

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY



DAVID J. KEARS, Agency Director

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

September 25, 1996

REMEDIAL ACTION COMPLETION CERTIFICATION

Ms. Marianne Robison  
Buttner Properties  
600 West Grand Avenue  
Oakland, California 94612

RE: Buttner Properties  
4055 Hubbard Street, Emeryville, California 94608  
STID # 259

Dear Ms. Robison:

This letter confirms the completion of site investigation and remedial action for the two underground storage tanks ( 4,000 gallon diesel and 1,000 gallon gasoline / diesel ) removed on July 17, 1990 and July 20, 1990 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 two 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 )  
Jerriann Alexander, SCI, 3736 Mt. Diablo Blvd., Suite 200  
Lafayette, CA 94549



## 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)	ND	97	** 1,700	91
TPH (Diesel)	10,000	1,700	*** 490,000	ND
Benzene	0.047	0.016	*** 4.0	ND
Toluene	0.15	0.034	** 0.9	ND
Xylene	0.22	0.17	** 8.2	ND
Ethylbenzene	0.06	0.099	** 2	ND
Oil & Grease	7,800	690	**** 230,000	ND
Total Lead	-	-	** 6	ND

\* Soil sample collected from about 8 inches below the dispenser island.

\*\* Grab water sample collected from the dispenser pit.

\*\*\* Grab water sample collected from the diesel/gasoline tank excavation.

\*\*\*\* Grab water sample collected from the common excavation pit on 11/25/92.

#### Comments (Depth of Remediation, etc.):

In July 1990, the 4,000 gallon diesel tank was removed from the site. The fuel island appeared to be for two dispensers but only one dispenser was present and capped pipes were visible at the location for the second dispenser. Excavation activities in the area of the pipes uncovered another tank, approximately 1,000 gallon in capacity and may have been used for both diesel and gasoline. Soil and grab water samples were subsequently collected following the tank removals. Low concentration of TPH diesel (up to 27 ppm), benzene (up to 16 ppb), toluene (up to 34 ppb), xylene (up to 34 ppb) and ethyl benzene (up to 14 ppb) were found in the soil samples collected from the bottom of the two tank excavations. TPH gasoline and TOG were not detected. The soil sample from the dispenser island showed elevated levels of TPH diesel (10,000 ppm), TOG (7,800 ppm), benzene (47 ppb), toluene (150 ppb), xylene (220 ppb) and ethyl benzene (60 ppb). In addition, the grab water samples collected from the tank excavations and the dispenser island showed high levels of petroleum hydrocarbon as listed in the above table.

Since the excavation was adjacent to the right-of-way, the stockpiled soil was temporarily used as backfill material.

In November 1992, approximately 150 cubic yards of contaminated soil from the previous tank excavation and the dispenser area was removed. Verification soil samples collected from the excavation walls showed low concentrations of petroleum hydrocarbon remain at the site (see "after" soil concentration listed above). The stockpiled soil detected levels of petroleum hydrocarbon, PNAs and metals as listed in Table 3. The excavated soil was disposed off-site.

Leaking Underground Fuel Storage Tank Program

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: **3**

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: *3/6/96*

Reviewed by

Name: **Barney Chan** Title: **Hazardous Materials Specialist**

Signature: *Barney Chan* Date: *3/4/96*

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

Signature: *Thomas Peacock* Date: *3-6-96*

VI. RWQCB NOTIFICATION

Date Submitted to RB: *3/22/96* RB Response: *Approved*

RWQCB Staff Name: **Kevin Graves** Title: **Water Resources Control Engineer**

Signature: *Kevin Graves* Date: *4/26/96*

## Leaking Underground Fuel Storage Tank Program

### VII. ADDITIONAL COMMENTS, DATA, ETC.

On June 2, 1993, three shallow groundwater monitoring wells (MW-1, MW-2 & MW-3) were installed at the site. Soil samples collected at depths ranging from 2.5 to 3.5 feet bgs from the borings found low levels of TPH diesel (nd to 10 ppm) and no detectable concentration of TPH gasoline, TOG and BTEX. The first five monitoring events did not detect TOG and BTEX. These target compounds were subsequently dropped from the monitoring program. Nine consecutive quarters of monitoring (6/93 to 8/95) have been conducted at the subject site. TPH diesel (nd to 560 ppb) and TPH gasoline (nd to 280 ppb) were detected in the downgradient wells MW-1 and MW-3. However, similar concentrations of TPH diesel (nd to 590 ppb) and TPH gasoline (nd to 210 ppb) were consistently detected in the upgradient well MW-2. The last sampling event found no detectable level of TPH diesel in the three wells and low concentrations of TPH gasoline ranging from nd to 91 ppb.

