

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, Assistant Agency Director

April 7, 1995
STID 4247

ALAMEDA COUNTY-ENV. HEALTH DEPT.
ENVIRONMENTAL PROTECTION DIV.
1131 HARBOR BAY PKWY., #250
ALAMEDA CA 94502-6577
(510)567-6700

REMEDIAL ACTION COMPLETION CERTIFICATION

Ms. Mary Mahon
General Counsel
Chief's Auto Parts
15303 Dallas Parkway, Suite 800
Dallas, Texas 75248

RE: SYDA Foundation (Former Chief's Auto Parts)
5714 San Pablo Avenue, Oakland, California 94608

Dear Ms. Mahon:

This letter confirms the completion of site investigation and remedial action for the underground storage tanks (1-10,000 gallon gasoline, 2-8,000 gallon gasoline, one waste oil) at the above described location.

Based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the four underground storage tanks 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.

Please contact Susan L. Hugo at (510) 567-6780 if you have any questions regarding this matter.

Sincerely,

Rafat A. Shahid, Director

cc: Ariu Levi, Acting Chief, Environmental Protection - files
Kevin Graves, RWQCB
Mike Harper, SWRCB
Warren Chapman, SYDA Foundation, 700 Irwin Street, Suite 101
San Rafael, California 94901
John Church, GHH Engineering Inc., 8084 Old Auburn Road, Suite E
Citrus Heights, California 95610

RECEIVED

MAR 31 1995

CASE CLOSURE SUMMARY

HEALTH SERVICES
COUNTY

Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION Date: March 15, 1995
Agency name: Alameda County-HazMat Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502 Phone: (510) 567-6700
Responsible staff person: Susan Hugo Title: Sr. Hazardous Materials Spec.

II. CASE INFORMATION
Site facility name: SYDA Foundation - (Former Chief's Auto Parts)
Site facility address: 5714 San Pablo Ave., Oakland, CA 94608
RB LUSTIS Case No: N/A Local Case No./LOP Case No.: 4247
URF filing date: 2/1/91 SWEEPS No: N/A

Responsible Parties: Addresses: Phone Numbers:
Chiefs Auto Parts 15303 Dallas Parkway Ste 800 (214) 404-1114
Dallas, Texas 75248

| <u>Tank No:</u> | <u>Size in gal.:</u> | <u>Contents:</u> | <u>Closed in-place or removed?:</u> | <u>Date:</u> |
|-----------------|----------------------|------------------|-------------------------------------|--------------|
| 1 | 10,000 | Gasoline | Removed | August 1985 |
| 2 | 8,000 | Gasoline | Removed | August 1985 |
| 3 | 8,000 | Gasoline | Removed | August 1985 |
| 4 | unknown | Waste oil | Removed | August 1985 |

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: Unknown
Site characterization complete? YES
Date approved by oversight agency: 7/3/91
Monitoring Wells installed? YES Number: Five (5)
Proper screened interval? YES
Highest GW depth below ground surface: 0.60 ft Lowest depth: 10.13 ft
Flow direction: Southwest to southeast
Most sensitive current use: Parking Lot
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): Unknown

Report (s) on file ? YES Where is report(s) filed? Alameda County
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

Leaking Underground Fuel Storage Tank Program

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> |
|-----------------|--|---|-------------------------|
| Tank | 1 -10,000 gallon 2 - 8,000 gallon 1 - unknown capacity | H&H - San Francisco | August 1985 |
| Piping | Aprox 450 feet | Stolen from secured area Richmond, CA | January 1992 |
| Soil | 630 cu yds 120 cu yds | BFI - Vasco Rd. Livermore Remco Inc. - Richmond, CA | 2/10-5/19/94 3/25/93 |
| Groundwater | 4600 gallons | Discharge into storm drain under RWQCB's variance | 5/15/92 to 9/9/94 |

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

| <u>Contaminant</u> | <u>Soil (ppm)</u> | | <u>Water (ppb)</u> | |
|--------------------|-------------------|--------------|--------------------|--------------|
| | <u>Before</u> | <u>After</u> | <u>Before</u> | <u>After</u> |
| TPH (Gas) | 5300 | 73 | 180 | ND |
| TPH (Diesel) | 1700 | 1400 | ND | ND |
| TPH (Motor oil) | 510 | ND | 130 | ND |
| Benzene | 52 | 0.011 | 8.0 | ND |
| Toluene | 0.6 | 0.76 | 3.9 | ND |
| Xylene | 570 | 0.160 | 4.1 | ND |
| Ethylbenzene | 100 | 0.029 | 0.9 | ND |
| Oil & Grease | 1100 | 330 | ND | ND |
| Heavy Metals | See comments | | See comments | |
| Others | See comments | | See comments | |

