

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

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

January 17, 2003

Mr. David Kirshman
CA College of Arts and Crafts
5212 Broadway
Oakland, CA 94618

Major Al Summerfield
Salvation Army
2794 Garden Street
Oakland, CA 94601-1314

Dear Mr. Kirshman and Maj. Summerfield:

Subject: Fuel Leak Site Case Closure for Former Salvation Army, 810 Clay Street, Oakland, CA;
Case No. RO0000083

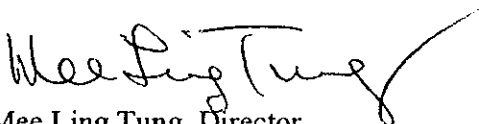
This letter confirms the completion of a site investigation and remedial action for the underground storage tank(s) formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) 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, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

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

Sincerely,


Mee Ling Tung, Director

ALAMEDA COUNTY
HEALTH CARE SERVICES



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Dear Mr. Kirshman and Maj. Summerfield:

Subject: Fuel Leak Site Case Closure for Former Salvation Army, 810 Clay Street, Oakland, CA;
Case No. RO0000083

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 Health (ACEH) 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 3,800ppm TPHg and 22ppm benzene exists in soil under the sidewalk at 15 feet bgs.
- Up to 150ppb TPHg and 18ppb benzene exists in groundwater beneath the site.

If you have any questions, please call Ms. eva chu at (510) 567-6762. Thank you.

Sincerely,

Donna L. Drogos, P.E.
Supervising Hazardous Materials Specialist
Underground Storage Tank Local Oversight Program

Enclosures:

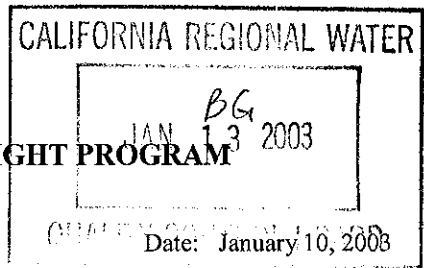
1. Case Closure Letter
2. Case Closure Summary

cc: Ms. Betty Graham (w/enc)
Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Mr. Toru Okamoto (w/enc)
Division of Clean Water Programs
Underground Storage Tank Cleanup Fund
State Water Resources Control Board
P.O. Box 944212
Sacramento, CA 94244-2120

Oakland Fire Department – OES
1605 MLK Jr. Way
Oakland, CA 94612

~~Roseanna Garcia (w/enc)~~
Donna Drogos (w/enc)



**CASE CLOSURE SUMMARY
UNDERGROUND FUEL STORAGE TANK LOCAL OVERSIGHT PROGRAM**

I. AGENCY INFORMATION

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502	Phone: (510) 567-6700
Responsible Staff Person: Eva Chu	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Salvation Army		
Site Facility Address: 810 Clay Street, Oakland, CA 94607		
RB LUSTIS Case No.: ---	Local Case No.: 6638	LOP Case No.: RO0000083
URF Filing Date: 12/28/00	SWEEPS No.: ---	APN: 1-203-10

Responsible Parties	Addresses	Phone Number
Mr. David Kirshman CA College of Arts and Crafts	5212 Broadway Oakland, CA 94618	(510) 594-3688
Maj. Al Summerfield Salvation Army	2794 Garden Street Oakland, CA 94601-1314	

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
Unknown	Unknown	Gasoline	Removed	1965?
Piping			Assumed removed with USTs.	

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Unknown cause of gasoline release at the site.		
Site characterization complete? Yes	Date Approved By Oversight Agency: -----	
Monitoring wells installed? Yes	Number: 1	Proper screened interval? Yes (15' to 35')
Highest GW Depth Below Ground Surface: 19.42	Lowest Depth: 20.90	Flow Direction: Assumed Southwest*
Most Sensitive Current Use: Potential drinking water source.		

* based on flow direction at 726 Harrison and at 250 8th Street, approximately 1,700 feet from the site.

Summary of Production Wells in Vicinity:

Three water supply wells were located within 2000 feet of the site.

- Well 1S/4W-35 F12 is an irrigation well, 470 feet deep, 16 and 6-inch diameter, screened at depth exceeding 180 feet bgs, and located approximately 1100 feet ENE (upgradient) of the site.
- Well 1S/4W-35- is a 10 and 12-inch diameter well, 144 feet deep, that was constructed to supply water for a laundry. The well is located 2000 feet WNW (cross-gradient) of the site.
- Well 1S/4W-26- is 197 feet deep of unknown diameter and located 2000 feet SW (downgradient) of the site.