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

- 1) BTEX and TOG were not detected in the three wells during the first five monitoring events and subsequently dropped from the monitoring program.
- 2) Contaminated soil (150 cubic yards) had been excavated in the former dispenser island and around the former tank areas. Low levels of petroleum hydrocarbon as listed in the above table remain at the site.
- 3) The groundwater plume appears to be stable and the levels have significantly decreased during the two years of monitoring.
- 4) The site presents no significant risk to human health and the environment.

**Table 1.  
CONTAMINANT CONCENTRATIONS IN SOIL**

Sample Designation	TVH (mg/kg)	TEH (mg/kg)	TOG (mg/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Xylene (ug/kg)	Ethylbenzene (ug/kg)	Lead (mg/kg)
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**1990 Excavation**

1 @ 5'	ND	<10	<50	<5	<5	<5	<5	-
2 @ 5'	ND-	<10	<50	<5	<5	23	<5	-
3 @ 10'	ND	24	<50	16	34	34	14	-
4 @ 3'	ND	<10	<50	<5	7.0	14	<5	-
5 @ 5'	ND-	<10	<50	<5	<5	<5	<5	-
6 @ 10'	ND-	27	<50	<5	<5	<5	<5	-
7 @ 5'	ND-	<10	<50	<5	<5	<5	<5	-
8 @ 5'	ND-	<10	<50	<5	<5	<5	<5	-
9 @ 5'	ND-	<10	<50	<5	<5	<5	<5	-
Dispenser	ND-	10,000	7,800	47	150	220	60	-

**1992 Excavation**

10 @ 6'	<1	3	<50	<5	<5	<5	<5	3
11 @ 5'	<1	<1	<50	<5	<5	<5	<5	3
12 @ 4'	<1	3	<50	<5	<5	<5	<5	4
13 @ 4'	<1	5	<50	<5	<5	<5	<5	5
14 @ 3'	<1	220	190	<5	<5	<5	<5	120
15 @ 3'	<1	1,100	690	<5	<5	34	15	72
16 @ 3'	97	1,700	420	<5	27	45	99	9
17 @ 3'	44	490	190	<5	20	170	76	20
18 @ 5'	27	450	310	<5	<5	35	62	5
19 @ 5'	<1	4	<50	<5	<5	<5	<5	4
20 @ 7'	<1	3	<50	<5	<5	<5	<5	3

**1993 Groundwater Investigation**

MW-1 @ 3.5'	<1	<1	<50	<5	<5	<5	<5	-
MW-2 @ 3.0'	<1	9	<50	<5	<5	<5	<5	-
MW-3 @ 2.5'	<1	10	<50	<5	<5	<5	<5	-

TEH = Total Volatile Hydrocarbons

TEH = Total Extractable Hydrocarbons

TOG = Total Oil and Grease

mg/kg = milligrams per kilogram = parts per million

ug/kg = micrograms per kilogram = parts per billion

<1 = chemical not present at a concentration greater than the detection limit stated

- = analysis not performed

**Table 2.  
CONTAMINANT CONCENTRATIONS IN WATER**

Sample Designation	Date	TVH (ug/l)	TEH Diesel (ug/l)	TOG (mg/l)	Benzene (ug/l)	Toluene (ug/l)	Xylene (ug/l)	Ethylbenzene (ug/l)	Lead (ug/l)
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**Excavation Water**

Tank 1 Excavation	7/23/90	<500	250,000	<20	3.1	<1	<1	<1	-
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Tank 2 Excavation	7/23/90	<500	490,000	<20	4.0	<1	<1	<1	-
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Tank Excavation	11/25/92	440	15,000	230	2.0	0.7	2.1	<0.5	<3
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Dispenser Pit	11/25/92	1700	15,000	25	<0.5	0.9	8.2	2	6
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**Monitoring Well Water**

