



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

REMEDIAL ACTION COMPLETION CERTIFICATION

**StID 4021 - 5576 Miles Ave, Oakland, CA
(1-280 gallon diesel tank removed in March 16, 1988)**

April 16, 1998

Mr. Andrew Clark-Clough
City of Oakland
1333 Broadway, Suite 330
Oakland, CA 94612

Dear Mr. Clark-Clough:

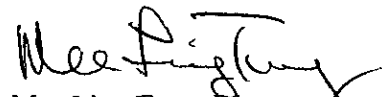
This letter confirms the completion of site investigation and remedial action for the underground storage tank formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank 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 (fire#19-3)

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



RO# 857

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StID 4021

April 16, 1998

Mr. Andrew Clark-Clough
City of Oakland
1333 Broadway, Suite 330
Oakland, CA 94612

**Re: Fuel Leak Site Case Closure for City of Oakland Fire Station #19, at 5776 Miles Ave, Oakland,
CA 94618**

Dear Mr. Clark-Clough:

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.

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

eva chu
Hazardous Materials Specialist

enclosure:

1. Case Closure Letter
2. Case Closure Summary

c: Frank Kliewer
City of Oakland-Planning
1330 Broadway, 2nd Floor
Oakland, CA 94612

files-ec (fire#19-4)

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: September 23, 1997

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: City of Oakland Fire Station #19
Site facility address: 5776 Miles Ave, Oakland, CA 94618
RB LUSTIS Case No: N/A Local Case No./LOP Case No.: 4021
URF filing date: 11-18-88 SWEEPS No: N/A

<u>Responsible Parties:</u>	<u>Addresses:</u>	<u>Phone Numbers:</u>
Andrew Clark-Clough City of Oakland	1333 Broadway #330 Oakland, CA 94612	510/238-6259

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	280	Diesel	Removed	3/16/88

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: Unknown
Site characterization complete? YES
Date approved by oversight agency: 9/18/97
Monitoring Wells installed? Yes Number: 2 piezometers, 1 monitoring well
Proper screened interval? Yes, ~17' to 30' bgs
Highest GW depth below ground surface: 18.45' Lowest depth: 19.45' in MW-3
Flow direction: SW to NE
Most sensitive current use: Residential, Temescal Creek
Are drinking water wells affected? No Aquifer name: Unknown
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
Alameda, CA 94502

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 & Piping	1 UST	Disposed by H & H, San Francisco	3/16/88
Soil	18 cy	Disposed at Chem Waste, Kettleman City	4/21//88

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before ¹	After ²	Before ³	After ⁴
TPH (Gas)	NA	NA	ND	NA
TPH (Diesel)	1,900	46	ND	ND
Benzene	NA	NA	ND	ND
Toluene	NA	NA	ND	ND
Ethylbenzene	NA	NA	ND	ND
Xylenes	NA	NA	ND	ND

- NOTE: 1 soil sample collected beneath tank at time of UST removal, 3/88
 2 soil sample collected after minor overexcavation, 4/88
 3 initial groundwater sampling event, 4/89
 4 latest groundwater sampling event, 10/93
 NA Not Analyzed
 ND Non-Detect

Comments (Depth of Remediation, etc.):

See Section VII, Additional Comments, etc...

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: **None**
 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: **None**
 List enforcement actions rescinded: **NA**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Eva Chu Title: Haz Mat Specialist

Signature:  Date: 10/6/97

Reviewed by

Name: Larry Seto Title: Sr. Haz Mat Specialist

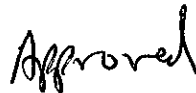
Signature:  Date: 9-23-97

Name: Thomas Peacock Title: Supervisor

Signature:  Date: 10-2-97

VI. RWQCB NOTIFICATION

Date Submitted to RB: 10/7/97

RB Response: 

RWQCB Staff Name: Kevin Graves

Title: AWRCE

Signature: 

Date: 10-22-97

VII. ADDITIONAL COMMENTS, DATA, ETC.

A 285 gallon diesel UST was removed in march 1988. Soil samples collected beneath the UST exhibited up to 1,900 ppm TPHd. Approximately 18 cy of impacted soil was excavated. A confirmatory soil sample collected from the bottom of the pit contained 46 ppm TPHd. It appears overexcavation removed most of the hydrocarbon-impacted soil.

