

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

May 31, 1996

REMEDIAL ACTION COMPLETION CERTIFICATION

Ms. Maryann Leshin
City of Emeryville
Redevelopment Agency
2200 Powell Street, 12th Floor
Emeryville, California 94608

RE: City of Emeryville Redevelopment Agency
4300 San Pablo Avenue, Emeryville, California 94608
STID # 4266

Dear Ms. Leshin:

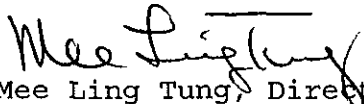
This letter confirms the completion of site investigation and remedial action for the four 550 gallon gasoline underground storage tanks removed prior to 1969 at the above described location. Enclosed is the Case Closure Summary for the referenced site for your records.

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 gasoline underground storage tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, 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)
Stephen Baker, HydroSolutions of California , Inc.,
5917 Moss Creek Circle, Suite 2, Fair Oaks, CA 95628

ENVIRONMENTAL PROTECTION
EPA-2 PM/45

CASE CLOSURE SUMMARY

Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION Date: January 3, 1996
 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: City of Emeryville Redevelopment Agency
 Site facility address: 4300 San Pablo Avenue, Emeryville, CA 94608
 RB LUSTIS Case No: N/A Local Case No./LOP Case No.: 4266
 URF filing date: 6/7/91 SWEEPS No: N/A
Responsible Parties: Addresses: Phone Numbers:
 City of Emeryville 2200 Powell St. 12th Floor
 Redevelopment Agency Emeryville, CA 94608
 c/o Ms. Maryann Leshin

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	550 gallon	Gasoline	Removed	Prior to 1969
2	550 gallon	Gasoline	Removed	Prior to 1969
3	550 gallon	Gasoline	Removed	Prior to 1969
4	550 gallon	Gasoline	Removed	Prior to 1969

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **Unknown**
 Site characterization complete? **YES**
 Date approved by oversight agency: 8/26/91
 Monitoring Wells installed? **YES** Number: **Seven (7)**
 Proper screened interval? **YES**
 Highest GW depth below ground surface: **3.21 feet** Lowest depth: **10.66 feet**
 Flow direction: **Northwest Southwest**
 Most sensitive current use: **Unknown**
 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) filed? **Alameda County**
1131 Harbor Bay Parkway, 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>
Tank	4 - 550 gallon	Unknown, USTs were removed prior to 1969	Unknown
Soil	160 cy 90 cy	Redwood Landfill, Novato, CA aerated / reuse at the site	9/9/91
Groundwater	2,500 gallons	H & H, San Francisco, CA	8/28/91

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 (Gas)	*** 490	290	1,800	440
TPH (Diesel)	ND	-	2,800	ND
TPH (Kerosene)	ND	-	-	-
Benzene	**** 0.51	ND	5.3	0.5
Toluene	**** 1.90	0.29	1.8	0.6
Xylene	*** 2.20	0.75	3.8	1.9
Ethylbenzene	*** 0.81	0.74	3.8	1.6
Oil & Grease	***** 54	-	-	-
Organic lead	ND	-	-	-
Others	*	-	**	-

* The following heavy metals were detected in a composite soil sample from MW-1 @ 6', MW-2 @7' and MW-3 @2': 140 ppm barium, 1.0 cadmium, 18 ppm chromium, 11 ppm cobalt, 23ppm copper, 16 ppm lead, 24 ppm nickel, 12 vanadium, and 40 ppm zinc. Semi volatiles (8270) and cyanide were not detected in the same composite sample.

** Purgeable halocarbons (8010) was not detected in the groundwater sample.

*** Soil sample collected from B-1 @7'.

**** Confirmation soil sample collected from the excavation at 7.5 'depth.

***** Soil sample (EE-16) collected from the trench at 3'depth.

Comments (Depth of Remediation, etc.):

The subject site was formerly occupied by a service station from 1926 to 1966 and a car wash from 1969 to 1990. At least 4 USTs existed at the site and were removed prior to 1969. The former tanks were located beneath the sidewalks, two USTs on San Pablo Avenue and two USTs on 43rd Street. Although no tank removal records were found, tanks were not encountered during the entire soil and groundwater investigation conducted at the site.

On June 6, 1990, a subsurface investigation was conducted at the subject site which included the drilling of 22 probes at depths ranging from 6.5 to 12 feet. In addition, three shallow ground water monitoring wells (MW-1, MW-2, and MW-3) were installed. Two of the wells (MW-1 and MW-2) were placed in the areas with the highest OVM readings in the soil. TPH gasoline at 120 ppm was detected in the soil sample collected from boring B-1 at 9.5 feet depth. Groundwater samples detected petroleum hydrocarbon contamination as listed in the above table.

On December 26, 1990, three soil borings (B-1, B-2 and B-3) were drilled and three additional wells (MW-4, MW-5 and MW-6) were installed downgradient of the former tanks. Soil samples collected from MW-5 at 7 to 11.5 ' depth found up to 45 ppm TPH gasoline, 5.2 ppb benzene, 39 ppb toluene, 390 ppb xylene, and 160 ppb ethyl benzene. Soil samples collected

Leaking Underground Fuel Storage Tank Program

from B-1 at 7 ' depth found up to 490 ppm TPH gasoline, 280 ppb toluene, 2,200 ppb xylene, and 810 ppb ethyl benzene. Groundwater samples collected from MW-4 and MW-5 detected up to 420 ppb TPH gasoline, 1.1 ppb toluene, 2.8 ppb xylene, and 1.5 ppb ethyl benzene. Subsurface conditions at the site consist of silty and sandy clays to a depth of about 15 feet. Beneath the silty and sandy clays, are interbedded layers of clays, silty sands and clayey gravels up to 30 feet bgs.

In July, 1991, approximately 250 cubic yards of contaminated soil was excavated and approximately 2500 gallons of water was removed from the excavation. Low levels of soil contamination, up to 290 ppm TPH gasoline and 54 ppm oil and grease and trace levels of TEX, remain 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, pending case closure**

