



January 8, 1996
STID 4244
page 1 of 2

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

Attn: Rod Freitag
Alameda County General Services Agency
1401 Lakeside Dr., 11th Floor
Oakland CA 94612

REMEDIAL ACTION COMPLETION CERTIFICATION

RE: Alameda County Health Headquarters Building, 499-5th St., Oakland CA 94607
Case File Number 4244

Dear Mr. Freitag,

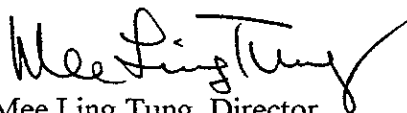
This letter confirms the completion of site investigation and remedial action for the underground storage tank(s) formerly located at the above referenced site. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) is 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, Division 3, Chapter 16, Section 2721(e) of the California Code of Regulations.

Attached is a copy of the Case Closure Summary, which was reviewed and approved by this agency and the Regional Water Quality Control Board (RWQCB). If you have any questions regarding this letter, please contact Jennifer Eberle at (510) 567-6700, ext. 6761.

Sincerely,


Mee Ling Tung, Director

January 8, 1996
STID 4244
page 2 of 2
Attn: Rod Freitag

cc: Acting Chief, Environmental Protection Division
Kevin Graves, RWQCB
Lori Casias, SWRCB (with attachment)
Dave Deaner, SWRCB, UST Cleanup Fund Program
Aimee Chow, Versar, 1255 Harbor Bay Pky, Suite 100, Alameda CA 94502
 Jennifer Eberle (3 copies of letter only)

LOP/Completion
je.4244clos.let
enclosure (clos sum)

01-1720

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: 10/21/96

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Pky**
City/State/Zip: **Alameda CA 94502** Phone: **(510) 567-6700**
Responsible staff person: **Jennifer Eberle** Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: **Alameda County Health HQ Building**
Site facility address: **499-5th St., Oakland CA 94607**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **4244**
URF filing date: **3/21/90** SWEEPS No: **N/A**

Responsible Parties: **Addresses:** **Phone Numbers:**
Rod Freitag, Alameda County General Services Agency, 1401 Lakeside Dr., 11th Floor, Oakland
CA 94612 telephone (510)-208-9522

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	2,000	gasoline	removed	2/12/90
2	2,000	Fuel oil	closed in place	8/22/96

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: unknown
Site characterization complete? **YES**
Monitoring Wells installed? **YES** Number: **3**
Proper screened interval? **YES**
Highest GW depth below ground surface: **14.13'bgs** Lowest depth: **15.55'bgs**
Flow direction: **W-SW**
Most sensitive current use: **offices**
Are drinking water wells affected? **NO** Aquifer name:
Is surface water affected? **NO** Nearest affected SW name:
Off-site beneficial use impacts (addresses/locations): **unknown**

Report(s) on file? **YES** Where is report(s) filed?
Alameda County, 1131 Harbor Bay Pky, Alameda Ca 94502

PROTECTION
JAN -2 PM 2:14

Leaking Underground Fuel Storage Tank Program

Treatment and Disposal of Affected Material:

<u>Material</u>	<u>Amount</u> <u>(include units)</u>	<u>Action (Treatment</u> <u>of Disposal w/destination)</u>	<u>Date</u>
Tank:	2000 gal	disposed to H&H (manifest #90003784)	2/12/90
Gasoline & Water:	400 gal	disposed to H&H (manifest #90003776)	2/11/90
Product and rinsate:	645 gal	disposed to Americlean Inc in Silver Springs NV (manifest # illegible)	8/22/96
Soil:	it was backfilled, and later sampled. See Section III and VII		

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)	5800		ND	ND
TPH (Diesel)	NA		NA	NA
Benzene	22		ND	ND
Toluene	120		ND	ND
Xylene	520		ND	ND
Ethylbenzene	91		ND	ND
1,2-DCA			5.5	NA

Comments (Depth of Remediation, etc.):

*Soil "before" samples are pit bottom samples at 17"bgs, collected on 2/12/90 (see Table 1).

**Soil "after" samples are not applicable since there was no overexcavation or remediation.

Water "before" samples are from the first round of MW sampling on 12/1/93 (see Table 4).

Water "after" samples are from the last round of MW sampling on 8/12/94 (see Table 4).