In April 1989 one groundwater monitoring well, MW-3, and two piezometers, P1 and P2, were installed at the site. Soil samples from 9' and 14'bgs and groundwater from the well borings did not contain TPHg, TPHd, or BTEX. (See Fig 1, Table 1)

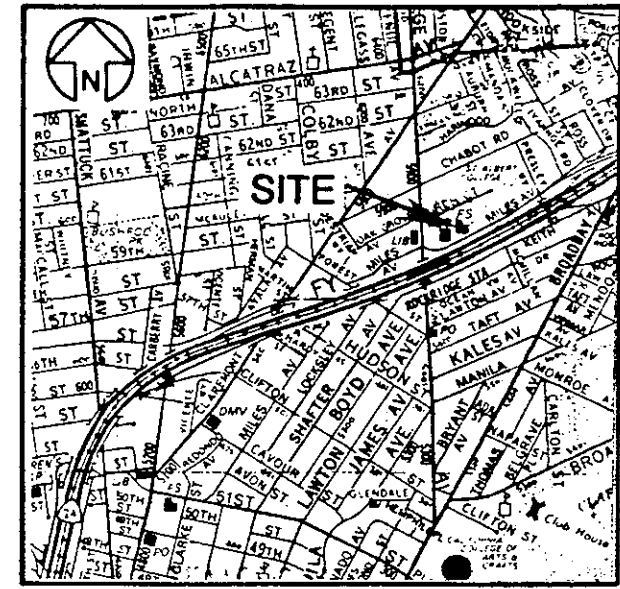
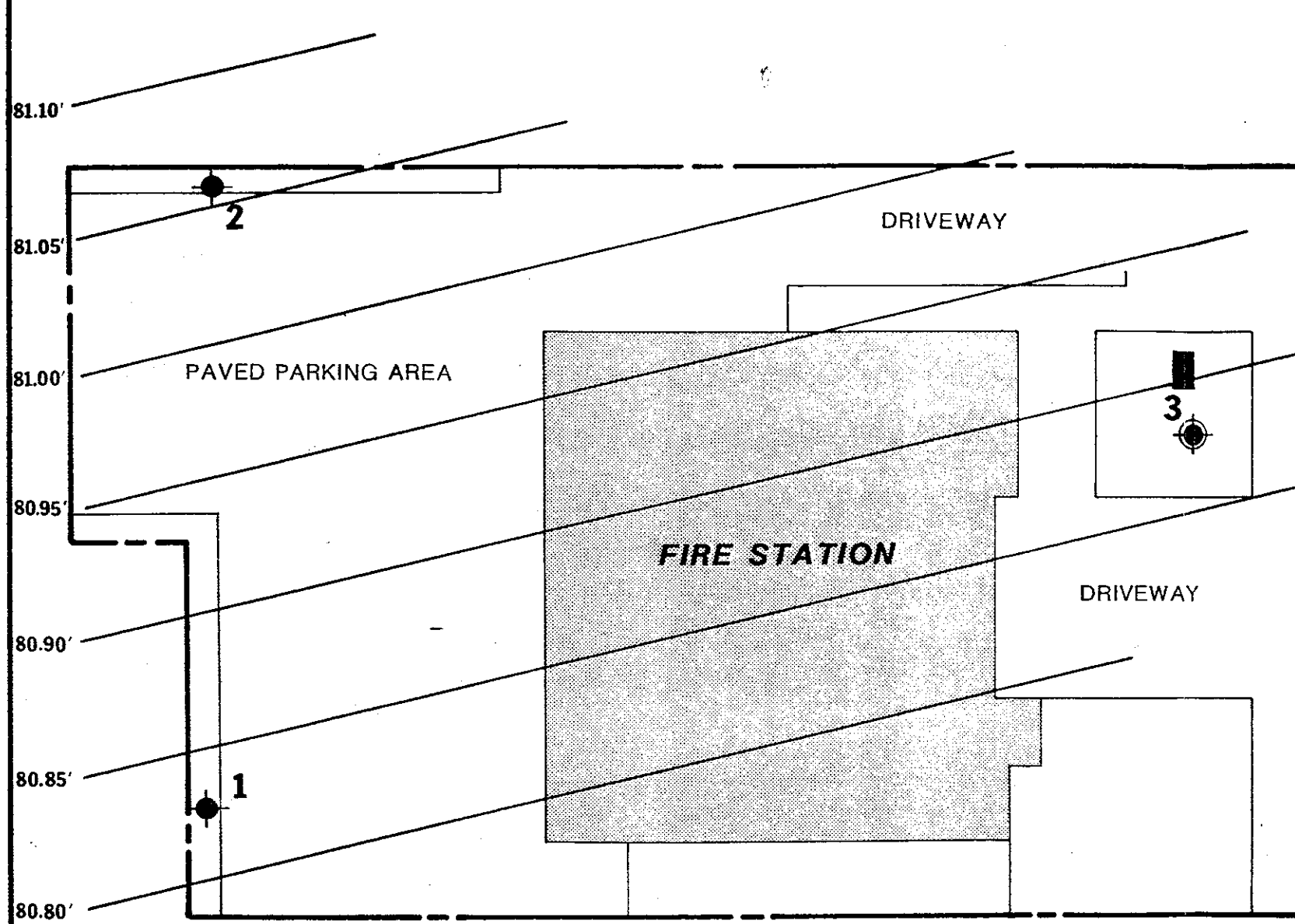
Groundwater was again sampled in Nov 1989, and April, July, and Oct 1993. TPHd and BTEX were not found above the detection limits during these sampling events. (See Table 2)

