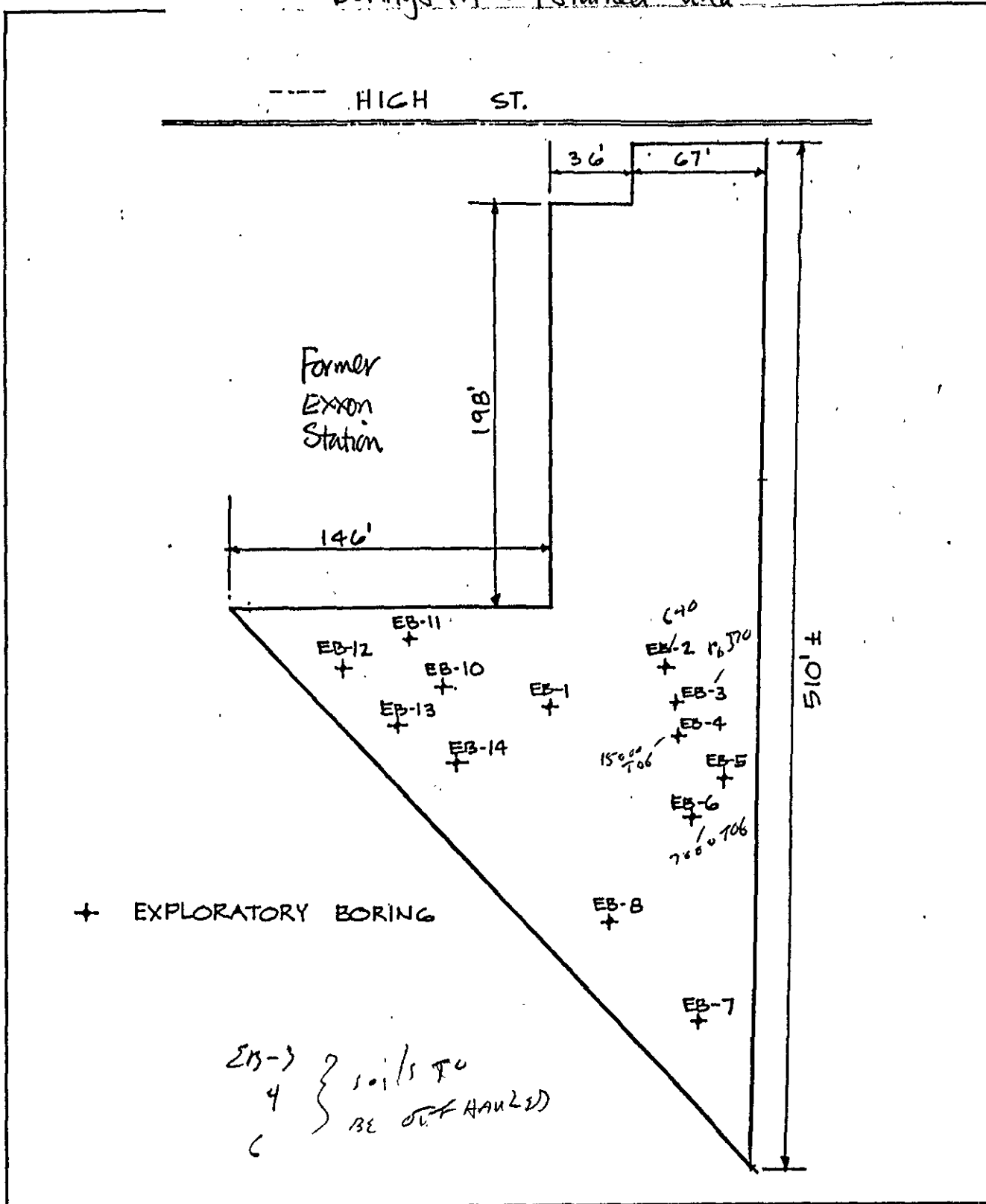
**April 15, 1991-** correspondence from Earth Metrics and Ms. Cynthia Chapman of ACEH notified her that all stockpiled soils would be reused since the soil in question with 270 ppm lead did not require disposal since it did not exhibit hazardous levels of total lead. Backfilling of this soil into the tank pits apparently occurred later that month.




Although there appears to have been both surface and underground tank releases at this site, significant groundwater monitoring downgradient of this site on the former Exxon property has been performed which would detect any release from the solvent USTs. Grab groundwater samples from the tank pits detected only TPHstoddard, TPHd and 4.5 ppb 1,2-DCA. No BTEX or PCBs were detected in the grab groundwater samples. Although additional subsurface investigation could be performed to complete our knowledge of the site, it appears that this site should be considered a low risk groundwater case and recommended for site closure based upon the following:

