

ALAMEDA COUNTY.
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



Alameda County CC4580
Environmental Health Services
1131 Harbor Bay Pkwy., #250
Alameda CA 94502-6577
(510)567-6700 FAX(510)337-9335

August 2, 1996

REMEDIAL ACTION COMPLETION CERTIFICATION

Ladies Home Society
c/o Ms. Marianne Robison
Buttner Properties
600 West Grand Avenue
Oakland, California 94612

RE: Park Day School
368 42nd Street, Oakland, California 94609
STID # 4540

Dear Ms. Robison:

This letter confirms the completion of site investigation and remedial action for the 1,500 gallon heating fuel underground storage tank removed on June 11, 1993 at the above described location. Enclosed is the Case Closure Summary for the referenced site for your records.

Based upon the available information, including the current land use, and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the heating fuel underground storage tank release is required.

This notice is issued pursuant to a regulation contained in Title 28, California Code of Regulations, Division 3, Chapter 16, Section 2721 (e). If a change in the present land use is proposed, the property owner must promptly notify this agency.

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

Sincerely,


Mee Ling Tung, Director

Enclosure

c: Gordon Coleman, Acting Chief, Environmental Protection - files
Kevin Graves, RWQCB
Lori Casias, SWRCB (with enclosure)
Jerriann Alexander, SCI, 171 12th St., Suite 201, Oakland, CA 94607

Leaking Underground Fuel Storage Tank Program

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	* Before	After	*** Before	After
TPH (Gasoline)	96	ND	ND	-
TPH (Diesel)	5,600	** 210	160	**** 1000
Benzene	ND	ND	ND	ND
Toluene	ND	ND	ND	ND
Xylene	0.058	ND	ND	ND
Ethylbenzene	0.10	ND	ND	ND

* Soil sample collected from the south end bottom of the excavation at 17 feet bgs.

** Soil sample collected from the boring at approx. 12.5 feet bgs during the installation of well MW-1 on 2/16/94.

*** Grab water sample collected from boring 1 drilled approximately 4 feet west of the tank excavation near the southern end.

**** TPH diesel detected in well MW-1 during the last sampling conducted on 9/5/95.

Comments (Depth of Remediation, etc.):

In June 1993, one 1,500 gallon heating fuel UST was removed from the site (a school used for educational and recreational activities). Approximately 1425 gallons of oil/water was pumped out from the tank prior to its removal. The former UST was removed without the county's oversight but was granted approval by the Oakland Fire Dept. according to CEC. At the time of the tank removal, holes were noted at each end of the UST. Two soil samples were collected (one from each end of the tank) at approximately 17 feet bgs following the tank's removal. The south end soil sample identified the presence of petroleum hydrocarbon contamination as listed in the above "before clean up" table. The open excavation posed a physical danger to the children at the site, so the stockpiled soil was allowed to be used as backfill.

On August 25, 1993, overexcavation was conducted in the tank area which included the removal of the stockpiled soil used as backfill. While removing the backfilled soil, liquid material which appeared to be heating fuel oil was running out of one of the two pipes associated with the former UST. KTW shored and entered the excavation the following day and the leaking pipe was drained and both pipes were rinsed and properly capped. The overexcavation of the tank area continued until the floor and sidewalls appeared to be of native soil. It was noted that staining was visible on the side walls in an unconsolidated gravel layer at 10 to 11 feet bgs. Four confirmation soil samples were collected, one sample from the south wall at the gravel layer, one sample from the west wall at the gravel layer, one sample from the east wall in the stained area near the pipes (approx. 13 ft. bgs) and one floor sample from the center of the pit at approximately 17 ft. bgs. Low levels of TPH diesel (45 ppm to 47 ppm) were detected but no BTEX was found in the confirmation soil samples.

Leaking Underground Fuel Storage Tank Program

On September 8, 1993, one soil boring was drilled within 4 feet of the tank area in the assumed downgradient direction (west). Two soil samples were collected from the boring at 11 feet bgs and at 18 feet bgs and showed no detectable level of TPH diesel, TPH gasoline or BTEX. Groundwater was encountered at 25.5 ft. bgs in a layer of unconsolidated silty gravel. A grab water sample was collected and found low levels of TPH diesel (160 ppb) but no detectable level of TPH gasoline and BTEX.

