ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
1131 Harbor Bay Parkway
Alameda. CA 94502-6577
(510)567-6700

February 28, 1996
StID # 953

REMEDIAL ACTION COMPLETION CERTIFICATION

Mr. Merle Konigsberg c/o Steve Banker
LCB Associate
1000 Broadway, Suite 620
Oakland CA 94607

RE: Olen Lot, 910 81st Ave., Oakland 94621

Dear Mr. Konigsberg:

This letter confirms the completion of site investigation and remedial action for the one underground 1,000 gallon gasoline tank at the above described location.

Based upon the available information and with provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the undeground tank release is required.

This notice is issued pursuant to the regulation contained in Title 23, Division 3, Chapter 16, Section 2721 (e) of the California Code of Regulations.

Enclosed please find a copy of the **Case Closure Summary** for the State Water Resources Control Board's files.

Please contact Barney Chan at (510) 567-6765 if you have any questions regarding this matter.

Sincerely,

Jun Makishima

Jun Makishima
Acting Agency Director

enclosure (Mr. Harper)

c: G. Coleman, Acting Chief, Hazardous Materials Division-files
Kevin Graves, RWQCB
Mike Harper, SWRCB
Mr. J. Helge, Subsurface Consultants, 171 12th St., Suite 201, Oakland CA 94607

RACC910-81

01-1094

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION **Date: January 17, 1996**

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Pkwy**
City/State/Zip: **Alameda, CA 94502** Phone: **(510) 567-6700**
Responsible staff person: **D. Klettke** Title: **Haz. Materials Spec.**

II. CASE INFORMATION

Site facility name: **Olen Lot**
Site facility address: **910 81st Avenue, Oakland, CA 94621**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **953**
URF filing date: **7/22/92** SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
Merle Konigsberg c/o Steve Banker LCB Associate	1000 Broadway, Suite 620, Oakland, CA 94607	(510)763-7016

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	1000	gasoline	removed	6/18/1992

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **suspected leak-hole observed in bottom of tank**
Site characterization complete? **YES**
Date approved by oversight agency: **December 2, 1992**
Monitoring Wells installed? **YES** Number: **one**
Proper screened interval? **YES**
Highest GW depth below ground surface: **4.22' on 2/2/93** Lowest depth: **5.65' on 11/17/93**
Flow direction: **determined from offsite measurements for three sites west of the subject site, varies from southwest to the northwest.**
Most sensitive current use: **industrial**
Are drinking water wells affected? **NO** Aquifer name: **N/A**
Is surface water affected? **NO** Nearest affected SW name: **N/A**
Off-site beneficial use impacts (addresses/locations): **N/A**

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:

Material	Amount (include units)	Action (Treatment or Disposal w/destination)	Date
Tank	1-1000 gallon	disposal/H & H Ship	6/18/1992
Piping	200 pounds	disposal/H & H Ship	6/23/1992
Free Product			
Soil	90 cubic yards	disposal/BFI-Vasco Rd.	8/26/1993
Groundwater			
Barrels			
Tank contents*	800 gallons	disposal/Gibson Oil	6/18/1992

*Tank contents consisted of approximately 5% gasoline/95% water solution

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	490	130	1500	250
TPH (Diesel)	49	49	NA	NA
Benzene	0.28	0.009	<0.5	<0.5
Toluene	2.2	<0.005	<0.5	<0.5
Ethyl benzene	4.8	0.260	14	<0.5
Xylenes	9.2	0.170	15	<0.5
Oil & Grease	NA	NA	NA	NA
Heavy metals - lead	636		NA	NA
Other-soluble lead	1.5			

Comments (Depth of Remediation, etc.):