Comments (Depth of Remediation, etc.):

The site is a former gasoline station and currently being used as a parking lot. Four underground storage tanks (2-8,000 gallon gasoline, 1-10,000 gallon gasoline, and 1 waste oil tank unknown capacity) were removed in 1985 according to a report by Levine Fricke dated August 27, 1990. The fueling islands and some of the former product lines were still present at the site. Five exploratory borings were conducted and one monitoring well (W-1) was installed in June 12, 1989. Soil samples indicated the presence of TPH gasoline as high as 720 ppm and 0.7 ppm benzene. Groundwater detected 180 ppb TPH gasoline and 8 ppb benzene.

On January 22, 1992, the remaining pipings associated with the former tanks were removed. Overexcavation of the contaminated soil was conducted in the dispenser island, piping trenches and the former tank excavation. A total of 720 cubic yards of soil was generated from the overexcavation. Fill materials such as brick foundation appeared to be present at the site. Confirmation soil samples indicated the following residual soil contamination at the site in addition to the list mentioned above:

Leaking Underground Storage Tank Program

26 ppb TCE, 89 ppm chromium, 7.1 ppm lead, 120 ppm zinc, 38 ppm nickel, 19 ppb acetone, and 22 ppb carbon disulfide. Polynuclear aromatics were also detected in the soil ranging from 0.97 ppm to 11 ppm. These PNA's appear to occur in a black soil zone which extend off the site and do not appear to be related to gas station activities.

Four shallow groundwater monitoring wells were installed in May 20, 1992. Depth to water ranges from 0.60 to 10.13 feet bgs. Groundwater flow appears to be toward the south-southwest. Soil at the site is characterized by very fine grained material consisting chiefly of clay and sandy silty clay. Groundwater did not detect any PNA's, TPH diesel, TPH gasoline, and TOG. Halogenated VOC's were not detected except at one sampling event in MW-4 at 3.3 ppb vinyl chloride, 2.1 ppb DCE, and 0.63 ppb DCA. TPH as motor oil was found in the following wells : MW-3 during five sampling events as high as 180 ppb; MW-4 during two sampling events as high as 160 ppb; and MW-5 during one sampling event at 110 ppb. Xylenes were detected at 4.1 ppb during two to three sampling events. Ethyl benzene was detected during one sampling event at 0.9 ppb, toluene at 3.9 ppb and benzene at 2.7 ppb. Four quarters of non detectable concentration of target compounds in groundwater had occurred at the site.

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: **NA**
Should corrective action be reviewed if land use changes? **YES**
Monitoring wells Decommissioned: **NO**
Number Decommissioned: **NONE** Number Retained: **FIVE (5)**
List enforcement actions taken: **NA**
List enforcement actions rescinded: **NA**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Susan L. Hugo Title: Sr. Hazardous Materials Specialist
Signature: *Susan L. Hugo* Date: March 15, 1995

Reviewed by
Name: Barney Chan Title: Hazardous Materials Specialist
Signature: *Barney Chan* Date: 3/21/95

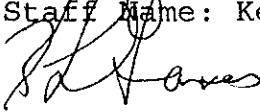
Name: Thomas Peacock Title: Sup. Hazardous Materials Specialist
Signature: *Thomas Peacock* Date: 3-21-95

Leaking Underground Storage Tank Program

VI. RWQCB NOTIFICATION

Date Submitted to RB:

RWQCB Staff Name: Kevin Graves



RB Response:

Title: Water Resources Control Engineer

Date: 3/28/95

Approved

VII. ADDITIONAL COMMENTS, DATA, ETC.

Currently, the site is used as a parking lot. Aggressive source removal has occurred at this site. The potential beneficial uses of the groundwater do not appear to be threatened to a significant extent from the release that occurred at the site associated with the former four tanks and associated pipings.

INTRODUCTION

GHH Engineering, Inc. (GHH) has prepared this Quarterly Status Report (QSR) to provide Chief Auto Parts, Inc. with the results of the groundwater monitoring conducted in the third quarter of 1994, at the 5714 San Pablo Avenue site. The site is located at the southeast corner of the San Pablo-Stanford Avenue intersection in Oakland, California, as shown on Figure 1. The reader is referred to the following documents for additional information regarding work completed at the site.