MW-1	6/2/93	160	<50	<5	<0.5	<0.5	<0.5	<0.5	-
	9/15/93	120	<50	<5	<0.5	<0.5	<0.5	<0.5	-

MW-2	6/2/93	210	150	<5*	<0.5	<0.5	<0.5	<0.5	-
	9/15/93	150	50	<5	<0.5	<0.5	<0.5	<0.5	-

MW-3	6/2/93	280	170	<5	<0.5	<0.5	<0.5	<0.5	-
	9/15/93	180	<50	<5	<0.5	<0.5	<0.5	<0.5	-

TVH = Total Volatile Hydrocarbons

TEH = Total Extractable Hydrocarbons

TOG = Total Oil and Grease

mg/l = milligrams per liter = parts per million

ug/l = micrograms per liter = parts per billion

<0.5 = chemical not present at a concentration greater than the detection limit stated

**Table 3.**  
**CONTAMINANT CONCENTRATIONS IN STOCKPILED SOIL**

Sample Designation	Gasoline (mg/kg)	Diesel (mg/kg)	TOG (mg/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Total Xylenes (ug/kg)	Ethyl-Benzene (ug/kg)	EPA 8240 Compounds	2-Methyl-Napthalene (ug/kg)	Phenanthrene (ug/kg)	Other EPA 8270 Compounds (ug/kg)
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**1990 Investigation**

SP-1, 3, 5, 7	-	820	490	<5	<5	40	<5	ND	1,400	590	ND
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**1992 Investigation**

SP-A, B, C, D	11	930	800	-	-	-	-	ND	-	-	-
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SP-E, F, G, H	2	500	640	<5	<5	<5	<5	-	-	-	-
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	Total Metal Concentrations SP-1, 3, 5, 7 (mg/kg)	Soluble Metal Concentrations SP-A, B, C, D (ug/l)
Antimony	<5	400
Arsenic	6.2	2,000
Barium	95	5,800
Beryllium	<0.5	20
Cadmium	3.8	<30
Chromium (total)	40	1,400
Cobalt	11	420
Copper	130	<50
Lead	67	1,000
Mercury	<0.1	<0.1
Molybdenum	<0.5	<70
Nickel	37	1,800
Selenium	<2.5	<30
Silver	<1	<50
Thallium	<5	<3,000
Vanadium	26	1,100
Zinc	200	12,000



**Table 4:**  
**Contaminant Concentrations in Groundwater**

<u>Designation</u>	<u>Date</u>	<u>TVH</u> <u>(ug/l)</u>	<u>TEH</u> <u>(ug/l)</u>	<u>TOG</u> <u>(mg/l)</u>	<u>Benzene</u> <u>(ug/l)</u>	<u>Toluene</u> <u>(ug/l)</u>	<u>Xylene</u> <u>(ug/l)</u>	<u>Ethyl</u> <u>benzene</u> <u>(ug/l)</u>	<u>Lead</u> <u>(ug/l)</u>
MW-1	6/2/93	160	<50	<5	<0.5	<0.5	<0.5	<0.5	--
	9/15/93	120	<50	<5	<0.5	<0.5	<0.5	<0.5	--
	12/23/93	120	310	<5	<1.5	<1.5	<1.5	<1.5	--
	4/5/94	130	<50	<5	<0.5	<0.5	<0.5	<0.5	--
	8/26/94	74	560	<5	<0.5	<0.5	<0.5	<0.5	--
	11/11/94	140	<50	--	--	--	--	--	--
	2/17/95	<50	230	--	--	--	--	--	<3.0
	5/15/95	66	<50	--	--	--	--	--	--
	8/15/95	<50	<50	--	--	--	--	--	--
MW-2	6/2/93	210	150	<5	<0.5	<0.5	<0.5	<0.5	--
	9/15/93	150	50	<5	<0.5	<0.5	<0.5	<0.5	--
	12/23/93	140	220	<5	<1.5	<1.5	<1.5	<1.5	--
	4/5/94	150	<50	<5	<0.5	<0.5	<0.5	<0.5	--
	8/26/94	70	590	<5	<0.5	<0.5	<0.5	<0.5	--
	11/11/94	--	--	--	--	--	--	--	--
	2/17/95	<50	230	--	--	--	--	--	<3.0
	5/15/95	(78)	(50)	--	--	--	--	--	--
MW-3	6/2/93	280	170	<5	<0.5	<0.5	<0.5	<0.5	--
	9/15/93	180	<50	<5	<0.5	<0.5	<0.5	<0.5	--
	12/23/93	190	250	<5	<1.5	<1.5	<1.5	<1.5	--
	4/5/94	240	280	<5	<0.5	<0.5	<0.5	<0.5	--
	8/26/94	130	520	<5	<0.5	<0.5	<0.5	<0.5	--
	11/11/94	170	<50	--	--	--	--	--	--
	2/17/95	120	170	--	--	--	--	--	<3.0
	5/15/95	130	<50	--	--	--	--	--	--
	8/15/95	(91)	(50)	--	--	--	--	--	--

