

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



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 3664 - 1111 Broadway, Oakland, CA

February 3, 1997

Mr. Thomas Lacey
CMA Asset Managers
500 12th Street, Suite 310
Oakland, CA 94607

Dear Mr. Lacey:

This letter confirms the completion of site investigation and remedial action for the former underground storage tank removed from the above site in 1987. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tanks 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: Chief, Division of Environmental Protection
Kevin Graves, RWQCB
Lori Casias, SWRCB (with attachment)
Cheryl Gordon, UST Cleanup Fund
files (bramalea.2)

01-1983
35
Department of Environmental Health
JAN 31 1997

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: December 30, 1996

Agency name: Alameda County-HazMat Address: 1131 Harbor Bay Pkwy
City/State/Zip: Alameda, CA 94502 Phone: (510) 567-6700
Responsible staff person: T. Peacock Title: Supervisor

II. CASE INFORMATION

Site facility name: Bramalea Pacific
Site facility address: 1111 Broadway, Oakland, CA 94607
RB LUSTIS Case No: N/A Local Case No./LOP Case No.: 3664
URF filing date: 2/3/89 SWEEPS No: N/A

<u>Responsible Parties:</u>	<u>Addresses:</u>	<u>Phone Numbers:</u>
Thomas Lacey CMA Asset Managers	500 12th St, Suite 310 Oakland, CA 94607	510/874-7808

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	Unknown	Diesel	Removed	1987

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: Unknown
Site characterization complete? YES
Date approved by oversight agency:
Monitoring Wells installed? Yes Number: 6
Proper screened interval? Yes, 18' to 38' bgs in well APC-13 and APC-14
Highest GW depth below ground surface: 1st encountered water at ~26' bgs during drilling of groundwater monitoring wells.
Flow direction: Northerly, but only measured once.
Most sensitive current use: Office building
Are drinking water wells affected? No Aquifer name: Merritt Sand
Is surface water affected? No Nearest affected SW name: NA
Off-site beneficial use impacts (addresses/locations): Unknown

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	1 UST	Unknown	1987
Groundwater	~1 million gallons treated onsite and discharged to sanitary sewer from Jan to Nov 1989		

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

<u>Contaminant</u>	<u>Soil (ppm)</u>		<u>Water (ppb)</u>	
	<u>Before¹</u>	<u>After³</u>	<u>Before²</u>	<u>After⁴</u>
TPH (Gas)	4,500		24,000	
TPH (Diesel)	990			
Benzene	2.6		15,000	
Toluene	60		2,500	
Ethylbenzene	38		1,200	
Xylenes	198		4,000	
Heavy metals				
Other	1,2-DCA	NA ⁵	29	

- NOTE 1 sample E-SP-3 from soldier pier/dewatering well cuttings (1/13/89)
 2 from well APC-13 (12/21/88)
 3 most of the soil was removed during excavation for the construction of the below-ground parking garage, but no confirmatory soil samples were ever collected.
 4 groundwater monitoring wells were not sampled except immediately after well construction.
 5 sample E-SP-3 was not analyzed for HVOCs but Area Samples A-1, A-3, B-2, C-1, C-2 and D-2 , collected from 30' to 38' bgs, were ND for 8240 analyses.

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: **Yes, a site safety plan to address hydrocarbon and solvent contamination in soil and groundwater should be provided if the sidewalk and/or 11th Street is ever excavated.**
 Should corrective action be reviewed if land use changes? **YES**
 Monitoring wells Decommissioned: **Yes**
 Number Decommissioned: **6** Number Retained: **0**
 List enforcement actions taken: **None**
 List enforcement actions rescinded: **NA**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Eva Chu** Title: **Haz Mat Specialist**

Signature:  Date: **1/21/97**

Reviewed by

Name: **Juliet Shin** Title: **Sr. Haz Mat Specialist**

Signature:  Date: **12/31/96**

Name: **Thomas Peacock** Title: **Supervisor**

Signature:  Date: **1-17-97**

VI. RWQCB NOTIFICATION

Date Submitted to RB: **1/22/97**

RB Response: **Approved**

RWQCB Staff Name: **Kevin Graves**

Title: **AWRCE**

Signature: 

Date: **1-27-97**

VII. ADDITIONAL COMMENTS, DATA, ETC.

The general area experienced a transition from residential to commercial development during the period of 1902 to 1930. By the 1930s, commercial developments in the area included retail, service, entertainment, and light manufacturing. All buildings on the block bounded by 11th Street, 12th Street, and Broadway were demolished and removed by 1975 to make way for the City Center Development, consisting of a high-rise office building with a loading dock and three levels of underground parking.

