

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



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

StID 3954

January 26, 1999

Mr. Al Pelton  
Dreisbach Enterprises  
2530 E 11<sup>th</sup> Street  
Oakland, CA 94601

**Re: Fuel Leak Site Case Closure for California Refrigerated, at 860 92<sup>nd</sup> Avenue, Oakland, CA**

Dear Mr. Pelton:

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 490ppm TPH as gasoline, 1,500ppm TPH as diesel, and 0.18ppm benzene exists in soil beneath the site;
- up to 80ppb benzene exists in groundwater beneath the site; and,
- a site safety plan must be prepared for construction workers in the event of excavation/trenching is proposed in the vicinity of residual soil and groundwater contamination.

If you have any questions, please contact me at (510) 567-6762.

eva chu  
Hazardous Materials Specialist

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

c: Frank Kliewer, City of Oakland, 1330 Broadway, 2<sup>nd</sup> Floor, Oakland, CA 94612  
files (carefrig10)

ALAMEDA COUNTY  
HEALTH CARE SERVICES

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ENVIRONMENTAL HEALTH SERVICES

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

**REMEDIAL ACTION COMPLETION CERTIFICATION**

**StID 3954 - 860 92<sup>nd</sup> Avenue, Oakland, CA  
(1-10K and 1-5K gallons tanks removed on October 5, 1995)**

January 26, 1999

Mr. Al Pelton  
Dreisbach Enterprises  
2530 E 11<sup>th</sup> Street  
Oakland, CA 94601

Dear Mr. Pelton:

This letter confirms the completion of site investigation and remedial action for the underground storage tanks 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 tanks 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, no further action related to the underground tank release is required.

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

Please contact our office if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung, Director

cc: Richard Pantages, Chief of Division of Environmental Protection  
Chuck Headlee, RWQCB  
Dave Deaner, SWRCB  
Leroy Griffin, OFD  
files-ec (carefrig9)

OK to close

CH

ENVIRONMENTAL PROTECTION

CASE CLOSURE SUMMARY

Leaking Underground Fuel Storage Tank Program

98.10.18 PM 2:08

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
JUL 25 1998

I. AGENCY INFORMATION

Date: June 19, 1998

Agency name: Alameda County-HazMat  
City/State/Zip: Alameda, CA 94502  
Responsible staff person: Eva Chu

Address: 1131 Harbor Bay Pkwy  
Phone: (510) 567-6700  
Title: Hazardous Materials Spec.

II. CASE INFORMATION

Site facility name: California Refrigerated  
Site facility address: 860 92<sup>nd</sup> Ave  
RB LUSTIS Case No: N/A  
URF filing date: 10/22/95

Local Case No./LOP Case No.: 3954  
SWEEPS No: N/A

Responsible Parties:

Addresses:

Phone Numbers:

Al Pelton  
Dreisbach Enterprises

2530 E 11<sup>th</sup> Street  
Oakland, CA 94601

510/ 533-1527

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	5,000	Diesel	Removed	10/5/95
2	10,000	Diesel	"	"

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: Unknown  
Site characterization complete? YES  
Date approved by oversight agency: 5/5/98  
Monitoring Wells installed? Yes Number: 3  
Proper screened interval? Yes, 7' to 20' bgs  
Highest GW depth below ground surface: 4.92' Lowest depth: 8.69' in MW-2  
Flow direction: WNW at .006 ft/ft

Most sensitive current use: Commercial/Light Industrial  
Are drinking water wells affected? No Aquifer name: San Leandro Cone  
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 and Oakland Fire Dept  
Alameda, CA 94502 1605 MLK Jr Dr  
Oakland, CA 94612

**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 Soil	2 USTs 1,500 cy	Disposed by H & H, San Francisco Bioremediated and reused to fill pit	10/5/95

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

Contaminant	Soil (ppm)		Water (ppb)	
	Before <sup>1</sup>	After <sup>2</sup>	Before <sup>3</sup>	After <sup>4</sup>
TPH (Gas)	5,100	490	61,000	730
TPH (Diesel)	2,200	1,500	940,000	530
Benzene	25	0.18	810	80
Toluene	10	0.096	250	1.2
Ethylbenzene	68	0.240	1,600	11
Xylenes	23	0.280	1,600	2
MtBE	NA	NA	9	28
Other PNAs	see Note 5			
<b>Total Pb</b>	<b>13</b>			

- NOTE: 1 soil sample from UST removal, 10/95  
 2 confirmatory soil sample collected after overexcavation, 11/95  
 3 grab water sample from boreholes drilled July 1996  
 4 most recent groundwater sampling results, 2/98  
 5 2.78 ppm Naphthalene, 8.15 ppm 2-Methylnaphthalene, 1.21 ppm fluorene, and 1.55 ppm Phenanthrene

**IV. CLOSURE**

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: **A site safety plan must be prepared for construction workers in the event excavation/trenching is proposed in the vicinity of residual soil and groundwater contamination.**

Should corrective action be reviewed if land use changes? **YES**

Monitoring wells Decommissioned: **No, pending site closure**

Number Decommissioned: **0** Number Retained: **3**

List enforcement actions taken: **NOV issued 3/24/97**

List enforcement actions rescinded: **NA**

## V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Eva Chu**

Title: **Haz Mat Specialist**

Signature: 

Date: **6/19/98**

### Reviewed by

Name: **Madhulla Logan**

Title: **Haz Mat Specialist**

Signature: 

Date: **6/19/98**

Name: **Thomas Peacock**

Title: **Supervisor**

Signature: 

Date: **6-23-98**

## VI. RWQCB NOTIFICATION

Date Submitted to RB: **6/25/98**

RB Response:

RWQCB Staff Name: **Chuck Headlee**

Title: **EG**

Signature: 

Date: **7/1/98**

## VII. ADDITIONAL COMMENTS, DATA, ETC.

Two diesel USTs (1-10K and 1-5K gallon tanks) in a common pit were removed in October 1995. Groundwater was encountered under the 10K tank. Five soil samples (S-1 through S-5) were collected from the pit bottom and sidewalls at 10' to 14' bgs. All samples were analyzed for TPHd, TPHg, BTEX, and total lead. In addition, sample S-5 was also analyzed for PNAs. Elevated petroleum hydrocarbons were noted in samples S-4 and S-5. Sample S-5 also contain some PNAs and lead. (See Fig 1, 2 and Table 1 and 2)

The pit was overexcavated in November 1995 to the extent possible. Excavation to the north was limited by the building/workshop structure, and to the west by the presence of a subsurface electrical line. Approximately 1,500 cy of soil was stockpiled at the site to be bioremediated. Seven confirmatory soil samples (VS-1 through VS-7) were collected from the sidewalls at 10' bgs. A grab water sample was also collected from the pit. Location of samples and analytical results are on Fig 3 and Table 3.