Note that 1,2-DCA was ND in all 3 MWs during the second round of MW sampling on 2/24/94.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Undetermined

Leaking Underground Fuel Storage Tank Program

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: A health and safety plan should be developed if there is excavation to 17'bgs, in the vicinity of the former gasoline UST.
Should corrective action be reviewed if land use changes? YES
Monitoring wells Decommissioned: YES on 9/9/96
Number Decommissioned: 3 Number Retained: 0
List enforcement actions taken: NA
List enforcement actions rescinded: NA

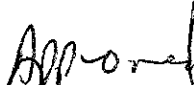

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Jennifer Eberle Title: Haz Mat Specialist
Signature:  Date: 10/21/96

Reviewed by
Name: Amy Leech Title: Haz Mat Specialist
Signature:  Date: 10/30/96

Name: Tom Peacock Title: LOP Manager
Signature:  Date: 11-21-96

VI. RWQCB NOTIFICATION

Date Submitted to RB: 11-22-96 RB Response: 
RWQCB Staff Name: Kevin Graves Title: AWRCE Date:  12/1/96

VII. ADDITIONAL COMMENTS, DATA, ETC.

One 2000-gal gasoline UST was removed on 2/12/90. The tank bottom was approximately 15'bgs. Two soil samples were taken at approx. 17'bgs, below the UST. **See Figure 1 and Table 1.** Three sidewall samples were taken at approx. 14'bgs, and the stockpile was also sampled. A hydrocarbon (fuel) odor was obvious. The pit was backfilled with the excavated soils for safety and liability reasons. There was up to 5800 ppm TPHg and 22 ppm benzene below the UST. The sidewalls were ND except .004 ppm benzene and some TEX (sample HH-7). The stockpile had 1700 ppm TPHg and 2 ppm benzene (and some TEX). The contamination did not appear to have migrated laterally, based on the sidewall soil sample results. The stockpiled soil was apparently backfilled into the tank excavation.

Leaking Underground Fuel Storage Tank Program

Four soil borings were installed in 4/92. Three SBs were converted to MWs. One SB was attempted in the tank pit, but had to be moved to a location approx 5' away from the tank pit, due to auger refusal at approx 6'bgs. This boring (A) was sampled at 10.5' and 15.5'bgs; results were ND for TPHd, TPHg, and BTEX. The other 3 MW borings were also ND at various depths. See **Figure 2 and Table 2**. Note that groundwater stabilized at 14 to 15'bgs in these MWs.

Another attempt was made to sample the backfilled stockpile in the tank pit. On 9/18/93, B-1 was advanced in the former UST pit. GW was present at 14'bgs; soil was sampled at 6', 11', and 13.5'bgs. Results indicated ND concentrations at 6' and 11' (with trace xylene concentrations), while the 13.5' depth sample had 1.8 ppm TPHg, 0.013 ppm benzene, some TEX, and ND TPHd. It appears that the contamination present in the backfilled soils has degraded to extremely low levels. See **Figure 3 and Table 3**. Note that groundwater was first encountered at 14'bgs. The California drought was lessened due to heavy rainfall the preceding winter. Therefore, the original 17'bgs sample below the UST was now in the saturated zone. Groundwater does not appear to have been impacted from the soil contamination at 17'bgs.

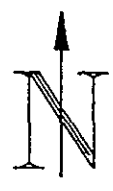
The MWs were monitored for 4 consecutive quarters. See **Table 4**. Results were all ND except 5.5 ppb of 1,2-DCA detected in MW1 during the first quarter. Since no petroleum HCs were found in the other water samples or borehole soils, the occurrence of 5.5 ppb of 1,2-DCA is probably not associated with the UST, and may actually be anomalous. Groundwater flow direction was consistently west to southwest.

A second UST was discovered in the sidewalk along Washington St. in 1995. GSA determined that the UST was used for fuel oil. Approximately 645 gallons of "oil and water" were pumped from the UST under hazardous waste manifest. GSA applied for closure in place for this UST, due to the proximity of utilities, the street and the building. A Geoprobe was used to collect soil and grab groundwater samples near the ends of the UST on 8/6/96. See **Figure 4 and Table 5**. Results indicated ND TPHd, ND BTEX, and ND O&G in both soil and groundwater samples, except for trace concentrations of TPHd in the groundwater (up to 250 ug/L). The gas chromatograph patterns were not analogous to TPHd, and were likely representative of fuel oil. The UST was filled with concrete grout on 8/22/96.

Leaking Underground Fuel Storage Tank Program

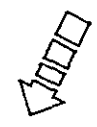
To summarize, the reasons that this case should be closed are as follows:

- * The sources have been removed (two USTs);
- * The site has been adequately characterized;
- * The downgradient wells (MW1 and MW3) have been ND for TPHg BTEX;
- * Although 5,800 mg/kg TPHg and 22 mg/kg benzene was detected below the UST at 17"bgs, groundwater contamination was not detected in the MWs.
- * There are no sensitive human or environmental receptors in the site vicinity: the estuary lies approximately 1,250 feet from the site (a significant and unlikely distance for a hydrocarbon plume to travel), and the site is used as a parking lot (see **Figure 5**);
- * There is likely no significant risk to human health; and
- * The closure letter will require **a**) agency notification if there is a proposal for a change in land use, site activity, or structural configuration of the site (e.g. new construction or excavation activities), and **b**) a health and safety plan if excavation occurs in the area of the previous gasoline UST.