Number Decommissioned: **None**

Number Retained: **Seven (7)**

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: *1/3/96*

Reviewed by

Name: **Barney Chan**

Title: **Hazardous Materials Specialist**

Signature: *Barney Chan*

Date: *1/12/96*

Name: **Eva Chu**

Title: **Hazardous Materials Specialist**

Signature: *eva chu*

Date: *1/12/96*

Leaking Underground Fuel Storage Tank Program

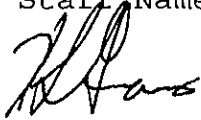
VI. RWQCB NOTIFICATION

Date Submitted to RB: 1/12/96

RB Response: *Approved*

RWQCB Staff Name: Kevin Graves

Title: Water Resources Control Engineer

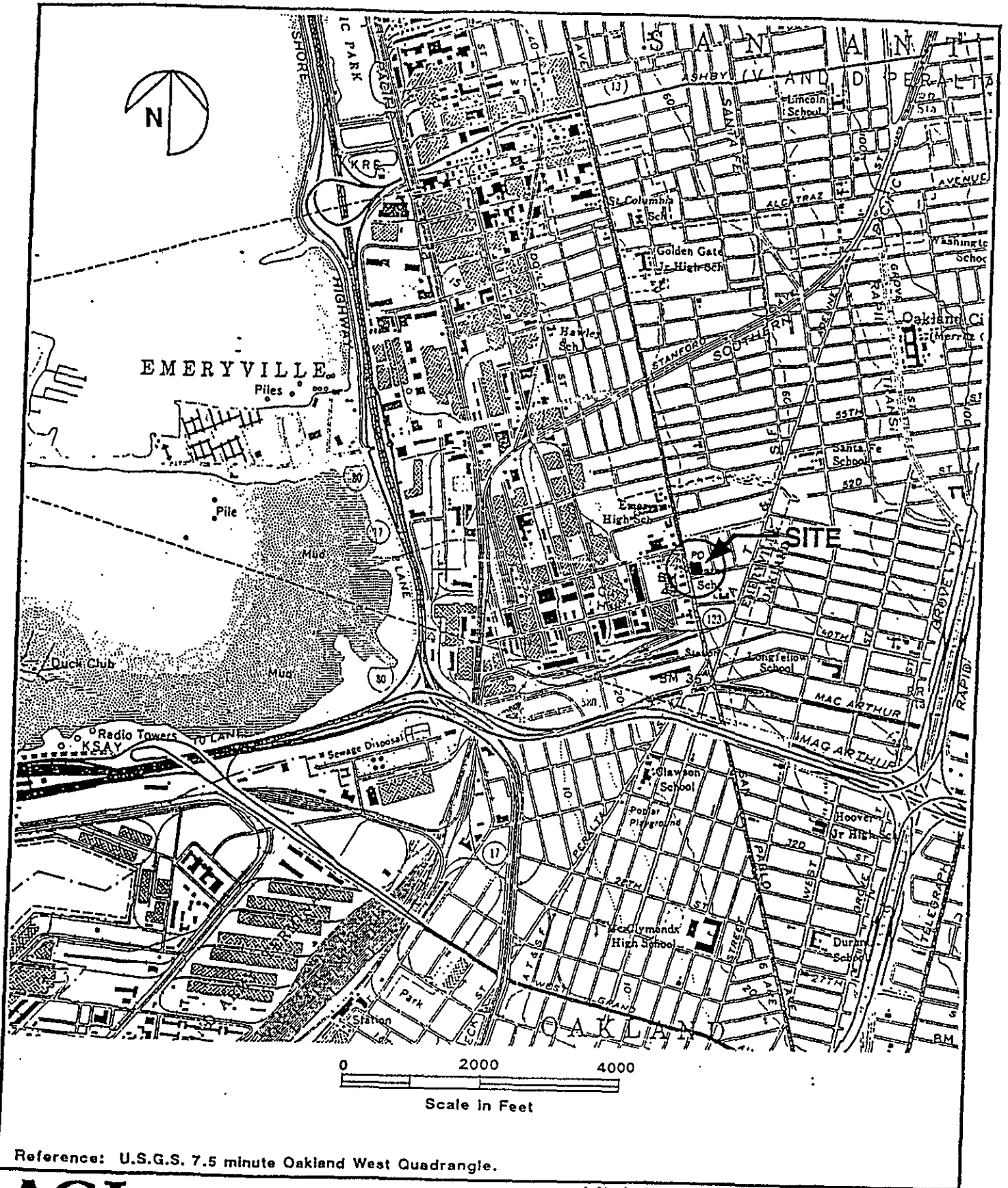


Date: 1/31/96

VII. ADDITIONAL COMMENTS, DATA, ETC.

The referenced site has been fully characterized. Historical groundwater data has been collected from June, 1990 to March, 1995. The furthest downgradient well (MW-6) did not detect any petroleum hydrocarbon contaminants during the last four sampling events (6/94 to 3/95). The petroleum hydrocarbon contamination in the groundwater has decreased considerably. Low levels of TPH gasoline (440 ppb), benzene (0.5 ppb), toluene (0.6 ppb), ethyl benzene (1.6 ppb), and xylene (1.9 ppb) were detected in MW-5 during the last sampling event.

Aggressive source removal has been conducted at the site and the residual levels of petroleum hydrocarbon in soil and groundwater do not pose a threat to the public health and the environment. Therefore, this agency recommends no further action regarding the four underground storage tanks removed from the site.



Reference: U.S.G.S. 7.5 minute Oakland West Quadrangle.

AGI
TECHNOLOGIES

Vicinity Map
Emeryville Redevelopment Agency
4300 San Pablo Avenue
Emeryville, California

FIGURE

1

JOB NUMBER
15.681.004.04

DRAWN
DH

APPROVED

DA

REVISED

DATE

Table 2
Summary of Chemical Analyses - Groundwater
4300 San Pablo Avenue
Emeryville, California

Sample ID	Date Sampled	EPA METHOD					
		8015 MODIFIED		8020			
		TPH-D (mg/l)	TPH-G (mg/l)	B (mg/l)	E (mg/l)	T (mg/l)	X (mg/l)
MW1 <i>A</i> <i>g for level</i>	06/11/90	1.90	0.94				
	12/11/90	NA	0.26	0.0053	0.0018	0.0018	0.0019
	09/13/91	0.38	0.33	0.0005	<0.0005	0.0008	0.0007
	12/24/91	0.41	0.15	<0.0005	0.0005	0.0018	0.0022
	01/27/93	0.40	0.94	<0.0005	<0.0005	<0.0005	<0.0005
	04/30/93	0.32	1.00	0.0030	0.0021	0.0039	0.0069
MW2 <i>A</i> <i>g for level</i>	06/11/90	2.80	1.80				
	12/11/90	NA	1.60	<0.0005	0.0005	<0.0005	<0.0005
MW3 <i>g for level</i>	06/11/90	<0.05	<0.05	0.0030	0.0021	0.0025	0.0038
	12/11/90	NA	<0.05	<0.0005	0.0005	<0.0005	<0.0005
MW4 <i>2x</i> <i>g for level</i>	12/10/90	NA	0.30	<0.0005	<0.0005	<0.0005	<0.0005
	09/13/91	0.18	<0.05	<0.0005	0.0006	0.0011	0.0013
	12/24/91	0.65	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
	04/30/93	0.35	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
	06/30/94	0.66	0.5	0.0010	0.0021	<0.0005	<0.0005
	09/23/94	0.09	<0.05	<0.0005	<0.0005	<0.0005	0.0035
	12/24/94	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
	03/25/95	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW5 <i>2x</i> <i>g for level</i>	12/10/90	NA	0.42	<0.0005	<0.0005	<0.0005	<0.0005
	09/16/91	0.20	1.20	0.0008	0.0015	<0.0005	0.0028
	12/24/91	0.82	0.66	<0.0005	0.0023	0.0033	0.0051
	01/27/93	0.49	0.77	<0.0005	0.0015	0.0010	0.0032
	04/30/93	0.45	0.93	0.0012	0.0032	0.0018	0.0065
	06/30/94	0.77	0.62	<0.0005	0.0020	<0.0005	0.0020
	09/23/94	0.12	0.31	<0.0005	0.0014	<0.0005	0.0019
	12/24/94	<0.05	0.20	<0.0005	0.0019	<0.0005	0.0024
	03/25/95	<0.05	0.44	<0.0005	0.0005	<0.0005	0.0011
	MW6 <i>g for level</i>	12/11/90	NA	<0.05	0.0005	0.0016	0.0006
09/13/91		0.11	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
12/24/91		<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
01/27/93		0.06	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
04/30/93		0.05	<0.05	0.0007	0.0007	0.0019	<0.0005
06/30/94		<0.05	<0.05	<0.0005	<0.0005	<0.0005	0.0031
09/23/94		<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
12/24/94		<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
03/25/95		<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW7 <i>g for level</i>		03/11/94	<0.05	<0.05	<0.0005	<0.0005	<0.0005
	06/30/94	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
	09/23/94	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
	12/24/94	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
	03/25/95	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
Laboratory Reporting Limit		0.05	0.05	0.0005	0.0005	0.0005	0.0005

Notes:

- TPH-D - Total petroleum hydrocarbons quantified as diesel fuel.
- TPH-G - Total petroleum hydrocarbons quantified as gasoline.
- B - Benzene.
- E - Ethylbenzene.
- T - Toluene.
- X - Total xylenes.
- NA - Not analyzed.

Table 1 (cont.)
Groundwater Elevation Monitoring Data
4300 San Pablo Avenue
Emeryville, California