A 1000-gallon UST previously containing gasoline was removed from the site on June 18, 1992. Subsurface Consultants, Inc. observed the tank removal and performed soil sampling. Analytical test results showed elevated levels of gasoline (490 mg/kg), benzene (280 ug/kg), toluene (2,200 ug/kg), ethyl benzene (4,800 ug/kg) and total xylene isomers (9,200 ug/kg) in the native soil beneath the tank. Non-detectable concentrations of petroleum hydrocarbons were found from samples collected beneath the associated piping. However, 636 ppm of total lead was found in soil sample P-1 which was collected at a depth of 1.0' bg.[1] The tank had a small hole approximately 1/8-inch-diameter in the bottom about 4 feet from the east end, and water was observed within the tank, as viewed through the fill opening. Water was first observed in the excavation at a depth of about 7 feet, however when excavation activities exposed the east end of the tank perched water began flowing into the excavation pit from a source approximately 6 feet below grade (bg). The source of this perched water was unknown. It was tested by the City of Oakland and found not to be associated with the sanitary sewer water. East Bay Municipal Utility District (EBMUD) also visited the site but was unable to determine the source of the water.

[1]The lack of significant petroleum hydrocarbon contamination associated with sample P-1 may suggest that this high lead level is not the result of past pipeline releases. In addition, Preliminary Remediation Goals (PRGs) established for industrials soils for lead is 1000 mg/kg.

On January 28, 1993, subsurface conditions were investigated by drilling 5 test borings ranging in depth from 11.5 to 18 feet bg. Test boring 5 was subsequently converted to a groundwater monitoring well. Another shallow soil sample from the P-1 area was collected at a depth of 1.0' bg. This shallow soil sample detected 1.5 mg/L-soluble lead using the Waste Extraction Test (WET) method. Groundwater information was available for three sites west of the subject site, and this information indicates that the flow direction varies from the southwest to the northwest with a groundwater depth of approximately 9' bg. Information obtained by SCI during their investigations following the heavy rains in January 1993 indicated that groundwater levels had risen and groundwater was encountered at a depth of approximately 5' bgs during the drilling activities. Static groundwater depth was recorded at 4.3 feet below the top of the casing for the well installed in test boring 5. Subsequent analysis of the soil samples from the test borings indicated non-detectable concentrations of TPHg and BTEX in borings 1, 2 and 3. Total volatile hydrocarbons were found at a concentration of 20 mg/kg at a depth of 10' bg and 4 mg/kg at a depth of 13' bg in test boring 4, and 59 mg/kg at a depth of 9' bg in test boring 5. In addition, 200 ug/kg-ethyl benzene and 320 ug/kg-total xylene isomers was found at a depth of 10' bg in test boring 4 as well as 100 ug/kg-ethyl benzene and 210 ug/kg-total xylene isomers at a depth of 9' in test boring 5. Ground water sample taken from MW-1 showed total volatile hydrocarbons as gasoline (1,500 ug/kg), non-detectable levels of benzene and toluene, ethyl benzene-14 ug/kg and total xylene isomers-15 ug/kg. An STLC lead analysis by EPA Method 7420 was performed on pipeline sample P-1 at 1.0' and was shown to contain 1,500 ug/L of lead. These lead-impacted soils are now paved with an asphalt surface, thereby reducing leachability of the lead bearing soils to underlying shallow aquifers.

On August 26, 1993 the tank pit was over excavated to approximately 10' by 20' by 12' deep. Approximately 90 yd3 of soil was removed. Sidewall samples were taken at approximately 10' bg in addition to a sample from the bottom of the excavation. The north sidewall sample (# 4) was blue-gray and had a noticeable gas odor. No odor was noticed in any of the other samples. Sidewall samples 2, 3 and 5 analyzed showed non-detectable concentrations of total volatile hydrocarbons (TVH) and BTEX, however, total extractable hydrocarbons (TEH) were found in the range of 1 to 19 mg/kg for these three sidewall samples. Sidewall sample 4, which was the sample which had noticeable gasoline odor, was shown to contain 49 mg/kg-TEH, 130 mg/kg-TVH, 260 ug/kg-ethyl benzene, 170ug/kg-total xylene isomers and non-detectable levels of benzene and toluene. The sample taken from the bottom of the excavation was shown to contain 39 mg/kg TEH, 110 mg/kg TVH, 9 ug/kg-benzene, 93 ug/kg-ethyl benzene, 140 ug/kg-total xylene isomers and non-detectable levels of toluene.