An underground storage tank (UST) was reportedly discovered adjacent to the north side of the 1111 Broadway parcel during the 12th Street improvement project in 1987. The tank was punctured during the excavation process and leaked some diesel fuel onto the ground. Analysis of soil samples taken from beneath the tank contained up to 990 ppm diesel. Approximately 20 cubic yards of contaminated soil were removed. The excavation was extended to a depth of ~10' below the tank bottom, into soils that appeared to be uncontaminated. Confirmatory soil samples were not collected.

In June 1988 six borings (APC-1 through APC-5 and groundwater monitoring well APC-1A) were drilled throughout the site to collect soil and groundwater samples. Boring APC-2 was advanced near the location of the former UST removed in 1987. In mid July 1988 additional soil borings, APC-6 through APC-9, were drilled. Borings APC-6 and APC-7 were converted into monitorings wells. Select soil and groundwater samples did not identify significant levels of TPH, VOCs, CAM-17 metals, SVOCs, herbicides, pesticides, cyanide, or phenolics (see Fig 1). Although metal

concentrations for Ba, Cr and Ni in groundwater exceeded Maximum Contaminant Levels (MCLs) for drinking water, it should not be a risk to human health since this water is not a source of drinking water.

In December 1988, during the installation of a shoring system along the north side of 11th Street, hydrocarbon odors were reported in soil cuttings near the then-existing Hyatt Hotel loading dock. A composite soil sample (GRAB-1/S-13 through S-18) from the cuttings contained up to 160 ppm TPHg and 2.6 ppm benzene. (See Fig 2, Table 1)

For the construction of a new loading dock at the southwest portion of the block, a large number of borings were drilled around the perimeter of the site for the installation of the excavation shoring and dewatering systems. Select borings were also drilled to monitor the occurrence of hydrocarbons in areas where contamination might be expected to occur. Wells APC12, APC-13, and APC-14 were also installed along the south, southwest end of the property. Records show that these wells were only sampled once, in December 1988. (See Fig 2)

Based on elevated TPHg, BTEX, and 1,2-Dichloroethane (DCA) levels in groundwater (up to 24,000 ppb, 15,000 ppb and 29 ppb, respectively) from wells APC-13 and APC-14, a groundwater treatment system was constructed to remove hydrocarbons from the groundwater. Periodically, groundwater from the dewatering wells, drainage sumps, and drain trenches was sampled and analyzed for TPH, BTEX and chlorinated hydrocarbons. When TPH concentrations exceeded 50 ppb, or when individual BTEX parameters exceeded 5 ppb, groundwater was routed and treated through the treatment system, which consisted of granulated activated carbon units. After treatment, the water was discharged to the sanitary sewer. Dewatering and treatment of the groundwater began in January 1989 and was completed in November 1989, when construction of the building foundation had progressed to the point where dewatering was no longer required. All monitoring wells were destroyed upon completion of the building foundation.

During the period of continuous pumping, from February through late April, TPH concentrations in the influent groundwater declined from about 3 ppm in early February to less than 0.22 ppm by early April. Benzene showed a similar decline (from 900 ppb to 35 ppb) during this period. Analysis of a groundwater sample taken from dewatering well 3 in November 1989 identified 25 ppm TPH, in the same range as the 24 ppm TPH value found from monitoring well APC-13 in December 1988.

Most of the soil containing TPHg was removed during excavation activities for the construction of the new loading dock (to ~16' bgs) and the building foundation mat (to ~38' bgs). A small pocket of soil containing oil was also removed from the central part of the excavation at ~39' bgs (samples C-4-1, 2 and 3). This soil contained up to 600 ppm trimethyl-cyclohexane, a component of lubricating oil. A zone of contaminated soil, about three feet thick at 27' to 30' bgs, remains in the southwest corner of the mat excavation, adjacent to and under the old Hyatt loading dock, and beneath the sidewalk and 11th Street (up to 4,500 ppm TPHg at E-SP-3). The source of the contamination is not known but appears to be from offsite.