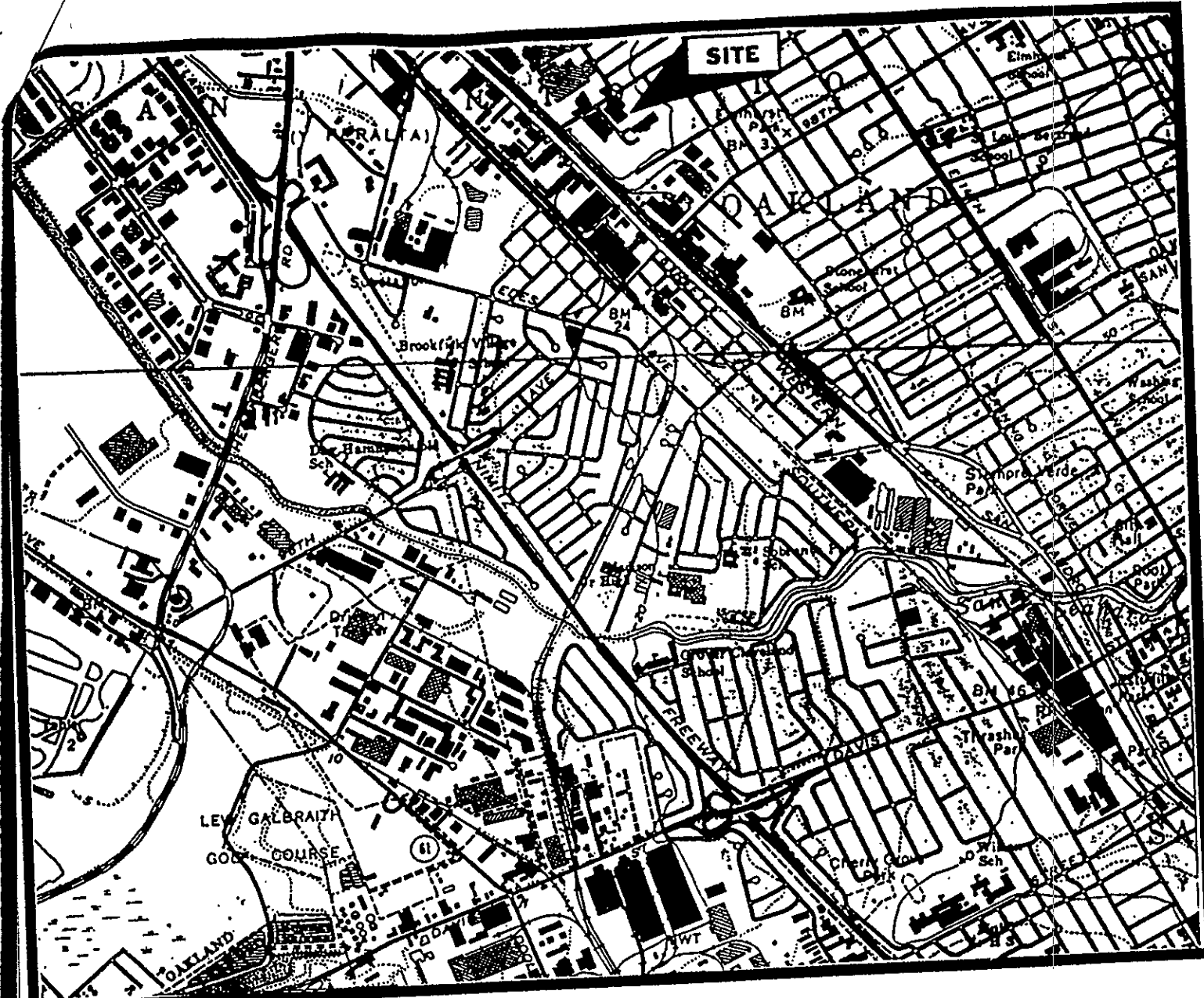
In July 1996 four boreholes (BH1 through BH4) were drilled to collect soil and grab water samples. Boring B1 was completed as a groundwater monitoring well MW-1. All soil and groundwater samples were analyzed for TPHd, TPHg, BTEX, and MTBE. Only soil and groundwater from borehole BH3 contained elevated target analytes. In addition, groundwater from BH2 contained 9 ppb MTBE and groundwater from BH4 contained 290 ppb TPHd. (See Fig 4, Table 4)

In May 1997 four soil borings, BH5 through BH8, (of which BH5 and BH6 were converted into groundwater monitoring wells MW-2 and MW-3, respectively) were drilled to delineate the extent of the contaminant plume and to verify groundwater flow direction. Boring BH5/MW-2 was installed adjacent to the former boring BH3, which identified elevated petroleum hydrocarbon concentrations. Soil samples, which were collected from the capillary fringe of each boring, did not contain significant levels of hydrocarbons. Groundwater from well MW-2 contained low levels of hydrocarbons. (See Fig 5, Table 5 and 6)

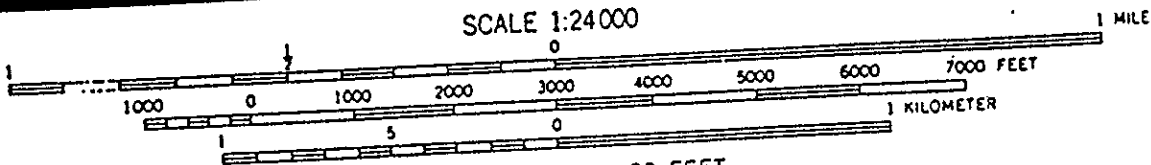
Groundwater has been sampled for four consecutive quarters (5/97 through 2/98). Only well MW-2 exhibits target analytes. However, the levels are not elevated to the degree where it would pose a risk to human health. The contaminant plume is limited in extent and the contaminant levels appear to have stabilized. And, residual PNAs (naphthalene and fluorene) in soil does not pose a risk to human health based on the RBCA Tier 2 Look Up Table 1 or EPA's Preliminary Remediation Goals. Continued monitoring is not warranted. (See Fig 6 and Table 7)

In summary, case closure is recommended because:

- o the leak and ongoing sources have been removed;
- o the site has been adequately characterized;
- o the dissolved plume is not migrating;
- o no water wells, surface water, or other sensitive receptors are likely to be impacted; and,
- o the site presents no significant risk to human health or the environment.



SCALE 1:24000



QUADRANGLE LOCATION

CONTOUR INTERVAL 20 FEET  
 DOTTED LINES REPRESENT 5-FOOT CONTOURS  
 NATIONAL GEODETIC VERTICAL DATUM OF 1929  
 DEPTH CURVES IN FEET—DATUM IS MEAN LOWER LOW WATER  
 SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER  
 THE MEAN RANGE OF TIDE IS APPROXIMATELY 5 FEET



Source: USGS San Leandro, California 7.5 Minute Topographical Map



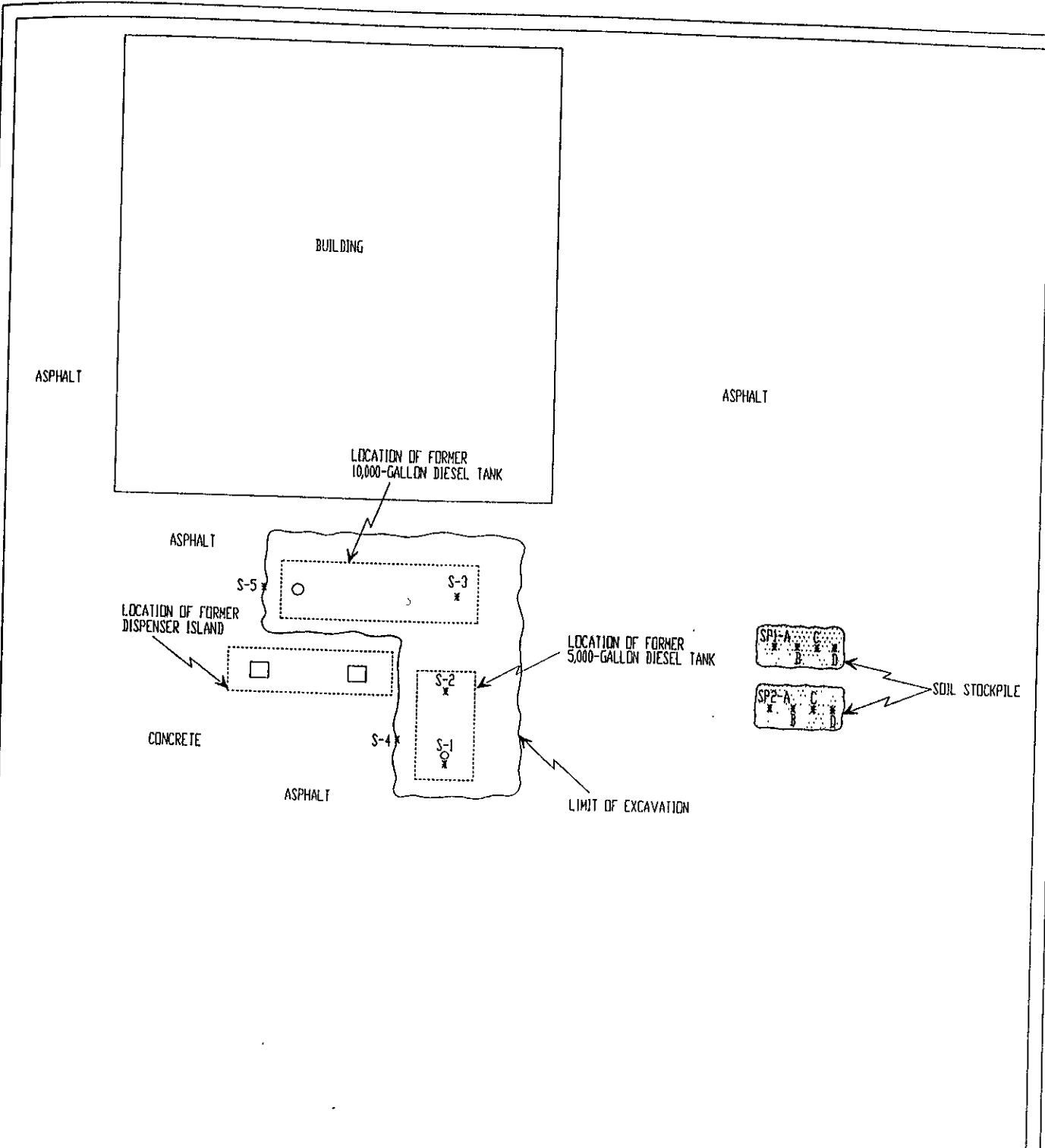
DATE:  
 3/20/98

DRAWN BY:  
 DAS

SCALE:  
 1" = 2,000'

**FIGURE 1:  
 SITE LOCATION MAP**

**DREISBACH ENTERPRISES, INC  
 860 92nd AVENUE  
 OAKLAND, CALIFORNIA**



LEGEND

S-1 \* NAME AND LOCATION OF SOIL SAMPLE



0 20  
SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN: TANK REMOVAL (10/05/95)