See Section VII, Additional Comments, etc...

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? **YES**
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? **YES**
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: **None**
Number Decommissioned: **N/A** Number Retained:
List enforcement actions taken: **None**
List enforcement actions rescinded: **None**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Dale H. Klettke** Title: **Haz Mat Specialist**

Signature: Dale H. Klettke Date: 1/16/96

Reviewed by

Name: **Barney Chan** Title: **Haz Mat Specialist**

Signature: Barney Chan Date: 1/16/96

Name: **Eva Chu** Title: **Haz. Materials Specialist**

Signature: Eva Chu Date: 1/17/96

VI. RWQCB NOTIFICATION

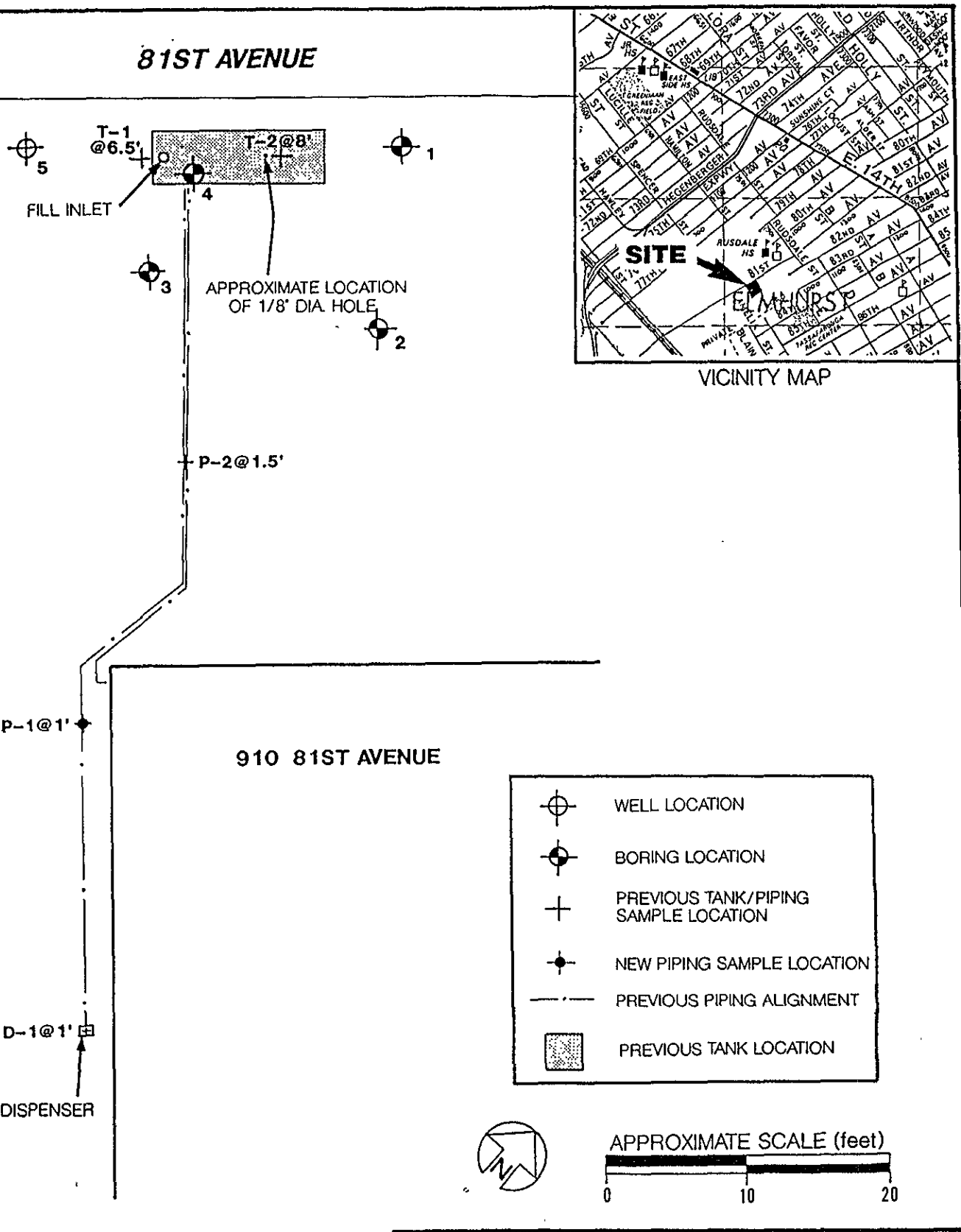
Date Submitted to RB: RB Response: Approved