Due to the location and depth of these wells, it appears that these wells are not likely to be impacted by the contaminant plume originating from this site.

Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? No	Nearest SW Name: Oakland Inner Harbor about 1 mile SW of site.
Off-Site Beneficial Use Impacts (Addresses/Locations): None identified	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health and City of Oakland Fire – OES, 1605 MLK Jr Way, Oakland, CA 94612

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	Not reported	---	---
Piping	Not reported	---	---
Free Product	Not reported	---	---
Soil	Not reported	---	---
Groundwater	Not reported	---	---

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP

(Please see Attachments 1-4 for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)		Contaminant	Soil (ppm)		Water (ppb)	
	Before ¹	After ²	Before ³	After ⁴		Before ¹	After ²	Before ³	After ⁴
TPH (Gas)	3,800	3,800	3,100	150	Benzene	22	22	540	18
TPH (Diesel)	1,000	1,000	1,000	<50	Toluene	88	88	3.0	<0.5
Oil & Grease	---	---	---	---	Ethyl Benzene	28	28	250	4.8
Heavy Metals	---	---	---	---	Xylene	170	170	38	<0.5
Other (8240/8270)	---	---	---	---	MTBE (if not analyzed, explain below)			<5*	<5*

Notes:

1. soil sample from boring SB-1 at 15 feet bgs, 1/99
 2. no overexcavation conducted at the site
 3. grab groundwater sample from boring BH-B, 4/99
 4. most recent groundwater sample from well MW-1, 7/00
- * Analysis for other oxygenates not performed.

Site History and Description of Corrective Actions:

Prior to the construction of the current site structure in 1965, a gasoline service station was located at the southwest portion of the site. There is no information available regarding the time, location or condition of the USTs, or when they were removed.

In January 1999, three soil borings (SB-1 through SB-3) were advanced at the site. Soil samples were collected from each boring at 15 feet bgs and groundwater samples were collected from a depth of approximately 28 feet bgs. Of concern was the identification of 3,800ppm TPHg, 1,000ppm TPHd, and 22, 88, 28 and 170ppm BTEX, respectively, from boring SB-1 at 15 feet bgs. The grab groundwater sample from boring SB-1 contained 610ppb TPHg, 610ppb TPHd, and 47, 30, 26, and 120ppb BTEX, respectively.

In April 1999, two soil borings, BH-A and BH-B, were drilled on each side of previous boring SB-1, and four hand-augered borings (#1 through #4) were advanced in the basement of the current building. Soil samples were collected at 15.5 and 21.5 feet bgs from BH-A and BH-B, and at 9.7 feet bgs from the basement borings. No petroleum hydrocarbons were identified in the soil samples. Grab groundwater from BH-B contained up to 3,100ppb TPHg, 1,000ppb TPHd, and 540ppb benzene. MTBE was not detected in any of the soil or groundwater samples.

Based on the previous subsurface investigations, in September 1999, a groundwater monitoring well, MW-1, was completed to 35 feet bgs and screened from 15 to 35 feet bgs. Sediments encountered at the site consist of silty sand to 34 feet bgs. Groundwater was encountered at approximately 23.5 feet bgs. Depth to water has ranged from 19.4 to 23.5 feet bgs. Groundwater flow direction is assumed to be to the southwest, based on data from two sites located approximately 1,700 feet from the site (at 726 Harrison Street, and at 250 8th Street). After four consecutive quarterly sampling events, groundwater has been shown to contain low levels of TPHg and BTEX constituents. MTBE has not been detected. It does not appear that groundwater beneath the site has been significantly impacted by the fuel release.

In November 2002, two soil vapor samples, SV-1 and SV-2, were collected east of the former tank pit, within the basement of the site building, at 3 feet below the basement floor. No TPHg, BTEX, or MTBE was detected in the vapor samples.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes No		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes No		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a risk to human health based upon current land use and conditions.		
Site Management Requirements: Site to be included in the City of Oakland Permit Tracking System.		
Should corrective action be reviewed if land use changes? Yes		
Monitoring Wells Decommissioned: No, pending closure	Number Decommissioned: 0	Number Retained: 1
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: None		

V. ADDITIONAL COMMENTS, DATA, ETC.


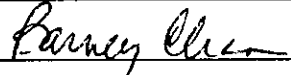
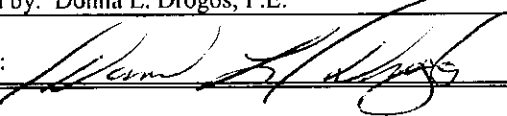
Considerations and/or Variances:

- There is no documentation of UST removal, but no USTs found when soil borings were advanced in the suspect tank location.
- No overexcavation of hydrocarbon-impacted soil, but its extent is defined by the soil borings advanced at the site. Residual soil contamination is limited in extent, to soil at 15 feet bgs and beneath the sidewalk.
- One well installed, but sites within 1700 feet of the site showed groundwater flowing to the southwest

Conclusion:

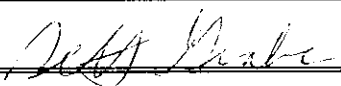
Based upon the information available in our files to date, Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment for the commercial use of the property.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Eva Chu	Title: Hazardous Materials Specialist
Signature: 	Date: 1/10/03
Reviewed by: Barney Chan	Title: Hazardous Materials Specialist
Signature: 	Date: 1/10/03
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: 	Date: 01/10/03

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

VII. REGIONAL BOARD NOTIFICATION

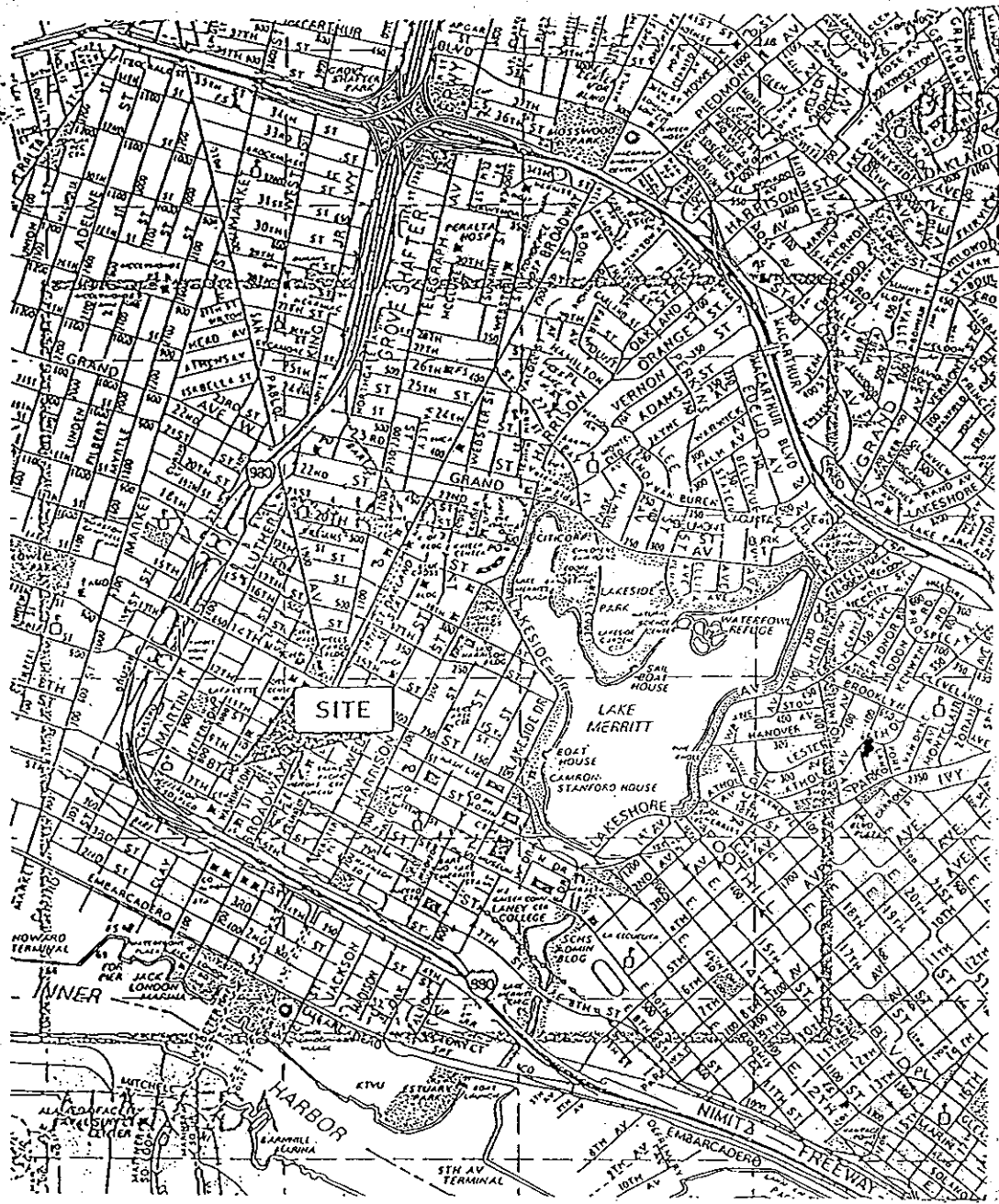
Regional Board Staff Name: Betty Graham	Title: Associate WRCB Engineer
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB: 1/13/03
Signature: 	Date: 1/15/03