CALIFORNIA REFRIGERATED EXPRESS, INC.  
860 92ND AVENUE  
OAKLAND, CA 94603

DATE	2/14/96
FIGURE	31
FILE #	366-IN
DRAWN BY	VK
CHECKED BY	LT III



#

TABLE 1.  
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS  
(ppm<sup>1</sup>)

Sample ID Name	Date	Depth (Feet)	TPHD	TPHG	Benzene	Toluene	Ethyl-benzene	Xylenes	Total Lead
S-1	10/05/95	13.5	<1.0	3	<0.005	0.033	<0.005	0.013	13
S-2	10/05/95	13.5	1.9	6	0.052	0.017	<0.005	<0.005	11
S-3	10/05/95	14.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	12
S-4	10/05/95	11.0	1,300	5,100	25	10	68	23	8.1
S-5 <sup>2</sup>	10/05/95	10.0	2,200	680	1.5	1.1	1.3	1.2	9.1
SP1 A-D	10/05/95	2.0	2,100	190	1.1	0.43	2.1	3.0	29
SP2 A-D	10/05/95	2.0	3,200	190	0.64	0.15	1.3	1.5	33

<sup>1</sup> PARTS PER MILLION

<sup>2</sup> ALSO ANALYZED BY EPA METHOD 8270 FOR PNA; SEE CERTIFIED ANALYTICAL REPORT IN APPENDIX C FOR RESULTS.

Client: Hull Development  
 Attn: Mr. Mike Golden

Client's Project: TPE-366-100595

Date Received: 10/14/95  
 Extraction Method: 3550  
 Extraction Material: Acetone/Methylene Chloride  
 Matrix: Soil  
 Units: ug/kg

*Table 2*

EPA Method 8270 (PNA only)

Lab No.:		Method Blank 8299-001								
Client Sample LD.:		B10817								
Date Sampled:		10/05/95								
QC Batch #:		958270S112								
Date Extracted:		10/17/95								
Date Analyzed:		10/19/95								
Analyst Initials:		SP								
Dilution Factor:		1								
ANALYTE	MDL	DLR	DLR							
Naphthalene	330	330	ND	330	2780					
2-Methylnaphthalene	330	330	ND	1650	8150*					
Acenaphthylene	330	330	ND	330	ND					
Acenaphthene	330	330	ND	330	ND					
Fluorene	330	330	ND	330	1210					
Phenanthrene	330	330	ND	330	1550					
Anthracene	330	330	ND	330	ND					
Fluoranthene	330	330	ND	330	ND					
Pyrene	330	330	ND	330	ND					
Benzo(a)anthracene	330	330	ND	330	ND					
Chrysene	330	330	ND	330	ND					
Benzo(b)fluoranthene	330	330	ND	330	ND					
Benzo(k)fluoranthene	330	330	ND	330	ND					
Benzo(a)pyrene	330	330	ND	330	ND					
Indeno(1,2,3-cd)pyrene	330	330	ND	330	ND					
Dibenzo(a,h)anthracene	330	330	ND	330	ND					
Benzo(ghi)perylene	330	330	ND	330	ND					

MDL = Method Detection Limit  
 ND = Not Detected (Below DLR)  
 DLR = MDL X Dilution Factor  
 NA = Not Analyzed

\* = Dilution Factor is 5.

Approved/Reviewed By:   
 Yun Pan  
 Department Supervisor

Date: 10/24/95

The cover letter is an integral part of this analytical report.



FIG 3  
TANK PROTECT ENGINEERING  
of Northern California, Inc.

overexcavation results 11/95

FROM: TANK PROTECT ENGINEERING

DATE: 11/29/95

TO: Alameda County Environmental Health

ATTN: Mrs. Eva Chu

RE.: Lab Results for California Refrigerated Exp. Inc.  
860 92nd Ave  
Oakland, CA

NO. OF PAGES: 4  
(Include cover sheet)

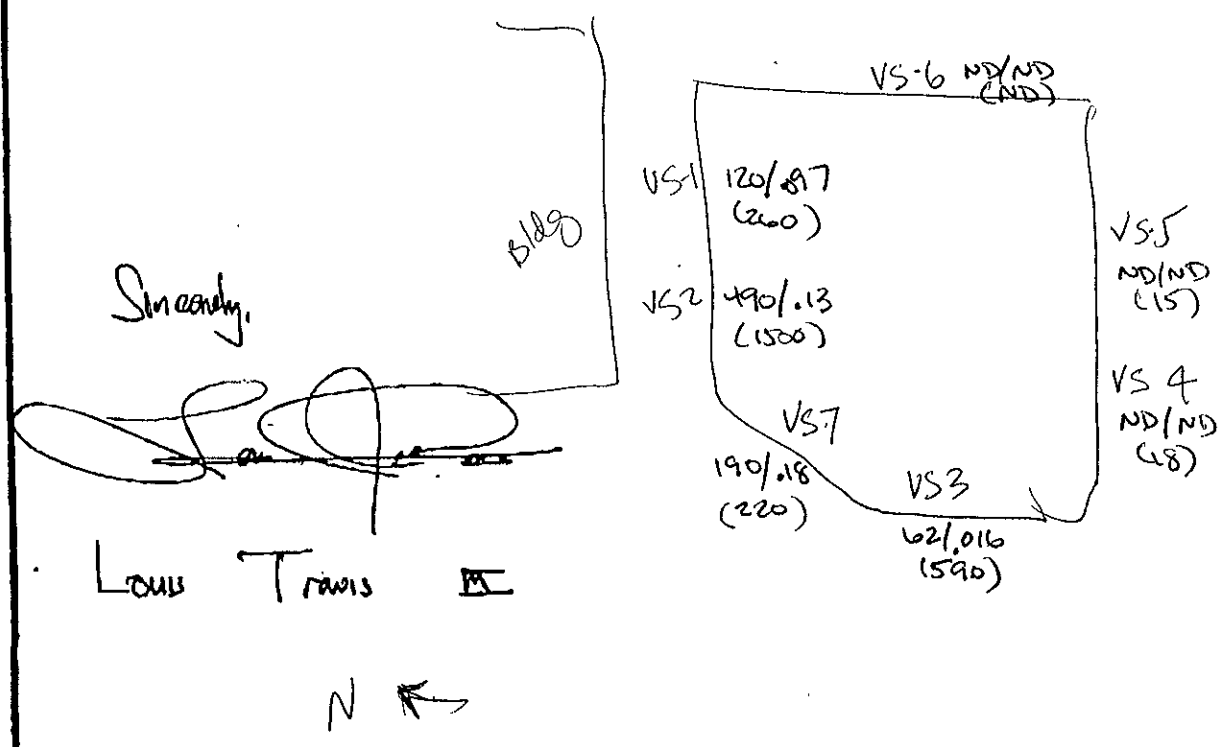
If all pages are not received please notify sender.

MESSAGE:

Dear Eva,

*Overexcavation*

Please find attached, lab results to the above mentioned site.



ppm TPH-G (Benzene LTPH-D)



# PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

Table 3

November 08, 1995

PEL # 9511058

TANK PROTECT ENGINEERING

*overexhaustion*

Attn: Louis Travis III

Re: Eight soil samples for Gasoline/BTEX and Diesel analyses.

Project name: California Refregerate Express, Inc.  
Project location: 860 92nd Ave., - Oakland, CA.  
Project number: 366-111505