Groundwater flow direction has been to the SW, SE, and NE with a relatively flat gradient (see Figs 2 and 3). Although well MW-3 may not be located downgradient of the former UST excavation. Any significant contamination to groundwater would have been detected in well MW-3, located ~5' from the former excavation. It does not appear that the fuel release has impacted groundwater quality beneath the site. Continued monitoring is not warranted.

In summary, case closure is recommended because:

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

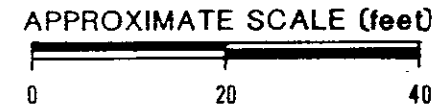
fire#19.1



VICINITY MAP

ELEVATION REFERENCE
TOP OF CURB
ASSUMED AT 100.00 FEET

- PIEZOMETER
- MONITORING WELL
- PROPERTY LINE
- GROUNDWATER ELEVATION CONTOURS (FEET) (4/28/89).
- APPROXIMATE PREVIOUS UNDERGROUND TANK LOCATION



SITE SKETCH		
FIRE STATION 19 - OAKLAND, CA		
JOB NUMBER 272.010	DATE 4/15/89	APPROVED
		1

Subsurface Consultants

TABLE 1

<u>Sample</u>	<u>Sample Type</u>	<u>Total Petroleum Hydrocarbons (ppm)¹</u>	<u>Benzene (ppm)</u>	<u>Toluene (ppm)</u>	<u>Total Xylenes (ppm)</u>	<u>Ethyl-benzene (ppm)</u>
3 @ 9'	soil	ND ^{2, 3}	ND	ND	ND	ND
3 @ 14'	soil	ND ³	ND	ND	ND	ND
MW1	water	ND ³	ND	ND	ND	ND

¹ Parts per million (mg/kg or mg/l)

² None detected, see attached test data sheets for detection limits

³ Results of both TVH and TEH analytical tests

V GROUNDWATER LEVEL MEASUREMENTS

A level survey, using an assumed elevation reference, was performed to determine the top of casing elevation for the piezometers and monitoring well. The depth to groundwater, below the top of each casing, was measured several times using a well sounder. The direction and gradient of groundwater flow was determined, based upon this data. The flow direction and contours for the April 28, 1989 reading are shown on the Site Plan. The results of all readings to date are summarized in the following table.