1. The leak has been stopped. The underground storage tanks were removed and a considerable amount of contaminated soil was excavated. The contaminated soil was spread, aerated, biologically and chemically treated and reused onsite. The failure to document the excavation of oil and grease contamination and to analyze the soil samples for TPHstoddard solvent is unfortunate but not critical. Oil and grease in the spoils was remediated during the bioremediation process. Stoddard solvent is volatile, therefore, both volatilization and bioremediation likely occurred on the stockpiled soils. Any residual contamination from the stoddard solvent tanks is a groundwater issue.
2. The site has been adequately characterized. Groundwater impact has been monitored over a lengthy period of time (1990-1997) through monitoring of MW-14 at the former Exxon site. MW-14 is immediately downgradient of the former solvent tank pit.
3. Any migrating plume from this site would eventually be captured in the extraction system currently in operation at the former Exxon site. Their remediation system consists of an extraction trench which collects and transfer groundwater to a holding tank, through an airstripper and then through an activated carbon canister before being discharged to EBMUD.
4. The release from this site is from stoddard solvent which does not contain any benzene. The toxicity of stoddard solvent in comparison to gasoline is low. The contribution of the stoddard solvent release relative to the total TPHg release at 720 High St. is small.

# Borings in oil stained area.



 earth metrics


 SCALE NO SCALE

FIGURE 2. SOIL SAMPLE MAP

W R E

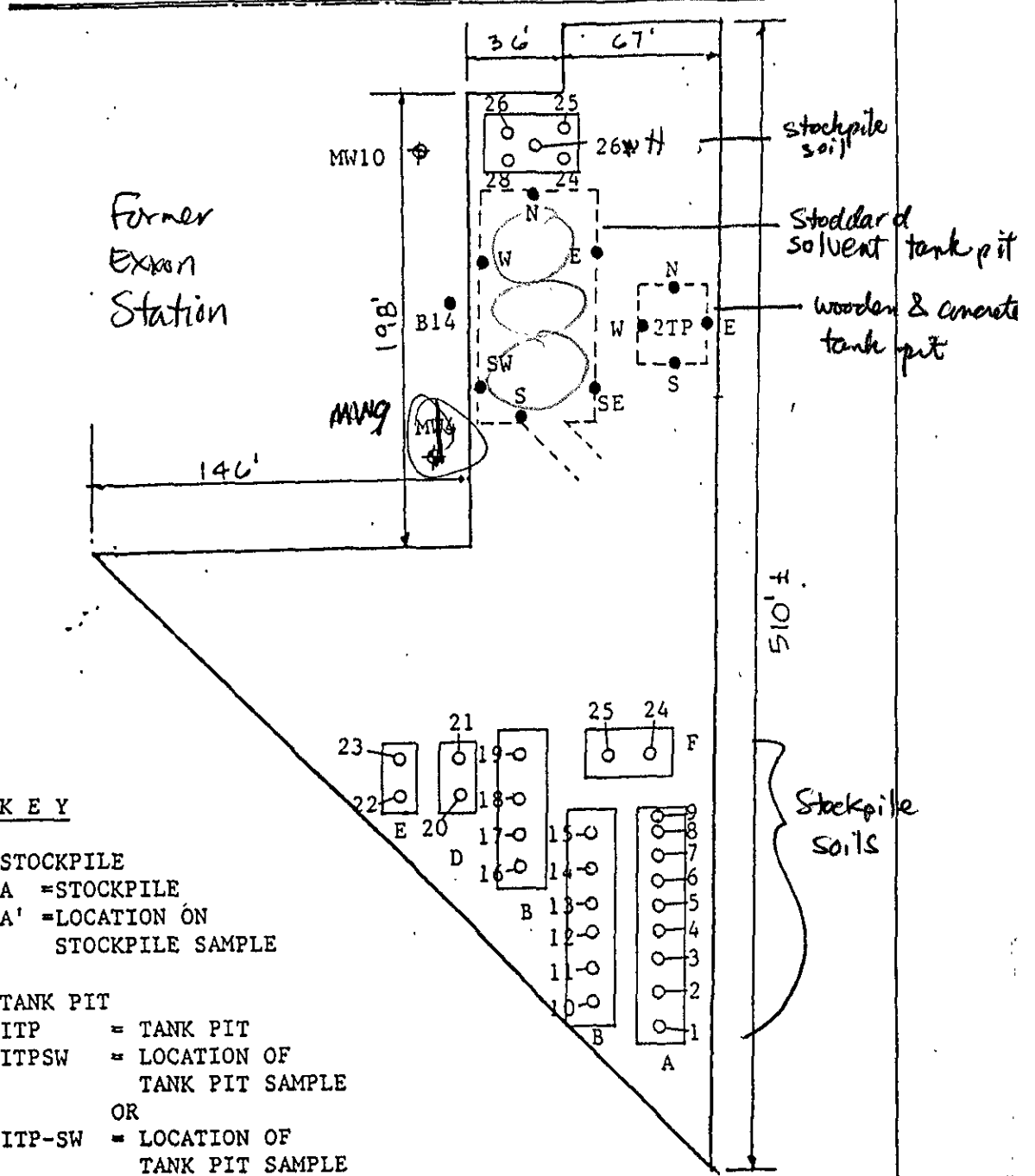
TABLE 1. SOIL SAMPLE TEST DATA FOR 752 HIGH STREET, OAKLAND, CALIFORNIA  
(JANUARY, 1989)