Date sampled: Nov 15, 1995  
Date extracted: Nov 16-18, 1995

Date submitted: Nov 16, 1995  
Date analyzed: Nov 16-18, 1995

### RESULTS:

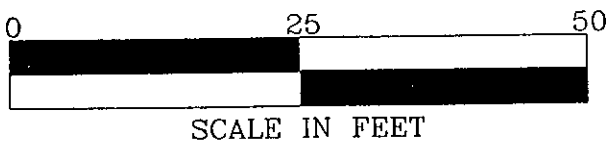
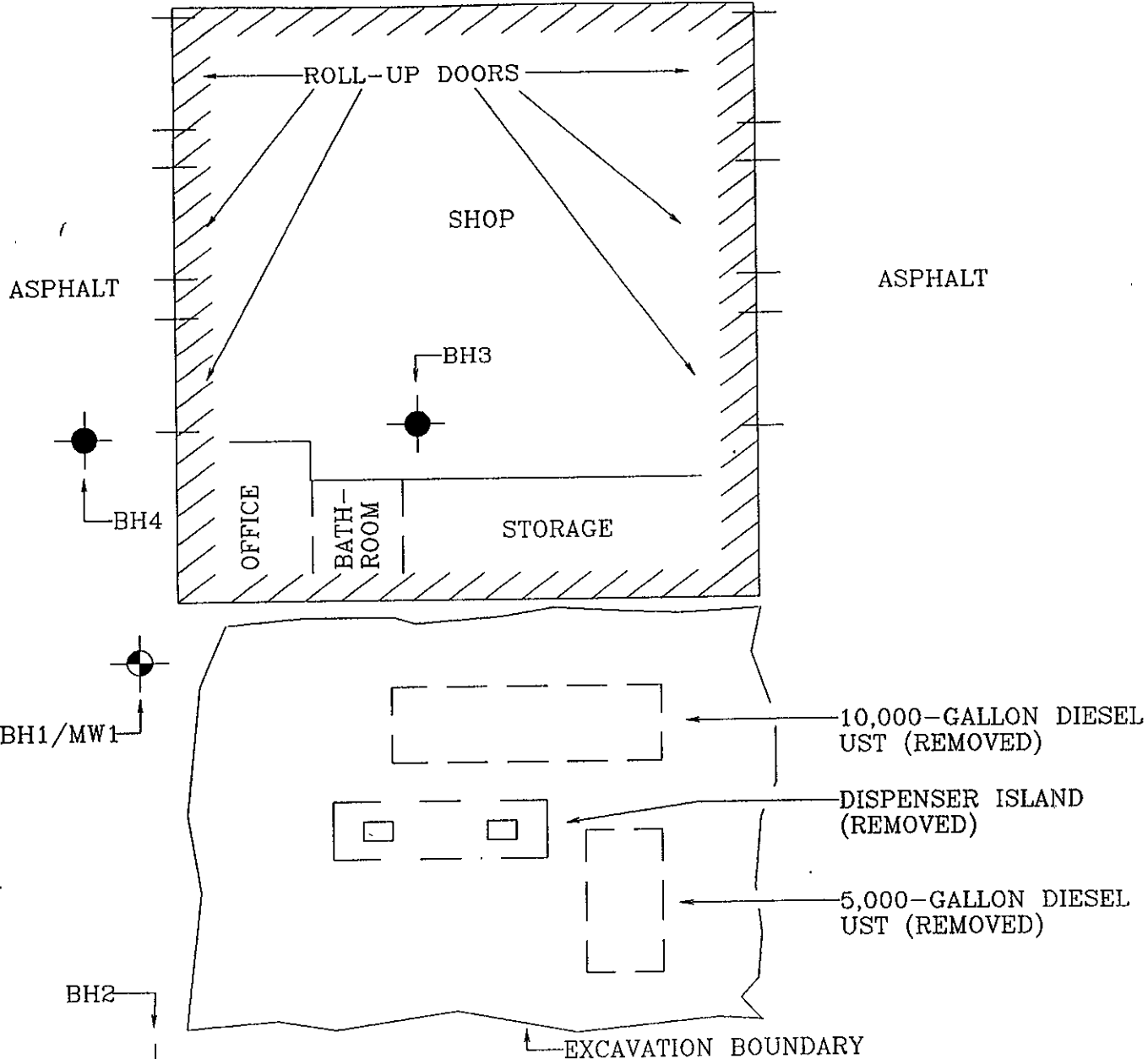
SAMPLE I.D.	<u>Soil</u>					
	Gasoline (mg/Kg)	Diesel (mg/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethyl Benzene (ug/Kg)	Total Xylene (ug/Kg)
SP3-A,B,C,D*	290	---	66	59	200	230
VS-1	120	260	97	46	74	150
VS-2	490	1500	130	96	240	280
VS-3	62	590	16	24	14	63
VS-4	N.D.	18	N.D.	N.D.	N.D.	N.D.
VS-5	N.D.	15	N.D.	N.D.	N.D.	N.D.
<del>VS-6</del>	<del>N.D.</del>	<del>---</del>	<del>N.D.</del>	<del>N.D.</del>	<del>N.D.</del>	<del>N.D.</del>
VS-7	190	220	180	70	190	280
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	89.8%	81.6%	92.9%	102.3%	90.0%	92.7%
Detection limit	1.0	1.0	5.0	5.0	5.0	5.0
Method of Analysis	5030 / 8015	3550 / 8015	8020	8020	8020	8020

GW  
ug/kg

TPH6 ND  
D 2,400  
B ND  
I  
X ↓  
before purg

\*Composited soil sample.

*David Duong*  
David Duong  
Laboratory Director



**LEGEND**

- GROUND WATER MONITORING WELL LOCATION
- └ MW1
- EXPLORATORY BOREHOLE LOCATION
- └ BH3

Map Source: Site Plan, Tank Protect Engineering Tank Closure Report, 2/16/96.

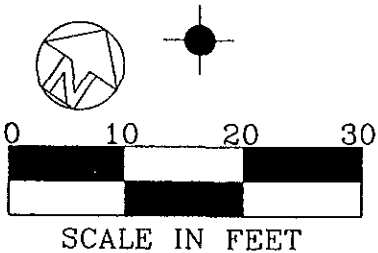
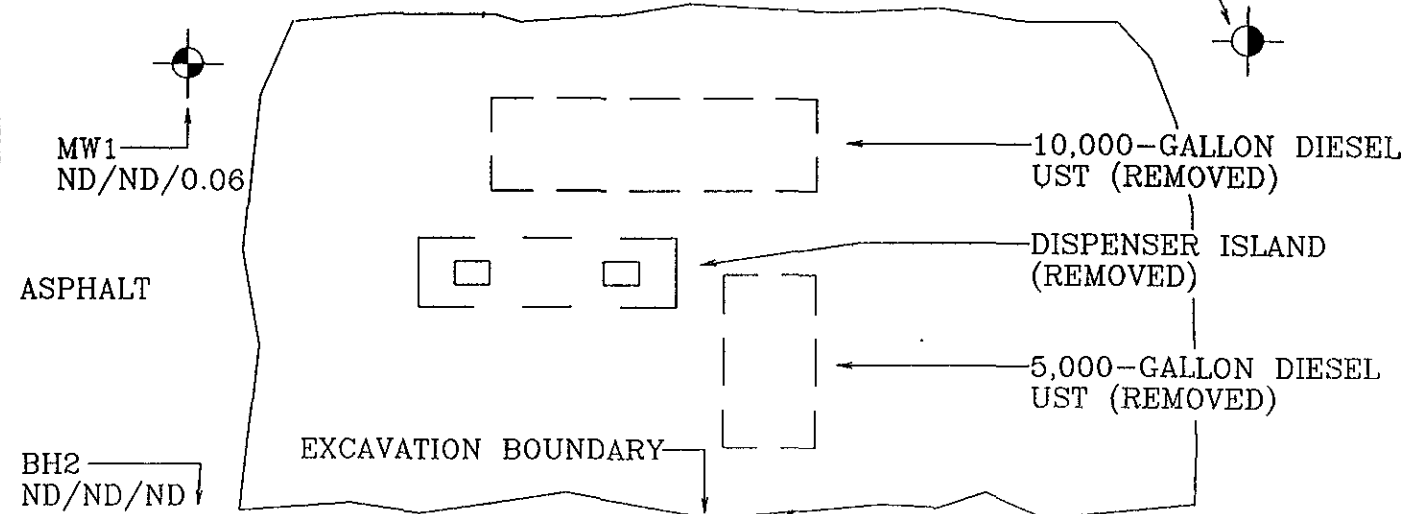
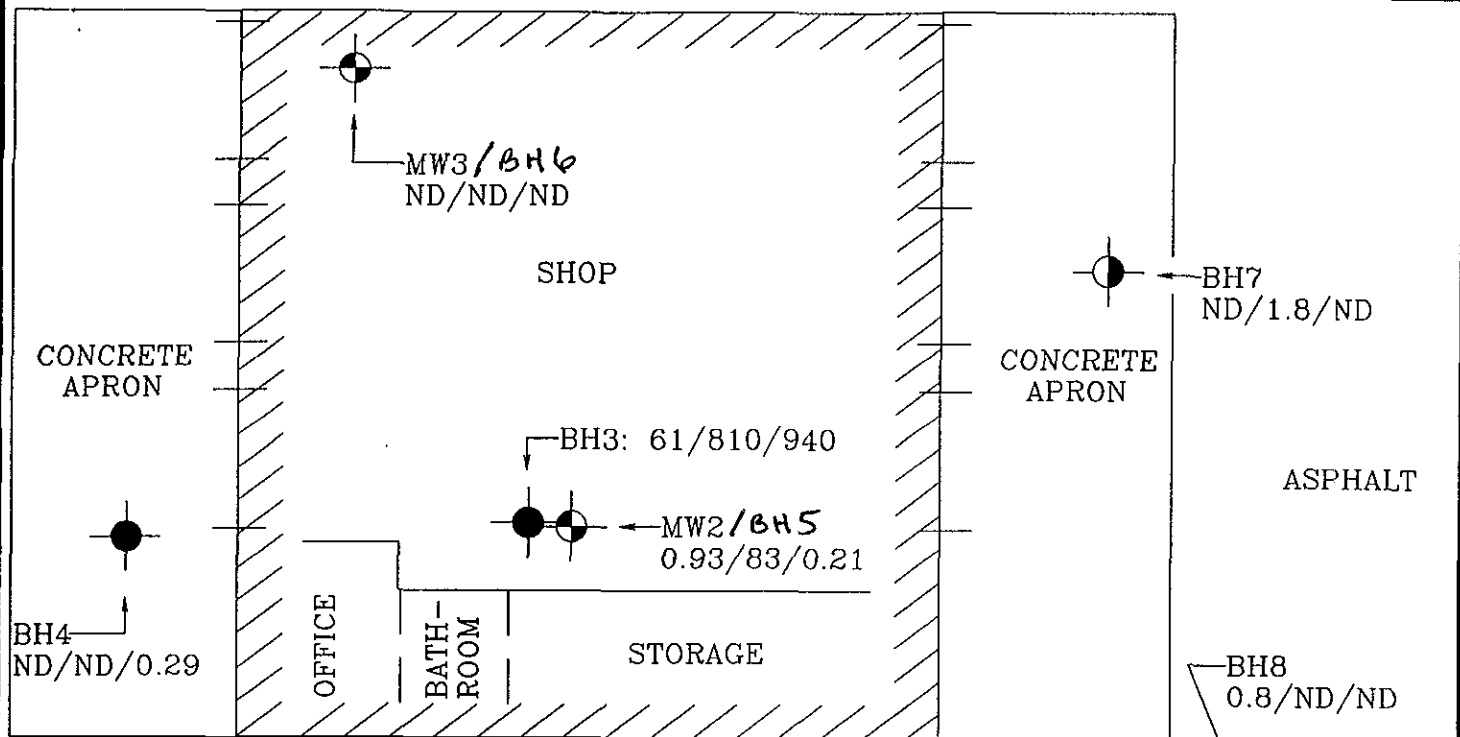
<p>ENVIRONMENTAL BIO-SYSTEMS, INC.</p>	<p>DATE: 8/8/96</p>	<p><b>FIGURE B:4</b> SITE MAP</p>
	<p>DRAWN BY: DAS</p>	
	<p>SCALE: AS SHOWN</p>	