- o Quarterly Status Report, prepared by GHH Engineering, dated June, 1994
- o Quarterly Status Report, prepared by GHH Engineering, dated March, 1994;
- o Quarterly Status Report, prepared by GHH Engineering, dated January, 1994;
- o Quarterly Status Report, prepared by GHH Engineering, dated October, 1993;
- o Quarterly Status Report, prepared by GHH Engineering, dated June, 1993;
- o Additional Work Schedule dated January 4, 1993;
- o Soil Remediation and Preliminary Investigation and Evaluation Report (SR/PIER) dated July 30, 1992;
- o Soil Remediation/Groundwater Investigation Workplan (workplan) dated July 19, 1991;
- o "Report on Soil and Groundwater Investigation, Former Tank Area, 5714 San Pablo Avenue, Oakland, California prepared by Levine-Fricke, Inc. (L-F), dated August 27, 1990; and
- o Preliminary Soil Testing Program, Stanford-San Pablo Avenue Site, Oakland, California, prepared by Kaldveer Associates Geoscience Consultants, dated March 9, 1989.

Copies of these reports may be obtained from this office if necessary to assist the reader in reviewing the project.

GROUNDWATER SAMPLING

On September 9, 1994, groundwater samples were collected from monitoring wells MW-2 through MW-5, located as shown on Figure 2. The samples were submitted to Western Environmental Science and Technology, Inc. (WEST) for total petroleum hydrocarbons as gasoline (TPH G; EPA Method 8015 Modified), TPH as diesel (TPH D; EPA Method 8015 Modified), TPH as motor oil (TPH M; EPA Method 8015 Modified), benzene, toluene, ethylbenzene, and xylenes, (BTEX; EPA Method 8020) analyses. The monitoring well MW-4 sample was also analyzed for halogenated volatile organic compounds (HVOC; EPA Method 8010).

Monitoring well W-1, which was constructed by a previous consultant, was not sampled because the screened interval extends from approximately 10-feet below grade to 19-feet below grade, and has not bridged the water table since GHH began on site work in January, 1992. No constituents were detected in the groundwater at the site. The analytical results are summarized in Table 1. The laboratory reports and chain-of-custody documentation are contained in Appendix A.

SAN PABLO QUARTERLY STATUS REPORT SEPTEMBER, 1994

The purge water from the monitoring wells is contained on site in labeled 55-gallon drums. The groundwater will be released to the storm water drainage system in accordance with the requirements of the San Francisco Bay Regional Water Quality Control Board (Regional Board).