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, will decommission upon case closure**

Number Decommissioned: **NA**

Number Retained: **One**

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: *3/21/96*

Reviewed by

Name: **Dale Klettke** Title: **Hazardous Materials Specialist**

Signature: *Dale Klettke* Date: *3/21/96*

Name: **Thomas Peacock** Title: **Sup. Hazardous Materials Specialist**

Signature: *Thomas Peacock* Date: *3/21/96*

Leaking Underground Fuel storage Tank Program

VI. RWQCB NOTIFICATION

Date Submitted to RB: 3/22/96

RB Response:

Approved

RWQCB Staff Name: Kevin Graves

Title: Water Resources Control Engineer

[Handwritten Signature]

Date:

4/26/96

VII. ADDITIONAL COMMENTS, DATA, ETC.

On February 14, 1994, one groundwater monitoring well (MW-1) was installed within 10 feet southwest of the former tank in the topographic downgradient direction. Based on the information provided by Mr. Gordon Laverty (a private consultant), water exists at a depth of about 16 feet in a brick-lined cistern located approximately 250 feet east of the tank area. Studies conducted by Mr. Laverty also found that the cistern was constructed in an old drainage swale which intercepts subsurface water and that the ground water flow at the site follows the topographic downgradient direction.

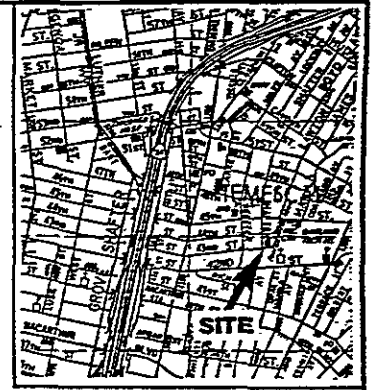
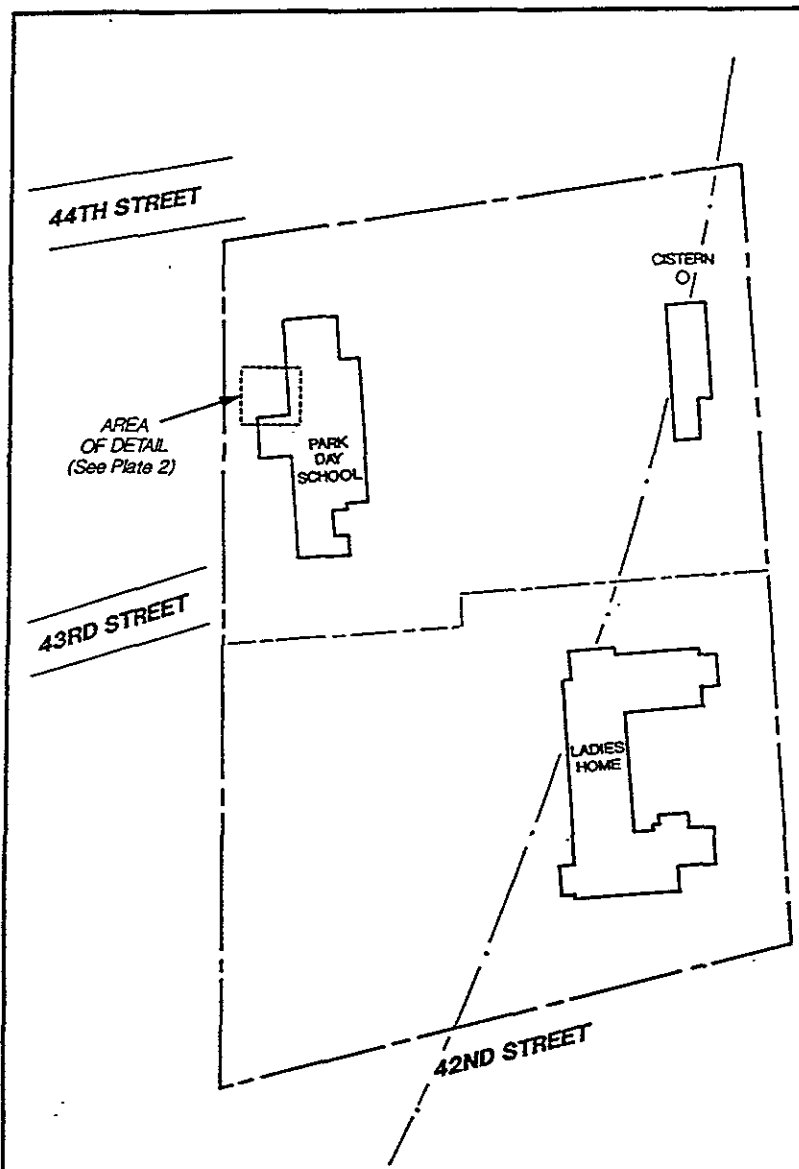
Two soil samples were collected from the boring (MW-1) at 11 feet bgs and at 12.5 feet bgs. Both samples were non detect for BTEX. TPH diesel was found at 150 ppm (11 ft.) and 210 ppm (12.5 ft.) A layer of silty sand was encountered between 9 to 12 feet bgs. and a clayey gravel was encountered between 23 to 27 feet bgs. Groundwater was encountered during drilling at 14 feet bgs. After the well installation, the groundwater level had risen to a depth of about 12 feet. Initial groundwater sample from MW-1 found no detectable concentration of TPH diesel or BTEX. Five monitoring events (2/94 to 2/95) showed BTEX at non detect level. BTEX analyses were eventually dropped from the monitoring program. The TPH diesel concentration ranged from nd to 1300 ppb during the entire monitoring program with the last sampling event (9/95) detecting 1000 ppb.