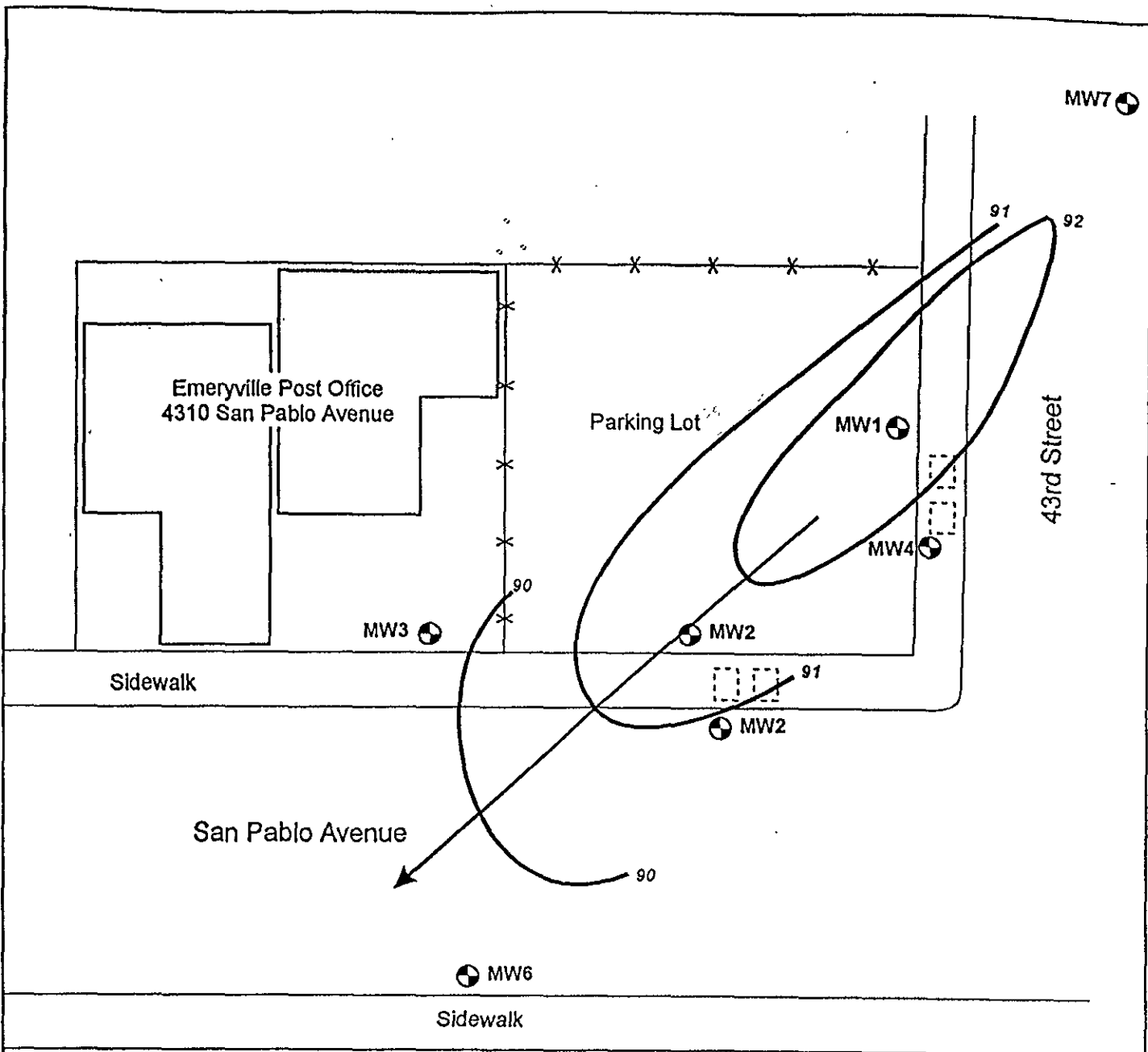
Monitoring Well	Measurement Date	Groundwater Elevation Monitoring Data		
		Field Measurement Data		Groundwater Elevation (feet)
		DTW Below TOC (feet)	TOC Elevation*	
MW4	12/26/90	6.93	100.25	93.32
	01/02/91	7.31	100.25	92.94
	07/10/91	7.12	100.25	93.13
	09/13/91	8.53	100.25	91.72
	12/24/91	6.70	100.25	93.55
	01/27/93	3.29	100.25	96.96
	04/30/93	4.74	100.25	95.51
	06/30/94	6.12	97.80	91.68
	09/23/94	7.57	97.80	90.23
	12/24/94	4.20	97.80	93.60
	03/25/95	3.82	97.80	93.98
MW5	12/26/90	7.74	99.54	91.80
	01/02/91	7.95	99.54	91.59
	07/10/91	6.48	99.54	93.06
	09/13/91	7.07	99.54	92.47
	12/24/91	9.65	99.54	89.89
	01/27/93	4.80	99.54	94.74
	04/30/93	5.21	99.54	94.33
	06/30/94	6.48	97.08	90.60
	09/23/94	7.68	97.08	89.40
	12/24/94	7.17	97.08	89.91
	03/25/95	6.52	97.08	90.56
MW6	12/26/90	9.20	99.26	90.06
	01/02/91	9.40	99.26	89.86
	07/10/91	8.66	99.26	90.60
	09/13/91	9.95	99.26	89.31
	12/24/91	9.61	99.26	89.65
	01/27/93	5.17	99.26	94.09
	04/30/93	5.92	99.26	93.34
	06/30/94	7.31	96.82	89.51
	09/23/94	9.13	96.82	87.69
	12/24/94	5.77	96.82	91.05
	03/25/95	3.45	96.82	93.37
MW7	03/11/94	6.44	99.76	93.32
	06/30/94	8.52	99.76	91.24
	09/23/94	6.35	99.76	93.41
	12/24/94	5.74	99.76	94.02
	03/25/95	4.18	99.76	95.58

Notes:

- * - 06/06/90 through 04/30/93: Elevation reference was top of curb at fire hydrant on 43rd Street.
- 06/30/94: Elevation reference was top of hydrant in sidewalk at NE corner of 43rd/San Pablo intersection.
- DTW - Depth to water.
- TOC - Top of monitoring well casing (data beginning 3/11/94 is based upon 7/25/94 resurveyed TOC elevations).
- NM - Not measured.

Table 1
Groundwater Elevation Monitoring Data
 4300 San Pablo Avenue
 Emeryville, California

Monitoring Well	Measurement Date	Groundwater Elevation Monitoring Data		
		Field Measurement Data		Groundwater Elevation (feet)
		DTW Below TOC (feet)	TOC Elevation*	
MW1	06/06/90	5.33	101.13	95.80
	06/11/90	5.52	101.13	95.61
	06/18/90	5.50	101.13	95.63
	06/22/90	6.18	101.13	94.95
	06/29/90	6.50	101.13	94.63
	10/30/90	9.10	101.13	92.03
	12/11/90	7.18	101.13	93.95
	12/26/90	7.90	101.13	93.23
	01/02/91	8.27	101.13	92.86
	07/10/91	8.00	101.13	93.13
	09/13/91	9.16	101.13	91.97
	12/24/91	7.29	101.13	93.84
	01/27/93	3.60	101.13	97.53
	04/30/93	5.14	101.13	95.99
	06/30/94	5.91	98.67	92.76
	09/23/94	8.00	98.67	90.67
	12/24/94	6.95	98.67	91.72
03/25/95	5.53	98.67	93.14	
MW2	06/06/90	7.15	101.49	94.34
	06/11/90	6.98	101.49	94.51
	06/18/90	7.04	101.49	94.45
	06/22/90	7.60	101.49	93.89
	06/29/90	9.96	101.49	91.53
	10/30/90	10.66	101.49	90.83
	12/11/90	9.88	101.49	91.61
	12/26/90	9.19	101.49	92.30
	01/02/91	9.65	101.49	91.84
	07/10/91	9.40	101.49	92.09
	09/13/91	NM	101.49	NM
	12/24/91	9.19	101.49	92.30
	01/27/93	4.84	101.49	96.65
	04/30/93	6.74	101.49	94.75
	06/30/94	7.29	99.00	91.71
	09/23/94	9.21	99.00	89.79
	12/24/94	5.59	99.00	93.41
03/25/95	4.21	99.00	94.79	
MW3	06/06/90	6.22	100.20	93.98
	06/11/90	6.50	100.20	93.70
	06/18/90	6.49	100.20	93.71
	06/22/90	7.11	100.20	93.09
	06/29/90	9.34	100.20	90.86
	10/30/90	10.11	100.20	90.09
	12/11/90	9.36	100.20	90.84
	12/26/90	9.00	100.20	91.20
	01/02/91	9.28	100.20	90.92
	07/10/91	8.94	100.20	91.26
	09/13/91	9.93	100.20	90.27
	12/24/91	9.02	100.20	91.18
	01/27/93	3.90	100.20	96.30
	04/30/93	5.85	100.20	94.35
	06/30/94	7.80	97.77	89.97
	09/23/94	8.65	97.77	89.12
	12/24/94	5.45	97.77	92.32
03/25/95	3.21	97.77	94.56	



LEGEND

- MW2 Monitoring Well
- Former Underground Storage Tank
- 90 Groundwater Elevation Contour
- Inferred Direction of Groundwater Flow