GROUNDWATER LEVEL MONITORING

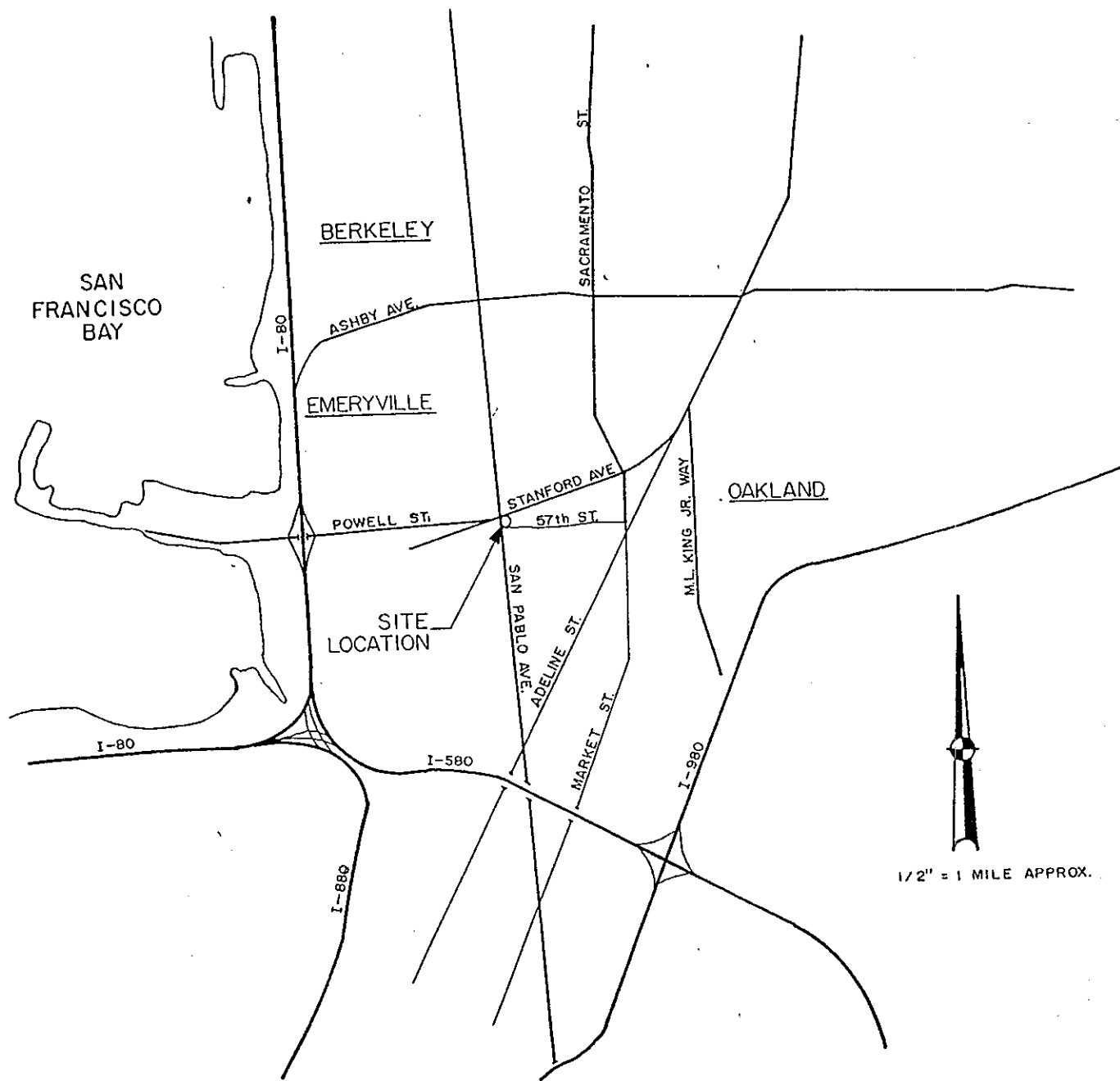
Static water level measurements (SWL's) have been collected monthly for the first year of monitoring with the exception of April and November, 1993, as shown in Table 2. The SWL's are being collected quarterly in 1994. The changes in the SWL's between May, 1994 and September, 1994 have decreased from 1.24-feet in MW-5 to 1.76-feet in MW-2 and have ranged from 5 to 8-feet below grade (fbg).

The groundwater gradient direction and magnitude were calculated from monitoring wells W-1, MW-3 and MW-5, as shown in Table 3 and Figure 3, since these wells are located outside the remedial excavation. Monitoring wells MW-2 and MW-4 are located within the excavations and were not used in the gradient calculations since groundwater gradient data could be influenced by the more permeable backfill material. For the September, 1994 sampling event the groundwater gradient was 0.08, and the groundwater flow direction was S 13 E. These groundwater conditions are consistent with previous findings.

CONCLUSIONS

For the fourth consecutive sampling event none of the tested constituents were detected in the groundwater at the site. The decrease in constituent concentrations may be due to the removal of approximately 750 cubic yards (cy) of petroleum hydrocarbon impacted soil from the site in 1992 and 1993. Monitoring wells MW-2, MW-4, and MW-5 have not contained any of the tested constituents for five, six and six consecutive quarters, respectively. Monitoring well MW-3 has not contained TPH M for four consecutive quarters, and has not contained any of the other constituents for over two years. We have received, completed and submitted Alameda County Department of Environmental Health Case Closure Summary Forms. In our opinion no further work at the site is necessary, therefore we are requesting site closure. Quarterly groundwater samples will be collected in November, 1994 for the December 31, 1994 QSR if site closure is not approved by that time. Therefore, we are requesting a timely response to the request for site closure to minimize future expenses for our client.

FIGURE 1
5714 SAN PABLO AVENUE
OAKLAND, CA
VICINITY MAP



GWH ENGINEERING INC.