The rationale for recommending case closure for the subject site are as follows:

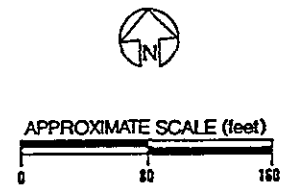
- 1) BTEX was not detected in the groundwater.
- 2) Benzene was not detected in any of the soil samples collected at the site.
- 3) Contaminated soil (90 cubic yards) had been excavated in the former tank area. Low levels of TPH diesel (210 ppm) in soil remains at the site. Aggressive source removal had occurred at the site.
- 4) The groundwater plume appears to be stable.
- 5) The site presents no significant risk to human health and the environment. The long term impact to public health and water quality is negligible.
- 6) RWQCB's toxicologist was consulted and agreed with the rationale for recommending case closure.



CERTIFIED	CERTIFIED ENVIRONMENTAL CORPORATION
FIGURE 1. VICINITY MAP	
PARK DAY SCHOOL 368 42ND STREET OAKLAND, CALIFORNIA	
KB 6/93	93-06-1128

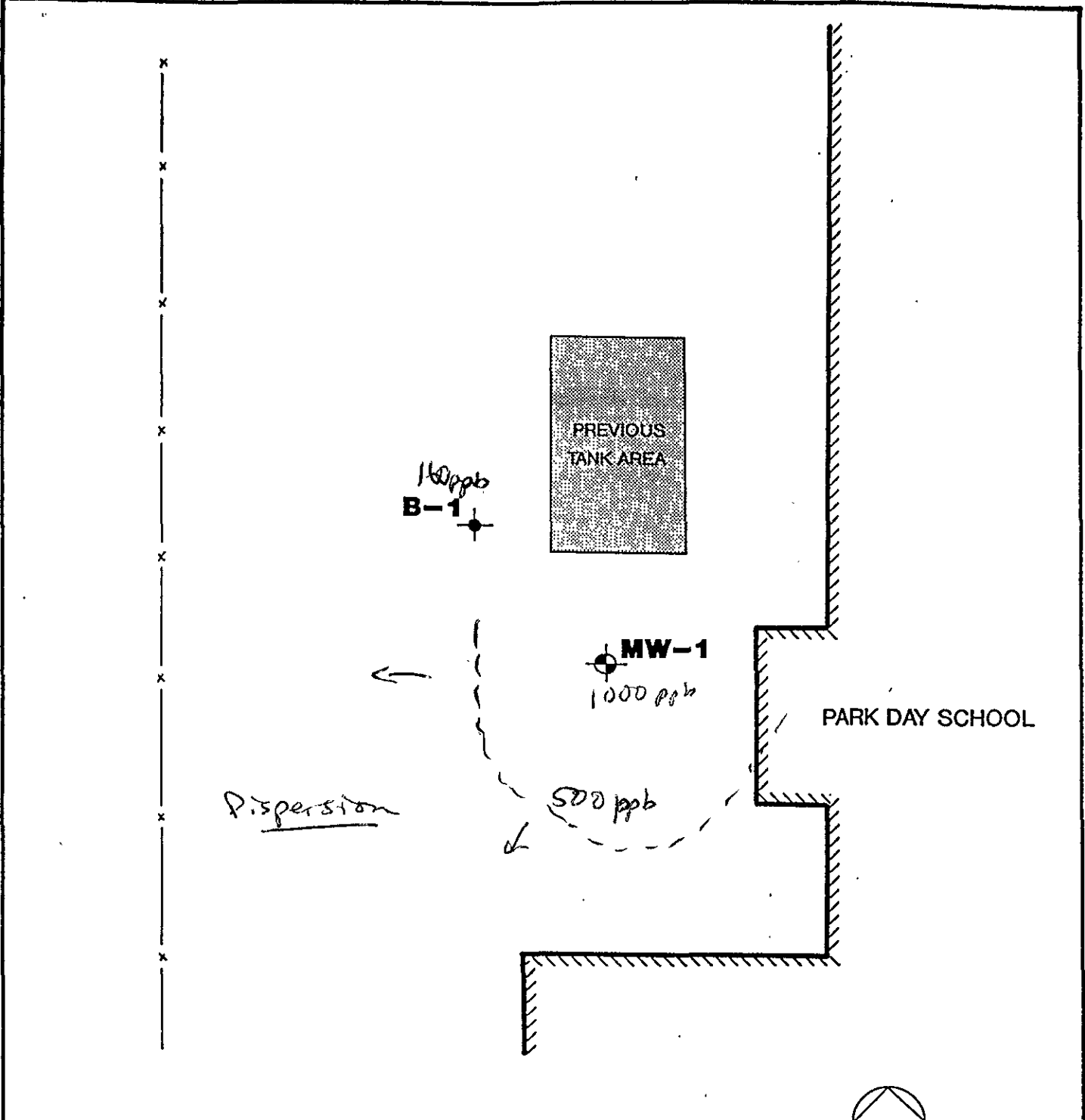


	PROPERTY LINE
	PROPOSED PROPERTY LINE
	WELL LOCATION
	EXISTING BUILDING
	APPROXIMATE ALIGNMENT OF SWALE



REFERENCE: EARTH METRICS FIGURE 4, JUNE, 1992.

Subsurface Consultants	SITE PLAN		FIGURE 2
	PARK DAY SCHOOL - OAKLAND, CA	DATE	
JOB NUMBER	DATE	APPROVED	
891.001	4/6/94		



	WELL LOCATION
	BORING LOCATION BY OTHERS
	EXISTING BUILDING