SAMPLE LOCATION I.D. (SEE FIG. 2)	SAMPLE DEPTH BELOW GRADE (FEET)	TOG (OIL AND GREASE)	BENZENE	ETHYL-BENZENE	TOLUENE	XYLENES	TPHd (DIESEL)	TOTAL LEAD
EB1 - 2		60	NT	NT	NT	NT	NT	NT
EB2 - 2		510	ND	ND	ND	ND	ND	NT
EB2 - 4		640	NT	NT	NT	NT	NT	NT
EB3 - 3		37	NT	NT	NT	NT	NT	370
EB4 - 1.5		15,000	NT	NT	NT	NT	NT	NT
EB5 - 2		40	NT	NT	NT	NT	NT	NT
EB6 - 1		7,000	NT	NT	NT	NT	NT	NT
EB7 - 2		100	NT	NT	NT	NT	NT	ND
EB8 - 2		10	NT	NT	NT	NT	NT	4.4
EB10 - 5		ND	NT	NT	NT	NT	NT	ND
EB11 - 2		140	NT	NT	NT	NT	NT	1.4
EB12 - 5		ND	NT	NT	NT	NT	NT	ND
EB13 - 3		20	NT	NT	NT	NT	NT	6.6
EB14 - 5		ND	NT	NT	NT	NT	NT	ND
backfill	STD	10.0	-	-	-	-	-	-

NT - Not Tested  
 ND - Not Detected  
 Results in ppm (parts per million)  
 Source: GTEL Lab.

EB2 - TOL  
 EB3 - PD  
 EB4 - TOL  
 EB6 - TOL  
 EB11 - TOL

--- HIGH ST.



**KEY**



STOCKPILE  
 A = STOCKPILE  
 A' = LOCATION ON STOCKPILE SAMPLE



TANK PIT  
 ITP = TANK PIT  
 ITPSW = LOCATION OF TANK PIT SAMPLE  
 OR  
 ITP-SW = LOCATION OF TANK PIT SAMPLE



MONITORING WELL



earth metrics



SCALE  
NO SCALE

FIGURE B-1 SOIL SAMPLE

752 High St 94601

TABLE 3. PIT AND SIDEWALL SOIL TEST DATA FOR 752 HIGH STREET, OAKLAND, CALIFORNIA (APRIL, 1989)

ORIGINAL TANK PULL SAMPLES

	TPH DIESEL EPA 8015	FUEL CHAR	TCE	BENZENE	ETHYL- BENZENE	TOLUENE	XYLENE
1NE	ND	NA	NT	ND	ND	ND	ND
2NW	13,000	D	NT	ND	ND	ND	ND
3SW	1,400	D	NT	ND	ND	ND	ND
4SE	ND	NA	NT	ND	ND	ND	ND
4NE	48	ST	ND	NT	NT	NT	NT
5SE	360	ST	ND	NT	NT	NT	NT
6SW	500	ST	ND	NT	NT	NT	NT
7NW	54	ST	ND	NT	NT	NT	NT
1NW, 2NE, 350 Comp	380	ST	NT	NT	NT	NT	NT
10WE	ND	NT	NT	NT	NT	NT	NT
11EA	ND	NT	NT	NT	NT	NT	NT
Standard	100	-	100	100	100	100	100