RWQCB Staff Name: **Kevin Graves** Title: **AWRCE**

Signature: Kevin Graves Date: 1/31/96

VII. ADDITIONAL COMMENTS, DATA, ETC.

MW-1 has been on a schedule of quarterly monitoring since 2/2/93 and has been monitored for 10 consecutive quarters. With the exception of one event which detected 9.5 ppb benzene and minor hits of TEX only low levels of TVH have been detected in groundwater (see Table 1). Over excavation of soil has been effective and the low concentration of TVH should attenuate through natural biodegradation and continued groundwater monitoring is no longer warranted.



SITE PLAN

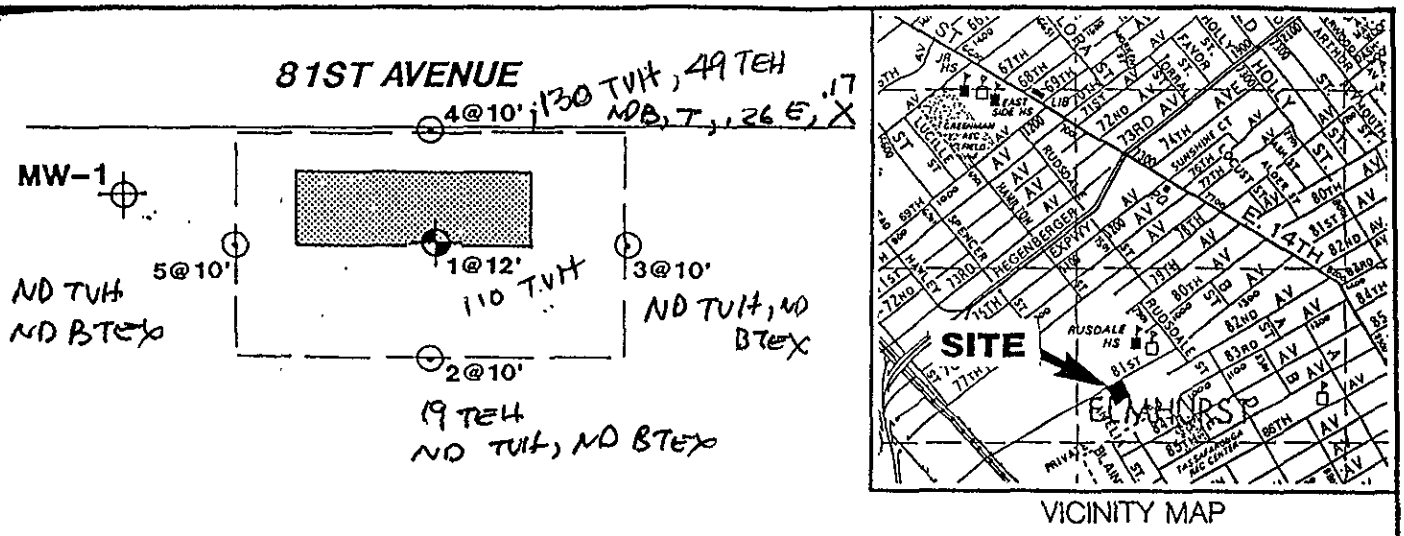
1/28/93 Subsurface Investigation

910 81ST AVENUE – OAKLAND, CA

Subsurface Consultants

JOB NUMBER	DATE	APPROVED
611.003	2/25/93	

PLATE 1



910 81ST AVENUE

- WELL LOCATION
- BOTTOM SAMPLE LOCATION
- SIDEWALL SAMPLE LOCATION
- EXTENT OF FINAL EXCAVATION
- ORIGINAL TANK PIT

APPROXIMATE SCALE (feet)
0 10 20

8/26/93 SITE PLAN
Over excavation results

Subsurface Consultants

910 81ST AVENUE – OAKLAND, CA

JOB NUMBER	DATE	APPROVED
611.003	2/25/93	

PLATE 1

Table 1.
Hydrocarbon and BTEX Concentrations In Water

Well	Date	Water Below TOC (feet)	TEH (ug/l)	TVH (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethyl Benzene (ug/l)	Xylenes (ug/l)
MW-1	2/2/93	4.22	450	1500	<0.5	<0.5	14	15
	5/7/93	4.74	<50	340	<0.5	<0.5	2.3	<0.5
	8/26/93	5.57	110	380	<0.5	15	1.2	<0.5
	11/17/93	5.65	88	310	<0.5	12	<0.5	1.6
	2/18/94	4.71	60	410	<0.5	<0.5	4.2	0.9