	FENCE

APPROXIMATE SCALE (feet)

REFERENCE: CERTIFIED ENVIRONMENTAL CONSULTING,
 FIGURE 2, SEPTEMBER, 1993

TANK AREA PLAN

Subsurface Consultants

PARK DAY SCHOOL - OAKLAND, CA	
JOB NUMBER 891.001	DATE 4/7/94
APPROVED 	

FIGURE
3

TABLE 1

SAMPLES FROM TANK REMOVAL

Sample	TPH(D)	TPH(G)	BENZENE	TOLUENE	ETHYL BENZENE	XYLENE
#1 FILL @17'	8.8	1.5	ND	ND	ND	ND
#2 SOUTH @ 17'	5600	96	ND < 0.025	ND < 0.025	0.10	0.058

All values in ppm ND = Non Detect

SAMPLES FROM RE-EXCAVATION

Sample	TPH(D)	TPH(G)	BENZENE	TOLUENE	ETHYL BENZENE	XYLENE
West @11'	45	ND	ND	ND	ND	ND
Pit Floor	ND	ND	ND	ND	ND	ND
East @13'	47	ND	ND	ND	ND	ND
South @11'	ND	ND	ND	ND	ND	ND

All values in ppm ND = Non Detect

Table 2
Contaminants in Soil

<u>Sample</u>	<u>Date</u>	<u>TEH</u> <u>(mg/kg)</u>	<u>Benzene</u> <u>(ug/kg)</u>	<u>Toluene</u> <u>(ug/kg)</u>	<u>Ethyl-</u> <u>benzene</u> <u>(ug/kg)</u>	<u>Xylene</u> <u>(ug/kg)</u>
B1 @ 11'	09/07/93	<10	<5	<5	<5	<5
B1 @ 18'	09/07/93	<10	<5	<5	<5	<5
MW-1 @ 11'	02/14/94	150	<5	<5	<5	<5
MW-1 @ 12.5'	02/14/94	210	<5	<5	<5	<5

TEH = Total extractable hydrocarbons
 mg/kg = milligrams per kilogram, parts per million
 ug/kg = micrograms per kilogram, parts per billion
 <5 = Chemical not present at a concentration greater than the
 laboratory detection limit stated