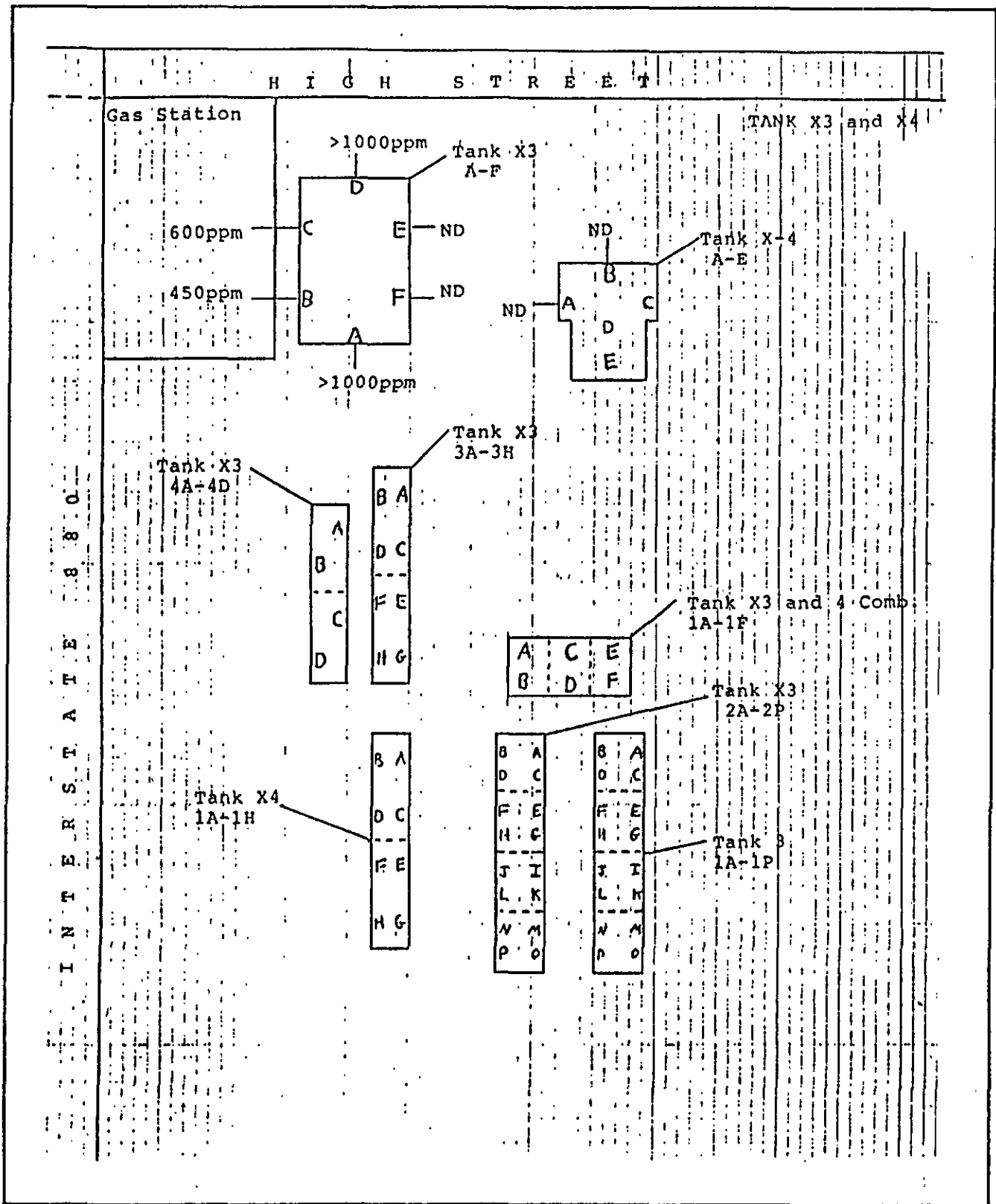
Date of Sampling: 4/6/89



NT - Not Tested  
 ND - Not Detected  
 Results in ppm.

EPA 8015 - Total Fuel Hydrocarbons as Diesel  
 ST - Stoddard Fuel Type  
 D - Diesel Fuel Type  
 TCE - Tetrachloroethylene

Source: Brown and Caldwell Lab.

*Handwritten notes:*  
 UNY no  
 SWAL WAT 1025  
 WHICH PIT?  
 WHICH?



  **SCALE NOT TO SCALE**

**FIGURE 3. STOCKPILE SOIL SAMPLE AND TANK LOCATIONS**

TABLE 2. RESULTS OF SAMPLING AND SOIL ANALYSIS FOR TANK PITS AT ED'S AUTO PARTS 750 HIGH STREET

8/90 SAMPLING AFTER OVEREXCAVATION

S/B  
TMS g

Solvent  
tank  
pit

sludge  
waste  
pit

SOIL DESCRIPTION	HIGH B.P. HYDROCARBON (PPM)
1TP-8-S	ND PPM
1TP-8-N	ND PPM
1TP-8-E	3.9 PPM
1TP-8-W	4.9 PPM
1TP-8-SW	17 PPM
1TP-8-SE	5.7 PPM
2TP-8-S	17 PPM
2TP-8-N	12 PPM
2TP-8-E	15 PPM
2TP-8-W	11 PPM

ok to  
relocate.

DISTN 58

Results in parts per million (ppm).  
 TOG - Hydrocarbon as diesel (EPA Method 8015).  
 ND - no compounds detected above the analytical detection limit; see laboratory reports in Appendix A for list of specific compounds tested for.  
 Sample designation: 2TP-8-W  
     └──┬──┬── Location in the pit  
       └──┬──┬── Sample depth in feet  
           └──┬──┬── Tank Pit tested

These samples show that no further excavation of the tank pits is required at this location.

PREPARED BY  
- WY/ STANARD  
NOT REVISIT  
SOIL  
8020

TABLE 4. PIT WATER TEST DATA FOR 752 HIGH STREET, OAKLAND, CALIFORNIA (APRIL, 1989)

	TOX	Lead	As	Cad	Cr	Zn	418.1	PCB RCB	8015 TPH	FUEL CHAR- ACTER	B	T	E	X	601
GWT 01A #2	.058	1.8	ND	.019	ND	2.1	ND	NT	NT	NT	NT	NT	NT	NT	NT
GWT 01 #11	NT	NT	NT	NT	NT	NT	7	NT	NT	NT	NT	NT	NT	NT	NT
GWT 01 #12	NT	NT	NT	NT	NT	NT	3	NT	NT	NT	NT	NT	NT	NT	NT
GWT 01 #13	NT	NT	NT	NT	NT	NT	48	NT	NT	NT	NT	NT	NT	NT	NT
JQ 2BT	NT	NT	NT	NT	NT	NT	NT	ND	NT	NT	NT	NT	NT	NT	NT
JQ 8TP	NT	NT	NT	NT	NT	NT	NT	NT	2,500	ST	NT	NT	NT	NT	NT
JQ 5TP	NT	NT	NT	NT	NT	NT	NT	NT	88	D	ND	ND	ND	.004	NT
JQ 95P	NT	NT	NT	NT	NT	NT	NT	NT	1.7	ST	NT	NT	NT	NT	NT
JQ 1BT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	*
Sludge 01A #1	NT	ND	ND	ND	ND	ND	NT	NT	NT	NT					

Date of Sampling: 4/17/89

NT = Not Tested  
 ND = Not Detected  
 \* = 1,2-Dichloroethane  
 TP = assumed to be Tank Pit  
 BT = assumed to be Bulk Tank  
 SP = assumed to be Soils Pit  
 GWT = Groundwater Tech Sample - no assumption made  
 JQ = J. Quarle & Assoc. Sample  
 Results in ppm.