TVH = Total volatile hydrocarbons

TEH = Total extractable hydrocarbons

TOG = Total oil and grease

mg/l = Milligrams per liter = parts per million

ug/l = Micrograms per liter = parts per billion

<0.5 = Chemical not present at a concentration greater than the detection limit stated

-- = Not requested

**Table 5**  
**Groundwater Elevation Data**

<u>Well Number</u>	<u>TOC Elev<sup>1</sup> (feet)</u>	<u>Date</u>	<u>Groundwater Depth<sup>2</sup> (feet)</u>	<u>Groundwater Elevation (feet)</u>
MW-1	3.64	6/1/93	3.63	0.01
		9/15/93	4.47	-0.83
		12/23/93	3.47	0.17
		4/5/94	3.85	-0.21
		8/26/94	4.29	-0.65
		11/11/94	2.83	0.81
		2/17/95	3.74	-0.10
		5/15/95	3.91	-0.27
		8/15/95	4.14	-0.50
MW-2	4.95	6/1/93	3.65	1.30
		9/15/93	4.90	0.05
		12/23/93	3.45	1.50
		4/5/94	4.01	0.94
		8/26/94	4.72	0.23
		11/11/94	2.34	2.61
		2/17/95	3.80	1.15
		5/15/95	3.68	1.27
		8/15/95	4.43	0.52
MW-3	3.61	6/1/93	3.29	0.32
		9/15/93	4.32	-0.71
		12/23/93	3.32	0.29
		4/5/94	3.74	-0.13
		8/26/94	4.30	-0.69
		11/11/94	3.05	0.56
		2/17/95	3.64	-0.03
		5/15/95	3.52	-0.09
		8/15/95	4.23	-0.62

<sup>1</sup> City of Oakland Datum

<sup>2</sup> Measured below TOC

# LOG OF TEST BORING 1

EQUIPMENT 8" Hollow Stem Auger

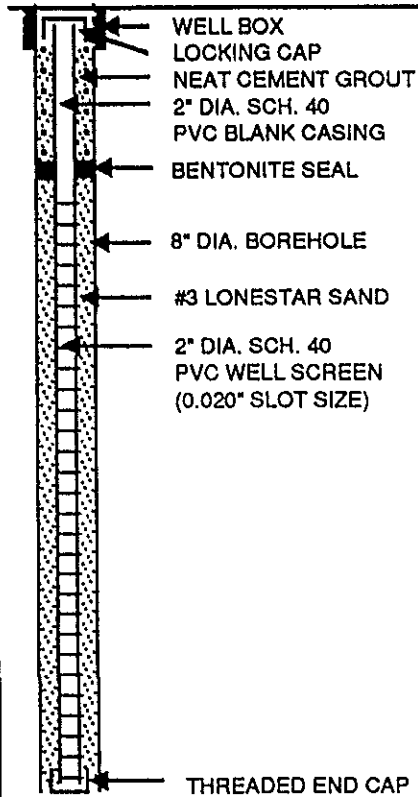
DATE DRILLED 5/27/93

TOC ELEVATION 3.64 feet \*

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

DEPTH  
(feet)

SAMPLE  
BLOWS  
PER  
FOOT



1.0

0

0

0

0

0

0

0

0

0

0

0

0

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0

0

0

0

0

0

0

0

0

0

14

20

13

13

30

19

12

22

ASPHALTIC CONCRETE - 6" thick  
BLACK SILTY CLAY (CL)  
medium stiff, moist

GROUNDWATER LEVEL DURING DRILLING  
LIGHT GRAY SILTY CLAY (CL)  
medium stiff, moist, with some sand

LIGHT BROWN SILTY SANDY CLAY (CL)  
stiff, moist, with some small rounded rocks

increase in silt and sand content

increase in clay content

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

HAMMER WEIGHT: 140 pounds  
HAMMER DROP: 30 inches

\* ELEVATION REFERENCE: TOP OF CURB AT NORTH  
WEST CORNER OF INTERSECTION OF HALLECK AND  
BEACH STREETS.