RCE #27011 LIC. #537901

8084 Old Auburn Road, Suite E

Citrus Heights, CA 95610

(916) 723-7645

FIGURE 2
5714 SAN PABLO AVENUE
OAKLAND, CA
SITE PLAN

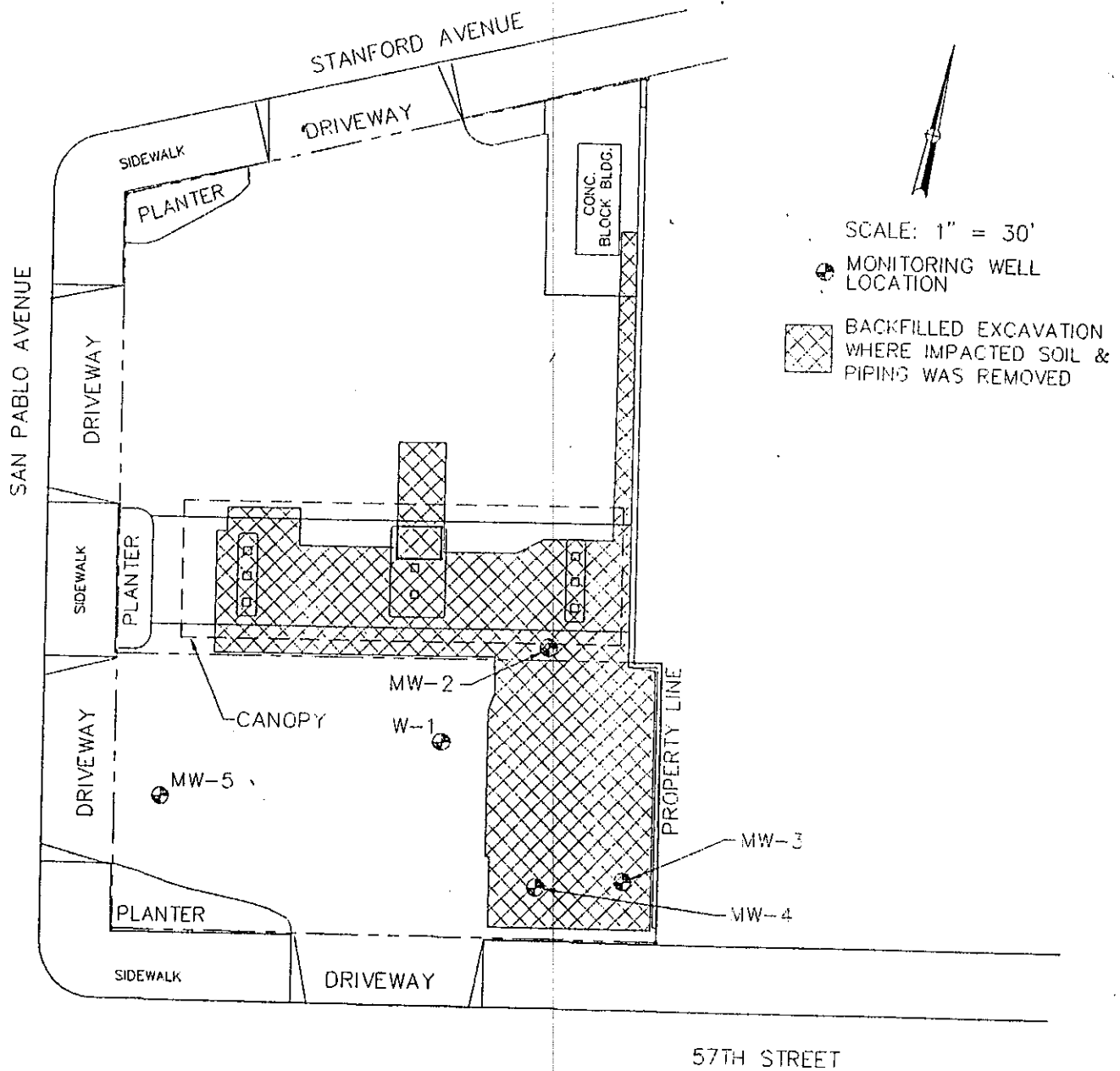
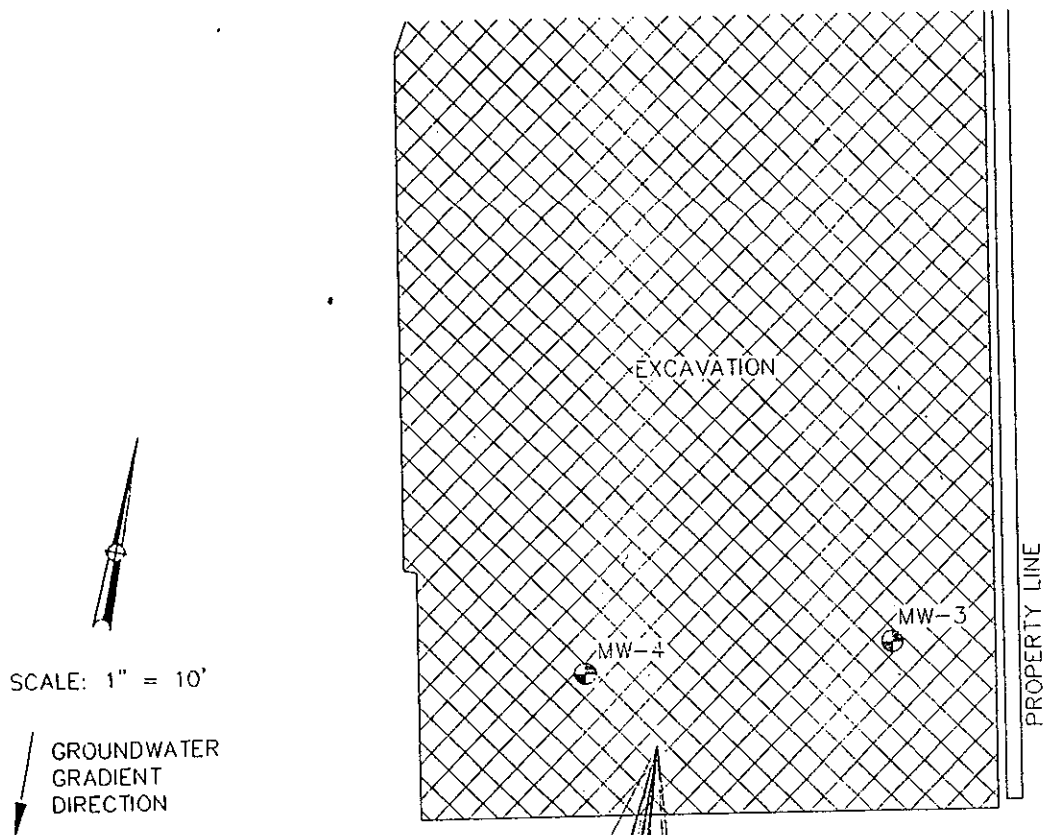
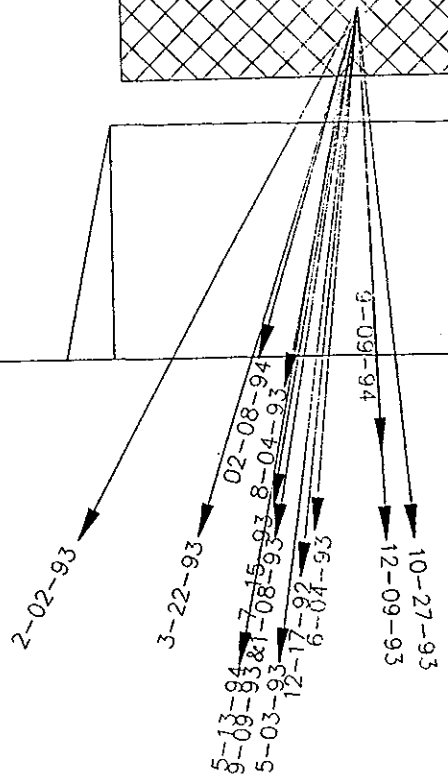