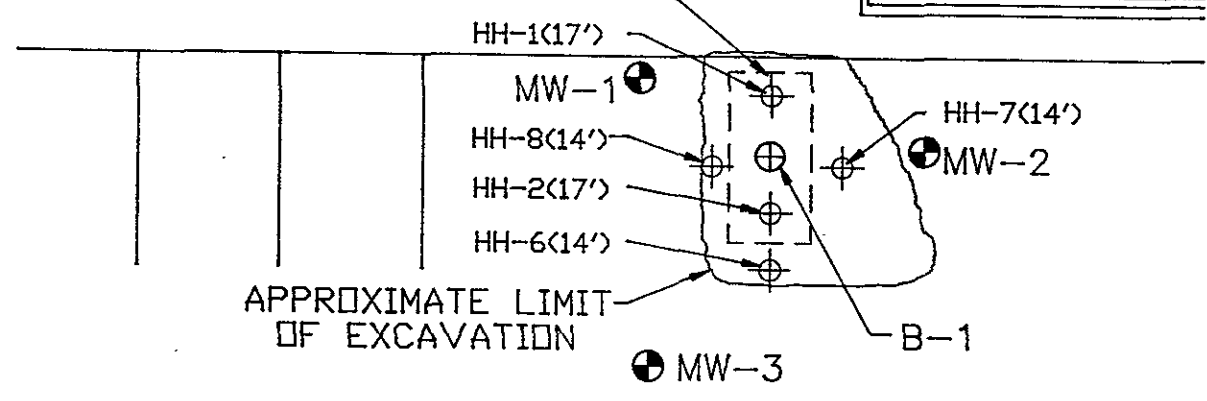
HEALTH DEPT.
BUILDING

ASSUMED GROUNDWATER
GRADIENT



ENTRANCE



REMOVED 2,000 GALLON
GASOLINE TANK

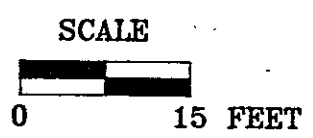


ASPHALT

Figure 1

LEGEND:

-  SOIL SAMPLE LOCATION (depth in feet)
-  PROPOSED GROUND-WATER MONITORING WELL



Environmental
Science &
Engineering, Inc.