Emeryville Fire Station #1

Retail Building

N

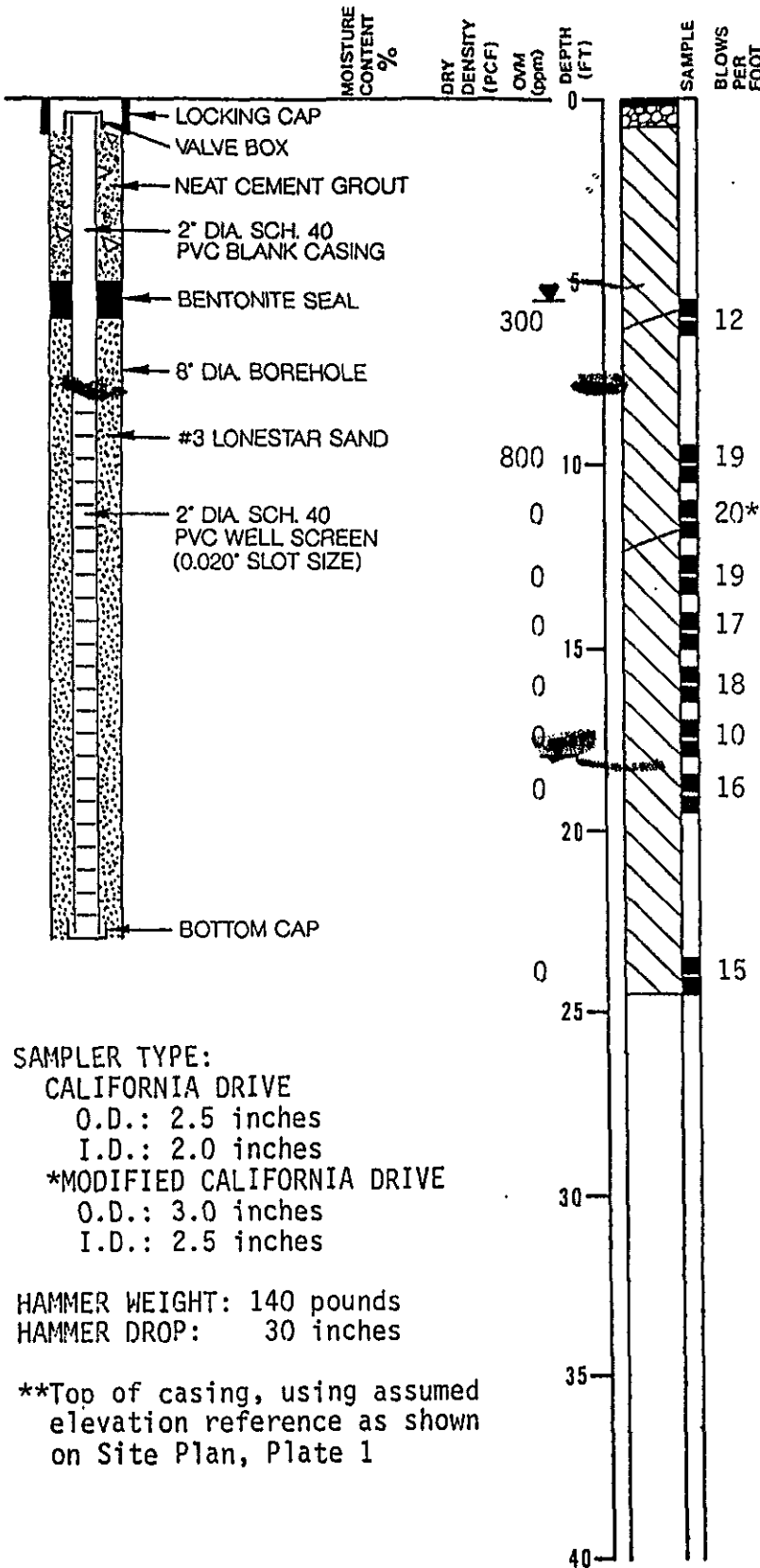
0 40
Scale in Feet

LOG OF TEST BORING MW-1

EQUIPMENT 8" Hollow Stem Auger

DATE DRILLED 6/5/90

ELEVATION 101.13 feet**



SAMPLER TYPE:

CALIFORNIA DRIVE

O.D.: 2.5 inches

I.D.: 2.0 inches

*MODIFIED CALIFORNIA DRIVE

O.D.: 3.0 inches

I.D.: 2.5 inches

HAMMER WEIGHT: 140 pounds

HAMMER DROP: 30 inches

**Top of casing, using assumed elevation reference as shown on Site Plan, Plate 1

Subsurface Consultants

EMERYVILLE SENIOR HOUSING

JOB NUMBER:
537.003

DATE
6/13/90

APPROVED

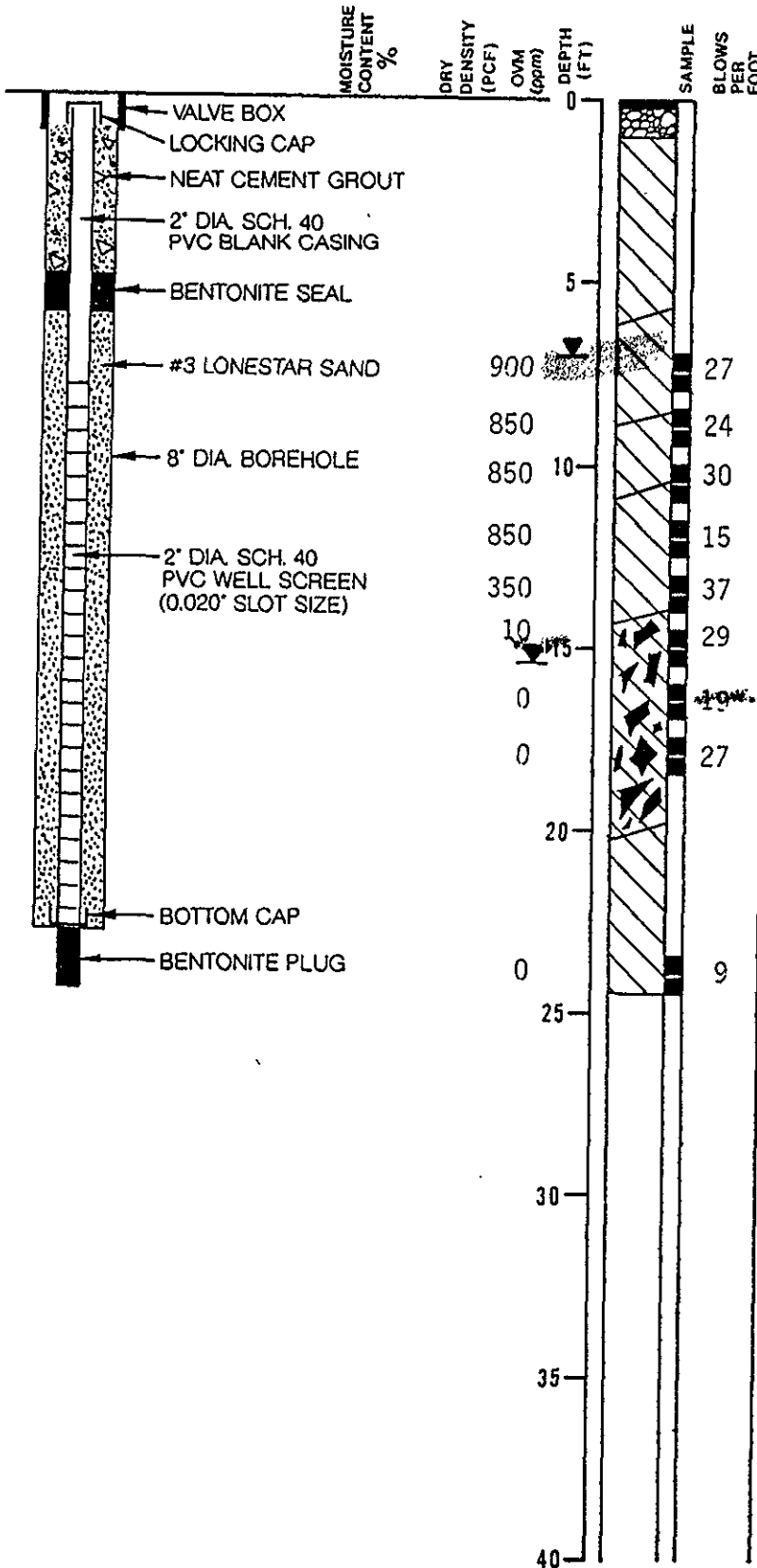
PLATE
13

LOG OF TEST BORING MW-2

EQUIPMENT 3" Hollow Stem Auger

DATE DRILLED 6/5/90

ELEVATION 101.49 feet



ASPHALTIC CONCRETE - 2" thick
 BASE ROCK - 10" thick
 DARK GRAY SILTY CLAY (CL)
 medium stiff, moist

GRAY-GREEN GRAVELLY CLAY (CL)
 medium stiff, moist

~~GROUNDWATER LEVEL 6/6/90~~

GRAY-GREEN SANDY CLAY (CL)
 medium stiff, moist, coarse
 grained sand

MOTTLED BROWN & GREEN-GRAY SILTY
 CLAY (CL)