*UNITS: ppm*

TOX = Total Organic Halides  
 Ar = Arsenic  
 Cad = Cadmium  
 Cr = Total Chromium  
 Zn = Zinc  
 418.1 = Total Recoverable Hydrocarbon  
 PCB = Polychlorinated Biphenyls  
 TPH 8015 = Total Fuel Petroleum Hydrocarbons  
 601 = Total Organic Volatiles  
 D = Diesel (fuel character)  
 ST = Stoddards (fuel character)  
 B = Benzene  
 E = Ethylbenzene  
 T = Toluene  
 X = Xylenes

Source: BC Lab and GTEL Lab.



TABLE 1. RESULTS OF SAMPLING AND SOIL ANALYSIS FOR STOCKPILES OF SOIL AT ED'S AUTO PARTS 750 HIGH STREET INITIAL SAMPLING (8/90).  
 See Fig B-1 for sample locations

SOIL DESCRIPTION	HIGH B.P. HYDROCARBON IN PPM
S-4-A1	65 PPM
S-4-A2	77 PPM
S-4-A3	90 PPM
S-4-A4	80 PPM
S-4-A5	53 PPM
S-4-A6	23 PPM
S-4-A7	54 PPM
S-4-A8	47 PPM
S-4-B9	68 PPM
S-4-B10	190 PPM
S-4-B11	110 PPM
S-4-B12	410 PPM <i>High</i>
S-4-B13	77 PPM
S-4-B14	130 PPM
S-4-B15	120 PPM
S-4-C16	140 PPM
S-4-C17	220 PPM
S-4-C18	160 PPM
S-4-C19	94 PPM
S-4-D20	43 PPM
S-4-D21	43 PPM
S-4-E22	110 PPM
S-4-E23	56 PPM
S-4-F24	95 PPM
S-4-F25	77 PPM
S-4-H24	8.7 PPM <i>Low</i>
S-4-H25	3.5 PPM <i>Low</i>
S-4-H26	230 PPM
S-4-H28	120 PPM
S-4-H26A	310 PPM

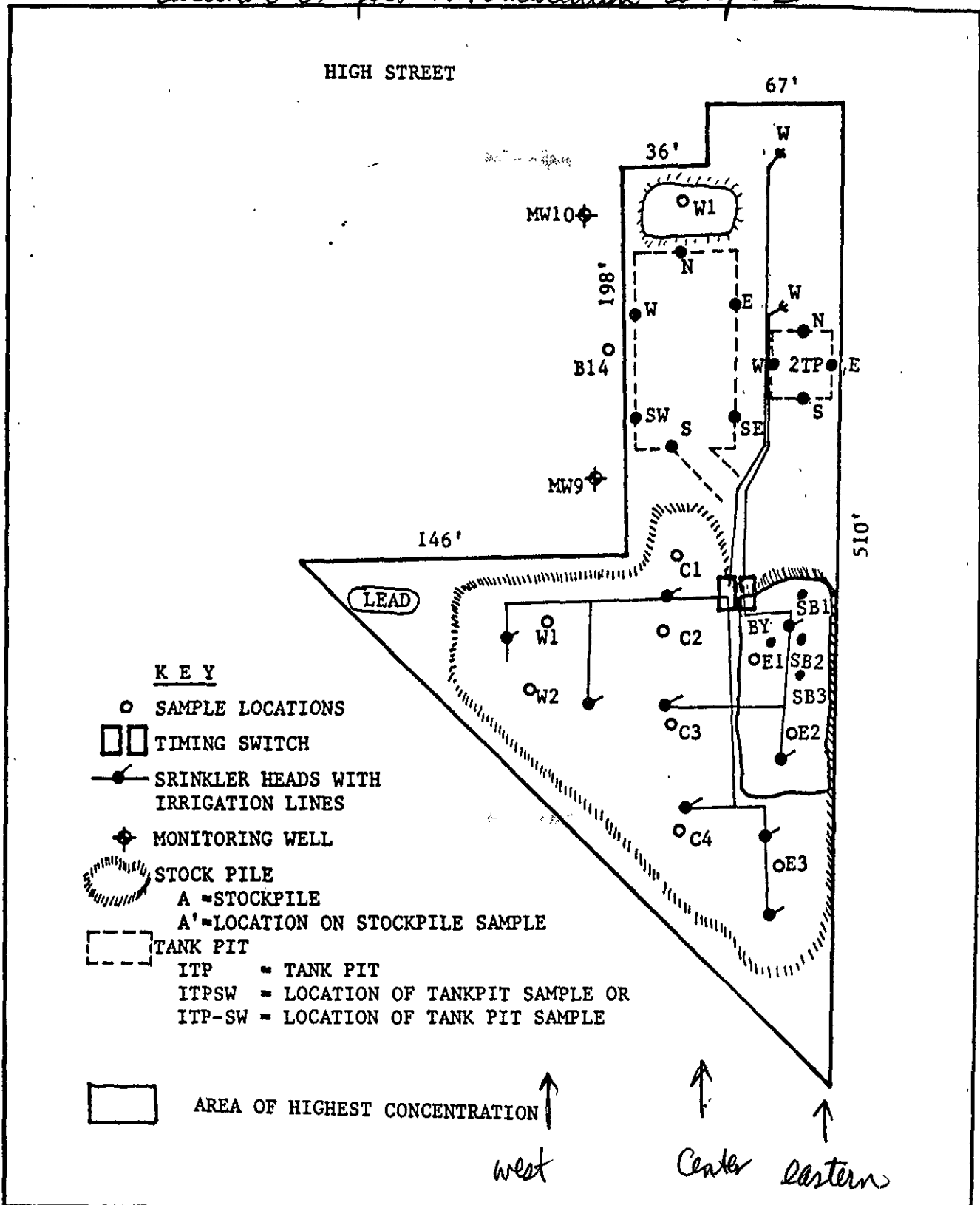
Results in parts per million (ppm).  
 TOG - Hydrocarbon as Diesel (EPA Method 8015).  
 ND - no compounds detected above the analytical detection limit; see laboratory reports in Appendix for list of specific compounds tested for.  
 Sample designation: S-4-H25