FIGURE 3
 5714 SAN PABLO AVENUE
 OAKLAND, CA
 GROUNDWATER GRADIENT
 DIRECTION MAP



DRIVEWAY



GWH ENGINEERING INC.

RCE #27011 LIC. #537901

TABLE 2 (CONTINUED)
GROUNDWATER ELEVATION DATA
5214 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

| MONITORING WELL | DATE | TOC TO GROUNDWATER (feet) | ASSUMED ELEVATION TOC (feet) | GROUNDWATER ELEVATION (feet) |
|-----------------|----------|---------------------------|------------------------------|------------------------------|
| MW-4 | 05/27/92 | 7.66 | 99.72 | 92.06 |
| | 12/17/92 | 1.40 | | 98.32 |
| | 01/08/93 | 0.60 | | 99.12 |
| | 02/02/93 | 2.12 | | 97.60 |
| | 03/22/93 | 2.51 | | 97.21 |
| | 05-03-93 | 3.51 | | 96.21 |
| | 06-04-93 | 3.83 | | 95.89 |
| | 07-15-93 | 4.29 | | 95.43 |
| | 08-04-93 | 4.51 | | 95.21 |
| | 09-09-93 | 5.10 | | 94.62 |
| | 10-27-93 | 5.68 | | 94.04 |
| | 12-09-93 | 3.72 | | 96.00 |
| | 02-08-94 | 1.95 | | 97.77 |
| | 05-13-94 | 3.60 | | 96.12 |
| 09-09-94 | 4.90 | 94.82 | | |
| MW-5 | 05/27/92 | 6.51 | 98.80 | 92.29 |
| | 12/17/92 | 4.50 | | 94.30 |
| | 01/08/93 | 4.67 | | 94.13 |
| | 02/02/93 | 5.35 | | 93.45 |
| | 03/22/93 | 5.51 | | 93.29 |
| | 05-03-93 | 5.92 | | 92.88 |
| | 06-04-93 | 6.16 | | 92.64 |
| | 07-15-93 | 6.65 | | 92.15 |
| | 08-04-93 | 6.83 | | 91.97 |
| | 09-09-93 | 7.06 | | 91.74 |
| | 10-27-93 | 4.16 | | 94.64 |
| | 12-09-93 | 6.38 | | 92.42 |
| | 02-08-94 | 6.98 | | 91.82 |
| | 05-13-94 | 5.93 | | 92.87 |
| 09-09-94 | 7.17 | 91.63 | | |