Table 3
Contaminants in Groundwater

<u>Sample</u>	<u>Date</u>	<u>Water</u> <u>Depth</u> <u>(feet)</u>	<u>TEH</u> <u>(ug/l)</u>	<u>B</u> <u>(ug/l)</u>	<u>T</u> <u>(ug/l)</u>	<u>E</u> <u>(ug/l)</u>	<u>X</u> <u>(ug/l)</u>
B1*	09/07/93	25.5	160	<0.5	<0.5	<0.5	<0.5
MW-1	02/16/94	12.0	<50	<0.5	<0.5	<0.5	<0.5

* = Test results of grab groundwater sample from within test
 borehole by others
 TEH = Total extractable hydrocarbons
 ug/l = micrograms per kilogram, parts per billion
 <0.5 = Chemical not present at a concentration greater than the
 laboratory detection limit stated

Table 4:**Hydrocarbon and BTEX Concentrations in Water**

<u>Sample</u>	<u>Date</u>	<u>Water Depth (feet)</u>	<u>TEH ug/l</u>	<u>B ug/l</u>	<u>T ug/l</u>	<u>E ug/l</u>	<u>X ug/l</u>
MW-1	2/17/94	12.00	<50	<0.5	<0.5	<0.5	<0.5
	5/19/94	12.05	1300	<0.5	<0.5	<0.5	<0.5
	8/29/94	13.75	1000	<0.5	<0.5	<0.5	<0.5
	11/14/94	13.92	690	<0.5	<0.5	<0.5	<0.5
	2/14/95	10.10	910	<0.5	<0.5	<0.5	<0.5
	5/15/95	10.20	900	--	--	--	--
	9/5/95	11.96	1000	--	--	--	--

TEH = Total Extractable Hydrocarbons

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylene

ug/l = microgram per liter

<50 = Indicate the analyte was not detected above the laboratory reporting limit stated.

-- = Not analyzed



CERTIFIED ENVIRONMENTAL CORPORATION

WELL/BORING NO. 1

PROJECT <u>PARK DAY SCHOOL</u>	LOGGED BY <u>JAMES H. ROBBINS</u>
PROJECT NO. <u>421-1238</u>	DRILLING METHOD <u>HOLLOW FLIGHT AUGER</u>
LOCATION <u>368 42nd STREET, OAKLAND</u>	SAMPLING METHOD <u>CONT. CORE/ CAL. SPLIT SPOON</u>
DATE/TIME DRILLED <u>9/8/93/1330</u>	DRILLING CO./FOREMAN <u>SES/MORRIS</u>
SCREEN TYPE <u>N/A</u> INTERVAL <u>N/A</u>	CASING DIA. <u>N/A</u> SLOT SIZE <u>N/A</u>
FILTER PACK TYPE <u>N/A</u> INTERVAL <u>N/A</u>	INITIAL WATER LEVEL <u>25'</u> FINAL WATER LEVEL _____
SURFACE SEAL TYPE <u>GROUT</u> INTERVAL <u>N/A</u>	BOREHOLE DIA. <u>8"</u> TOTAL DEPTH <u>28'</u>