Attachments:

1. Site Vicinity Map
2. Sample Location Map
3. Analytical Results of Soil and Grab Water Samples (4pp)
4. Summary of Groundwater Analytical Results from Monitoring Well
5. Summary of Analysis of Soil Vapor Samples
6. Location of Wells Within 2000-foot Radius
7. Groundwater Monitoring and Soil Boring Logs (4pp)

This document and the related CASE CLOSURE LETTER, shall be retained by the lead agency as part of the official site file.

(salvationarmy-closure)



SITE LOCATION MAP	
THE SALVATION ARMY 810 CLAY STREET OAKLAND, CALIFORNIA	
AQUA SCIENCE ENGINEERS, INC.	Figure 1



NORTH

SCALE
1" = 30'

J & M Meats Building

Parking

SB-3

Parking

Clay Street

Sidewalk

Basement #3

SALVATION ARMY BUILDING

Adjacent Building

Basement #4

Former Gasoline Station Area

BH-A

Basement #2

SV-2

SB-1

MW-1

BH-B

Basement #1

SB-2

Sidewalk

Area of Attempted Borings

Eighth Street

LEGEND



Soil Vapor Sample Location



Monitoring Well Location



Soil boring drilled 4/99



Hand augered soil boring drilled in basement area



Soil boring drilled 1/99

SOIL VAPOR
SAMPLE LOCATIONS

THE SALVATION ARMY
810 CLAY STREET
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

FIGURE 2

Table 1

Analytical Laboratory Results

Sample	Sample Depth	Matrix	Analytical Laboratory Results (ppm)						
			TPH-diesel	TPH-gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTHB
SB-1	15	soil	1,000	3,800	22	88	28	176	<0.05
GW-1	28	water	0.61	0.61	0.047	0.030	0.026	0.120	<0.005
SB-2	15	soil	3.3	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
GW-2	28	water	0.52	<0.050	<0.0005	0.00056	<0.0005	0.0019	<0.005
SB-3	15	soil	5.6	<1.0	<0.005	0.009	<0.005	0.016	<0.05
GW-3	28	water	0.38	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.005

Groundwater samples were reported by the analytical laboratory in micrograms per liter ($\mu\text{g/l}$), which are equivalent to parts per billion (ppb). Soil samples were reported in milligrams per kilogram (mg/kg) which is equivalent to parts per million (ppm). However, to reduce confusion all soil and groundwater samples shown in the above table have been converted into their equivalent parts per million (ppm) concentrations for comparison purposes. Bold type indicates detected above laboratory reporting concentration.

This was done after review of the February 15, 2001 Phase II Investigation Report prepared by MRC. In this report numerous borings were advanced and grab

letter sent to your attention.

TABLE ONE
Summary of Chemical Analysis of SOIL Samples
Petroleum Hydrocarbons
All results are in parts per million

Boring/ Sample Depth	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE
BH-A - 15.5'	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
21.5'	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
BH-B - 15.5'	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
20.0'	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
Basement #1	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
Basement #2	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
Basement #3	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
Basement #4	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
USEPA PRG	NE	NE	0.62	520	230	210	NE

Notes:

Detectable concentrations are in **bold**.

Non-detectable concentrations are noted by the less than sign (<) followed by the detection limit.

USEPA PRG is the United States Environmental Protection Agency Region IX preliminary remediation goal for residential soil.

USEPA PRG has not been established.

TABLE TWO
Summary of Chemical Analysis of GROUNDWATER Samples
Petroleum Hydrocarbons
 All results are in parts per billion

Boring	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE
BH-A	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
BH-B	3,100	1,000*	540	<5.0	250	38	<5
DTSC MCL	NE	NE	10	150	680	1,750	35**

Notes:

Detectable concentrations are in **bold**.

Non-detectable concentrations are noted by the less than sign (<) followed by the detection limit.