TPHg, benzene, and 1,2-DCA which were identified in groundwater (December 1988) at concentrations of up to 24 ppm, 15 ppm, and 0.029 ppm, respectively, along the southern edge of the property appear limited in extent since groundwater samples from other areas within the property line (wells APC-6, APC-7, and APC-12) did not contain elevated levels of TPHg, BTEX, or organic solvents. Levels of 1,2-DCA in groundwater (29 ppb) from well APC-13 exceeds CA MCL (0.5 ppb) by two orders of magnitude, but should not pose a health risk since groundwater at the site is not a source for drinking water. It should be noted that analysis of a second sample, taken from the same well at the same time, showed no 1,2 DCA above the detection limit of 20 ppb. Maximum 1,2 DCA concentrations from the dewatering wells did not exceed 4 ppb. (See Fig 2, Tables 1 and 2)

Because the perimeter wells were only sampled once (just after they were constructed) the effectiveness of the dewatering system in removing contaminated groundwater cannot be determined. Nor is it known what concentrations of residual soil and groundwater contamination currently exists. But, natural bioattenuation may reduce contaminant levels in soil and groundwater over time.

The direction of groundwater flow, as measured in mid-1988 was from south to north. Assuming that groundwater flow direction remains constant, the hydrocarbon plume from 11th Street would move beneath the existing office building. Since the lower levels of the site consists of a three-level parking garage and loading docks, any petroleum vapor which may migrate through the concrete floors would be removed by the ventilation systems designed to remove automobile and truck exhaust. Therefore, there does not appear to be any health risk due to residual groundwater contamination at the site.

Case closure is recommended because:

- o the leak and ongoing sources have been removed when the entire site was excavated to depths of 16 to 38' bgs;
- o no water wells, surface water, or other sensitive receptors are likely to be impacted since the plume appears to be localized mainly under the sidewalk and street adjacent to the southern boundary of the 1111 Broadway project at 27' to 30' bgs; and,
- o the site presents no significant risk to human health since the ventilation system in the garage would mitigate any potential vapor inhalation problem from residual soil and/or groundwater contamination.

Project 1111 BROADWAY BUILDING
 : Oakland, California

Log of Boring APC 12

Date Drilled: December 19, 1988
 Type of Boring: 8-inch Auger
 Hammer: 130 pounds falling 30 inches

Remarks: Groundwater monitoring well
 See Figure A-1 for boring log legend

Depth, ft.	Samples	Blows/ft.	MATERIAL DESCRIPTION	Moisture Content %	Dry Density pcf	Unconfined Compress. Strength psf
Surface Elevation: Approx. 27 feet (Oakland City Datum)						
5	1-4	100 9"	SILTY SAND (SM) Dense, moist, reddish-brown to grayish-brown. Some mottled reddish-brown clay.			
10	2-4	50 5"	SILTY SAND (SM) Dense, moist, reddish-brown, medium grain. Becomes reddish-brown			
15	3-4	52				
20			SILTY SAND (SM) wet, reddish-brown.			
25		50 6"				
Bottom of Boring 25'						
30						
35						
40						



Project : 1111 BROADWAY BUILDING
Oakland, California

Log of Boring APC 13

Date Drilled: December 20, 1988
Type of Boring: 8-Inch Auger
Hammer: 130 pounds falling 30 inches

Remarks: Groundwater monitoring well
See Figure A-1 for boring log legend

Depth, ft.	Samples	Blows/ft.	MATERIAL DESCRIPTION	Moisture Content %	Dry Density pcf	Unconfined Compress. Strength psf
Surface Elevation: Approx. 25 feet (Oakland City Datum)						
5	1-4	39	SILTY SAND (SM-SP) Slightly moist, reddish-brown. Contains pieces of brick material.			
10	2-4	50 2.5"	CLAYEY SAND(SC) Dense, moist, reddish-brown.			
15	3-4	50 3"	<p style="text-align: center;">▽ ATD</p> <p>Becomes blue-gray. Smells of gasoline in bottom 2 sample tubes (approx. 14.5')</p> <p>Contaminated sand as above</p>			
25			Bottom of Boring 23'			
30						
35						
40						

Project: 8810021A

Woodward-Clyde Consultants

Figure A-15

Project : 1111 BROADWAY BUILDING
Oakland, California

Log of Boring APC 14

Date Drilled: December 20, 1988
Type of Boring: 8-inch Auger
Hammer: 130 pounds falling 30 inches

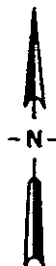
Remarks: Groundwater monitoring well
See Figure A-1 for boring log legend

Depth, ft.	Samples	Blows/ft.	MATERIAL DESCRIPTION	Moisture Content %	Dry Density pct	Unconfined Compress. Strength psf
Surface Elevation: Approx. 27 feet (Oakland City Datum)						
5	1-4	74	CLAYEY SAND (SC) Wet, reddish-brown, fine-grain.			
10	2-4	68	CLAYEY SAND(SC) Wet, reddish-brown, medium-grain. Contains some mottled clay (CH).			
15	3-4	72	SANDY CLAY(CL) Dense, wet, grayish-brown.			
25			Bottom of Boring 25'			