medium stiff, moist, with fine
 grained sand

GRAY-GREEN CLAYEY GRAVEL (GC)
 dense, moist

~~GROUNDWATER LEVEL DURING DRILLING~~
 brown below 16 feet

BROWN SILTY CLAY (CL)
 medium stiff, wet

Subsurface Consultants

EMERYVILLE SENIOR HOUSING

PLATE

JOB NUMBER
537.003

DATE
6/13/90

APPROVED

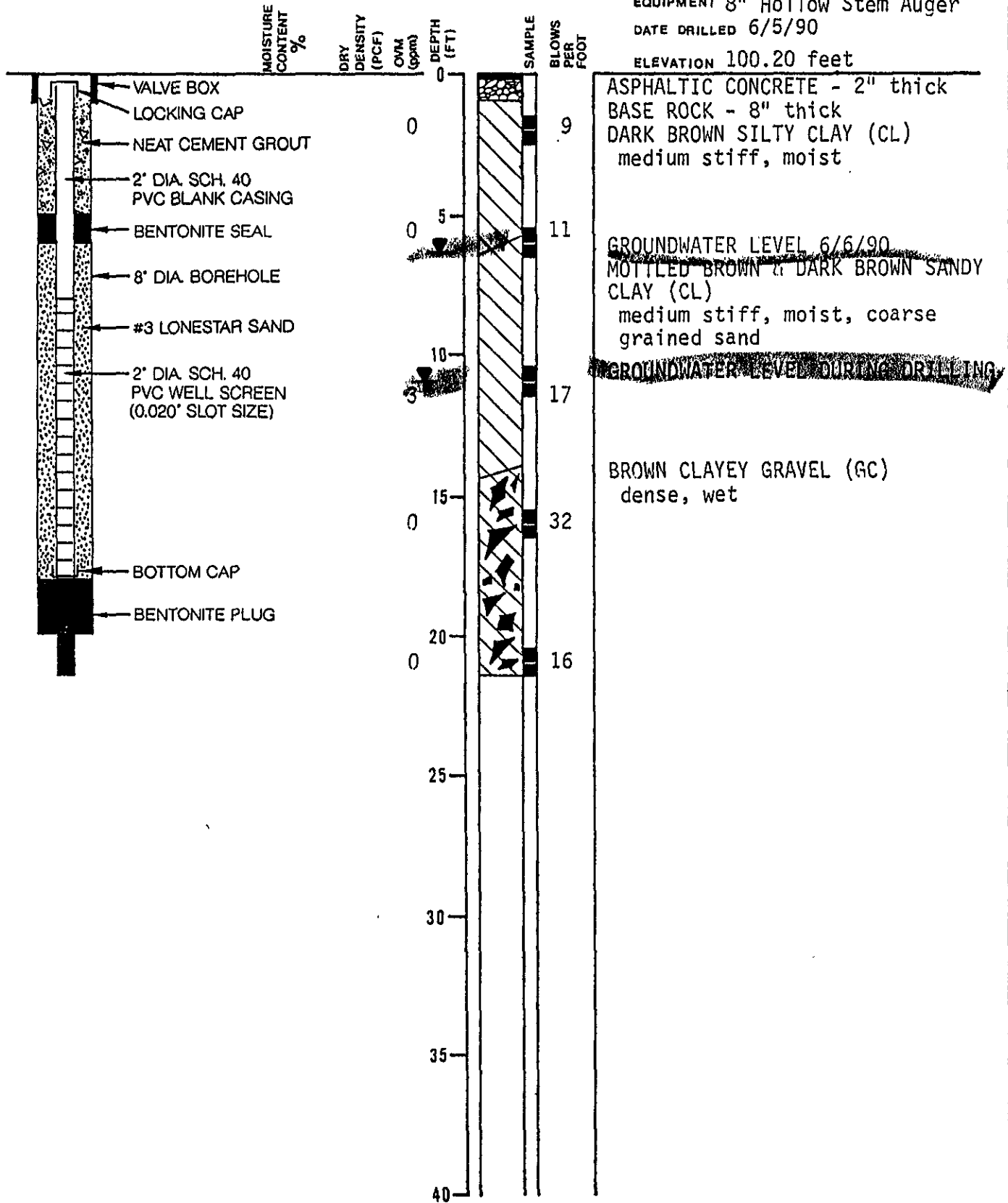
14

LOG OF TEST BORING MW-3

EQUIPMENT 8" Hollow Stem Auger

DATE DRILLED 6/5/90

ELEVATION 100.20 feet



Subsurface Consultants

EMERYVILLE SENIOR HOUSING

JOB NUMBER
537.003

DATE
6/13/90

APPROVED
[Signature]

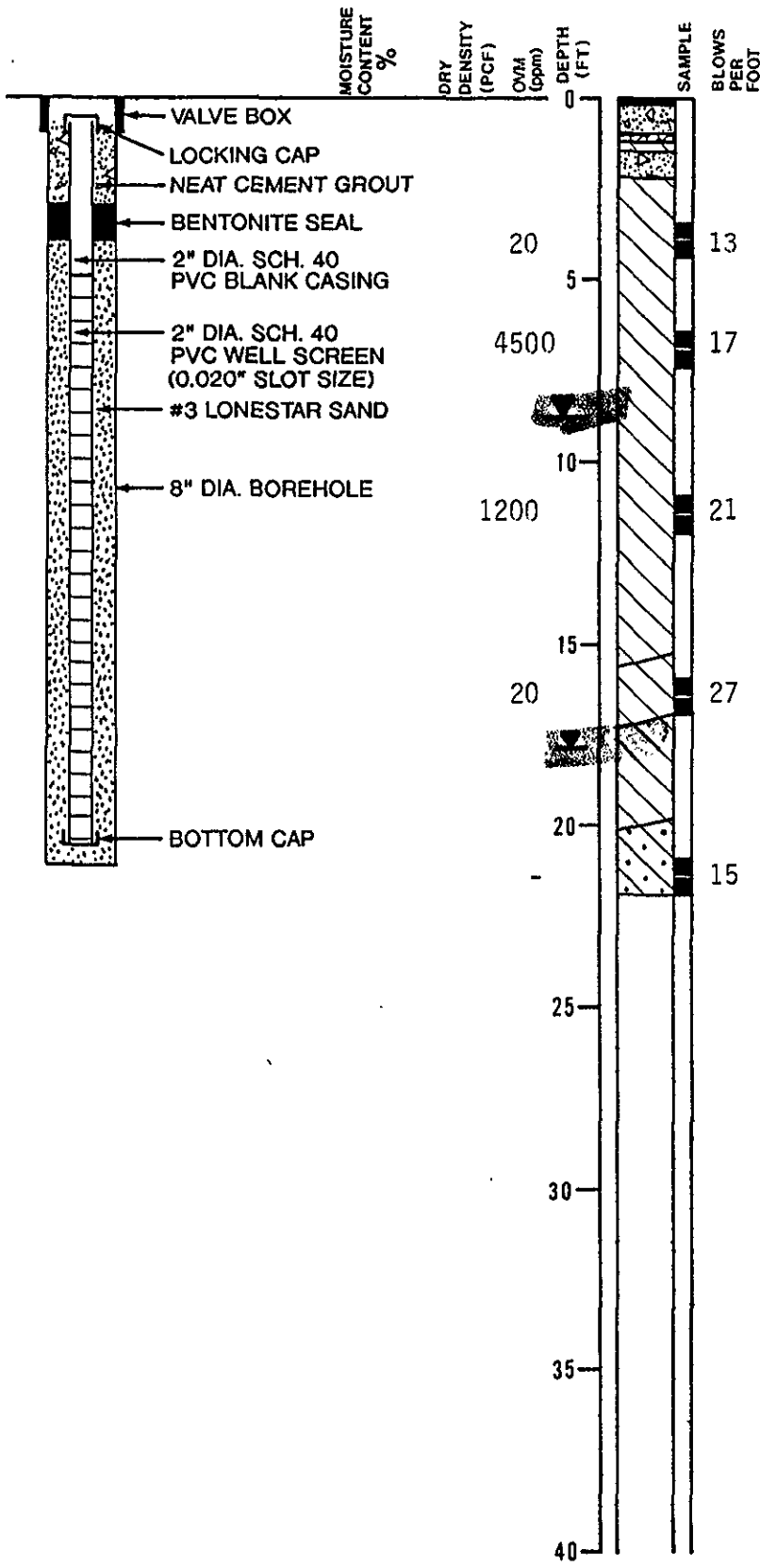
PLATE
15

LOG OF TEST BORING MW-5

EQUIPMENT 8" Hollow Stem Auger

DATE DRILLED 12/7/90

ELEVATION 99.54 feet



ASPHALTIC CONCRETE - 3" thick
 CONCRETE SLAB - 9" thick
 BASE ROCK - 2" thick
 GRAY CLAY (CL)
 CONCRETE SLAB - 9" thick
 DARK GRAY SILTY CLAY (CL)
 medium stiff, moist, with gravel
 mottled gray and green below
 4 feet

GROUNDWATER LEVEL 1/2/91

BROWN GRAVELLY CLAY (CL)
 medium stiff, moist
 RED-BROWN SANDY CLAY (CL)
 medium stiff, moist
~~GROUNDWATER TABLE~~
 SAND (SC)
 medium dense, wet, with gravel,
 fine grained sand