DTSC MCL is the California Department of Toxic Substances Control maximum contaminant level for drinking water.

NE = DTSC MCL has not been established.

* = Hydrocarbons detected do not match the pattern of a diesel standard.

** = DTSC interim action level for drinking water; MCL not established.

TABLE ONE
 Summary of Chemical Analysis of **SOIL** Samples
 Petroleum Hydrocarbons
 All results are in parts per million

Boring/ Sample Depth	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE
MW-1 20.5'	<1.0	<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
USEPA PRG	NE	NE	0.62	520	230	210	NE

Notes:

Detectable concentrations are in **bold**.

Non-detectable concentrations are noted by the less than sign (<) followed by the detection limit.

USEPA PRG is the United States Environmental Protection Agency Region IX preliminary remediation goal for residential soil.

USEPA PRG has not been established.

TABLE ONE
Summary of Chemical Analysis of GROUNDWATER Samples
Petroleum Hydrocarbons
All results are in parts per billion

Boring	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE
MW-1							
10/01/99	210	110	64	3.0	11	6.7	<5.0
1/06/00	270	---	22	0.96	5.2	<0.5	<5.0
4/04/00	180*	<50	<0.5	<0.5	<0.5	<0.5	<5.0
7/19/00	150*	< 50	18	< 0.5	4.8	< 0.5	< 5.0
DHS MCL	NE	NE	10	150	680	1,750	13

Notes:

Most recent sampling concentrations are in **bold**.

Non-detectable concentrations are noted by the less than sign (<) followed by the detection limit.

* = Hydrocarbon reported in the gasoline range does not match the laboratory standard.

DHS MCL is the California Department of Health Services maximum contaminant level for drinking water.

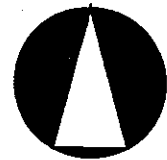
NE = DHS MCL has not been established.

TABLE ONE
Summary of Analysis of SOIL VAPOR Samples
 All results are in ug/L

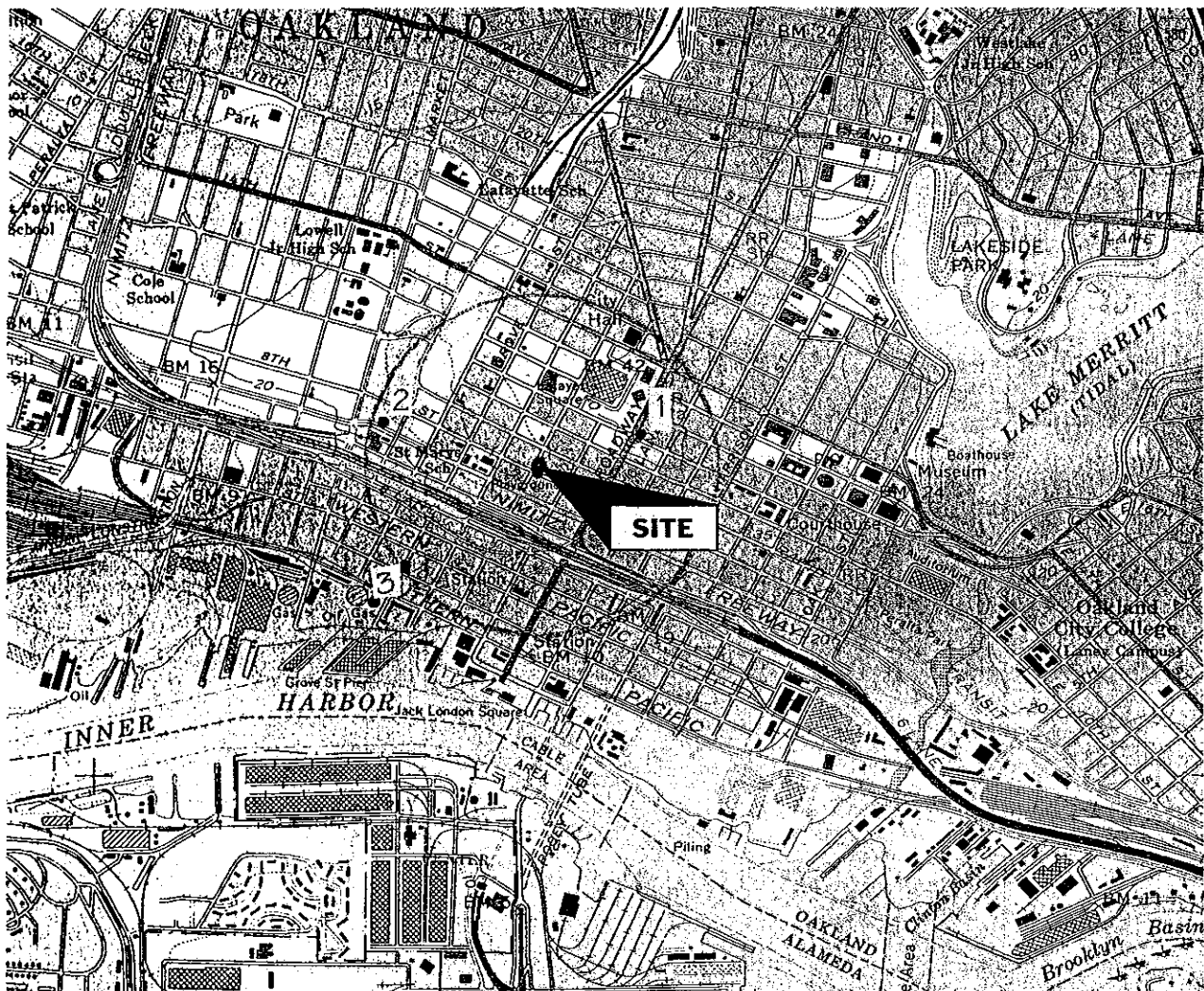
Boring	Depth Sampled	TPH Gasoline	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE
SV-1	3'	<50	<0.50	<0.50	<0.50	<0.50	<5.0
SV-2	3'	<50	<0.50	<0.50	<0.50	<0.50	<5.0