Subsurface Consultants

4055 HUBBARD STREET - OAKLAND, CA

JOB NUMBER  
609.001

DATE  
6/9/93

APPROVED

PLATE

3

# LOG OF TEST BORING 2

EQUIPMENT 8" Hollow Stem Auger

DATE DRILLED 5/28/93

TOC ELEVATION 4.95 feet

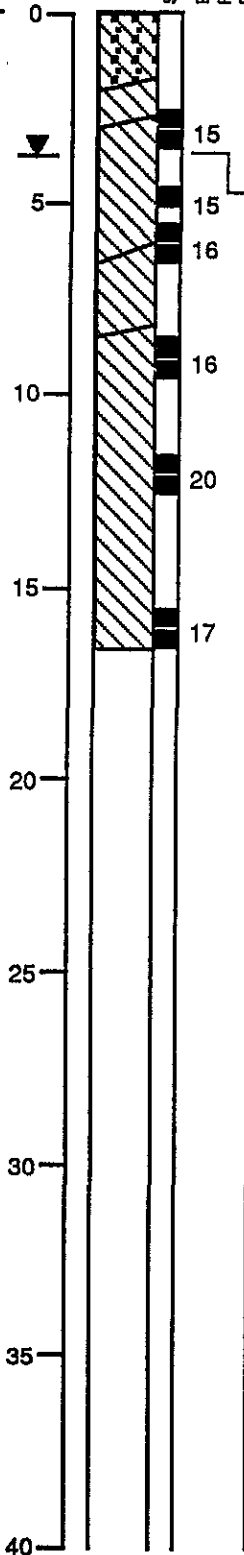
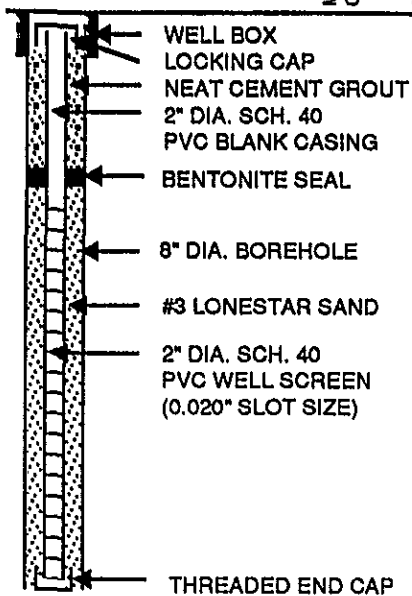
MOISTURE  
CONTENT %

DRY  
DENSITY  
(pcf)

OMV  
(ppm)

DEPTH  
(feet)

SAMPLE  
BLOWS  
PER  
FOOT



MOTTLED SILTY GRAVEL (GC)  
loose, dry, with broken asphalt concrete fragments (fill)

GRAY SILTY CLAY (CL)  
medium stiff, moist, with some sand (fill)

GROUNDWATER LEVEL DURING DRILLING

BLACK SILTY CLAY (CL)  
medium stiff, moist

LIGHT GRAY SILTY CLAY (CL)  
medium stiff, moist

LIGHT BROWN SILTY SANDY CLAY (CL)  
medium stiff, moist, with some small rock fragments