TOC Top of casing

TABLE 2
GROUNDWATER ELEVATION DATA
5214 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

| MONITORING WELL | DATE | TOC TO GROUNDWATER (feet) | ASSUMED ELEVATION TOC (feet) | GROUNDWATER ELEVATION (feet) |
|-----------------|----------|---------------------------|------------------------------|------------------------------|
| W-1 | 01/13/92 | 5.52 | 100.00 | 94.48 |
| | 05/27/92 | 6.35 | | 93.65 |
| | 12/17/92 | 3.55 | | 96.45 |
| | 01/08/93 | 3.87 | | 96.13 |
| | 02/02/93 | 4.80 | | 95.20 |
| | 03/22/93 | 4.86 | | 95.14 |
| | 05-03-93 | 5.77 | | 94.23 |
| | 06-04-93 | 5.83 | | 94.17 |
| | 07-15-93 | 6.36 | | 93.64 |
| | 08-04-93 | 6.57 | | 93.43 |
| | 09-09-93 | 6.95 | | 93.05 |
| | 10-27-93 | 4.30 | | 95.70 |
| | 12-09-93 | 6.69 | | 93.31 |
| | 02-08-94 | 5.00 | | 95.00 |
| 05-13-94 | 5.89 | 94.11 | | |
| 09-09-94 | 7.32 | 92.40 | | |
| MW-2 | 05/27/92 | 5.04 | 100.14 | 95.10 |
| | 12/17/92 | 1.90 | | 98.24 |
| | 01/08/93 | 0.98 | | 99.16 |
| | 02/02/93 | 1.95 | | 98.19 |
| | 03/22/93 | 3.12 | | 97.02 |
| | 05-03-93 | 4.07 | | 96.07 |
| | 06-04-93 | 4.37 | | 95.77 |
| | 07-15-93 | 4.86 | | 95.28 |
| | 08-04-93 | 5.07 | | 95.07 |
| | 09-09-93 | 5.78 | | 94.36 |
| | 10-27-93 | 6.11 | | 94.03 |
| | 12-09-93 | 4.80 | | 95.34 |
| | 02-08-94 | 2.20 | | 97.94 |
| | 05-13-94 | 4.24 | | 95.90 |
| 09-09-94 | 6.00 | 93.72 | | |
| MW-3 | 05/27/92 | 10.13 | 99.72 | 89.59 |
| | 12/17/92 | 5.70 | | 94.02 |
| | 01/08/93 | 5.18 | | 94.54 |
| | 02/02/93 | 4.69 | | 95.03 |
| | 03/22/93 | 5.43 | | 94.29 |
| | 05-03-93 | 6.22 | | 93.50 |
| | 06-04-93 | 7.18 | | 92.54 |
| | 07-15-93 | 7.14 | | 92.58 |
| | 08-04-93 | 7.37 | | 92.35 |
| | 09-09-93 | 7.81 | | 91.91 |
| | 10-27-93 | 8.52 | | 91.20 |
| | 12-09-93 | 8.82 | | 90.90 |
| | 02-08-94 | 6.39 | | 93.33 |
| | 05-13-94 | 6.66 | | 93.06 |
| 09-09-94 | 8.28 | 90.52 | | |