S — Stockpile and Location  
 4 — Sample depth in feet  
 H — Type of sample S - Soil

where is H 24-25

should run TPHg & TPHd  
 & TOG(HC)

Location of post bioremediation samples



  **SCALE**  
NO SCALE

**FIGURE 3. SOIL SAMPLE LOCATIONS**

TABLE 2. RESULTS OF SOIL ANALYSES FOR ED'S AUTO PARTS, 752 HIGH STREET,  
OAKLAND

AFTER BIOREMEDIATION

SAMPLE GROUP	SAMPLE	TPHD	OIL AND GREASE
Center	S-1-C1	ND	ND
Center	S-1-C2	1.4 ppm	ND
Center	S-1-C3	1.7 ppm	ND
Center	S-1-C4	1.8 ppm	ND
Western	S-1-W1	2.3 ppm	ND
Western	S-1-W2	1.7 ppm	ND
Western	S-1-W3	1.4 ppm	ND
Eastern	S-1-E1	ND	<del>410</del> ppm
Eastern	S-1-E2	ND	ND
Eastern	S-1-E3	ND	<del>97</del> ppm

ND - Not Detected  
 TPHD - Total Petroleum Hydrocarbon as Diesel (8015)  
 Oil and Grease - Oil and Grease by 5520 D&E  
 S - Soil  
 1 - 1 foot below surface  
 E1 - Sample location, see Figure 3

TABLE 4  
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES  
Former Exxon Service Station 7-3006  
720 High Street  
Oakland, California  
(page 3 of 7)

Sample No.	TPHg ppm	Benzene ppm	Toluene ppm	Ethyl-benzene ppm	Total Xylenes ppm	TPHd ppm	TOG ppm	VOC ppm
S-5-B17	<2	<0.050	<0.050	<0.050	<0.050	<10	-	-
S-7.5-B17	8.1	0.085	<0.050	0.19	0.24	-	-	-
S-10-B17	7.1	0.091	<0.050	0.20	0.25	200	-	-
S-5-B18	210	1.6	0.71	3.9	12	46	-	-
S-7.5-B18	210	2.4	0.50	4.8	20	270	-	-
S-10-B18	130	0.93	0.36	2.8	11	2000	-	-
S-10-B19	210	<0.5*	<0.5*	1.7*	<0.5*	210	<300	ND
S-10-B20	3100	<5.0*	<5.0*	64.0*	120.0*	360	73	87▲
S-1128-ABCD**	160	-	-	-	-	160	<50	-
October 31 and November 1, 1990								
S-3-MW14	<1.0	<0.005	<0.005	<0.005	<0.007	<10	-	-
S-8-MW14	<1.0	<0.005	<0.005	<0.005	<0.007	<10	-	-
S-18-MW14	837	0.10	1.6	6.0	34	<10	-	-

See notes on page 7 of 7.