	8/29/94	5.35	<50	200	9.5	<0.5	<0.5	<0.5
	11/10/94	5.35	56	340	<0.5	<0.5	7.7	3.6
	2/15/95	4.34	<50	280	<0.5	<0.5	0.8	<0.5
	5/12/95	4.46	<50	220	<0.5	<0.5	<0.5	<0.5
	8/10/95	5.15	<50	250	<0.5	<0.5	<0.5	<0.5

TOC = Top of Casing
TEH = Total Extractable Hydrocarbons
TVH = Total Volatile Hydrocarbons, as gasoline
ug/L = micrograms per liter
<50 = Contaminant not present at a concentration in excess of the detection limit shown

Table 2.

Hydrocarbon and BTEX Concentrations in Water

Sample	Kerosene ug/kg[5]	Diesel ug/kg	Gasoline ug/kg	B[1] ug/kg	T[2] ug/kg	E[3] ug/kg	X[4] ug/kg
MW-1	450**[6]	<50	1,500	<0.5	<0.5	14	15

1 B = Benzene
2 T = Toluene
3 E = Ethylbenzene
4 X = Xylene
5 ug/kg = microgram per liter
6 ** = Quantitated as overlap from gasoline range.

Table 3.

Pipeline Shallow Soil Sample

	Total Lead mg/kg[1]	Soluble Lead mg/l[2]
P-1 at 1.0'	636	1.5
Regulatory levels	1,000	5.0

1 mg/kg = milligrams per kilogram
2 ug/l = micrograms per liter

Table 4.

Hydrocarbon and BTEX Concentrations in Soil

Sample	TEH[1] Kerosene mg/kg[5]	TEH[1] Diesel mg/kg	TVH[2] Gasoline mg/kg	B[3] ug/kg[6]	T[3] ug/kg	E[3] ug/kg	X[3] ug/kg
Tank Pit							
T-1 @ 6.5'	<1	<1	<1	<5	15	<5	<5
T-2 @ 8'	**[4]	17	480	280	2200	4800	9200
Borings							
1 @ 9'	<1[7]	<1	<1	<5	<5	<5	<5
2 @ 9'	<1	<1	<1	<5	<5	<5	<5
3 @ 12'	<1	<1	<1	<5	<5	<5	<5
3 @ 15'	<1	<1	<1	<5	<5	<5	<5
4 @ 10'	7++[8]	<1	20	<5	<5	200	320
4 @ 13'	<1	<1	4	<5	<5	30	42
5 @ 9'	**	2	59	<30	<30	100	210
5 @ 14'	<1	<1	<1	<5	<5	<5	<5