TOC Top of casing

**TABLE 1
GROUNDWATER ANALYTICAL DATA
5714 SAN PABLO AVENUE
OAKLAND, CALIFORNIA**

| Sample ID | Date | Benzene (ppb) | Toluene (ppb) | Ethylbenzene (ppb) | Xylenes (ppb) | TPH G (ppb) | TPH D (ppb) | TPH M (ppb) |
|---|----------|---------------|---------------|--------------------|---------------|-------------|-------------|-------------|
| MW-2 <i>ND = 625</i> | 05-27-92 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 01-08-93 | BRL | BRL | BRL | BRL | BRL | BRL | NS |
| | 05-03-93 | 1.3 | 2.6 | 0.48 | 2.8 | BRL | BRL | BRL |
| | 05-22-93 | 0.67 | 0.39 | BRL | 0.71 | BRL | NS | NS |
| | 08-04-93 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 12-09-93 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 02-08-94 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 05-13-94 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 09-09-94 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| MW-3 | 05-27-92 | BRL | BRL | BRL | BRL | BRL | BRL | 130 |
| | 01-08-93 | BRL | BRL | BRL | BRL | BRL | BRL | 65 |
| | 05-03-93 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 05-22-93 | NS | NS | NS | NS | NS | BRL | 180 |
| | 08-04-93 | BRL | BRL | BRL | BRL | BRL | BRL | 88 |
| | 08-04-93 | NA | NA | NA | NA | NA | NA | 93 |
| | 12-09-93 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 02-08-94 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 05-13-94 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| MW-4 <i>Cd, Cr, Pb Ni = NS Edn = 3.2 ppb TDG = ND ND = 625</i> | 05-27-92 | BRL | 0.84 | BRL | 0.67 | BRL | BRL | 120 |
| | 01-08-93 | BRL | 0.51 | BRL | 1.0 | BRL | BRL | 160 |
| | 05-03-93 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 05-22-93 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 08-04-93 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 12-09-93 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 02-08-94 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 05-13-94 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 09-09-94 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| MW-5 <i>ND = 625</i> | 05-27-92 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 01-08-93 | BRL | 0.39 | BRL | 0.81 | BRL | BRL | 110 |
| | 01-08-93 | BRL | BRL | BRL | 0.58 | BRL | BRL | BRL |
| | 05-03-93 | 2.7 | 3.9 | 0.90 | 4.1 | BRL | BRL | BRL |
| | 05-22-93 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 08-04-93 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 12-09-93 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 02-08-94 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| | 05-13-94 | BRL | BRL | BRL | BRL | BRL | BRL | BRL |
| 09-09-94 | BRL | BRL | BRL | BRL | BRL | BRL | BRL | |
| SAL | | 0.80 | 40.0 | 30.0 | 20.0 | NA | 10.0 | NA |
| Reporting Limit | | .30 | .30 | .30 | .50 | 50 | 50 | 50 |

*HALOGENATED
VOC's 601*

*Final Chloride = 3.3
PCB = 2.1
PCB = 0.63
ND*

ND = 601

*ND
ND*

TPH G Total petroleum hydrocarbon as gasoline
 TPH D Total petroleum hydrocarbon as diesel
 TPH M Total petroleum hydrocarbon as motor oil
 ppb Parts per billion
 ppm Parts per million
 BRL Below reporting limit
 NA Not analyzed
 SAL State action levels

*625 - Semi Volatile Organic
Priority Pollutants*

*(5/3/93) MW-1 -> B = 5.7 ppb
T = 3.4
E = 2.9
X = 6.0
gas = 76
d = ND
MO > 170*

TABLE 3
GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE
5214 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

| Date | Direction | Magnitude | Monitoring Well Used |
|----------|-----------|-----------|----------------------|
| 12-17-92 | S 5 E | 0.1344 | 1, 3, 5 |
| 01-08-93 | S 2 E | 0.0994 | 1, 3, 5 |
| 02-02-93 | S 17 W | 0.0583 | 1, 3, 5 |
| 03-22-93 | S 6 W | 0.0773 | 1, 3, 5 |
| 05-03-93 | S 4 W | 0.0608 | 1, 3, 5 |
| 06-04-93 | S 6 E | 0.0956 | 1, 3, 5 |
| 07-15-93 | S 1 E | 0.0707 | 1, 3, 5 |
| 08-04-93 | N-S | 0.0720 | 1, 3, 5 |
| 09-09-93 | S 2 E | 0.0691 | 1, 3, 5 |
| 10-27-93 | S 17 E | 0.1720 | 1, 3, 5 |
| 12-09-93 | S 14 E | 0.1013 | 1, 3, 5 |
| 02-08-94 | S 6 W | 0.1392 | 1, 3, 5 |
| 05-13-94 | N-S | 0.0656 | 1, 3, 5 |
| 09-09-94 | S 13 E | 0.0793 | 1, 3, 5 |
| | | | |

S 5 E 5 degrees south of west