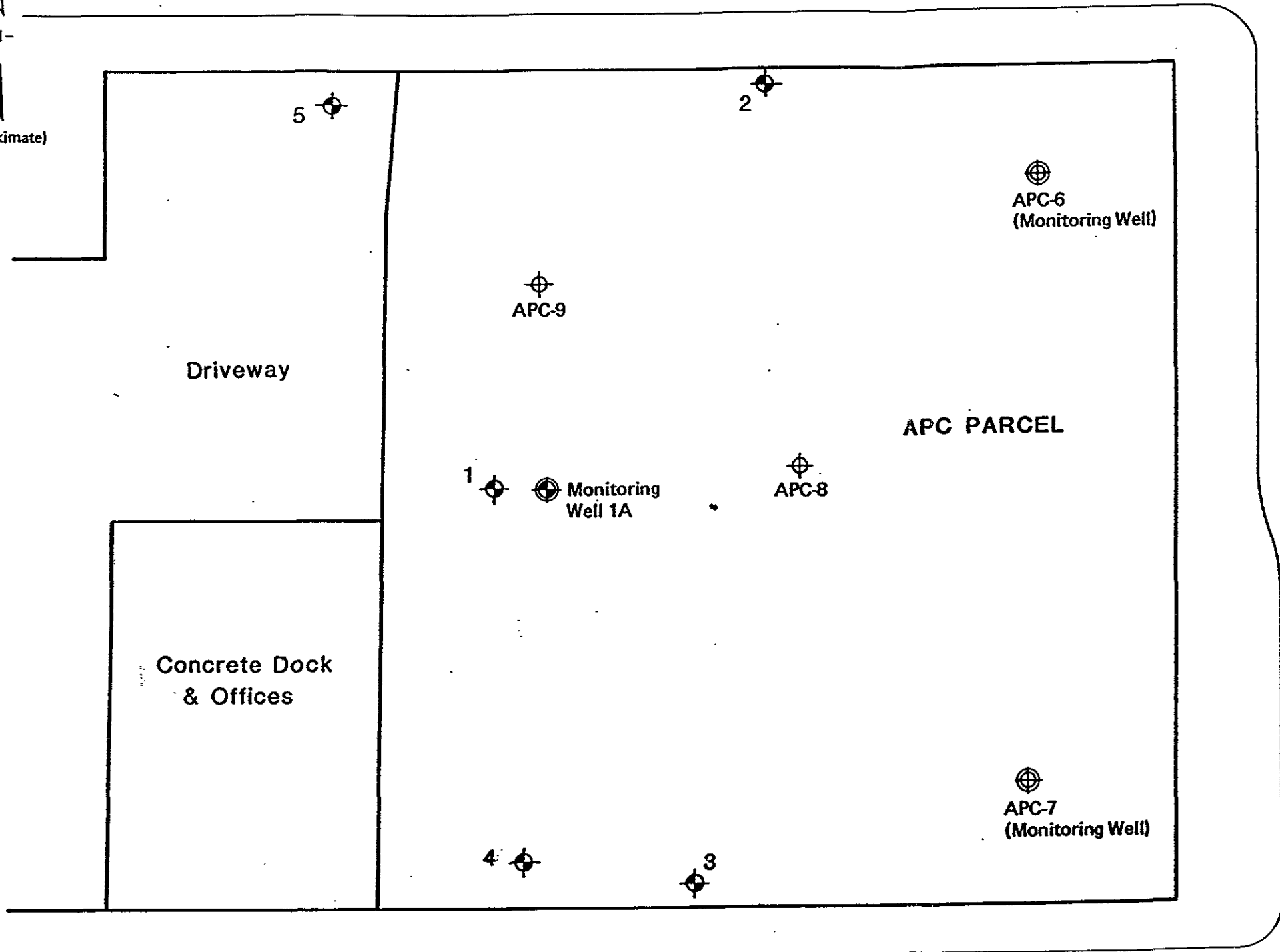


ATD

12th STREET



(Approximate)



Driveway

Concrete Dock
& Offices

APC PARCEL

APC-6
(Monitoring Well)

APC-9

1
Monitoring Well 1A

APC-8

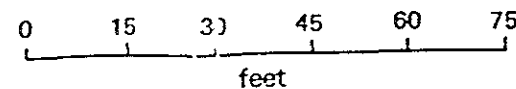
APC-7
(Monitoring Well)