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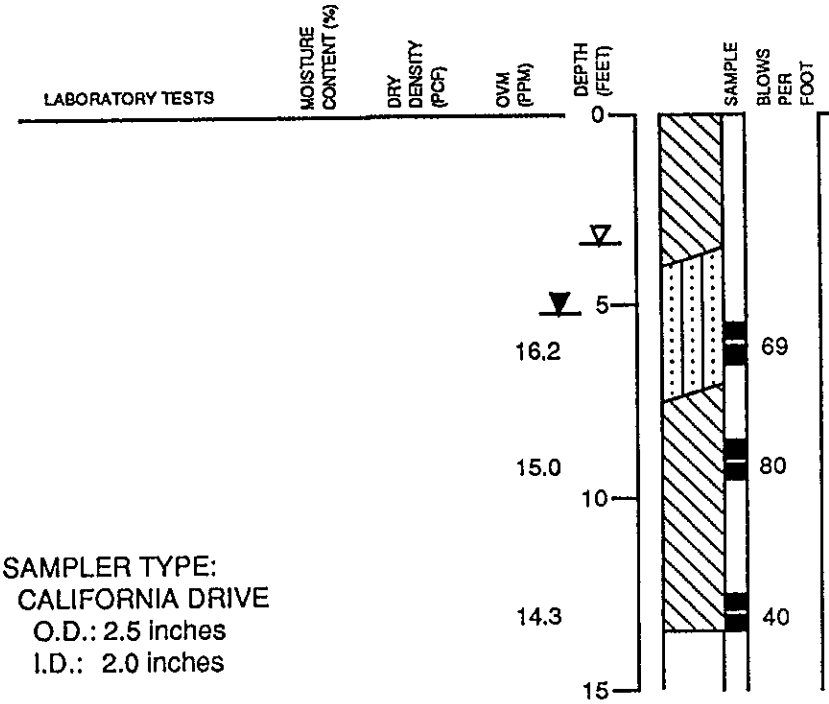
1 TEH = Total extractable hydrocarbons
2 TVH = Total volatile hydrocarbons
3 BTEX = Benzene, toluene, ethylbenzene and xylene
4 ** = Quantitated as diesel range.
5 mg/kg = milligram per kilogram
6 ug/kg = microgram per kilogram
7 < = Chemical not present at a concentration greater than analytical reporting limit stated
8 ++ = Quantitated as overlap from gasoline range.

Should excavate all backfill & also into native until no detectable odor. & take confirmation soples

LOG OF TEST BORING 1

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 1/28/93
ELEVATION - - *



DARK BROWN SILTY CLAY (CL)
soft to medium stiff, moist

GROUNDWATER LEVEL AFTER 8 HOURS
GRAY BROWN SILTY SAND (SM)
very dense, wet, with some clay
GROUNDWATER LEVEL DURING DRILLING