TABLE 2

Hydrocarbon Concentrations
April and July 1993 Monitoring Event
City of Oakland
Fire Station No. 19
Oakland, California

Well or Piezometer Number	Sample ID	Sample Date	TPH-D (mg/l)	Benzene (ug/l)	Ethylbenzene (ug/l)	Toluene (ug/l)	Total Xylenes (ug/l)
P1	N/A	N/A	NA	NA	NA	NA	NA
P2	N/A	N/A	NA	NA	NA	NA	NA
MW3	MW3	4-13-93 7-20-93 10-29-93	<1 <1 <1	<1 <1 <1	<1 <1 <1	<1 <1 <1	<1 <1 <1

Notes:

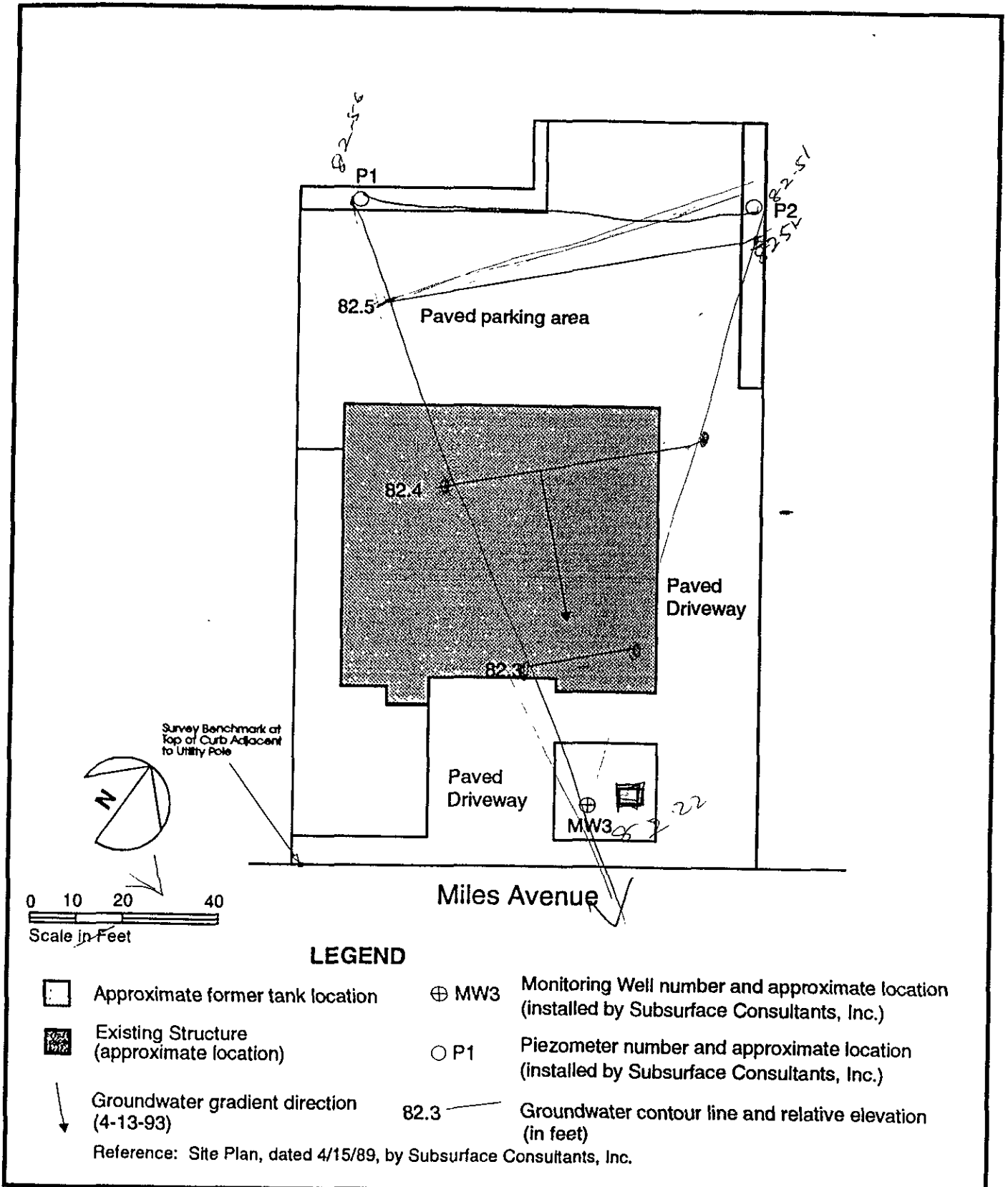
mg/l - milligrams per liter

TPH-D - total petroleum hydrocarbons as diesel fuel

ug/l - micrograms per liter