TABLE 4. RESULTS OF SOIL SAMPLES

SAMPLE ID	DEPTH (bgs)	TPHg (mg/kg)	B (µg/kg)	T (µg/kg)	E (µg/kg)	X (µg/kg)	TPHd (mg/kg)	MTBE (µg/kg)	PID (ppm)
BH1	9.5	ND	ND	ND	ND	ND	ND	ND	0
BH2	9.5	ND	ND	ND	ND	ND	ND	ND	0
BH3	9.5	20	30	80	610	560	120	ND	239
BH4	9.5	ND	ND	ND	ND	ND	ND	ND	0

**NOTES**

bgs: Below ground surface.  
 TPHg: Total petroleum hydrocarbons as gasoline.  
 BTEX: Benzene, toluene, ethylbenzene, and total xylenes.  
 TPHd: Total petroleum hydrocarbons as diesel.  
 MTBE: Methyl t-butyl ether.  
 PID: Photoionization detector (in isobutylene equivalents).  
 mg/kg: Milligrams per kilogram.  
 µg/kg: Micrograms per kilograms.  
 See laboratory report for reporting limits.



**LEGEND**

 MW2 0.93/83/0.21	 BH8 0.8/ND/ND
GROUND WATER MONITORING WELL LOCATION AND RESULTS OF ANALYSES TPHg(mg/L)/B(ug/L)/TPHd(mg/L)	EXPLORATORY BOREHOLE LOCATION AND RESULTS OF ANALYSES TPHg(mg/L)/B(ug/L)/TPHd(mg/L)

NOTE: RESULTS FOR BH2, BH3 AND BH4 FROM 7/96 (EBS PROJECT #079-417B).



DATE:  
6/6/97

DRAWN BY:  
DAS

SCALE:  
AS SHOWN

**FIGURE 06 GROUND WATER  
SAMPLE RESULTS**

**DREISBACH ENTERPRISES, INC.**  
 860 92nd AVENUE  
 OAKLAND, CALIFORNIA

TABLE b RESULTS OF SOIL SAMPLES

SAMPLE ID	DEPTH (bgs)	TPHg (mg/kg)	B (µg/kg)	T (µg/kg)	E (µg/kg)	X (µg/kg)	TPHd (mg/kg)	MTBE (µg/kg)	TOC, DUW, P, H <sub>2</sub> O	PID (ppm)
BH7	12'	ND	ND	ND	ND	ND	2	ND	TOC=0.42%	0
BH8	12'	ND	ND	ND	ND	ND	ND	ND	DUW=97.2, P=42.31%, H <sub>2</sub> O=27.98%	0
MW2	12	ND	ND	ND	ND	ND	28	ND	--	468
MW3	12'	ND	ND	ND	ND	ND	ND	ND	--	0

**NOTES**

bgs: Below ground surface.

TPHg: Total petroleum hydrocarbons as gasoline.

BTEX: Benzene, toluene, ethylbenzene, and total xylenes.

TPHd: Total petroleum hydrocarbons as diesel.

TOC: Total organic carbon.

DUW: Dry unit weight (in pounds per cubic foot).

P: Porosity.

H<sub>2</sub>O: Water content.

MTBE: Methyl t-butyl ether.

PID: Photoionization detector (in isobutylene equivalents).

mg/kg: Milligrams per kilogram.

µg/kg: Micrograms per kilograms.

--: Not analyzed.

See laboratory report for reporting limits.

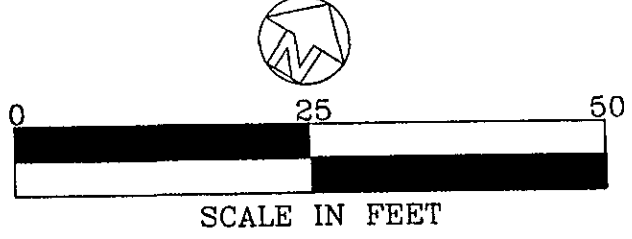
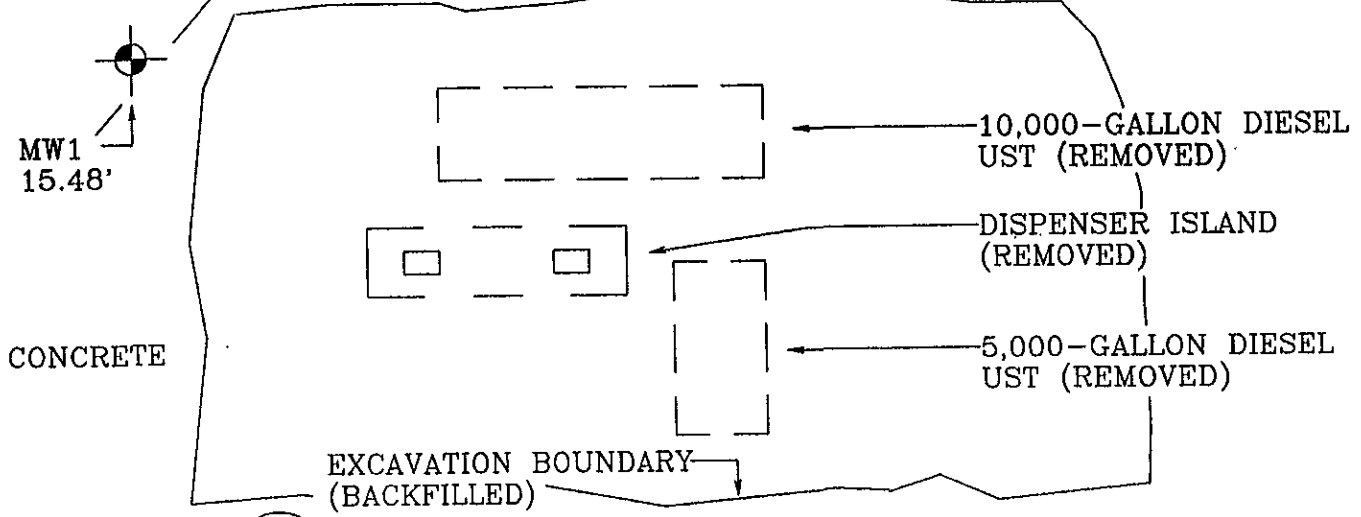
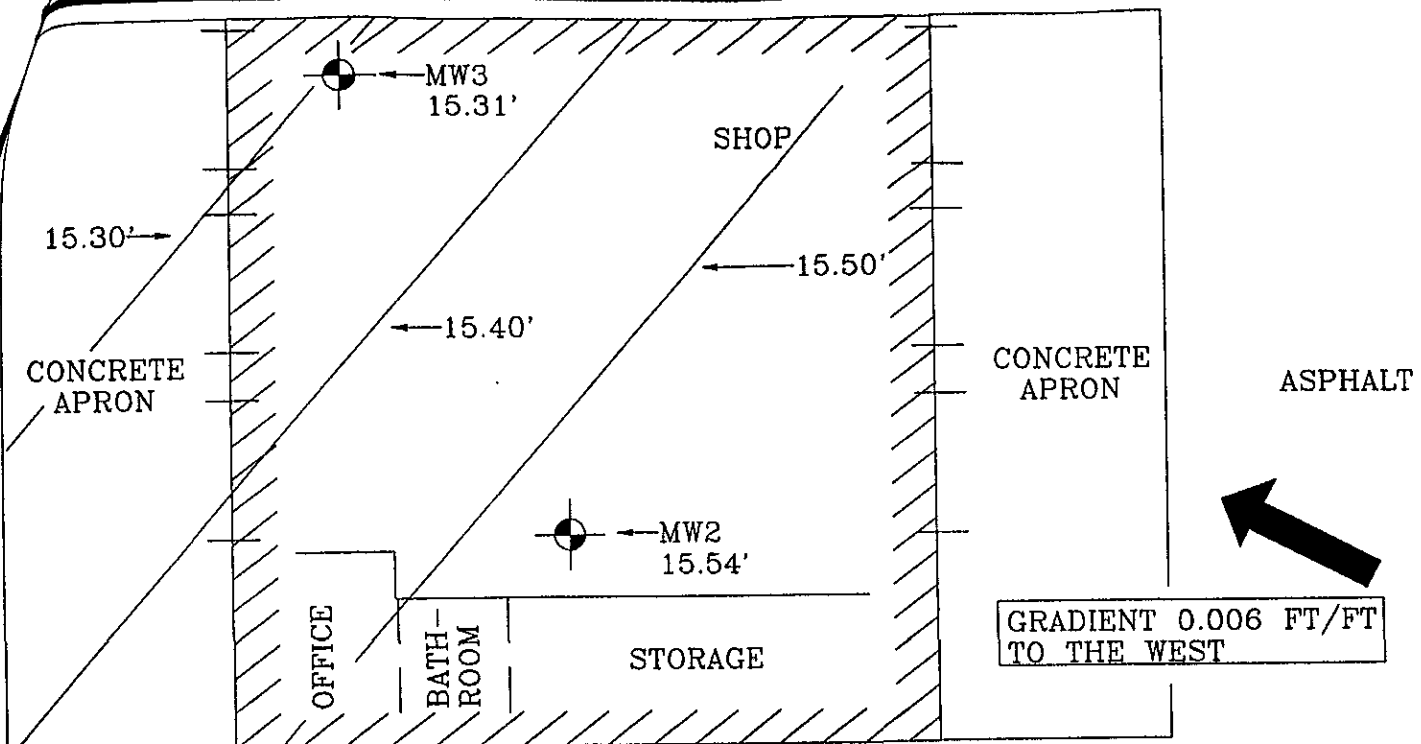