ALAMEDA CO.
HEALTH HEADQUARTERS

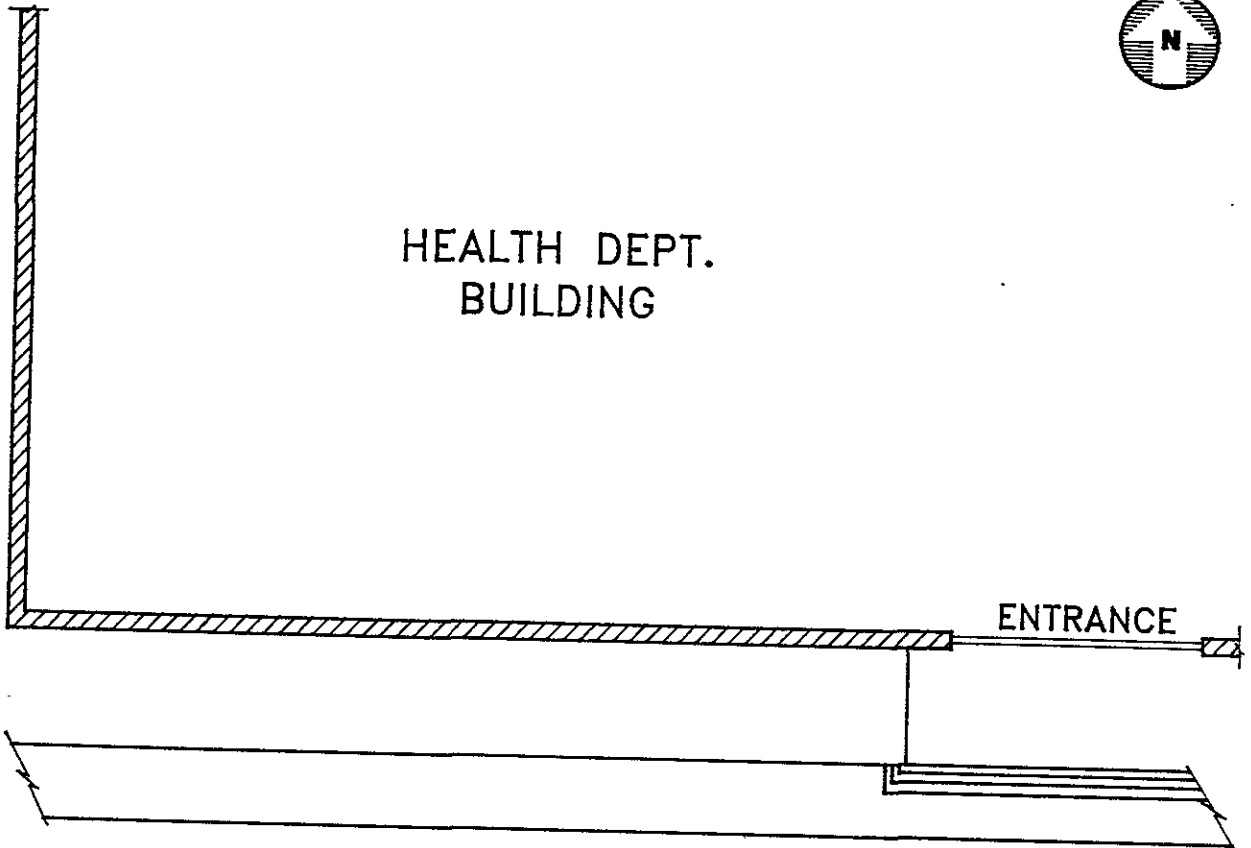
~~FIGURE 2~~
SITE PLAN

3/90

02-276-011



HEALTH DEPT.
BUILDING



ENTRANCE

MW-1

MW-2

A

A'

FORMER LOCATION
OF UNDERGROUND
STORAGE TANK

~~4th St.~~
(27)

parking lot


MW-3



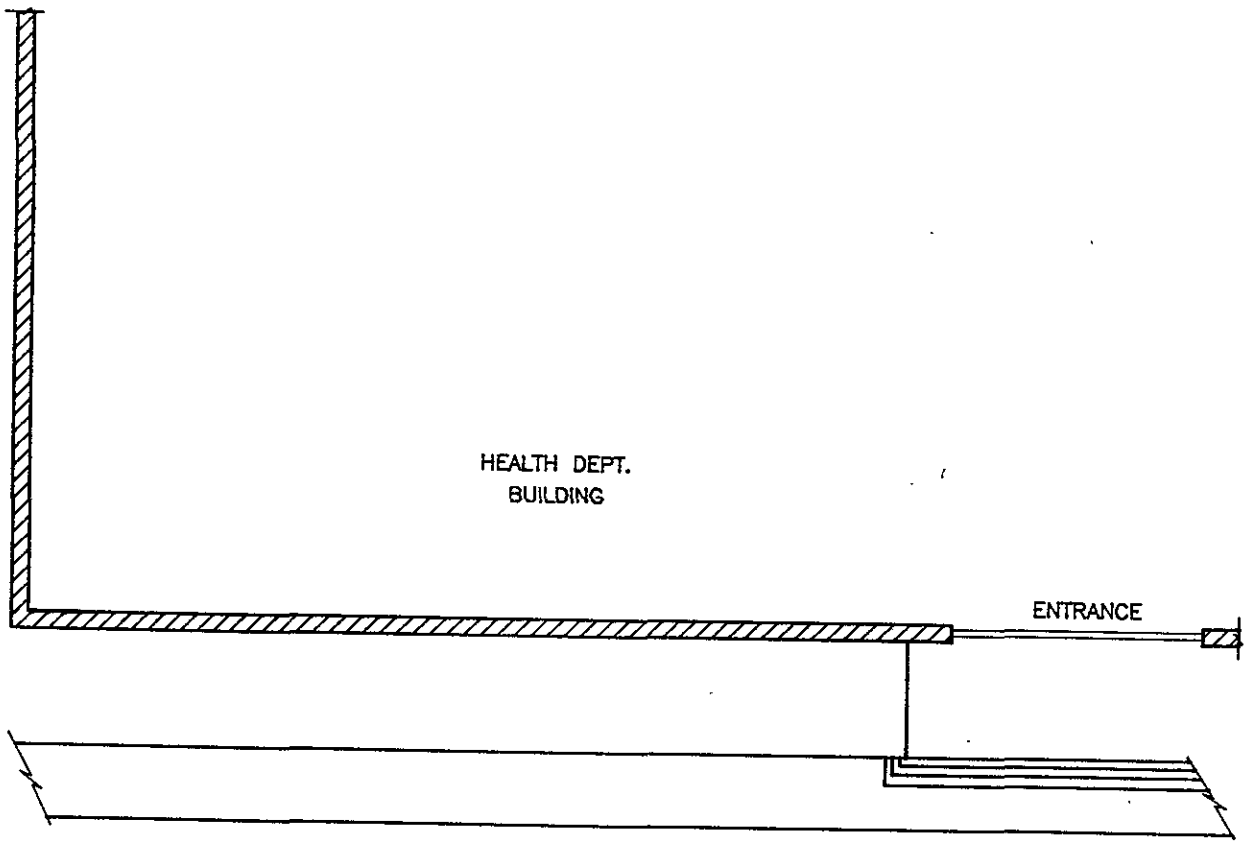
Figure 2

LEGEND:

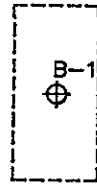
- ⊕ SOIL BORING
- ⊕ GROUND WATER MONITORING WELL

 A CECOORP COMPANY			Environmental Science & Engineering, Inc.		
ALAMEDA CO. HEALTH HEADQUARTERS					
FIGURE 2 PARTIAL SITE PLAN					
DRAWN BY DWR		APPROVED BY		REVISED MKE 6/92	
DATE 8/90	FILE NAME 50431002	PROJ. NO. 6-90-5043			

↓
4th St.



MW-1



MW-2

FORMER LOCATION OF UNDERGROUND STORAGE TANK

MW-3

LEGEND

- ⊕ SOIL BORING
- ⊕ GROUND WATER MONITORING WELL



Environmental Science & Engineering, Inc.

4090 NELSON AVENUE, SUITE J
CONCORD, CA 94520

DATE
8/93

REVISED
10/93 MKE

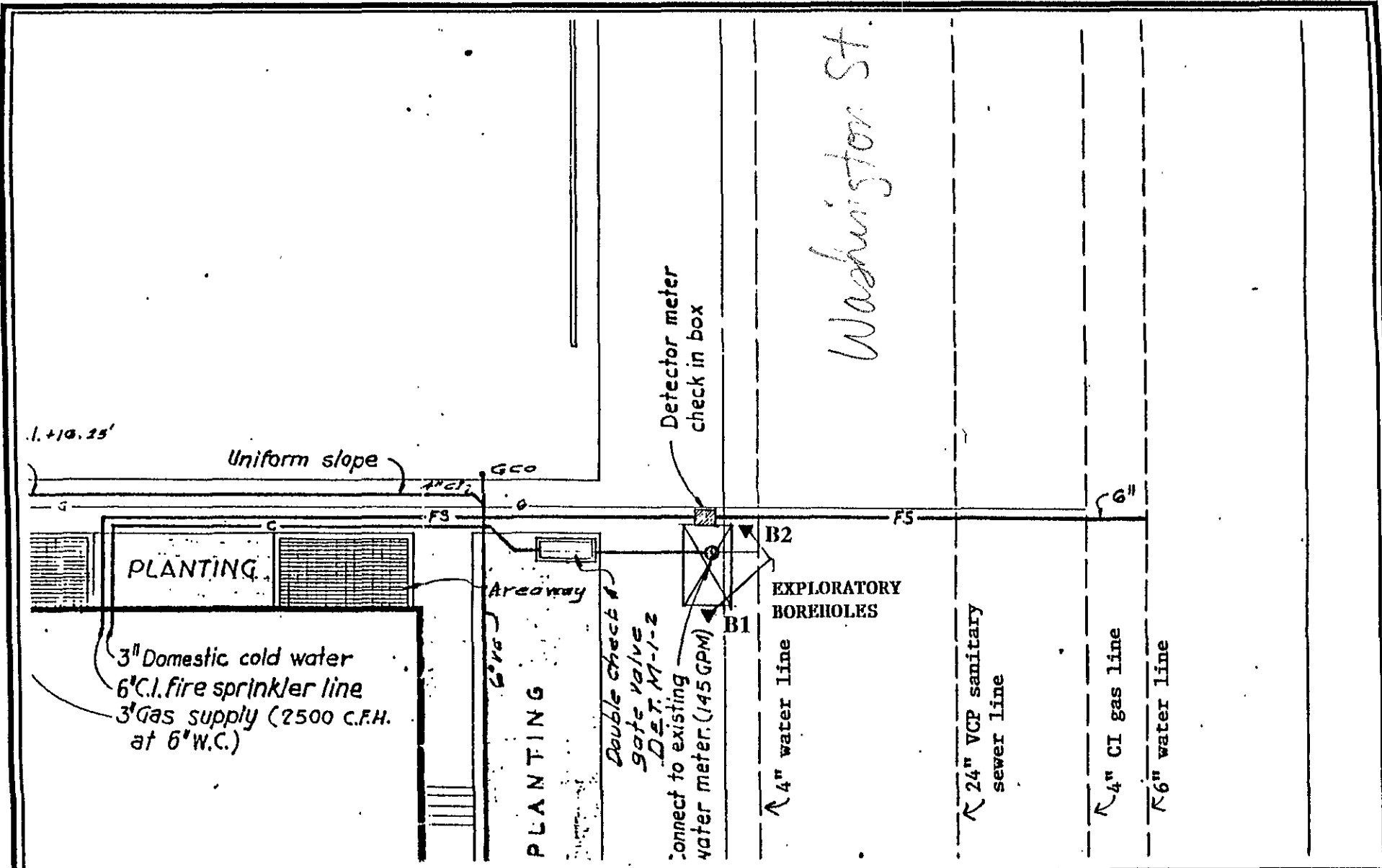
CAD FILE
51021002

PARTIAL SITE PLAN

ALAMEDA COUNTY .GSA
ALAMEDA COUNTY HEALTH HEADQUARTERS
OAKLAND, CALIFORNIA

FIGURE NO.
3

PROJ. NO.
6-93-5102



EXPLORATORY BOREHOLE LOCATIONS

COUNTY OF ALAMEDA
HEALTH HEADQUARTERS
499 5TH STREET
OAKLAND, CALIFORNIA

June 1996
Versar Project No.:
3383.001



FIGURE

4
Not to Scale

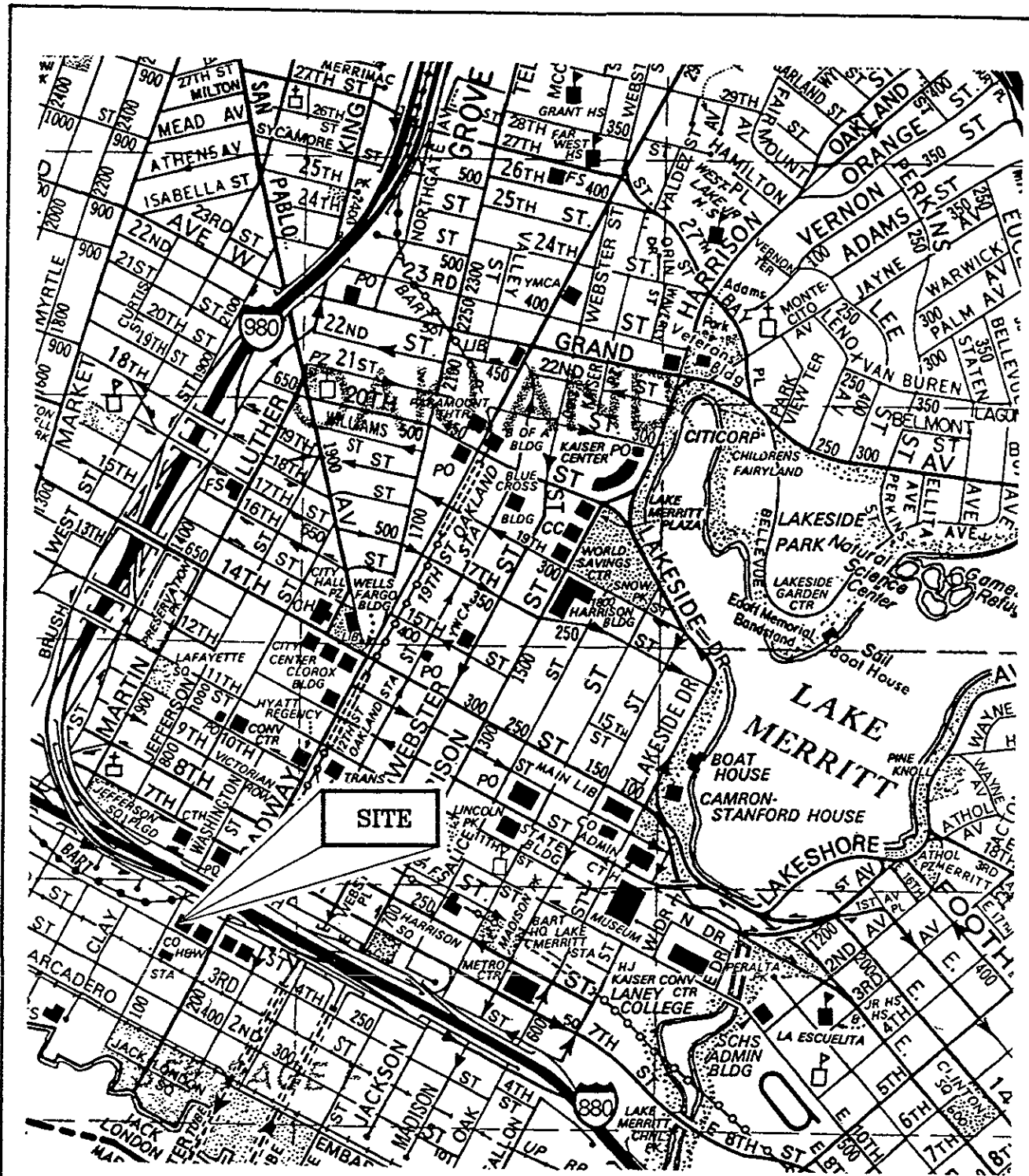
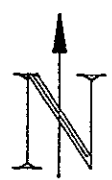


Figure 5



Environmental
Science &
Engineering, Inc.