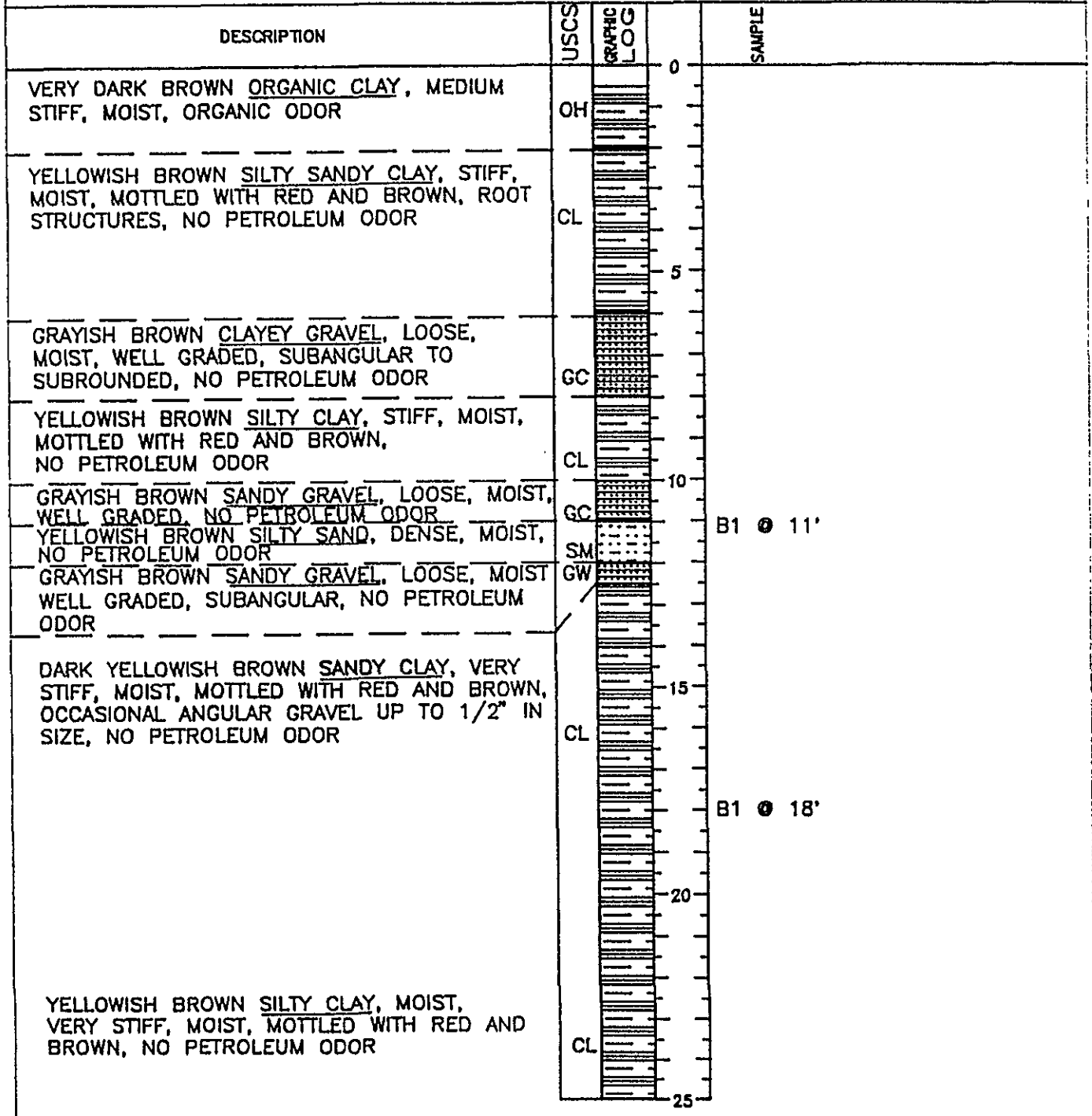


FIGURE 3



CERTIFIED ENVIRONMENTAL CORPORATION

WELL/BORING NO. 1

PROJECT PARK DAY SCHOOL LOGGED BY JAMES H. ROBBINS
 PROJECT NO. 421-1238 DRILLING METHOD HOLLOW FLIGHT AUGER
 LOCATION 368 42nd STREET, OAKLAND SAMPLING METHOD CONT. CORE/ CAL. SPLIT SPOON
 DATE/TIME DRILLED 9/8/93/1330 DRILLING CO./FOREMAN SES/MORRIS
 SCREEN TYPE N/A INTERVAL N/A CASING DIA. N/A SLOT SIZE N/A
 FILTER PACK TYPE N/A INTERVAL N/A INITIAL WATER LEVEL 25' FINAL WATER LEVEL _____
 SURFACE SEAL TYPE GROUT INTERVAL N/A BOREHOLE DIA. 8" TOTAL DEPTH 28'