RESNA  
Working To Restore Nature

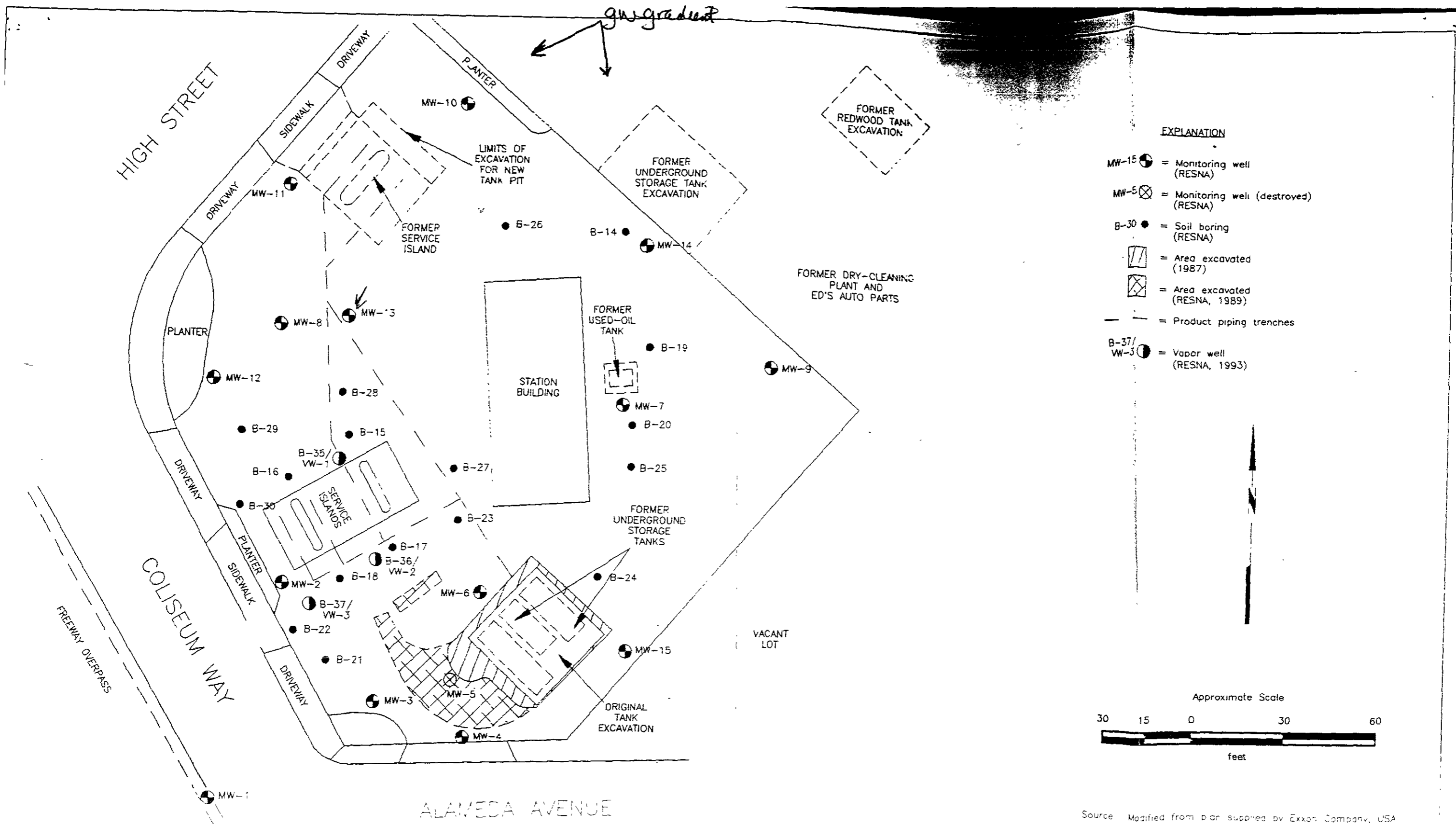
**TABLE 5**  
**CUMULATIVE RESULTS OF LABORATORY ANALYSES**  
**OF GROUNDWATER SAMPLES**  
 Former Exxon Station 7-3006  
 Oakland, California  
 Page 12 of 14  
 See notes on page 14

WELL DATE	TPH <sub>g</sub>	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	TPH <sub>d</sub>	TOG	VOCs
<u>MW-14</u>								
11/90	0.39	<0.0005	<0.0005	0.0036	0.0037	0.12	NA	NA
03/91	0.20	<0.0005	0.0015	0.0008	0.0036	<0.10	NA	NA
06/91	0.11	<0.0005	<0.0005	<.0005	<0.0005	<0.10	NA	NA
09/91	0.45	<0.0005	<0.0005	0.0032	0.0023	NA	NA	NA
12/91	0.071	0.0005	<0.0005	<0.0005	<0.0005	0.28	NA	NA
03/92	0.061	<0.0005	<0.0005	0.0011	<0.0005	0.64	NA	NA
06/92	0.140	<0.0005	<0.0005	0.0006	0.0020	0.35	NA	NA
09/92	0.075	<0.0005	<0.0005	<0.0005	<0.0005	0.30	NA	NA
12/92	0.35	0.0025	0.0010	0.0015	0.0081	0.22	NA	NA
03/93	0.41	<0.0005	<0.0005	0.0009	0.0016	<0.25 <sup>2</sup>	NA	NA
<u>MW-15</u>								
11/90	2.7	0.21	0.0055	0.6	0.25	0.34	NA	NA
03/91				Not Accessible				
06/91	0.38	<0.0005	<0.0005	<0.0005	0.0013	<0.10	NA	NA
09/91	0.49	0.0029	0.0017	0.033	0.0013	NA	NA	NA
12/91	1.6	0.014	0.0011	0.066	0.0098	0.30	NA	NA