TABLE 2. CUMULATIVE RESULTS OF WATER SAMPLES


SAMPLE ID	TPHg (mg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TPHd (mg/L)
MW1 (7/29/96)	ND	ND	ND	ND	ND	ND	ND
MW1	ND	ND	ND	ND	ND	ND	0.06
MW2	0.93	83	3.5	50	37	15	0.21
MW3	ND	ND	ND	ND	ND	ND	ND
BH7-H <sub>2</sub> O	ND	1.8	1.8	0.6	ND	ND	ND
BH8-H <sub>2</sub> O	0.8	ND	ND	ND	ND	ND	ND


**NOTES**

TPHg: Total petroleum hydrocarbons as gasoline.  
 BTEX: Benzene, toluene, ethylbenzene, and total xylenes.  
 MTBE: Methyl t-butyl ether.  
 TPHd: Total petroleum hydrocarbons as diesel.  
 mg/L: Milligrams per liter.  
 µg/L: Micrograms per liter.  
 See laboratory report for reporting limits.



**LEGEND**

 MW3 15.31' GROUND WATER MONITORING WELL LOCATION AND WATER ELEVATION

 15.50' LINES OF EQUIPOTENTIAL GROUND WATER ELEVATION

Map Source: Site Plan, Tank Protect Engineering Tank Closure Report, 2/16/98.



**ENVIRONMENTAL  
BIO-SYSTEMS, INC.**

DATE:  
3/20/98

DRAWN BY:  
DAS

SCALE:  
AS SHOWN

**FIGURE 0.7 GROUND WATER  
GRADIENT MAP (2/26/98)**

**DREISBACH ENTERPRISES, INC.**  
860 92nd AVENUE  
OAKLAND, CALIFORNIA

8 *DATA*

**TABLE I. CUMULATIVE RESULTS OF WATER SAMPLES**

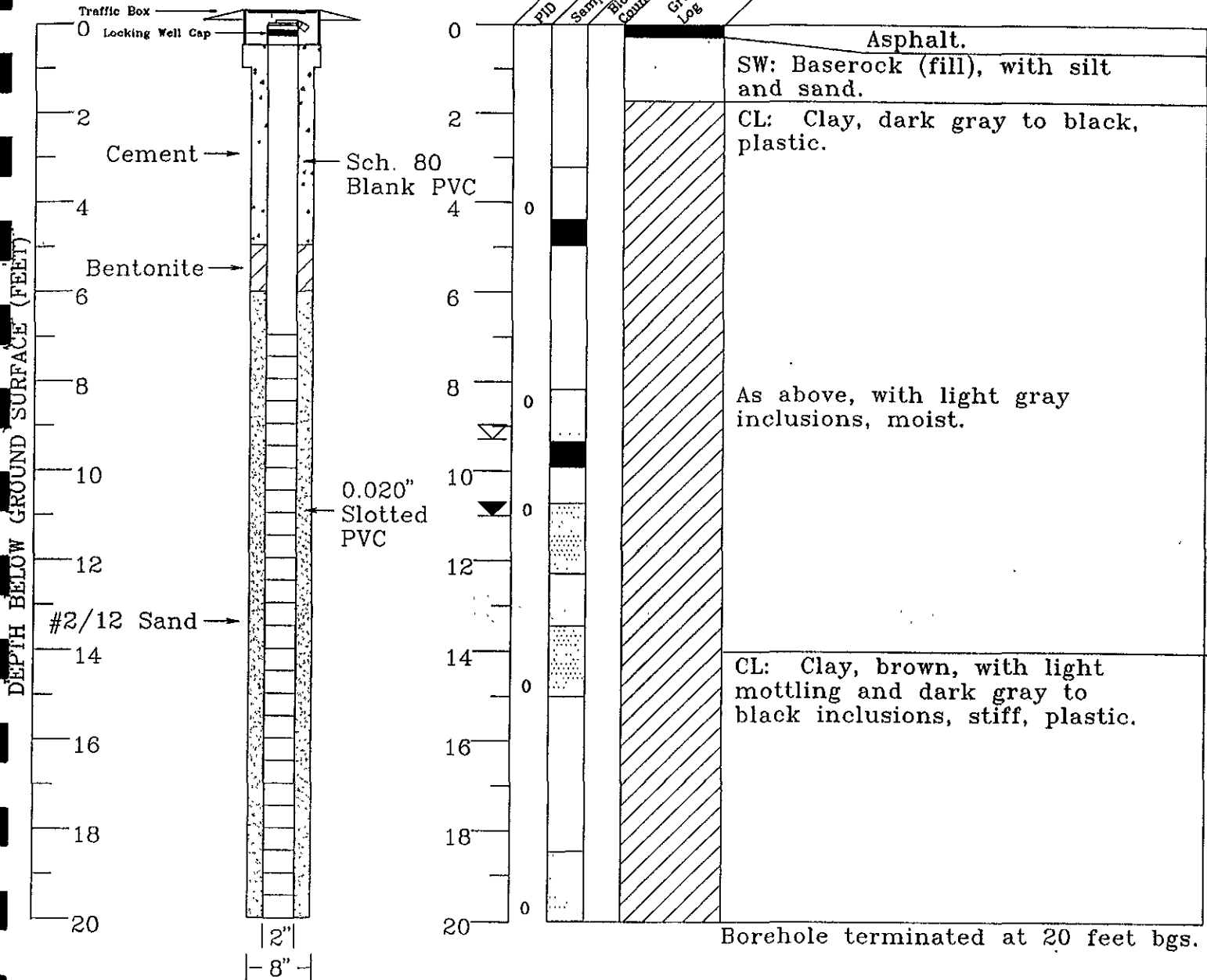
SAMPLE ID	DATE	TPHg (mg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TPHd (mg/L)
MW1	7/29/96	ND	ND	ND	ND	ND	ND	ND
MW1	5/19/97	ND	ND	ND	ND	ND	ND	ND
MW1	8/28/97	ND	ND	ND	ND	ND	ND	0.06
MW1	11/24/97	ND	ND	ND	ND	ND	ND	ND
MW1	2/26/98	ND	ND	ND	ND	ND	ND	ND
MW2	5/19/97	0.93	83	3.5	50	37	15	ND
MW2	8/28/97	0.49	24	1.1	14	8	8	0.21
MW2	11/24/97	2.1	260	5	65	36	ND	0.43
MW2	2/26/98	0.73	80	1.2	11	2	28	0.90
MW3	5/19/97	ND	ND	ND	ND	ND	ND	0.53
MW3	8/28/97	ND	ND	ND	ND	ND	ND	ND
MW3	11/24/97	ND	ND	ND	0.6	ND	ND	ND
MW3	2/26/98	ND	ND	ND	ND	ND	ND	ND

**NOTES**

TPHg: Total petroleum hydrocarbons as gasoline.  
 BTEX: Benzene, toluene, ethylbenzene, and total xylenes.  
 MTBE: Methyl t-butyl ether.  
 TPHd: Total petroleum hydrocarbons as diesel.  
 mg/L: Milligrams per liter.  
 µg/L: Micrograms per liter.  
 See laboratory report for reporting limits.