MOTTLED BROWN SILTY CLAY (CL)
very stiff, moist

Boring backfilled with cement grout

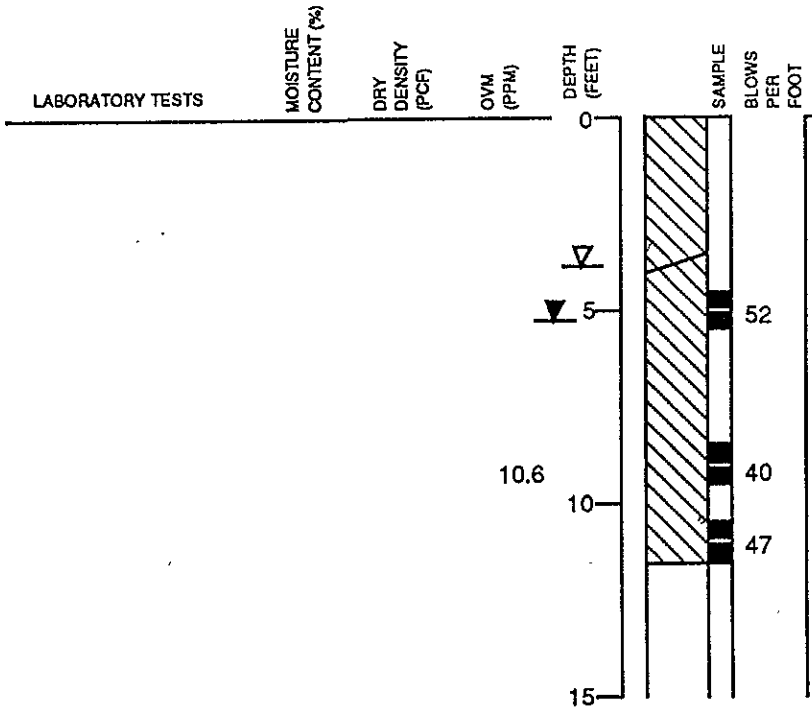
SAMPLER TYPE:
CALIFORNIA DRIVE
O.D.: 2.5 inches
I.D.: 2.0 inches

HAMMER WEIGHT: 140 pounds
HAMMER DROP: 30 inches

*ALL TEST BORINGS ARE AT ABOUT THE SAME RELATIVE ELEVATION.

LOG OF TEST BORING 2

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 1/28/93
ELEVATION - -



DARK BROWN SILTY CLAY (CL)
soft to medium stiff, moist

GROUNDWATER LEVEL AFTER 8 HOURS

GROUNDWATER LEVEL DURING DRILLING
GRAY BROWN SILTY CLAY (CL)
very stiff, moist, with some gravel

Boring backfilled with cement grout

Subsurface Consultants

910 81ST AVENUE - OAKLAND, CA

JOB NUMBER	DATE	APPROVED
611.003	2/16/93	

PLATE 2

LOG OF TEST BORING 3

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 1/28/93
ELEVATION - -

LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	OVM (PPM)	DEPTH (FEET)	SAMPLE	BLOWS PER FOOT	
				0			DARK BROWN SILTY CLAY (CL) soft to medium stiff, moist
							GRAY BROWN SILTY CLAY (CL) very stiff, moist
							GROUNDWATER LEVEL AFTER 8 HOURS
			20	5		82	GRAY BROWN CLAYEY SAND (SC) very dense, moist
						90	GROUNDWATER LEVEL DURING DRILLING
							MOTTLED BROWN SILTY CLAY (CL) very stiff, moist
			65.3	10		54	
			82.0			15	
			18.1	15		60	some sand at 15 feet
							Boring backfilled with grout

LOG OF TEST BORING 4

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 1/28/93
ELEVATION - -

LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	OVM (PPM)	DEPTH (FEET)	SAMPLE	BLOWS PER FOOT	
				0			BROWN GRAVELLY CLAY (CL) tank backfill material
							GROUNDWATER LEVEL AFTER 8 HOURS
				5			
							GRAY BROWN SILTY CLAY (CL) very stiff, moist, with strong hydrocarbon odor
			over range	10		66	
			3.8			53	
				15			GRAY BROWN SAND (SP) dense, wet
			8			20	
							Boring backfilled with grout