ALAMEDA CO. HEALTH HEADQUARTERS		
FIGURE 1 LOCATION MAP		
DATE	FILE NAME	PROJ. NO.
8/90	F11M10	02-276-016

TABLE 1

Laboratory Results of Soil Samples Taken at the Alameda County Health Headquarters Facility, Located at 599 5th Street, Oakland, California on February 12, 1990

SAMPLE I.D. AND DEPTH BELOW GROUND SURFACE	SAMPLE LOCATION	EPA 8015 (ppm) TPH	EPA 8020 (ppb)			
			BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES
HH-1 @ 17'	Below tank-North	1,500	5,400	9,900	20,000	73,000
HH-2 @ 17'	Below tank-South	5,800	22,000	120,000	91,000	520,000
HH-3	Stockpile Area #1	1,700	2,000	18,000	24,000	140,000
HH-4	Stockpile Area #2	480	ND>200	3,000	5,200	32,000
HH-5	Stockpile Area #3	19	31	300	460	2,700
HH-6 @ 14'	South wall/Excav.	ND>1	ND>3	ND>3	5	29
HH-7 @ 14'	East wall/Excav.	ND>1	4	6	5	23
HH-8 @ 14'	West wall/Excav.	ND>1	ND>3	ND>3	ND>3	ND>3

NOTES: ppm - Parts per million or milligrams per liter (mg/L)
 ppb - Parts per billion or micrograms per liter (mg/L)
 ND<1 - Not detected at indicated detection limit
 TPH - Total Petroleum Hydrocarbons
 O&G - Oil & Grease

TABLE 2

ANALYTICAL RESULTS - SOIL SAMPLES

ALAMEDA COUNTY HEALTH HEADQUARTERS
499 5TH STREET
OAKLAND, CALIFORNIA 95814

Soil Boring No.	Sample Depth (feet)	Dated Collected	TPH-D (mg/kg)	TPH-G (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2 DCA (mg/kg)	EDB
MW-1	15	04/25/92	<0.5 ✓	<0.5 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	ND
MW-2	6	04/25/92	--	--	--	--	--	--	--	
MW-2	11	04/25/92	<0.5 ✓	<0.5 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	ND
MW-2	15	04/25/92	<0.5 ✓	<0.5 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	ND
MW-2	20	04/25/92	--	--	--	--	--	--	--	
MW-3	5	04/26/92	<0.5 ✓	<0.5 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	ND
MW-3	10	04/26/92	--	--	--	--	--	--	--	
MW-3	15.5	04/26/92	<0.5 ✓	<0.5 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	ND
A	5.5	04/26/92	--	--	--	--	--	--	--	
A	10.5	04/26/92	<0.5 ✓	<0.5 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	ND
A	15.5	04/26/92	<0.5 ✓	<0.5 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	<0.005 ✓	ND

Notes:

- TPH-D = Total petroleum hydrocarbons as diesel
 TPH-G = Total petroleum hydrocarbons as gasoline
 1,2 DCA = 1,2 Dichloroethane
 MG/KG = Milligrams per kilogram or parts per million (PPM)
 -- = Not analyzed
 < = Less than listed detection limit

Table 3

~~TABLE 1~~

ANALYTICAL RESULTS: SOIL SAMPLES

**Alameda County Health Services Building
499 5th Street
Oakland, California**

Boring I.D. No.	Sample Depth	Date Collected	TPH-D (mg/Kg)	TPH-G (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)
B-1	6	09/18/93	<10 ✓	<1 ✓	<0.005 ✓	0.008 ✓	<0.005 ✓	0.014
B-1	11	09/18/93	<10 ✓	<1 ✓	<0.005 ✓	0.006 ✓	<0.005 ✓	0.011
B-1	13.5	09/18/93	<10 ✓	1.8 ✓	0.013 ✓	0.013 ✓	0.036 ✓	0.068

NOTES:

TPH-D = Total Petroleum Hydrocarbons as Diesel
TPH-G = Total Petroleum Hydrocarbons as Gasoline
mg/Kg = Milligrams per Kilogram or parts per million (ppm)
< = Less than listed detection limit