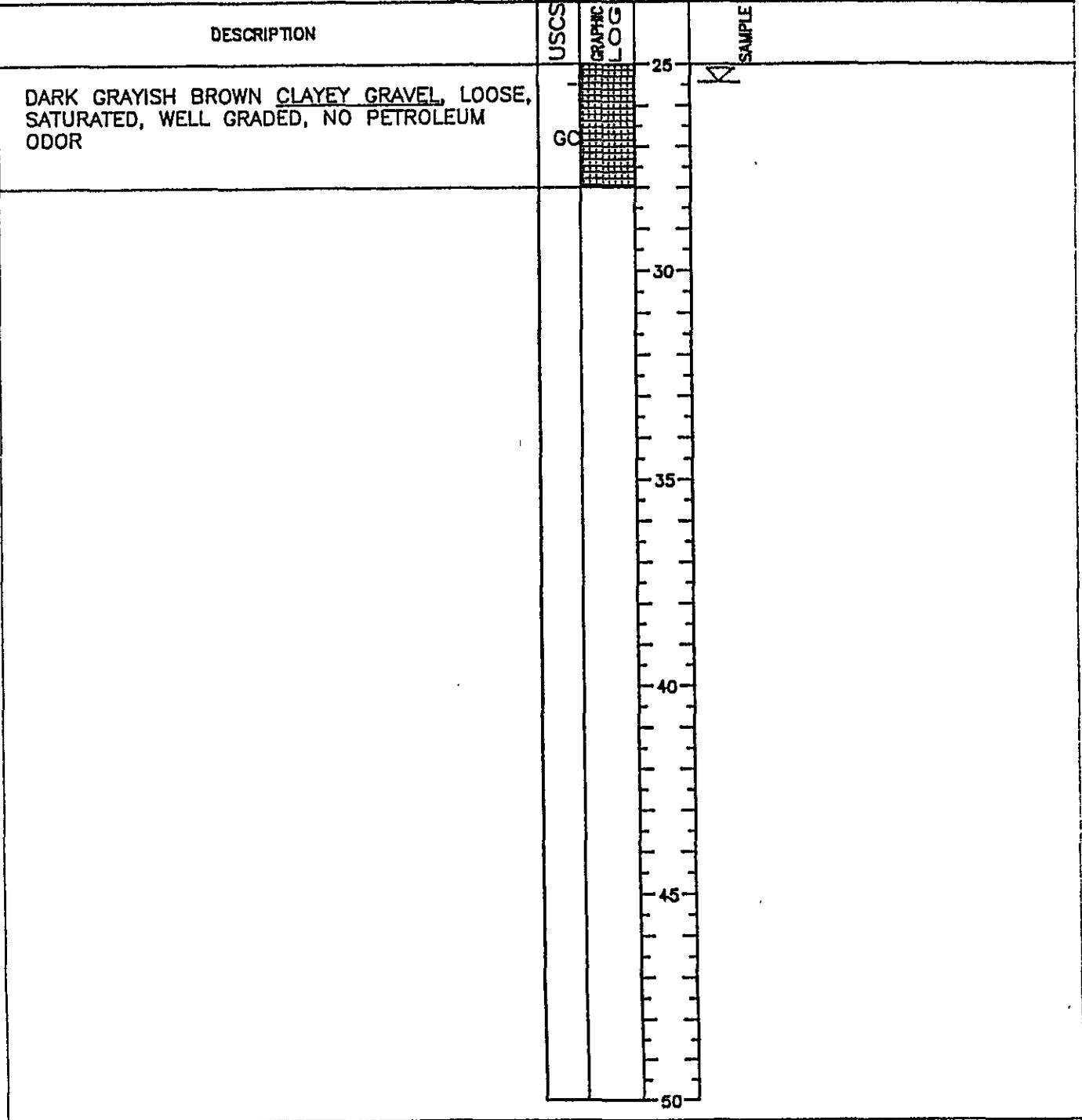


FIGURE 3 (cont)