11th STREET

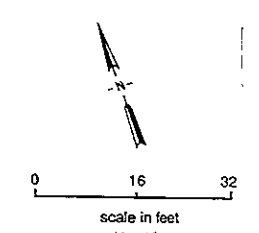
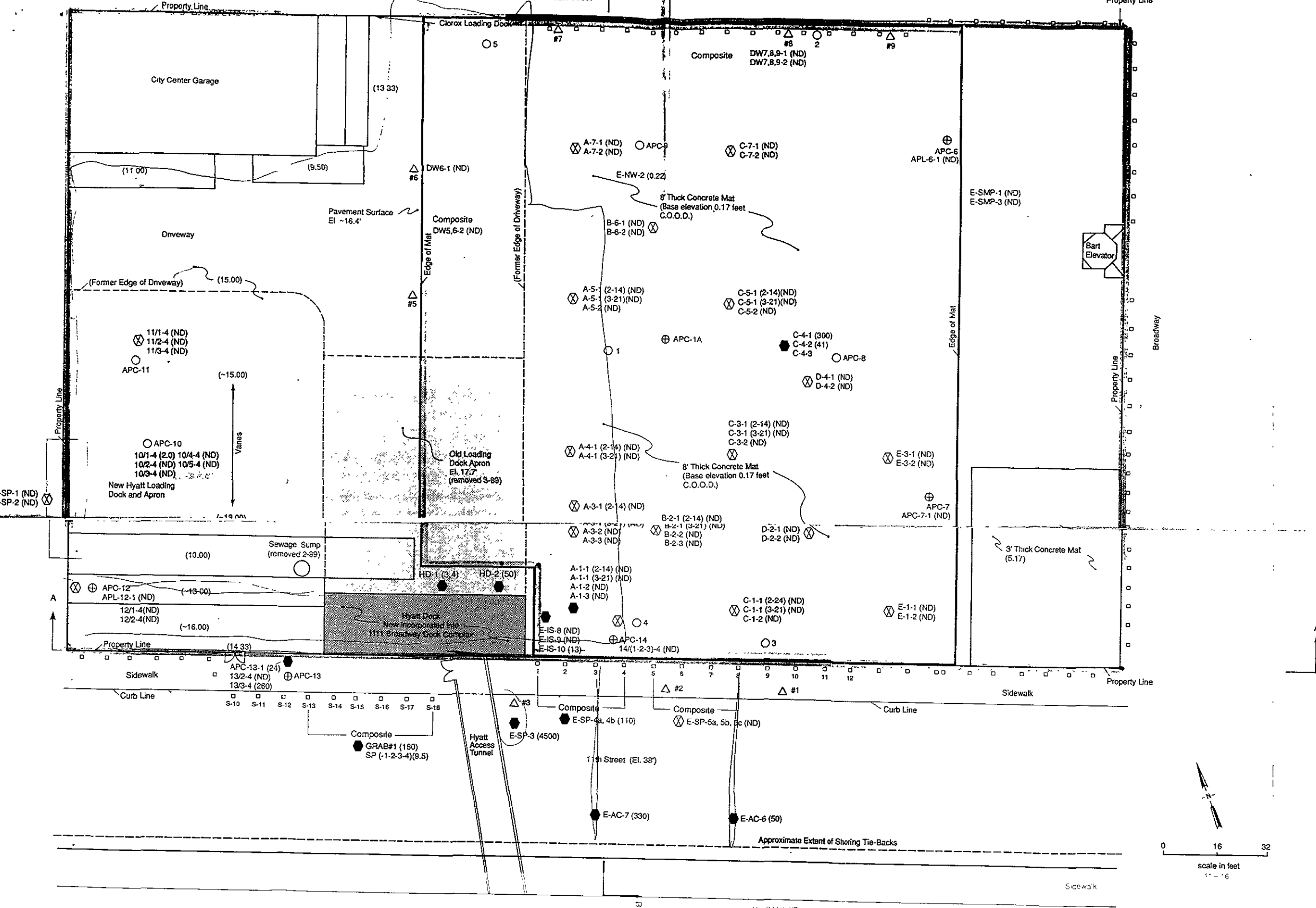
BROADWAY

LEGEND

- Approximate Soil Boring Location (previous study)
- Monitoring Well Installed (previous study)
- Approximate Soil Boring Location (July 1988)
- Monitoring Wells Installed (July 1988)



Project No. 8810021A	APC Building Oakland, CA	BORING LOCATION PLAN	Figure 1
Woodward-Clyde Consultants			



EXPLANATION

- △ Dewatering wells
- Soil borings
- ⊕ Monitoring wells
- ⊖ Soldier piles
- Soil Samples with TPH and/or BETX
- ⊗ Soil Samples with no TPH or BETX
- (13) Total Petroleum Hydrocarbons (TPH) Expressed as Parts Per Million (ppm)

Notes

- (1) Numbers in parentheses, (15.00), indicate bottom elevations of excavation in feet relative to City of Oakland datum.
- (2) Source of drawing: Skilling, Ward, Magnusson, Barkshire Inc sheets # S2.00.1 and S2.00.2, additions from Kenneth Heaton Associates, Inc., sheet A3.02.