Table 4

Table 4 Summary of TPH-G, BTEX, and 1,2-Dichloroethane Results of Groundwater Samples ¹ Alameda County Headquarters, Oakland, California						
Monitoring Station Dates Sampled	CONSTITUENT					
	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	1,2-Dichloroethane
MCL	NA ²	1 ³	100 ⁴	680 ³	1,750 ³	0.5 ³
MW-1						
12/1/93	<50	<0.5	<0.5	<0.5	<1.5	5.5
2/24/94	<50	<0.5	<0.5	<0.5	<1.5	<2.0
5/5/94	<50	<0.5	<0.5	<0.5	<1.5	NAN ⁵
8/12/94	<50 /	<0.5 /	<0.5 /	<0.5 /	<1.5 /	NAN
MW-2						
12/1/93	<50	<0.5	<0.5	<0.5	<1.5	<2.0
2/24/94	<50	<0.5	<0.5	<0.5	<1.5	<2.0
5/5/94	<50	<0.5	<0.5	<0.5	<1.5	NAN
8/12/94	<50 /	<0.5 /	<0.5 /	<0.5 /	<1.5 /	NAN
MW-3						
12/1/93	<50	<0.5	<0.5	<0.5	<1.5	<2.0
2/24/94	<50	<0.5	<0.5	<0.5	<1.5	<2.0
5/5/94	<50	<0.5 /	<0.5 /	<0.5 /	<1.5 /	NAN
8/12/94	<50 /	<0.5 /	<0.5 /	<0.5 /	<1.5 /	NAN

¹ All results reported in micrograms per liter.

² NA = Not applicable

³ California DHS Primary MCL

⁴ California DHS Action Level

⁵ NAN = Not Analyzed

Leaking Underground Fuel Storage Tank Program

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Jennifer Eberle

Signature: *J Eberle*

Title: Haz Mat Specialist

Date: 11/10/94

Reviewed by

Name: Barney Chan

Signature: *B. Chan*

Title: Haz Mat Specialist

Date: 3/1/95

Name: eva chu

Signature: *eva chu*

Title: Haz Mat Specialist

Date: 4/2/95

VI. RWQCB NOTIFICATION

Date Submitted to RB:

RWQCB Staff Name: Kevin Graves

RB Response:

Title: AWRCE Date:

VII. ADDITIONAL COMMENTS, DATA, ETC.

One 2000-gal gasoline UST was removed on 2/12/90. The tank bottom was approximately 15'bgs. Two soil samples were taken at approx. 17'bgs, below the UST. Three sidewall samples were taken at approx. 14'bgs, and the stockpile was also sampled. A hydrocarbon (fuel) odor was obvious. The pit was backfilled with the excavated soils for safety and liability reasons. There was up to 5800 ppm TPHg and 22 ppm benzene below the UST. The sidewalls were ND except .004 ppm benzene and some TEX (sample HH-7). The stockpile had 1700 ppm TPHg and 2 ppm benzene (and some TEX). The contamination did not appear to have migrated laterally, based on the sidewall soil sample results.

Four soil borings were installed in 4/92. Three SBs were converted to MWs. One SB was attempted in the tank pit, but had to be moved to a location approx 5' away from the tank pit, due to auger refusal at approx 6'bgs. This boring (A) was ND for TPHd, TPHg, and BTEX, as were the 3 MW borings at 15'bgs.

Another attempt was made to sample the backfilled stockpile in the tank pit. On 9/18/93, B-1 was advanced in the former UST pit. GW was present at 14'bgs; soil was sampled at 6', 11', and 13.5'. It was ND at 6' and 11', but at 13.5' had 1.8 ppm TPHg, .013 ppm benzene, some TEX, and ND TPHd. It appears that the contamination present in the backfilled soils has degraded to extremely low levels.

The MWs were monitored for 4 consecutive quarters. See attached Table 1. Results were all ND except 5.5 ppb of 1,2-DCA detected in MW1 during the first quarter. Since no petroleum HCs were found in the other water samples or borehole soils, the occurrence of 5.5 ppb of 1,2-DCA is probably not associated with the UST, and may actually be anomalous. See attached Table 2.

Table 5

~~TABLE 1~~**Laboratory Analytical Results¹****County of Alameda
Health Headquarters Building
Oakland, California**

Sample	TPH-D ²	Benzene	Toluene	Ethylbenzene	Xylenes	O&G ³
B1 - 10.5 - 11 ⁴ (soil)	ND	ND	ND	ND	ND	ND
B2 - 15 - 15 ⁴ (soil)	ND	ND	ND	ND	ND	ND
B1 - 15 ⁴ (water)	160 ⁵	ND	ND	ND	ND	ND
B2 - 14.45 ⁴ (water)	250 ⁵	ND	ND	ND	ND	ND

- ¹ Soil results expressed in milligrams per kilogram, equivalent to parts per million and water results expressed in micrograms per liter, equivalent to parts per billion.
- ² Total petroleum hydrocarbons as diesel.
- ³ Petroleum Oil and Grease
- ⁴ Depth collected in feet below ground surface.
- ⁵ Gas chromatograph patterns were not analogous to TPH-D, however detected concentrations were confirmed within the diesel and/or oil range.