Notes:

Non-detectable concentrations noted by the less than symbol (<) followed by the detection limit



NORTH



LOCATION OF WELLS WITHIN 2,000-FOOT RADIUS OF SITE	
810 Clay Street Oakland, California	
AQUA SCIENCE ENGINEERS, INC.	Figure 1

BORING LOG AND WELL COMPLETION DETAILS

Soil Boring: BH-A

Project Name: Salvation Army

Project Location: 810 Clay Street, Oakland, CA

Page 1 of 1

Driller: Vironex

Type of Rig: Geoprobe

Size of Drill: Macro Core Sampler

Logged By: Robert E. Kitay, R.G.

Date Drilled: April 9, 1999

Checked By: Robert E. Kitay, R.G.

WATER AND WELL DATA

Depth of Water First Encountered: 22'

Total Depth of Well Completed: NA

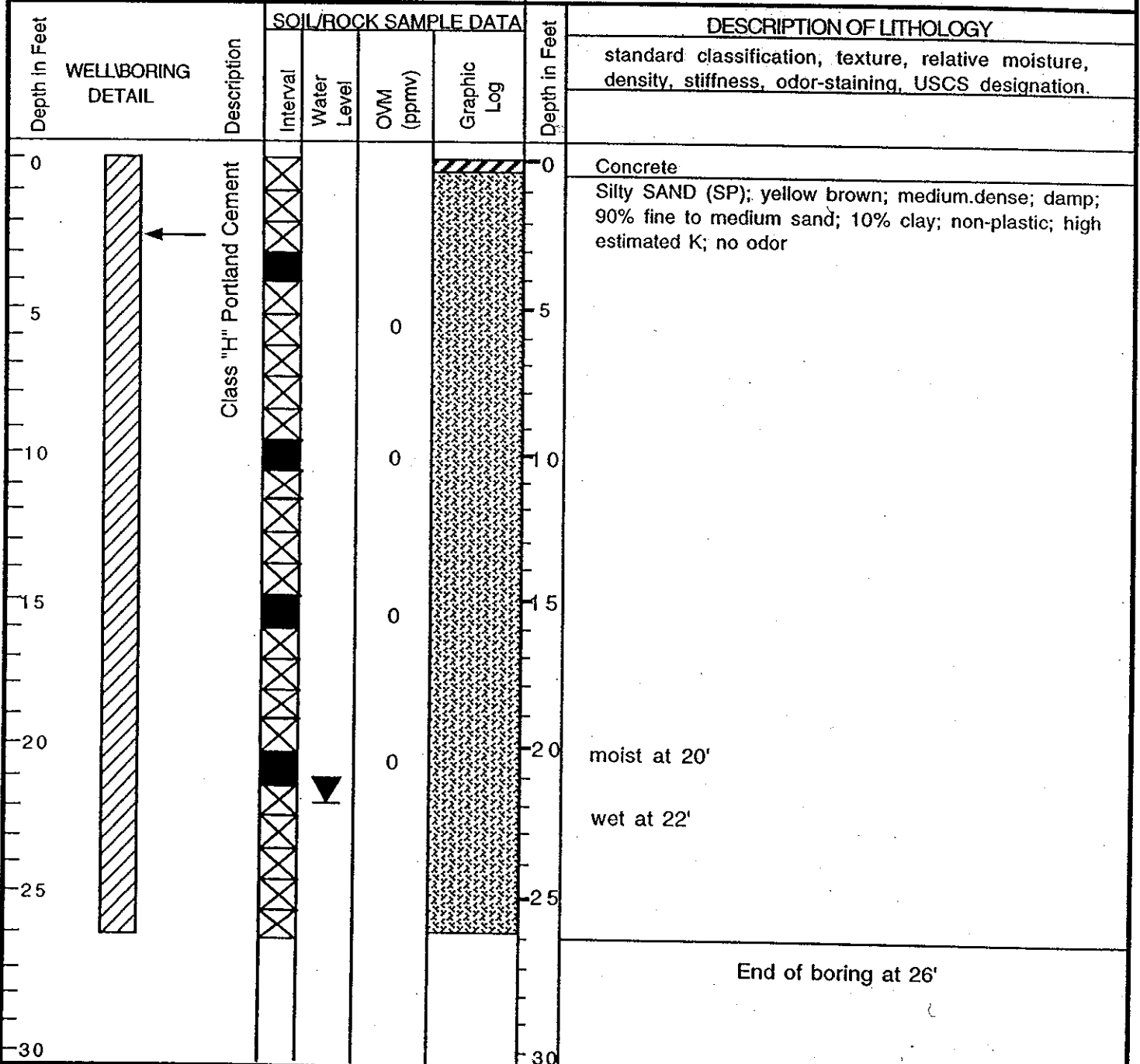
Well Screen Type and Diameter: NA

Static Depth of Water in Well: Unknown

Well Screen Slot Size: NA

Total Depth of Boring: 26'

Type and Size of Soil Sampler: Macro Core Sampler



BORING LOG AND WELL COMPLETION DETAILS

Soil Boring: BH-B

Project Name: Salvation Army

Project Location: 810 Clay Street, Oakland, CA

Page 1 of 1

Driller: Vironex

Type of Rig: Geoprobe

Size of Drill: Macro Core Sampler

Logged By: Robert E. Kitay, R.G.

Date Drilled: April 9, 1999

Checked By: Robert E. Kitay, R.G.

WATER AND WELL DATA

Depth of Water First Encountered: 21'

Total Depth of Well Completed: NA

Well Screen Type and Diameter: NA

Static Depth of Water in Well: Unknown

Well Screen Slot Size: NA

Total Depth of Boring: 26'