## WELL CONSTRUCTION DETAILS

## SOIL DESCRIPTION



Logged by: Dave A. Sadoff  
 Inspector: N/A  
 Date: 7/23/96

Drilling Contractor: Gregg  
 Drilling Method: Rhino HSA  
 Driller: Ted, Bob

Sanitary Seal: Portland Cement  
 Sampler Type: Split Spoon  
 Total Boring Depth: 20 Feet

### EXPLANATION

- |  |                             |                  |             |
|--|-----------------------------|------------------|-------------|
|  | water level during drilling |                  | gradational |
|  | potentiometric water level  | NR               | no recovery |
|  | drill sample                | <b>CONTACTS:</b> |             |
|  | chemical analysis sample    | —                | certain     |
|  | sieve sample                | .....            | approximate |
|  | grab sample                 | - -              | uncertain   |

APPENDIX D:  
 LITHOLOGIC LOG  
 OF BH1/MW1

PROJECT #079-417B

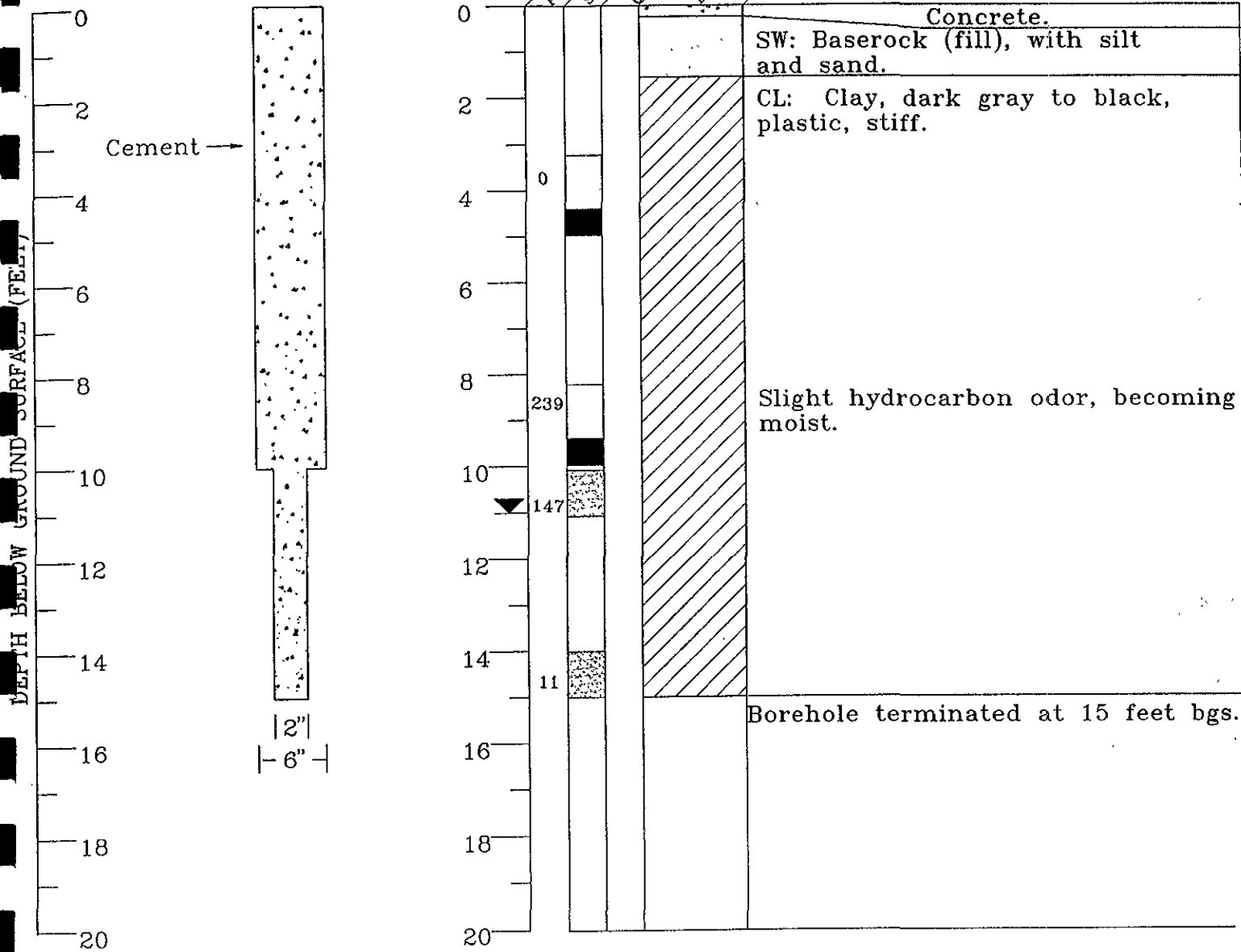
DREISBACH ENTERPRISES  
 860 92nd AVENUE  
 OAKLAND, CALIFORNIA



**ENVIRONMENTAL  
 BIO-SYSTEMS, INC.**

## WELL CONSTRUCTION DETAILS

## SOIL DESCRIPTION



Logged by: Dave A. Sadoff  
 Inspector: N/A  
 Date: 7/23/96

Drilling Contractor: Gregg  
 Drilling Method: Rhino HSA  
 Driller: Ted, Bob

Sanitary Seal: Portland Cement  
 Sampler Type: Split Spoon  
 Total Boring Depth: 15 Feet



**ENVIRONMENTAL  
 BIO-SYSTEMS, INC.**

### EXPLANATION

- |                               |                   |
|-------------------------------|-------------------|
| ▼ water level during drilling | ▨ gradational     |
| ▽ potentiometric water level  | NR no recovery    |
| □ drill sample                | CONTACTS:         |
| ■ chemical analysis sample    | — certain         |
| ⊠ sieve sample                | ----- approximate |
| ⊞ grab sample                 | - - - uncertain   |

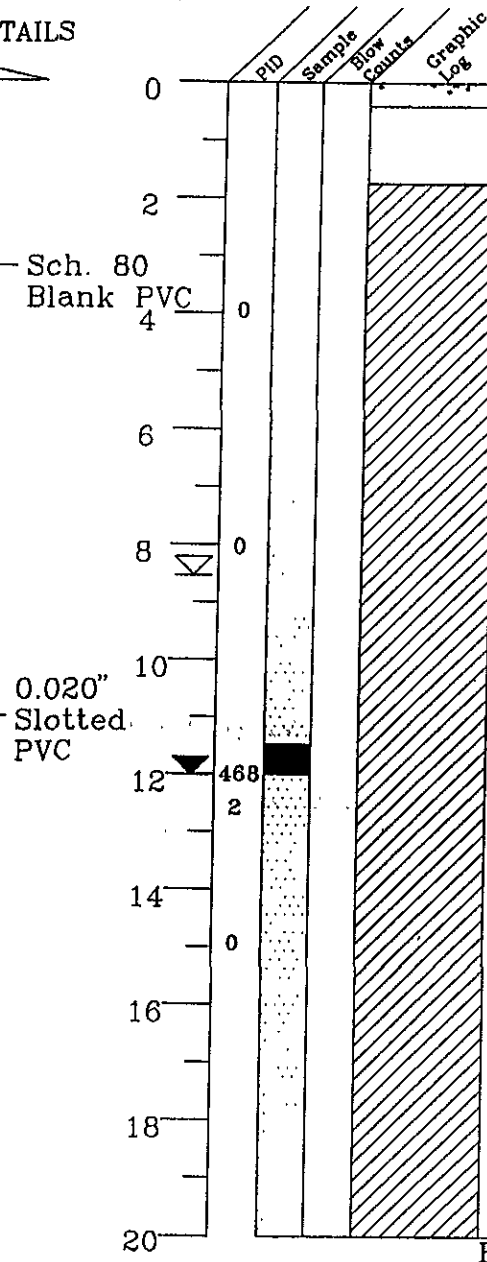
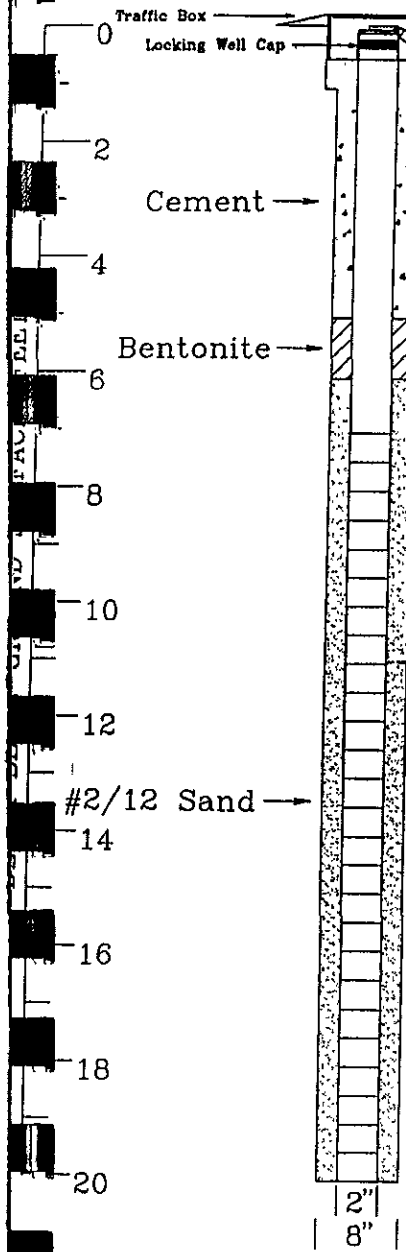
APPENDIX D:  
 LITHOLOGIC LOG  
 OF BH3