Subsurface Consultants

EMERYVILLE SENIOR HOUSING

PLATE
8

JOB NUMBER
 537.004

DATE
 12/14/90

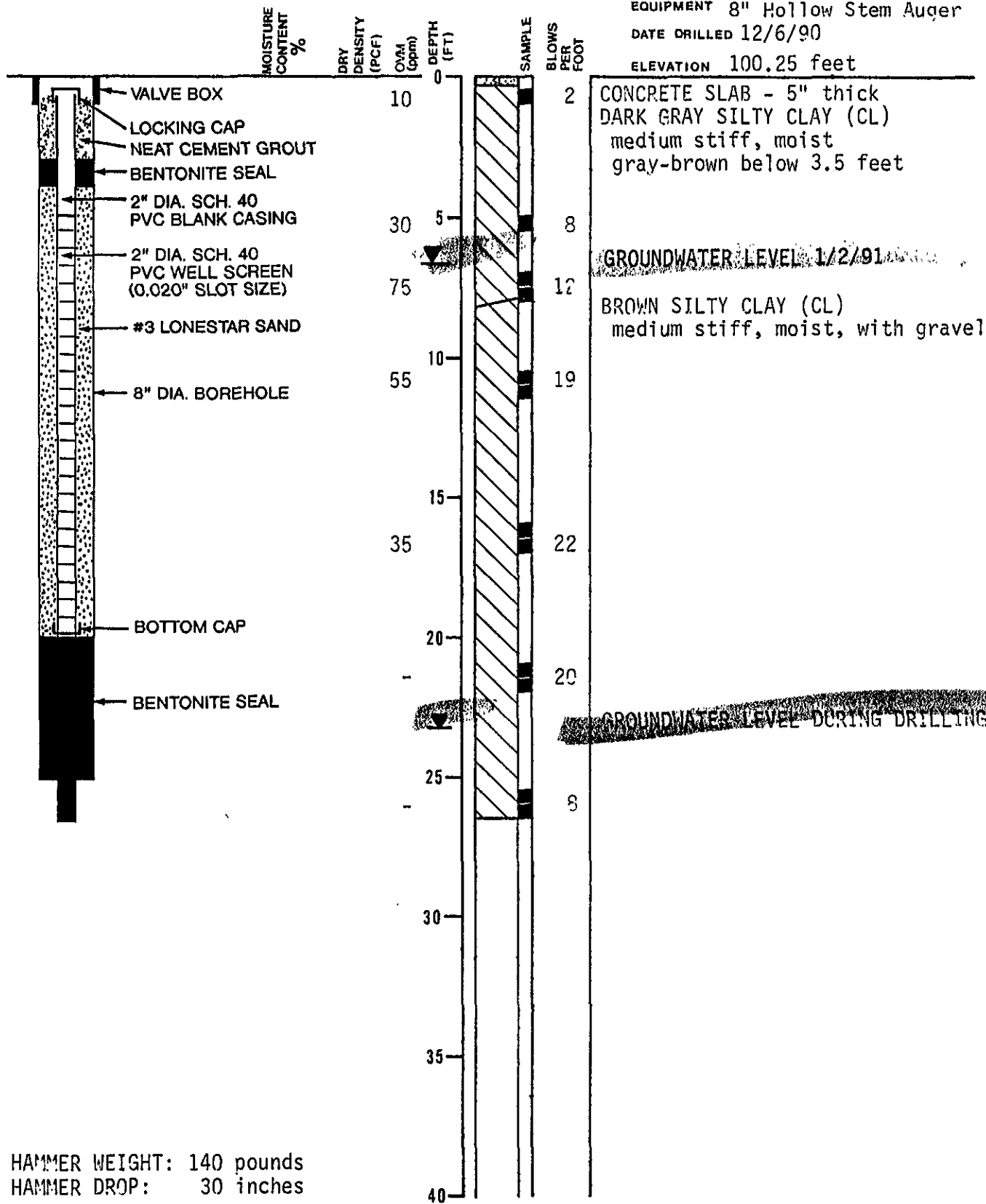
APPROVED
[Signature]

LOG OF TEST BORING MW-4

EQUIPMENT 8" Hollow Stem Auger

DATE DRILLED 12/6/90

ELEVATION 100.25 feet



HAMMER WEIGHT: 140 pounds
HAMMER DROP: 30 inches

Subsurface Consultants

EMERYVILLE SENIOR HOUSING

PLATE

JOB NUMBER
537.004

DATE
12/14/90

APPROVED

[Signature]