Subsurface Consultants

4055 HUBBARD STREET - OAKLAND, CA

PLATE

JOB NUMBER  
609.001

DATE  
6/9/93

APPROVED

4

# LOG OF TEST BORING 3

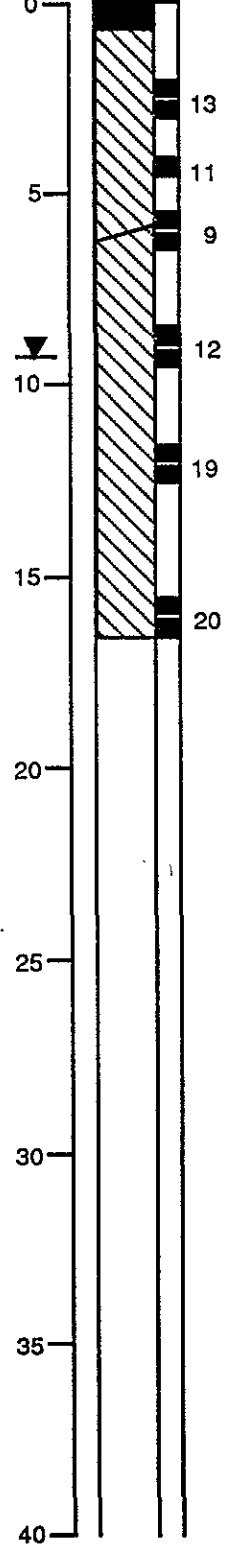
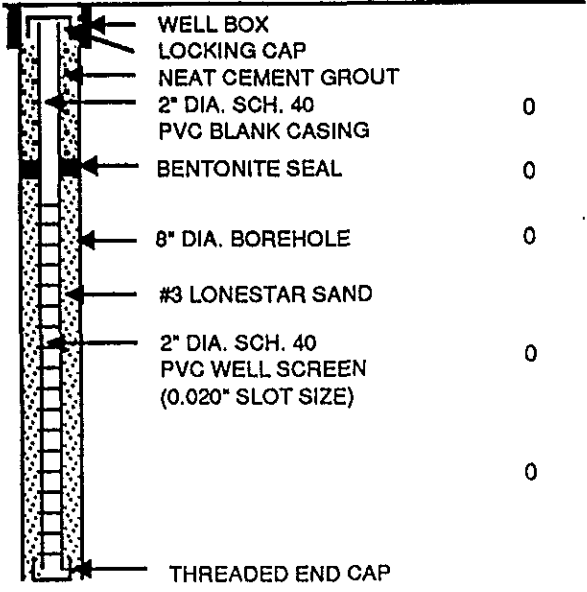
EQUIPMENT 8" Hollow Stem Auger