N/A - not applicable

NA - not analyzed



LEGEND

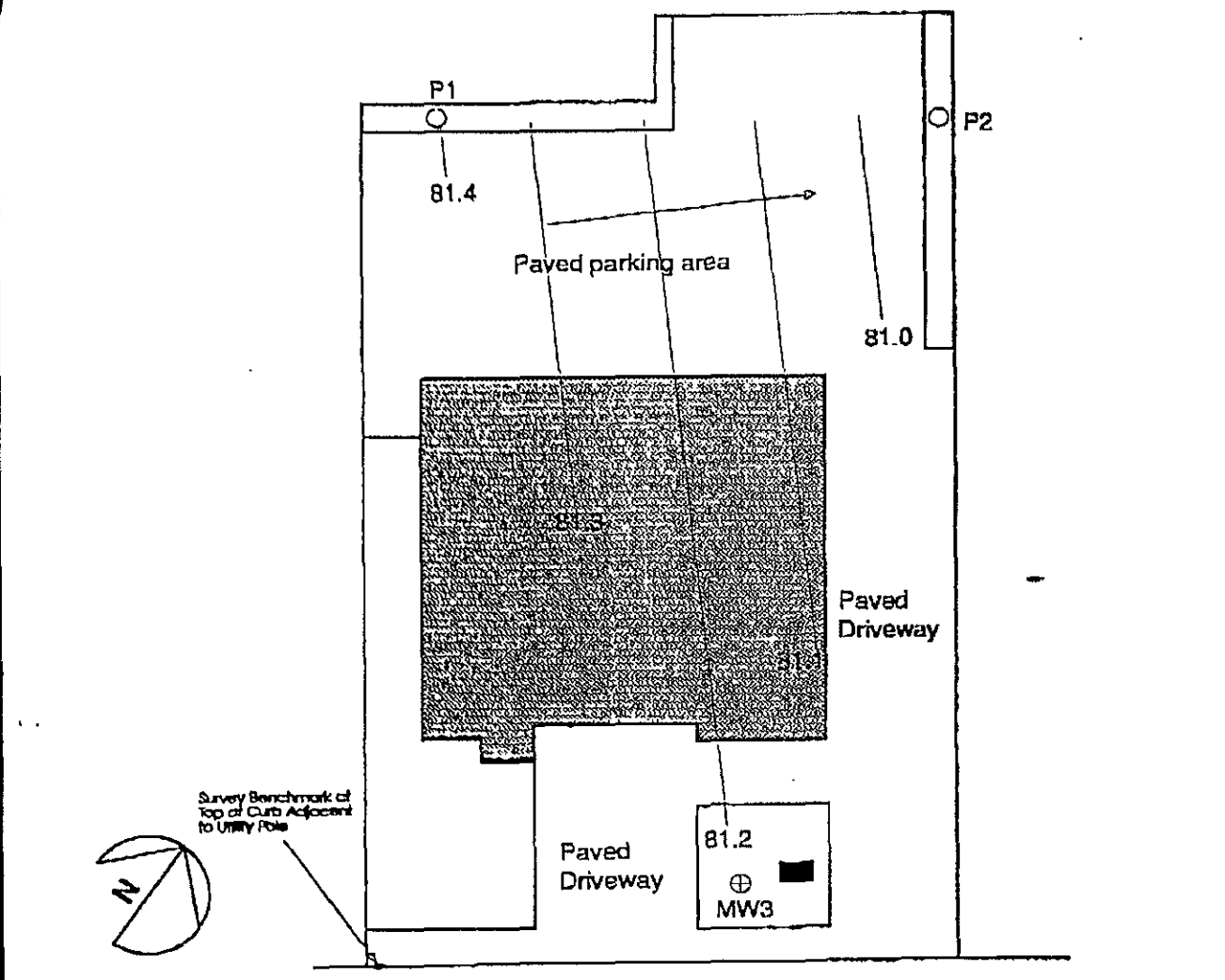
- Approximate former tank location
- Existing Structure (approximate location)
- Groundwater gradient direction (4-13-93)
- MW3 Monitoring Well number and approximate location (installed by Subsurface Consultants, Inc.)
- P1 Piezometer number and approximate location (installed by Subsurface Consultants, Inc.)
- 82.3 Groundwater contour line and relative elevation (in feet)

Reference: Site Plan, dated 4/15/89, by Subsurface Consultants, Inc.