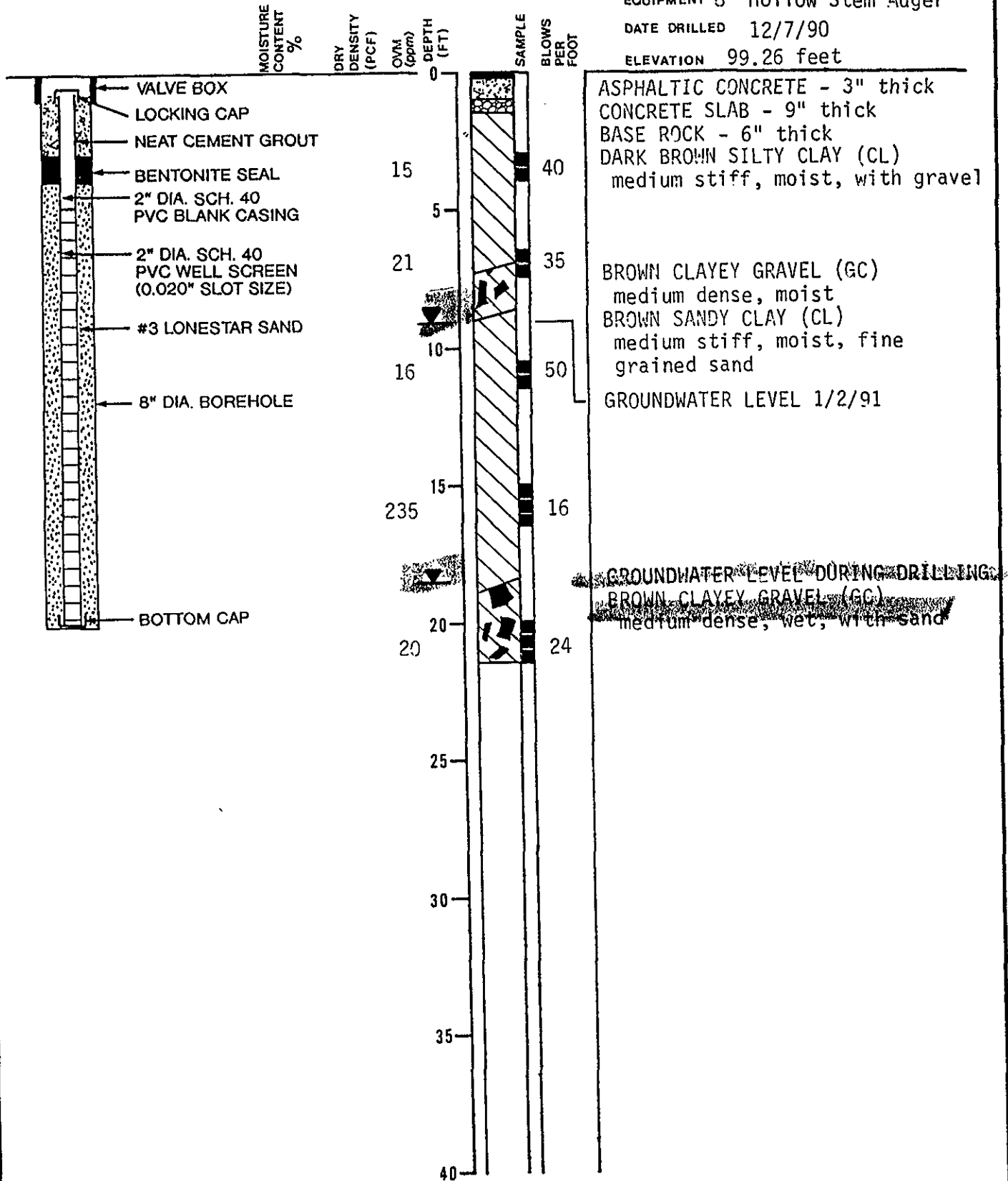
7

LOG OF TEST BORING MW-6

EQUIPMENT 8" Hollow Stem Auger

DATE DRILLED 12/7/90

ELEVATION 99.26 feet



Subsurface Consultants

EMERYVILLE SENIOR HOUSING

JOB NUMBER
537.004

DATE
12/14/90

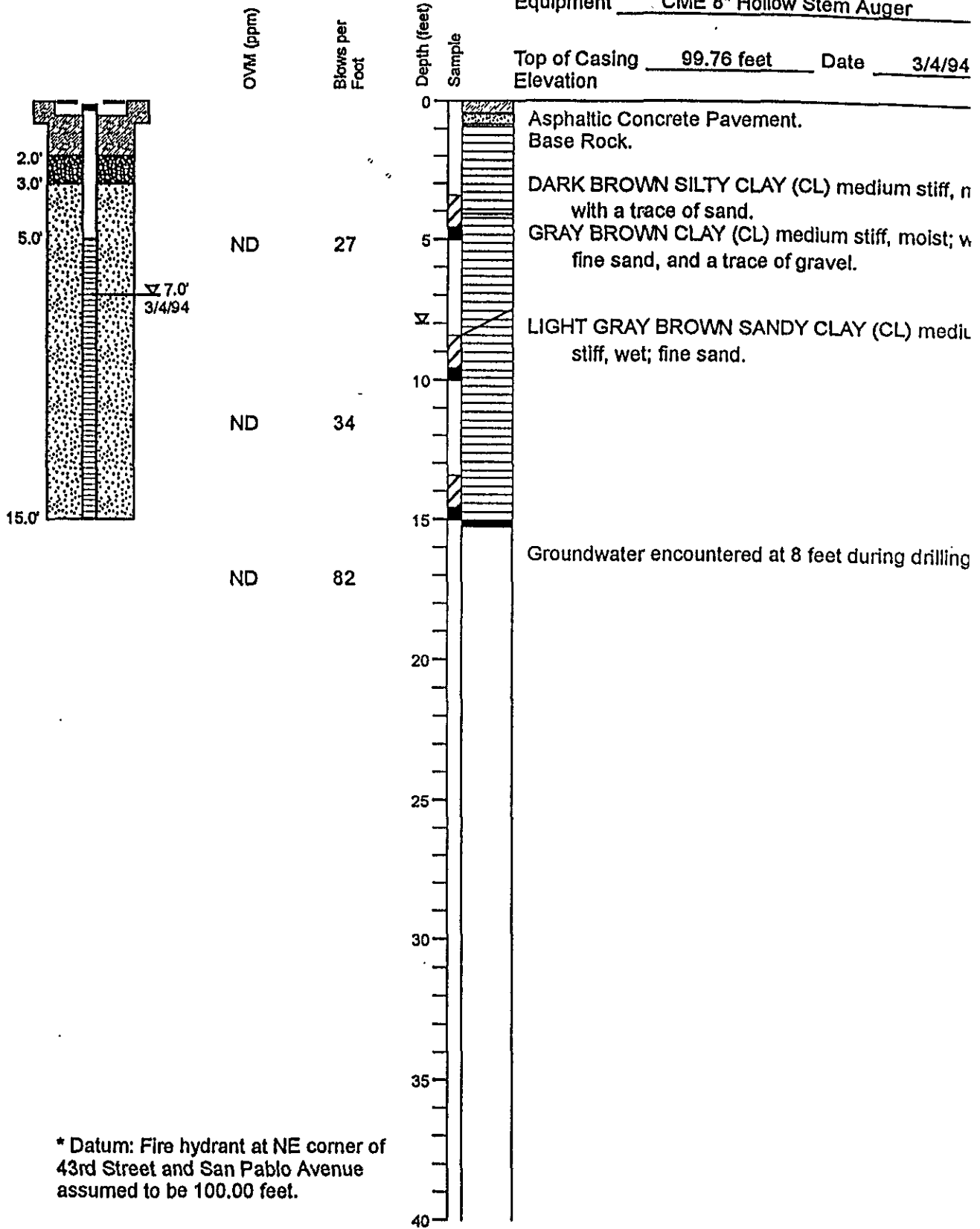
APPROVED
[Signature]

PLATE

9

Equipment CME 8" Hollow Stem Auger

Top of Casing Elevation 99.76 feet Date 3/4/94



AGI
TECHNOLOGIES

Log of Monitoring Well 7
Emeryville Redevelopment Agency/4300 San Pablo Avenue
Emeryville, California

PLATE

A

081004mw.cdr PROJECT NO. 15,681.004.04 DRAWN SES DATE 31 August 94 APPROVED REVISED DATE

Table 1.
Petroleum Hydrocarbon Concentrations
in the Soil Remediation Excavation

Sample	Gasoline ¹ (mg/kg) ²	Benzene (ug/kg) ³	Toluene (ug/kg)	Ethyl- Benzene (ug/kg)	Total Xylenes (ug/kg)
1 @ 10.5'	1.1	<5 ⁴	<5	<5	<5
2 @ 7'	<1	<5	<5	<5	<5
3 @ 7.5'	270	<80	99	750	1,600
4 @ 8'	<1	<5	<5	<5	<5
6 @ 13'	<1	<5	<5	<5	<5
7 @ 8'	<1	<5	<5	<5	<5
8 @ 8'	120	<80	290	180	750
9 @ 7.5'	450 ⁵	510	1,900	740	680

- 1 Measured as total volatile hydrocarbons (EPA 8015 modified)
 2 mg/kg = milligrams per kilogram = parts per million
 3 ug/kg = micrograms per kilogram = parts per billion
 4 Less than detection limits shown
 5 Removed by subsequent excavation

During excavation, an additional former tank location was discovered that was not shown on the plans of the former service stations. Two trenches were excavated to the north and west of the remediation area (as shown on Plate 2) to further investigate the extent of soil contamination. Analytical test results of soil samples from the trenches are shown on Table 2. The results of our visual observations of the soils exposed by the excavations, OVM readings and analytical tests indicated that contaminants existed primarily in a zone of soil about 2-foot-thick near the groundwater.

Table 2.

Petroleum Hydrocarbon Concentrations
in the Trenches

<u>Sample</u>	<u>Gasoline¹</u> <u>(mg/kg)³</u>	<u>Oil & Grease²</u> <u>(mg/kg)</u>
EE-2 @ 7'	[REDACTED]	-- ⁴
[REDACTED]	[REDACTED]	--
EE-4 @ 14.5'	1.5	--
[REDACTED]	[REDACTED]	--
EE-14 @ 10.5'	[REDACTED]	--
EE-16 @ 3'	--	54

¹ Measured as total volatile hydrocarbons (EPA 8015 modified)

² Petroleum hydrocarbon oil and grease (SMWW 17:5520 E&F)

³ mg/kg = milligrams per kilogram = parts per million

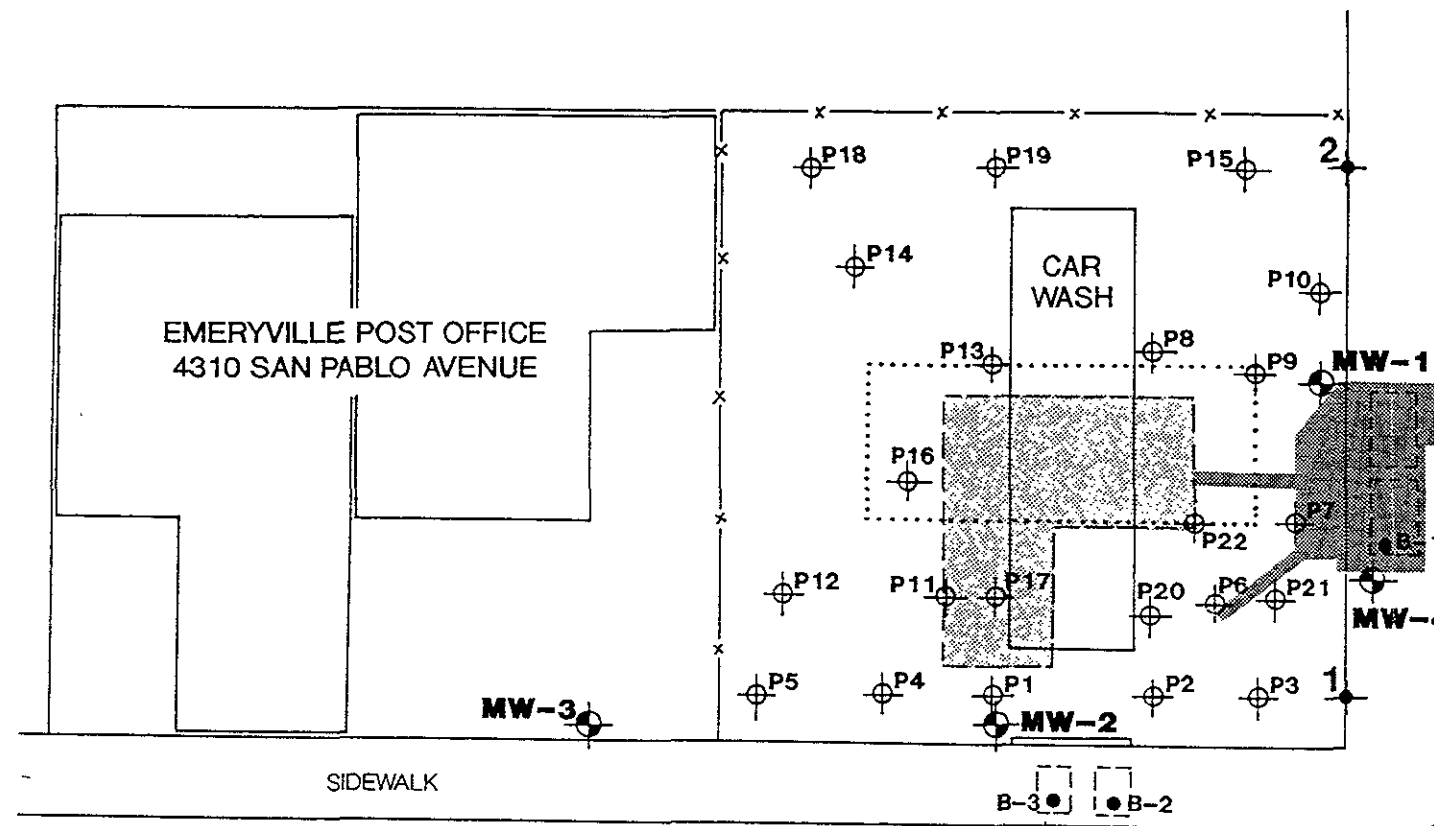
⁴ Test not requested

On August 26, 1991, SCI and the City of Emeryville met with the RWQCB and ACHCSA to discuss the gasoline concentrations, and the results of the remediation to date. The RWQCB agreed that additional soil remediation was not required at this time provided groundwater monitoring was performed. However, if significant increases in groundwater contaminant levels were detected in the future, additional soil remediation could be required.