DATE DRILLED 5/28/93

TOC ELEVATION 3.61 feet

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

DEPTH (feet)  
 SAMPLE  
 BLOWS PER FOOT



ASPHALTIC CONCRETE - 8" thick  
 BLACK SILTY CLAY (CL)  
 medium stiff, moist

MOTTLED GRAY SILTY CLAY (CL)  
 medium stiff, moist

GROUNDWATER LEVEL DURING DRILLING

color change to light brown at 11.5 feet

**Subsurface Consultants**

4055 HUBBARD STREET - OAKLAND, CA

JOB NUMBER  
609.001

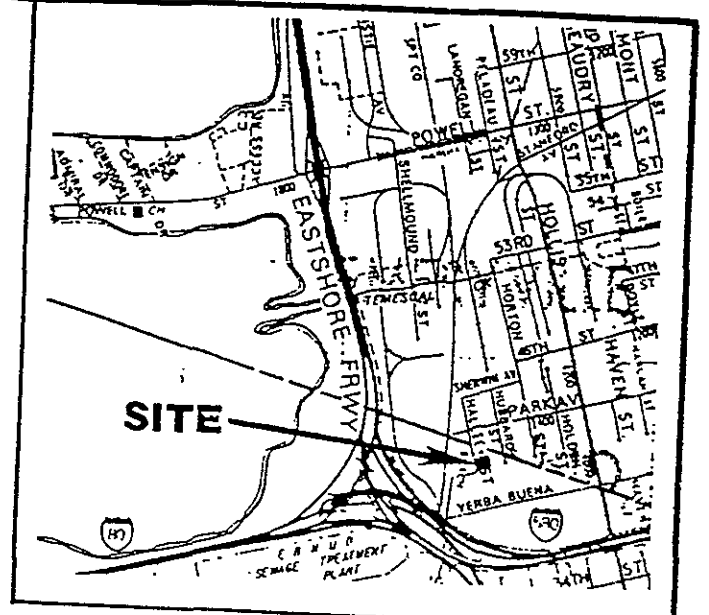
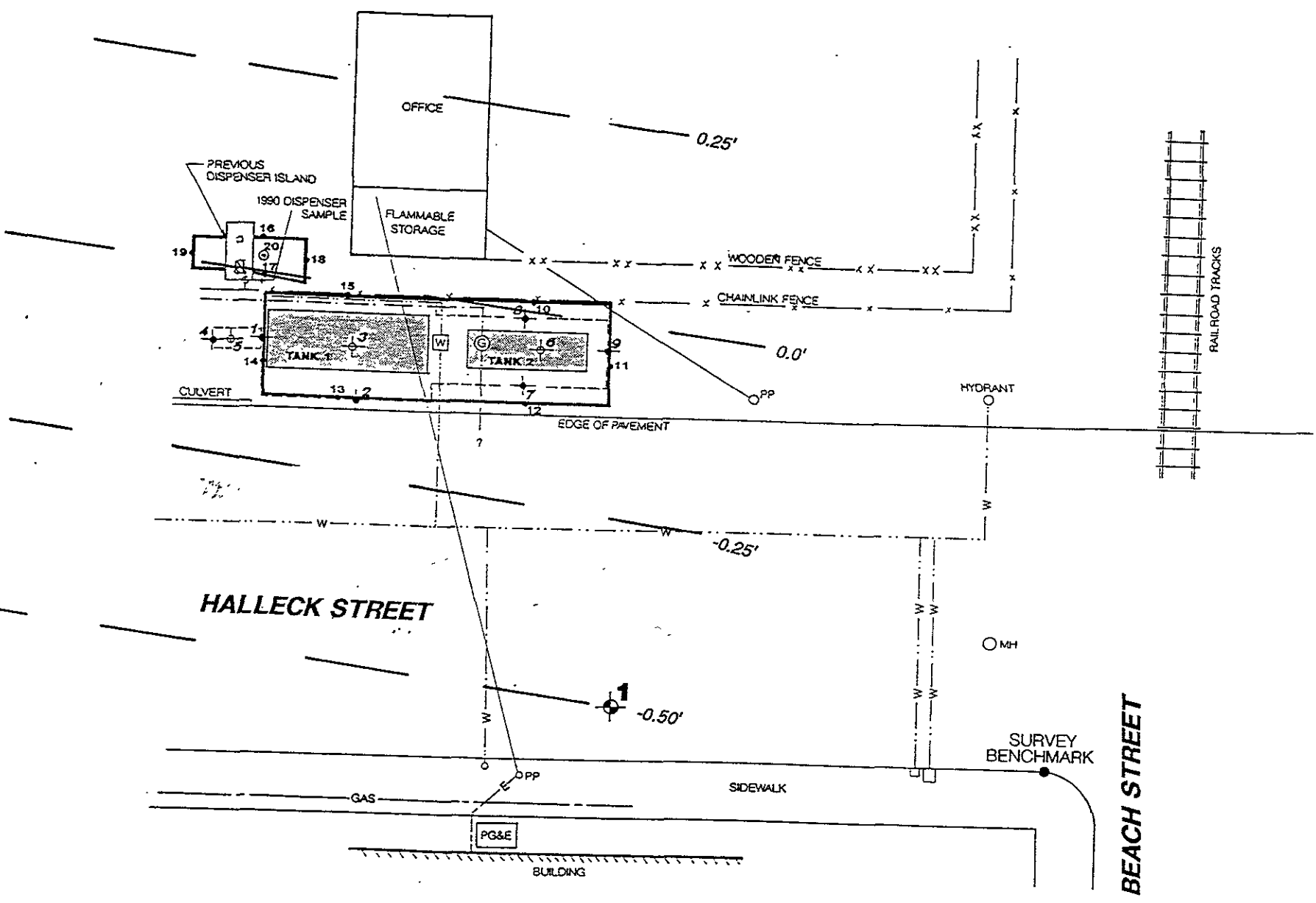
DATE  
6/9/93

APPROVED  
*[Signature]*

PLATE  
**5**



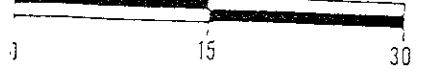
DIRECTION OF GROUNDWATER FLOW  
8/15/95



VICINITY MAP

- 1990 SIDEWALL SAMPLE
- 1990 BOTTOM SAMPLE
- PREVIOUS TANK
- LIMIT OF 1990 EXCAVATION
- WATER VALVE
- GAS VALVE
- GAS LINE
- WATER LINE
- MANHOLE
- POWER POLE
- 1992 SIDEWALL SAMPLE
- 1992 BOTTOM SAMPLE
- PREVIOUS DISPENSER
- LIMIT OF 1992 EXCAVATION
- WELL LOCATION
- GROUNDWATER ELEVATION CONTOURS (feet)

APPROXIMATE SCALE (feet)



SITE PLAN

Subsurface Consultants

4055 HUBBARD STREET - OAKLAND, CA

JOB NUMBER 609.001      DATE 8/29/95      APPROVED *[Signature]*

PLATE  
**1**