PROJECT #079-417B

DREISBACH ENTERPRISES  
 860 92nd AVENUE  
 OAKLAND, CALIFORNIA

# LOG OF SOIL BORING MW2

## BOREHOLE DETAILS



## SOIL DESCRIPTION

0	Concrete.
0 - 2	SW: Baserock (fill), with silt and sand.
2 - 8	CL: Clay, minor silt, dark gray to black, plastic, moderately stiff.
8 - 12	CL: Clay, olive/greenish, strong petroleum odor, stiff, plastic, moist.
12 - 20	CL: Clay, brown, stiff, plastic, with dark gray/olive inclusions.

Borehole terminated at 20 feet bgs.

Logged by: Dave A. Sadoff  
Inspector: N/A  
Date: 5/12/97

Drilling Contractor: Gregg  
Drilling Method: Rhino HSA  
Driller: Bob, Rich

Sanitary Seal: Portland Cement  
Sampler Type: Geoprobe Core  
Total Boring Depth: 20 Feet



ENVIRONMENTAL  
SYSTEMS, INC.

### EXPLANATION

- water level during drilling
- potentiometric water level
- drill sample
- chemical analysis sample
- sieve sample
- grab sample
- gradational
- NR no recovery
- CONTACTS:
- certain
- approximate
- uncertain

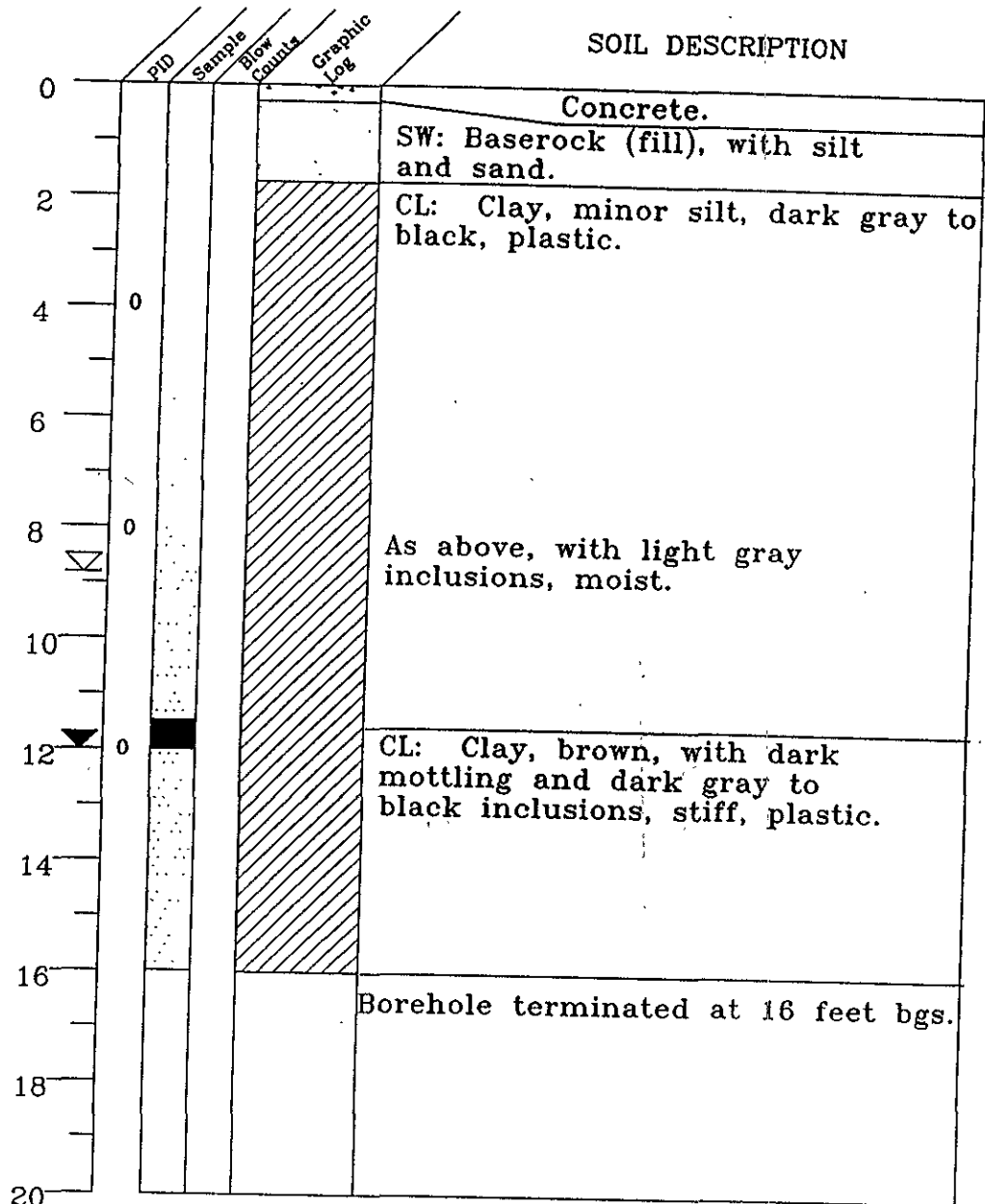
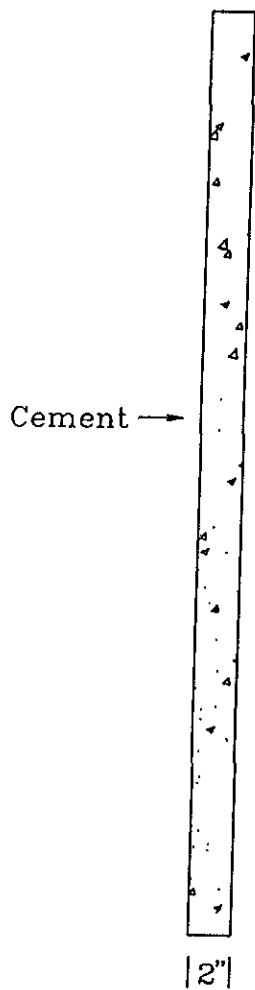
### APPENDIX D: LITHOLOGIC LOG OF MW2

PROJECT #079-458B

DREISBACH ENTERPRISES  
860 92nd AVENUE  
OAKLAND, CALIFORNIA

# LOG OF SOIL BORING BH7

## BOREHOLE DETAILS



Logged by: Dave A. Sadoff  
 Inspector: N/A  
 Date: 5/12/97

Drilling Contractor: Gregg  
 Drilling Method: Rhino HSA  
 Driller: Bob, Rich

Sanitary Seal: Portland Cement  
 Sampler Type: Geoprobe Core  
 Total Boring Depth: 16 Feet



**ENVIRONMENTAL  
 SYSTEMS, INC.**

### EXPLANATION

- water level during drilling
- potentiometric water level
- drill sample
- chemical analysis sample
- sieve sample
- grab sample
- gradational
- NR no recovery
- CONTACTS:**
- certain
- approximate
- uncertain

APPENDIX D:  
 LITHOLOGIC LOG  
 OF BH7

PROJECT #079-458B

DREISBACH ENTERPRISES  
 860 92nd AVENUE  
 OAKLAND, CALIFORNIA