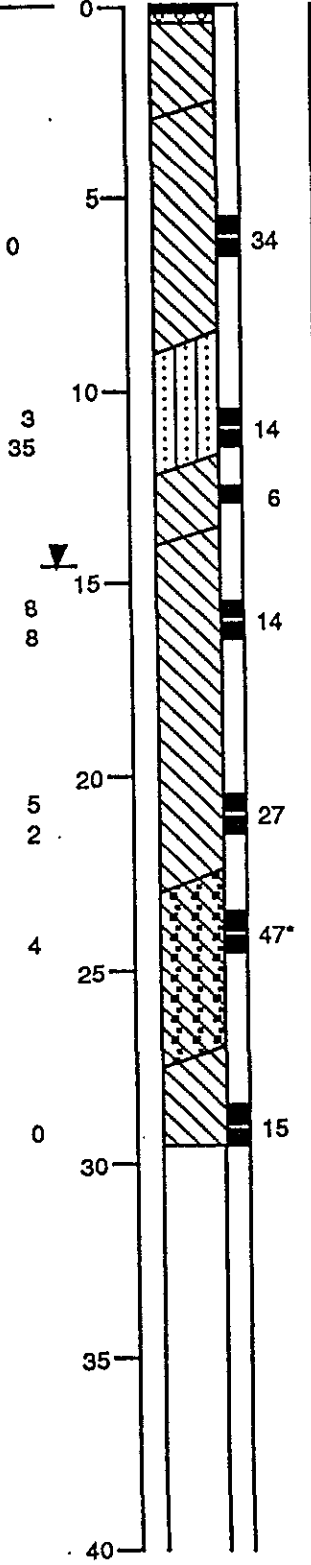
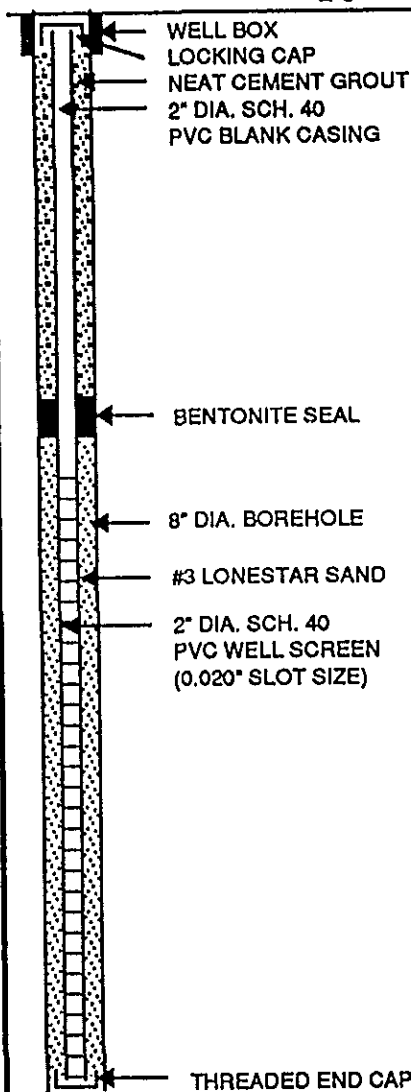
LOG OF TEST BORING MW-1

EQUIPMENT 8" Hollow Stem Auger
 DATE DRILLED 2/14/94
 ELEVATION - -

MOISTURE CONTENT %
 DRY DENSITY (pcf)
 OVM (ppm)

DEPTH (feet)

SAMPLE BLOWS PER FOOT



ASPHALTIC CONCRETE - 2" thick
 BASE ROCK - 4" thick
 DARK BROWN SILTY CLAY (CL)
 medium stiff, moist
 LIGHT ORANGE BROWN SILTY CLAY (CL)
 medium stiff, moist, with fine grained sand

MOTTLED OLIVE BROWN SILTY SAND (SM)
 medium stiff, moist, strong hydrocarbon odor

MOTTLED OLIVE BROWN SILTY SANDY CLAY (CL)
 medium stiff, moist

GROUNDWATER LEVEL DURING DRILLING

ORANGE BROWN SILTY CLAY (CL)
 medium stiff to stiff, moist

RED BROWN CLAYEY GRAVEL (GC)
 dense, wet

MOTTLED BROWN SILTY CLAY (CL)
 medium stiff, moist

SAMPLER TYPES
 MODIFIED CALIFORNIA DRIVE
 O.D.: 3.0 inches
 I.D.: 2.5 inches
 *CALIFORNIA DRIVE
 O.D.: 2.5 inches
 I.D.: 2.0 inches

HAMMER WEIGHT: 140 pounds
 HAMMER DROP: 30 inches

Subsurface Consultants

PARK DAY SCHOOL - OAKLAND, CA

JOB NUMBER
891.001

DATE
3/21/94

APPROVED
[Signature]

PLATE

3

24 May 1996

ZONE 7
WATER RESOURCES ENGINEERING
GROUNDWATER PROTECTION ORDINANCE

ALTERNATIVE INVESTMENTS
5829 ADELINE STREET
OAKLAND
WELLS 1S/4W 14L80 TO 14L83
PERMIT 96378

Destruction Requirements:

1. Clean out all bridged or poorly compacted materials to the bottom of the well.
2. Pressure grout the casing to 2 feet below finished grade or original ground, whichever is the lower elevation.
3. Remove casing, seal and gravel pack to 2 feet below finished grade or original ground, whichever is the lower elevation.
4. After the seal has set, backfill the remaining hole with compacted material.

These destruction requirements as proposed by Samuel Won of Subsurface Consultants meet or exceed Zone 7 minimum requirements.