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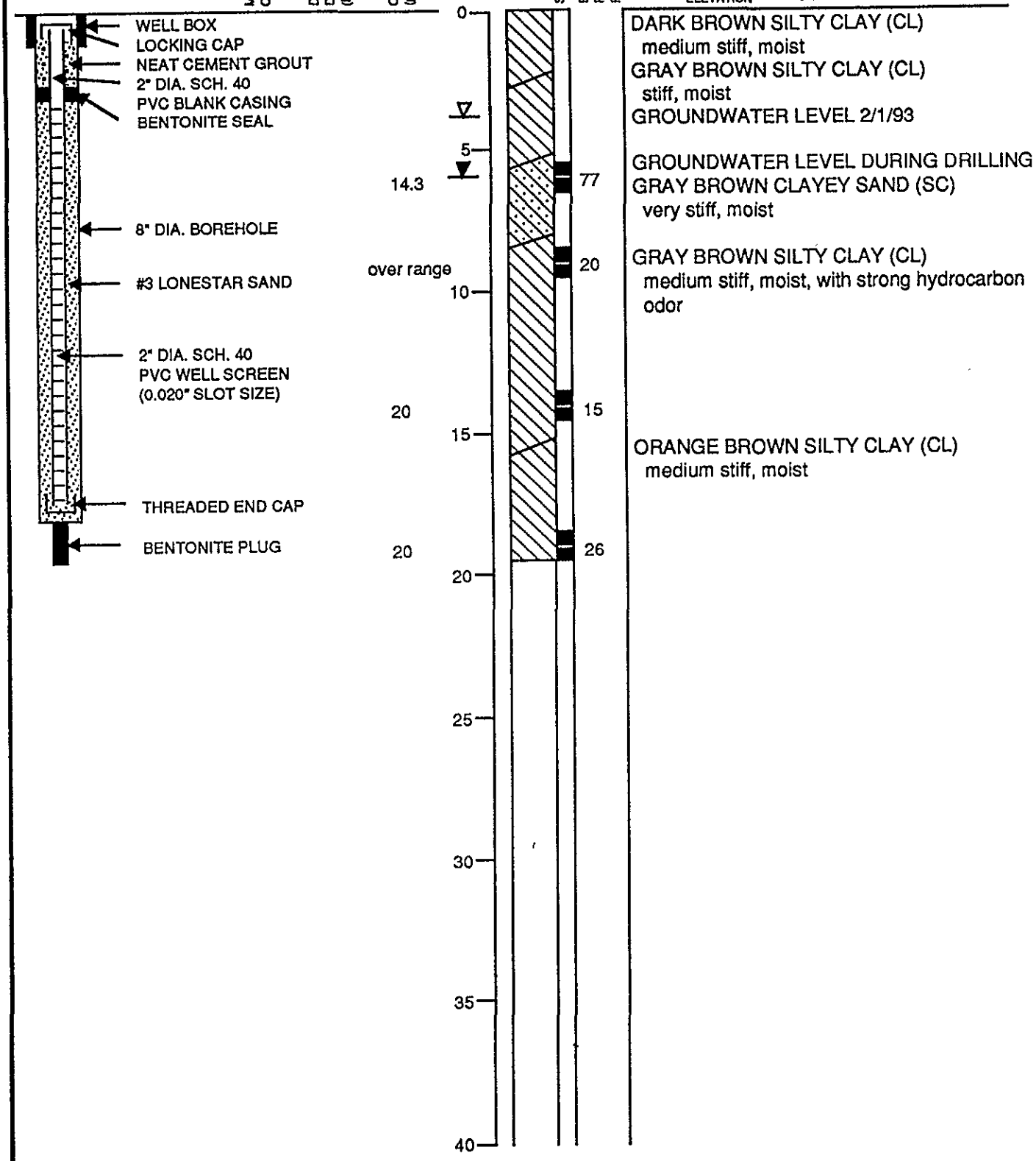
910 81ST AVENUE - OAKLAND, CA

JOB NUMBER 611.003 | DATE 2/16/93 | APPROVED

PLATE 3

LOG OF TEST BORING 5

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 1/28/93
ELEVATION - -



Subsurface Consultants	910 81ST AVENUE - OAKLAND, CA			PLATE 4
	JOB NUMBER 611.003	DATE 2/16/93	APPROVED	