Site Plan
 City of Oakland/Fire Station 19
 Oakland, California

FIGURE 2

JOB NUMBER	DRAWN	APPROVED	DATE	REVISED	DATE
15,698.005.04	WKW		3 Feb 93		



0 10 20 40
Scale in Feet

Miles Avenue

LEGEND

- Approximate former tank location
 - ▨ Existing Structure (approximate location)
 - Groundwater gradient direction (10-29-93)
 - ⊕ MW3 Monitoring Well number and approximate location (installed by Subsurface Consultants, Inc.)
 - P1 Piezometer number and approximate location (installed by Subsurface Consultants, Inc.)
 - | 81.4 Groundwater contour line and relative elevation (in feet)
- Reference: Site Plan, dated 4/15/89, by Subsurface Consultants, Inc.



Applied Geotechnology Inc.
Geotechnical Engineering
Geology & Hydrogeology

Site Plan
City of Oakland/Fire Station 19
Oakland, California

FIGURE 3

JOB NUMBER	DRAWN	APPROVED	DATE	REVISED	DATE
15,698.005.04	JBA		5 Aug 93		

LOG OF TEST BORING 1

EQUIPMENT 7" Hollow Stem Auger

DATE DRILLED 4/21/89

ELEVATION TOC: 100.18'*

LABORATORY TESTS

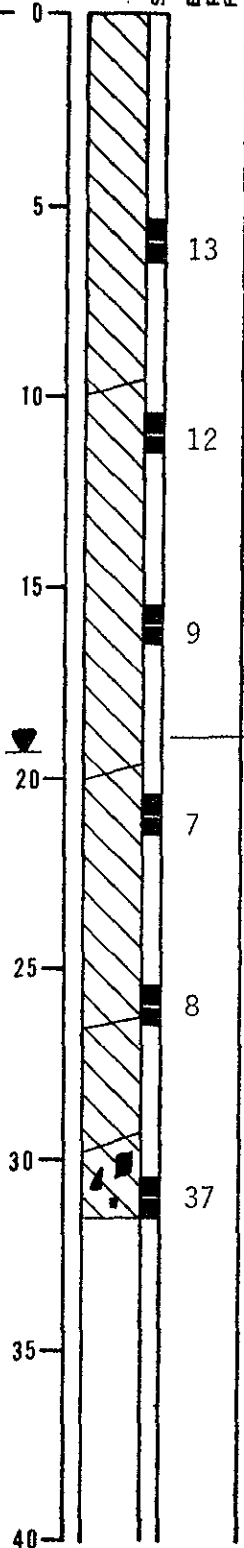
MOISTURE
CONTENT
%

DRY
DENSITY
(PCF)

DEPTH
(FT)

SAMPLE

BLOWS
PER
FOOT



DARK BROWN SILTY CLAY (CL)
medium stiff, moist

BROWN SILTY CLAY (CL)
medium stiff, moist, with fine
grained sand

increased sand content below
15 feet

GROUNDWATER LEVEL (4/28/89)

MOTTLED ORANGE AND BROWN SANDY
CLAY (CL)
medium stiff, wet, fine grained
sand

GRAY SILTY CLAY (CL)
soft, wet

BROWN CLAYEY GRAVEL (GC)
medium dense, wet, with coarse
grained sand

(Piezometer installed to denth
of 28 feet)

*Top of casing (TOC), using
assumed elevation, referenced
location shown on Site Plan,
plate 1.