TABLE 1. SUMMARY OF CHEMICAL ANALYTICAL RESULTS: SOIL - 1111 BROADWAY PROJECT

Sampling Results				Test Results					Other Analyses/Notes
Number	Date	Location(1)	Elevation (feet)	TPH-Gasoline ppm	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm	
GRAB-1	12-09-88	Soldier Pile S-13 to -18	12	160	2.6	12	3.7	13	
<u>Soil Boring and Monitoring Well Samples</u>									
10/1-4	12-19-88	Soil Boring APC-10	20	2.0	N.D.	N.D.	N.D.	N.D.	
10/2-4	12-19-88	Soil Boring APC-10	16	N.D.	N.D.	N.D.	N.D.	N.D.	
10/3-4	12-19-88	Soil Boring APC-10	10	N.D.	N.D.	N.D.	N.D.	N.D.	
10/4-4	12-19-88	Soil Boring APC-10	5	N.D.	N.D.	N.D.	N.D.	N.D.	
10/5-4	12-19-88	Soil Boring APC-10	1	N.D.	N.D.	N.D.	N.D.	N.D.	
11/1-4	12-19-88	Monitoring Well APC-11	11	N.D.	N.D.	N.D.	N.D.	N.D.	
11/2-4	12-19-88	Monitoring Well APC-11	6	N.D.	N.D.	N.D.	N.D.	N.D.	
11/3-4	12-19-88	Monitoring Well APC-11	1	N.D.	N.D.	N.D.	N.D.	N.D.	
12/1-4	12-19-88	Monitoring Well APC-12	22	N.D.	N.D.	N.D.	N.D.	N.D.	
12/2-4	12-19-88	Monitoring Well APC-12	17	N.D.	N.D.	N.D.	N.D.	N.D.	
13/2-4	12-20-88	Monitoring Well APC-13	16	N.D.	N.D.	N.D.	N.D.	N.D.	
13/3-4	12-20-88	Monitoring Well APC-13	11	260	N.D.	0.91	2.2	N.D.	
14/(1-2-3)-4	12-20-88	Monitoring Well APC-14	22 to 12	N.D.	N.D.	N.D.	N.D.	N.D.	Composite of 14/1-4, 14/2-4, 14/3-4

Notes:

- (1) Refer to Figures 1 and 4 for sample locations.
- (2) N.D. = Not Detected. Limits of detection vary.
- (3) Elevations are based on the City of Oakland Datum.

Cont. TABLE 1. SUMMARY OF CHEMICAL ANALYTICAL RESULTS: SOIL - 1111 BROADWAY PROJECT (continued)

Sampling Results			Test Results					Other Analyses/Notes
Number	Date	Elevation (feet)	TPH-Gasoline ppm	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm	
<u>Soldier Pier and Dewatering Well Cuttings</u>								
SP(-1-2-3-4)	12-20-88	27 to 0	9.5	N.D.	N.D.	N.D.	0.15	Composite
W-SP-1	01-10-89	20 to 16	N.D.	N.D.	N.D.	N.D.	N.D.	
W-SP-2	01-11-89	16	N.D.	N.D.	N.D.	N.D.	N.D.	
E-SP-3	01-13-89	12	4500	N.D.	60	38	198	
E-SP-4a, 4b	01-25-89	27 to 0	110	N.D.	N.D.	1.2	1.7	
E-SP-5a, 5b, 5c	01-25-89	27 to 0	N.D.	N.D.	N.D.	N.D.	N.D.	
E-AC-6	02-10-89	9	50	N.D.	N.D.	N.D.	0.39	
E-AC-7	02-10-89	9	330	N.D.	0.2	1.1	3.9	
<u>Area Investigation</u>								
A-1-1	02-14-89	7	N.D.	N.D.	N.D.	N.D.	N.D.	Acetone=3ppm, Xylenes=0.14ppm (3) Methylene Chloride=7.8 ppm (3) Total Lead=11 ppm
B-2-1	02-14-89	8	N.D.	N.D.	N.D.	N.D.	N.D.	Methylene Chloride=1.4 ppm (3) Total Lead=11 ppm
A-3-1	02-14-89	8	N.D.	N.D.	N.D.	N.D.	N.D.	Total Lead=14 ppm
C-1-1	02-14-89	9	N.D.	N.D.	N.D.	N.D.	N.D.	
A-4-1	02-14-89	6	N.D.	N.D.	N.D.	N.D.	N.D.	Total Lead = 14 ppm

Notes:

- (1) Refer to Figures 1 and 4 for sample locations.
- (2) N.D. = Not Detected. Limits of detection vary.
- (3) These data are believed to result from laboratory error.
- (4) Elevations are based on the City of Oakland Datum.