Table 2. Petroleum Hydrocarbon and Purgeable Aromatic Concentrations in Soil

Sample	TVH ² (ppm) ⁵	TEH ³ (ppm)	Purgeable Aromatics ¹				
			B (ppb) ⁶	T (ppb)	X (ppb)	E (ppb)	Other ⁴ (ppm)
1 @ 5.5'	-- ⁷	ND ⁸	--	--	--	--	--
1 @ 9.5'	--	120 ⁹	--	--	--	--	--
B1 @ 7'	490	--	ND	280	2,200	810	--
B1 @ 10'	ND	--	ND	ND	ND	ND	--
B2 @ 8'	21	--	ND	15	260	68	--
B2 @ 11'	ND	--	ND	ND	ND	ND	--
B3 @ 7'	ND	--	ND	16	28	ND	--
B3 @ 11'	57	--	14	86	1,100	370	--
MW-1 @ 6'	ND	ND ¹⁰	ND	11	20	ND	ND
MW-1 @ 10'	63	ND ¹⁰	ND	ND	ND	ND	ND
MW-2 @ 7'	4.1	ND ¹⁰	ND ¹¹	ND ¹¹	ND ¹¹	ND ¹¹	ND
MW-2 @ 12'	ND	ND ¹⁰	ND	7	7	ND	ND
MW-2 @ 16.5'	ND	--	ND	ND	ND	ND	ND
MW-3 @ 6'	ND	ND ¹⁰	ND ¹¹	ND ¹¹	ND ¹¹	ND ¹¹	ND
MW-4 @ 5'	ND	--	ND	ND	ND	ND	ND
MW-4 @ 11'	ND	--	ND	ND	ND	ND	--
MW-5 @ 7'	18	45 ¹²	5.2	18	100	61	--
MW-5 @ 11.5'	52	--	ND	39	390	160	--
MW-6 @ 7'	ND	--	ND	ND	ND	ND	--
MW-6 @ 16'	ND	--	ND	ND	ND	ND	--

- 1 Benzene, toluene total xylenes and ethylbenzene determined by EPA 5030/8020 unless noted otherwise
- 2 Total volatile hydrocarbons (EPA Method 5030/8015 mod.)
- 3 Total extractable hydrocarbons (EPA Method 3550/8015)
- 4 As determined by EPA Method 5030/8240
- 5 Parts per million (mg/kg)
- 6 Parts per billion (ug/kg)
- 7 Test not requested
- 8 None detected, see test data sheets in the Appendix for detection limits
- 9 Quantified by the analytical laboratory as gasoline
- 10 Also analytically tested for oil and grease, with none detected
- 11 Determined by EPA Method 5030/8240
- 12 Gasoline range, kerosene: ND, diesel: ND



APPROXIMATE
DIRECTION OF
GROUNDWATER
FLOW ON 7/10/91

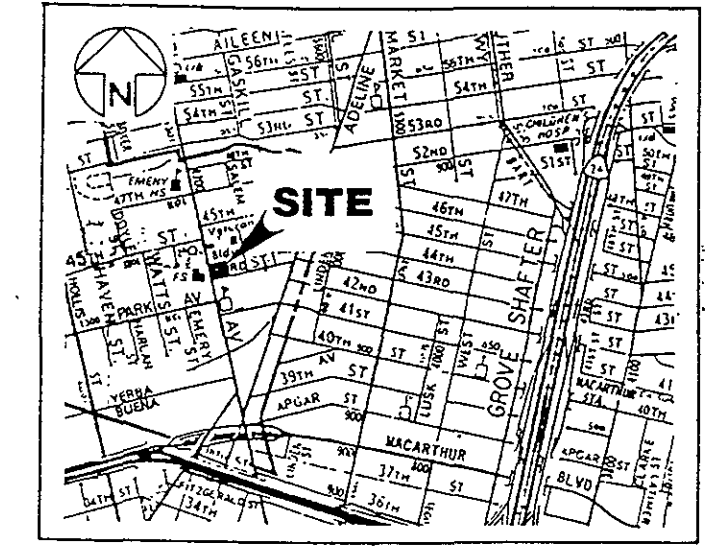
SAN PABLO AVENUE
(STATE ROUTE 123)

MW-6

SIDEWALK

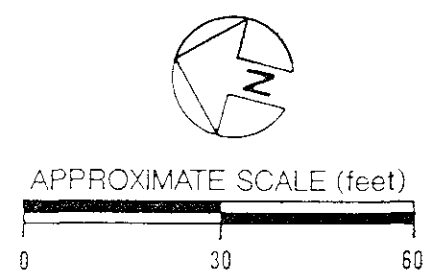
EMERYVILLE
FIRE STATION #1

RETAIL
BUILDING












VICINITY MAP

- MONITORING WELL
- PROBE
- TEST BORING
- APPROXIMATE FORMER TANK LOCATION
- FORMER FUEL STATION PRIOR TO 1950 (APPROXIMATE LOCATION)
- FORMER FUEL STATION AFTER 1959 (APPROXIMATE LOCATION)
- SOIL REMEDIATION EXCAVATION



Subsurface Consultants	SITE PLAN		PLATE
	EMERYVILLE SENIOR HOUSING		1
JOB NUMBER 537 004	DATE 12/26/91	APPROVED 	

 TEST BORING
 MONITORING WELL
 EE-14@10.5'(14)
 GASOLINE (mg/kg)
 SAMPLE DEPTH
 SAMPLE IDENTIFICATION
 SIDEWALL SAMPLE
 BOTTOM SAMPLE
 EXCAVATION BOUNDARY
 FORMER TANK EXCAVATION BACKFILL

EE-16@3'(OIL & GREASE=54mg/kg)

EE-14@10.5'(14)

APPROXIMATE
DIRECTION OF
GROUNDWATER
FLOW ON 7/10/91

EE-2@7'(11)

EE-3@8'(290)

TRENCHES

EE-10@7'(83)

EE-4@14.5'(1.5)

MW-1
@6'(<1)
@10'(63)

1
@5.5'(DIESEL=<10)
@9.5'(DIESEL=120mg/kg, GASOLINE RANGE)

3@7.5'(270)
REMOVED BY
EXCAVATION

9@7.5'(450)
REMOVED BY
EXCAVATION

MW-4
@5'(<1)
@11'(<1)

B-1
@7'(490)
@10'(<1)
REMOVED BY
EXCAVATION

(120 ppm at 9.5')

1@10.5'(1.1)

6@13'(<1)

7@8'(<1)

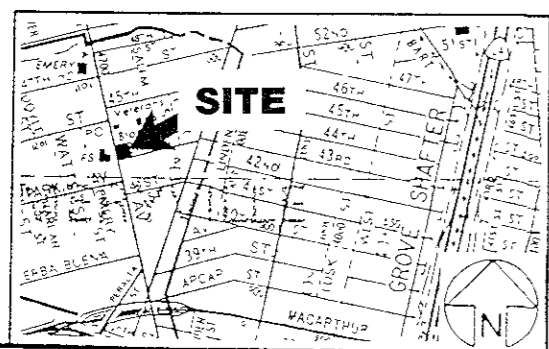
SIDEWALK

UTILITY POLE

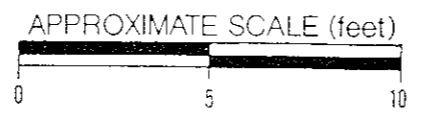
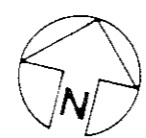
4@8'(<1)

8@8'(120)

43RD STREET



VICINITY MAP



SOIL REMEDIATION EXCAVATION		
4300 SAN PABLO AVENUE - EMERYVILLE, CA		
JOB NUMBER 537 004	DATE 12/26/91	APPROVED <i>[Signature]</i>
Subsurface Consultants		PLATE 2