SAMPLER:
CALIFORNIA DRIVE:
I.D. = 2.0 inches
O.D. = 2.5 inches

HAMMER:
WEIGHT: 140 pounds
DROP: 30 inches

Subsurface Consultants

FIRE STATION 19 - OAKLAND, CA

JOB NUMBER
272.010

DATE
5/4/89

APPROVED
William K. [Signature]

PLATE

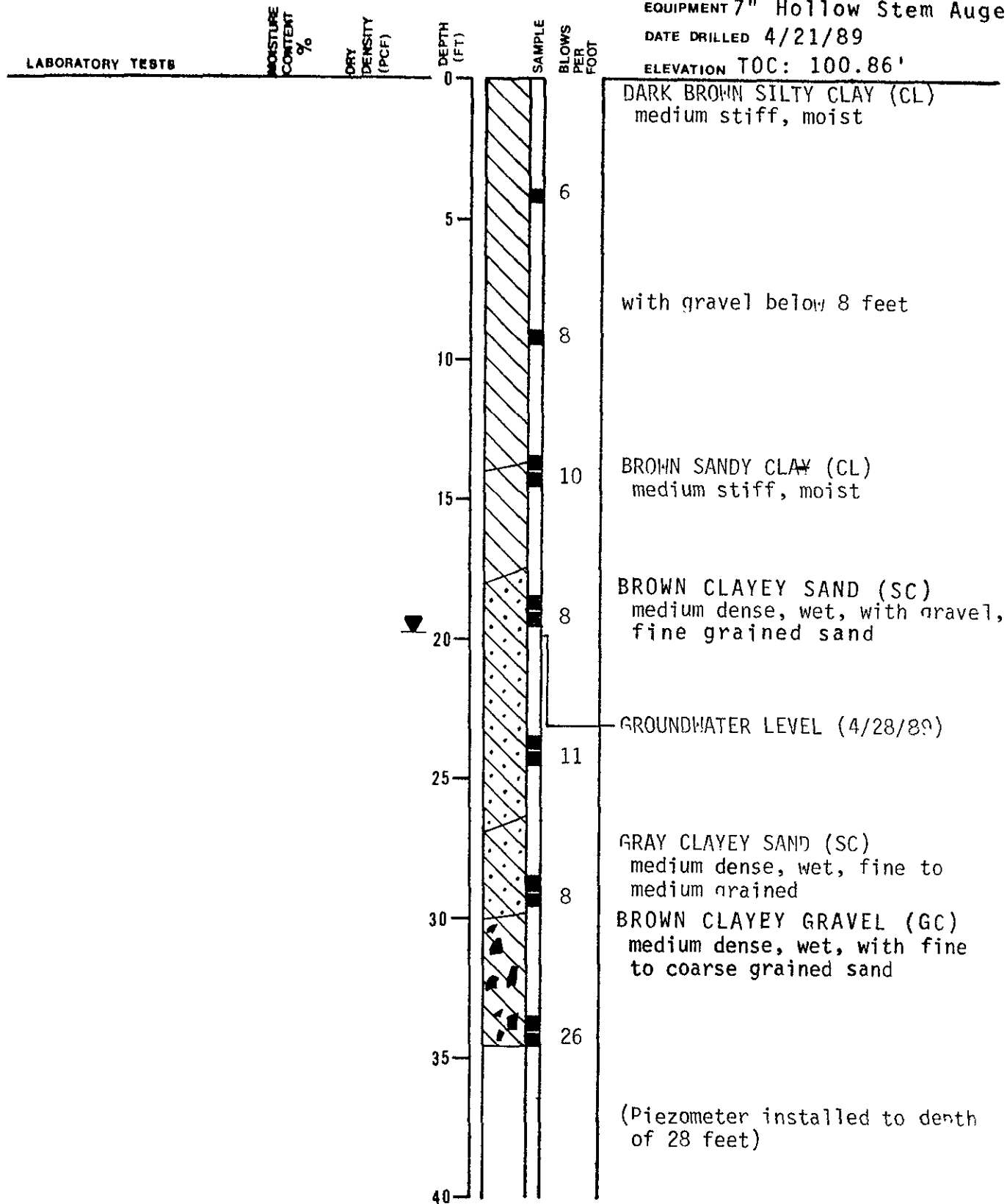
2

LOG OF TEST BORING 2

EQUIPMENT 7" Hollow Stem Auger

DATE DRILLED 4/21/89

ELEVATION TOC: 100.86'