TABLE 2. SUMMARY OF CHEMICAL ANALYTICAL RESULTS: GROUNDWATER - 1111 BROADWAY PROJECT

Sampling Information			Test Results					Other Analyses/Notes
Number	Date	Location	TPH-gasoline ppm	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylene ppm	
APL-7-1	12-21-88	Monitoring Well APC-7	N.D.	0.0018	N.D.	N.D.	N.D.	
APL-12-1	12-21-88	Monitoring Well APC-12	N.D.	N.D.	N.D.	N.D.	N.D.	
APL-6-1	12-21-88	Monitoring Well APC-6	N.D.	N.D.	N.D.	N.D.	N.D.	
APC-13-1	12-21-88	Monitoring Well APC-13	24	15	2.5	1.2	4	
APC-14-1	12-21-88	Monitoring Well APC-14	5.1	0.12	0.03	0.37	0.45	1,2-DCA = 0.029 ppm Organic Lead = N.D.
DW6-1	01-17-89	Dewatering Well #6	N.D.	0.00055	N.D.	0.0006	0.00083	
E-NW-2	02-09-89	NW Corner, near APC-9	0.22	0.0051	0.0192	0.0039	0.0464	
DW7, 8, 9-1	03-02-89	Dewatering Wells 7, 8, and 9	N.D.	N.D.	0.0031	N.D.	N.D.	2-Butanone = 0.013 ppm (4) 1,2-DCA 0.0029 ppm (4)
DW5, 6-2	03-09-89	Dewatering Wells 5 and 6	N.D.	N.D.	N.D.	N.D.	N.D.	1,2-DCA 0.004 ppm (4)
DW7, 8, 9-2	03-09-89	Dewatering Wells 7, 8, and 9	N.D.	N.D.	N.D.	N.D.	N.D.	1,2-DCA 0.0036 ppm (4)
E-SMP-1	03-20-89	Sump Pump E1. 1.5'	N.D.	N.D.	N.D.	N.D.	N.D.	Acetone = 0.031 ppm (4)
E-SMP-3	03-27-89	Trench Drain, North	N.D.	N.D.	N.D.	N.D.	N.D.	Volatile Organics = N.D.
E-SMP-7	04-10-89	Trench Drain, North	0.039	0.0036	0.0035	0.0019	0.0075	
DW7, 8, 9-3	04-18-89	Dewatering Wells 7, 8, and 9	N.D.	N.D.	N.D.	N.D.	N.D.	
DW1, 2, 3	05-03-89	Dewatering Wells 1, 2, and 3	0.4	0.0037	0.0017	0.0016	0.0095	
DW7, 8, 9	05-03-89	Dewatering Wells 7, 8, and 9	N.D.	N.D.	N.D.	N.D.	N.D.	

Notes:

- (1) Refer to Figures 1 and 4 for monitoring well and sampling point locations.
- (2) 1,2-DCA = 1,2-Dichloroethane
- (3) N.D. = Not detected. Limits of detection vary.
- (4) These data are believed to result from solvents used in assembling the dewatering system.

cont. TABLE 1. SUMMARY OF CHEMICAL ANALYTICAL RESULTS: SOIL - 1111 BROADWAY PROJECT (continued)