Type and Size of Soil Sampler: Macro Core Sampler

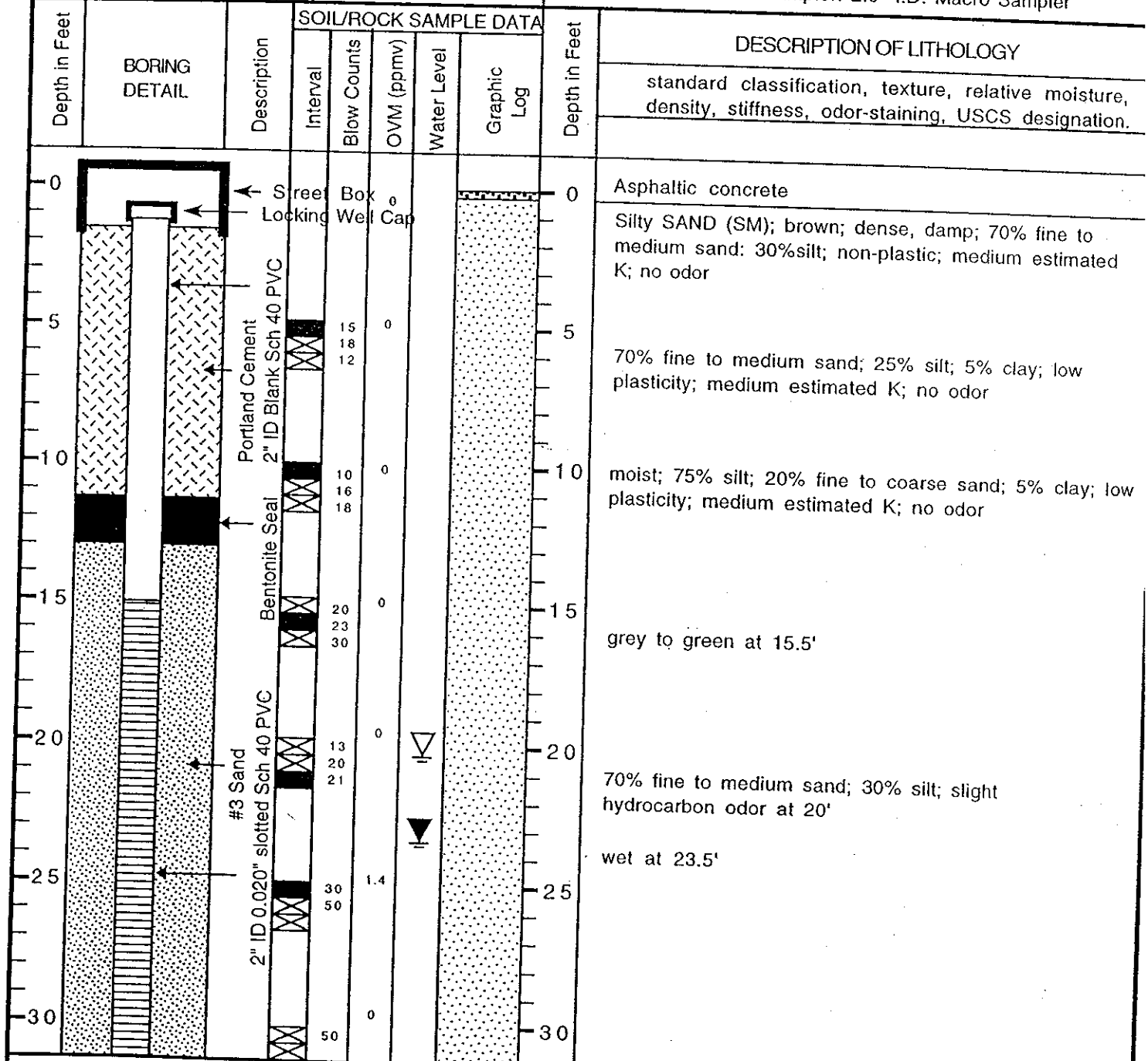
Depth in Feet	WELLBORING DETAIL	Description	SOIL/ROCK SAMPLE DATA				Depth in Feet	DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.					
			Interval	Water Level	OVM (ppmv)	Graphic Log							
0	<p>Class "H" Portland Cement</p>						0	Concrete					
5							0	Silty SAND (SP); yellow brown; medium dense; damp; 90% fine to medium sand; 10% clay; non-plastic; high estimated K; no odor					
10							0						
15							0						
20							7	olive; moist; faint hydrocarbon odor at 20' wet at 21'					
25													
30													
End of boring at 26'													

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS

Monitoring Well MW-1

Project Name: Salvation Army		Project Location: 810 Clay Street, Oakland, CA		Page 1 of 2
Driller: West Hazmat Drilling		Type of Rig: Hollow-Stem Auger	Size of Drill: 8.0" Diameter	
Logged By: Ian Reed		Date Drilled: September 28, 1999	Checked By: Robert E. Kitay, R.G.	

WATER AND WELL DATA	Total Depth of Well Completed: 35'
Depth of Water First Encountered: 23.5'	Well Screen Type and Diameter: 0.020" slotted, 2" sch. PVC
Static Depth of Water in Well: 20.3'	Well Screen Slot Size: 0.020"
Total Depth of Boring: 35'	Type and Size of Soil Sampler: 2.0" I.D. Macro Sampler



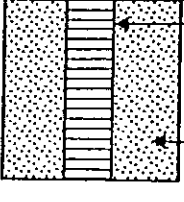
SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS

Monitoring Well MW-1

Project Name: Salvation Army

Project Location: 810 Clay Street, Oakland, CA

Page 2 of 2

Depth in Feet	BORING DETAIL	Description	SOIL/ROCK SAMPLE DATA				Depth in Feet	DESCRIPTION OF LITHOLOGY
			Interval	Blow Counts	OVM (ppmv)	Water Level		
35		#3 Sand 2" diameter 0.020" slotted sch. 40 PVC	50	50	0		35	Silty CLAY (CL); olive; brown mottled olive; wet; 70% clay; 20% silt; 10% fine sand; medium plasticity; low estimated K; no odor
40							40	
45							45	
50							50	
55							55	
60							60	
65							65	
End of boring at 35'								