Subsurface Consultants

FIRE STATION 19 - OAKLAND, CA

JOB NUMBER
272.010

DATE
5/4/89

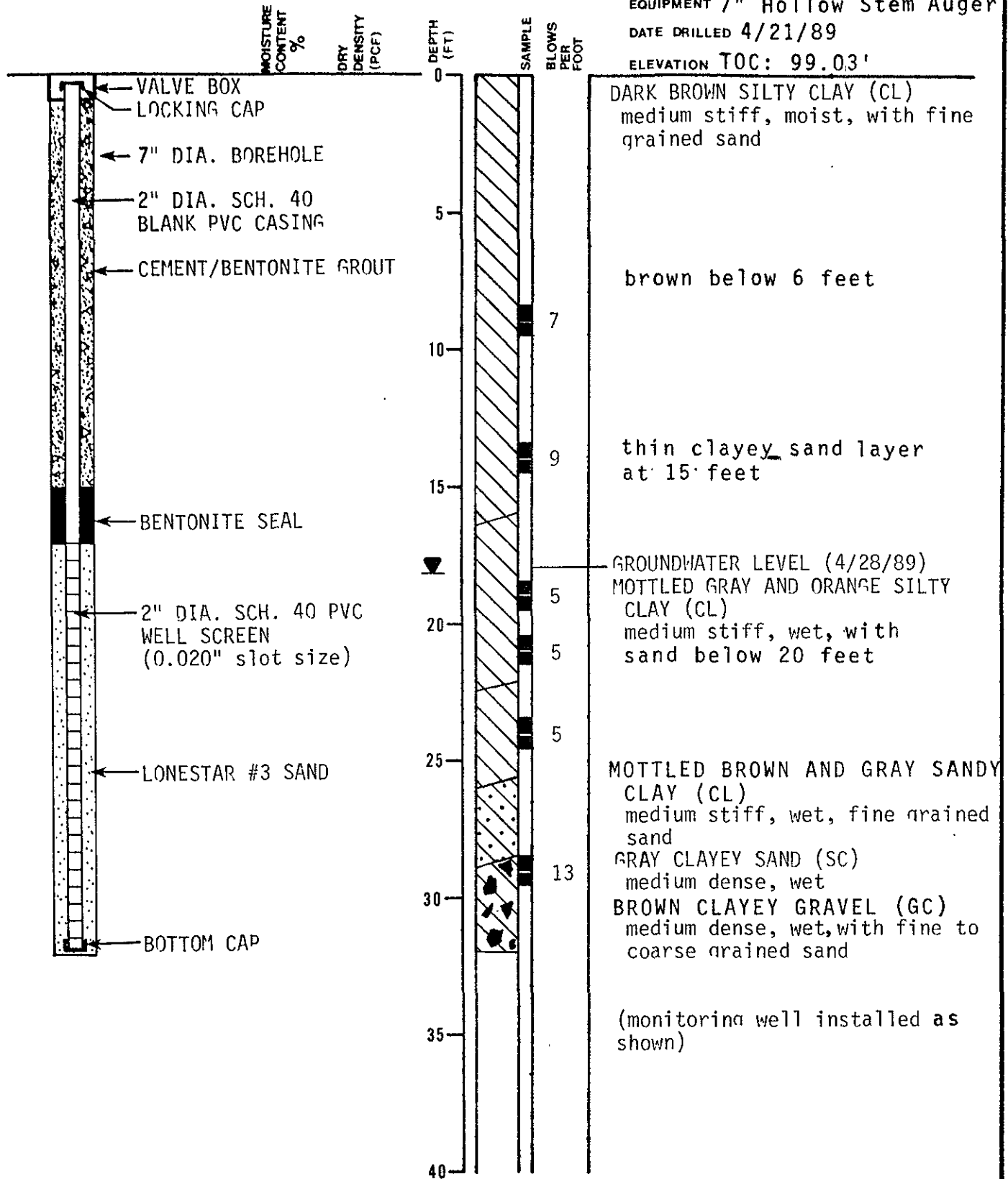
APPROVED
[Signature]

PLATE

3

LOG OF TEST BORING 3

EQUIPMENT 7" Hollow Stem Auger
 DATE DRILLED 4/21/89
 ELEVATION TOC: 99.03'



Subsurface Consultants

FIRESTATION 19 - OAKLAND, CA

PLATE

JOB NUMBER
272.010

DATE
5/4/89

APPROVED

William C. Miller

4