Sampling Results			Test Results					Other Analyses/Notes
Number	Date	Elevation (feet)	TPH-Gasoline ppm	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm	
<u>Area Samples</u>								
A-5-1	02-14-89	7	N.D.	N.D.	N.D.	N.D.	N.D.	
C-5-1	02-14-89	7	N.D.	N.D.	N.D.	N.D.	N.D.	
C-3-1	02-14-89	8	N.D.	N.D.	N.D.	N.D.	N.D.	
E-1S-8	02-23-89	5	N.D.	N.D.	N.D.	N.D.	N.D.	
E-1S-9	02-23-89	2	N.D.	N.D.	N.D.	N.D.	N.D.	
E-1S-10	02-23-89	11	13	0.08	0.17	0.1	1.4	
A-1-1	3/21/89	7	N.D.	N.D.	N.D.	N.D.	N.D.	EPA 8240 Organics = N.D.
A-1-2	3/21/89	4	N.D.	N.D.	N.D.	N.D.	N.D.	EPA 8240 Organics = N.D.
A-1-3	3/21/89	1	N.D.	N.D.	N.D.	N.D.	N.D.	EPA 8240 Organics = N.D.
A-3-1	3/21/89	8	N.D.	N.D.	N.D.	N.D.	N.D.	EPA 8240 Organics = N.D.
A-3-2	3/21/89	4	N.D.	N.D.	N.D.	N.D.	N.D.	EPA 8240 Organics = N.D.
A-3-3	3/21/89	1	N.D.	N.D.	N.D.	N.D.	N.D.	EPA 8240 Organics = N.D.
B-2-1	3/21/89	8	N.D.	N.D.	N.D.	N.D.	N.D.	EPA 8240 Organics = N.D.
B-2-2	3/21/89	4	N.D.	N.D.	N.D.	N.D.	N.D.	EPA 8240 Organics = N.D.
B-2-3	3/21/89	1	N.D.	N.D.	N.D.	N.D.	N.D.	EPA 8240 Organics = N.D.
C-1-1	3/21/89	4	N.D.	N.D.	N.D.	N.D.	N.D.	EPA 8240 Organics = N.D.
C-1-2	3/21/89	0	N.D.	N.D.	N.D.	N.D.	N.D.	EPA 8240 Organics = N.D.
C-3-1	3/21/89	4	N.D.	N.D.	N.D.	N.D.	N.D.	EPA 8240 Organics = N.D.
C-3-2	3/21/89	0	N.D.	N.D.	N.D.	N.D.	N.D.	EPA 8240 Organics = N.D.
D-2-1	3/21/89	4	N.D.	N.D.	N.D.	N.D.	N.D.	EPA 8240 Organics = N.D.
D-2-2	3/21/89	0	N.D.	N.D.	N.D.	N.D.	N.D.	EPA 8240 Organics = N.D.
A-4-1	3/21/89	2	N.D.	N.D.	N.D.	N.D.	N.D.	EPA 8240 Organics = N.D.
A-5-1,2	3/21/89	Comp. 0 to 4	N.D.	N.D.	N.D.	N.D.	N.D.	
A-7-1,2	3/21/89	Comp. 0 to 4	N.D.	N.D.	N.D.	N.D.	N.D.	
B-6-1,2	3/21/89	Comp. 0 to 4	N.D.	N.D.	N.D.	N.D.	N.D.	
C-5-1,2	3/21/89	Comp. 0 to 4	N.D.	N.D.	N.D.	N.D.	N.D.	

Notes:

- (1) Refer to Figures 1 and 4 for sample locations.
- (2) N.D. = Not Detected. Limits of detection vary.
- (3) Elevations are based on the City of Oakland Datum.

Cond. TABLE 1. SUMMARY OF CHEMICAL ANALYTICAL RESULTS: SOIL - 1111 BROADWAY PROJECT (concluded)

Sampling Results			Test Results					Other Analyses/Notes
Number	Date	Elevation (feet)	TPH-Gasoline ppm	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm	
C-7-1,2	3/21/89	4	N.D.	N.D.	N.D.	N.D.	N.D.	Trimethyl Cyclopentane=120 ppm Methyl Propyl Cyclopentane=190 ppm Dimethyl Cyclopentane=210 ppm Trimethyl Cyclopentane=620 ppm Tetramethyl Cyclopentane=190 ppm EPA 8240 Volatiles = N.D.
D-4-1,2	3/21/89	4	N.D.	N.D.	N.D.	N.D.	N.D.	
E-1-1,2	3/21/89	4	N.D.	N.D.	N.D.	N.D.	N.D.	
E-3-1,2	3/21/89	4	N.D.	N.D.	N.D.	N.D.	N.D.	
C-4-1	3/28/89	2	300	N.D.	N.D.	N.D.	N.D.	
C-4-2	3/28/89	0	41	N.D.	N.D.	N.D.	N.D.	
C-4-3	3/28/89	-1	--	N.D.	N.D.	N.D.	N.D.	Trimethyl Cyclohexane=0.54 ppm EPA 8240 Volatiles = N.D.
HD-1	5/3/89	10	3.4	N.D.	N.D.	N.D.	N.D.	
HD-2	5/3/89	9	50	N.D.	N.D.	N.D.	N.D.	

Notes:

- (1) Refer to Figures 1 and 4 for sample locations.
- (2) N.D. = Not Detected. Limits of detection vary.
- (3) Elevations are based on the City of Oakland Datum.