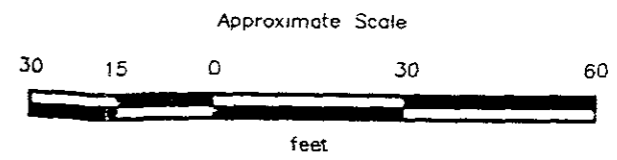
**TABLE I**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 7-3006  
720 High Street  
Oakland, California  
(Page 6 of 7)

Well ID / (FOC)	Sampling Date	SUBJ	DTW feet	Elev. > <	TPHg	B	T	E	X	MTBE	TEPHd	VOCs >
MW13 (14.20)	1/20/94	NLPH	9.08	5.12								
	02/02-03/94	NLPH	8.75	5.45								
	3/10/94	Sheen	7.46	6.74	41,000	3,800	1,500	2,700	9,500	NA	8,100	NA
	4/22/94	Sheen	7.78	6.42								
	05/10-11/94	NLPH	7.61	6.59								
	6/27/94	NLPH	7.97	6.23	39,000	3,400	930	2,400	8,900	NA	15,000	NA
	8/31/94	NLPH	9.21	4.99								
	9/29/94	NLPH	9.61	4.59								
	10/25/94	Sheen	9.93	4.27	57,000	2,100	470	2,600	8,100	NA	320	NA
	11/30/94	NM	8.16	6.04								
	12/27/94	NM	7.61	6.59								
	2/6/95	Sheen	5.89	8.31								
	6/7/95	Sheen	8.05	6.15								
	9/18/95	Sheen	9.94	4.26								
	11/1/95	Sheen	10.48	3.72								
	2/14/96	Sheen	8.88	5.32								
	6/19/96	Sheen	7.22	6.98								
	9/24/96	Sheen	10.27	3.93								
	12/11/96	Sheen	8.77	5.43								
	3/19/97	Sheen	9.46	4.74								
MW14 (15.18)	1/20/94	NM	NM	---								
	02/02-03/94	Not Accessible										
	3/10/94	NLPH	7.84	7.34								
	4/22/94	NLPH	8.00	7.18								
	05/10-11/94	NLPH	7.93	7.25								
	6/27/94	NLPH	8.19	6.99	300	2.7	7.9	2	27	NA	11,002	NA
	8/31/94	NLPH	9.44	5.74								
	9/29/94	NLPH	9.82	5.36								
	10/25/94	NLPH	9.99	5.19	300	< 0.5	< 0.5	0.9	1.3	1,600	NA	NA
	11/30/94	NM	8.16	7.02	200	< 0.5	< 0.5	0.8	< 0.5	210	NA	NA
	12/27/94	Sheen	8.15	7.03								
	2/6/95	NLPH	7.18	8.00								
		Additional Analysis TOG		400								
	6/7/95	NLPH	7.70	7.48	360	< 1.0	< 1.0	< 1.0	< 1.0	NA	1,200	NA
		Additional Analysis EHCss		450								
	9/18/95	NLPH	9.88	5.30	670	< 0.5	< 0.5	3.6	< 0.5	< 2.5	1,100	NA
		Additional Analysis EHCss		1,200								
	11/1/95	NLPH	10.56	4.62	1,300	< 2.0	< 2.0	< 2.0	3	< 10	1,900	NA
		Additional Analysis EHCss		1,600								
	2/14/96	NLPH	9.08	6.10	1,100	< 2.5	< 2.5	3.2	3.1	< 13	2,700	NA
	Additional Analysis EHCss		680									
6/19/96	NLPH	8.50	6.68	470	< 0.5	< 0.5	1.3	< 0.5	< 2.5	1,500	ND	
	Additional Analysis EHCss		670									
9/24/96	NLPH	10.23	4.95	610	< 2.5	< 2.5	< 2.5	< 2.5	< 12	2,000	ND	
	Additional Analysis EHCss		4,500									
12/11/96	NLPH	9.09	6.09	1,000	< 5.0	< 5.0	< 5.0	< 5.0	< 25	5,100	ND	
	Additional Analysis EHCss		750									
3/19/97	NLPH	7.99	7.19	1,100	< 2.0	< 2.0	< 2.0	3.3	< 10	2,100*	ND	
	Additional Analysis EHCss		470									
				690	0.65	1.7	2.5	8.3	< 2.5	1,400	ND	



**EXPLANATION**

- MW-15 = Monitoring well (RESNA)
- MW-5 = Monitoring well (destroyed) (RESNA)
- B-30 = Soil boring (RESNA)
- = Area excavated (1987)
- = Area excavated (RESNA, 1989)
- = Product piping trenches
- B-37/  
VW-3 = Vapor well (RESNA, 1993)



Source: Modified from plan supplied by Exxon Company, USA



PROJECT 130006.01

**GENERALIZED SITE PLAN**  
 Exxon Station 7-3006  
 720 High Street  
 Oakland, California

PLATE  
 2