

UNION POINT PARK/CAL CREW CONCEPT

Oakland Waterfront Initiatives: Estuary Plan

DRAFT

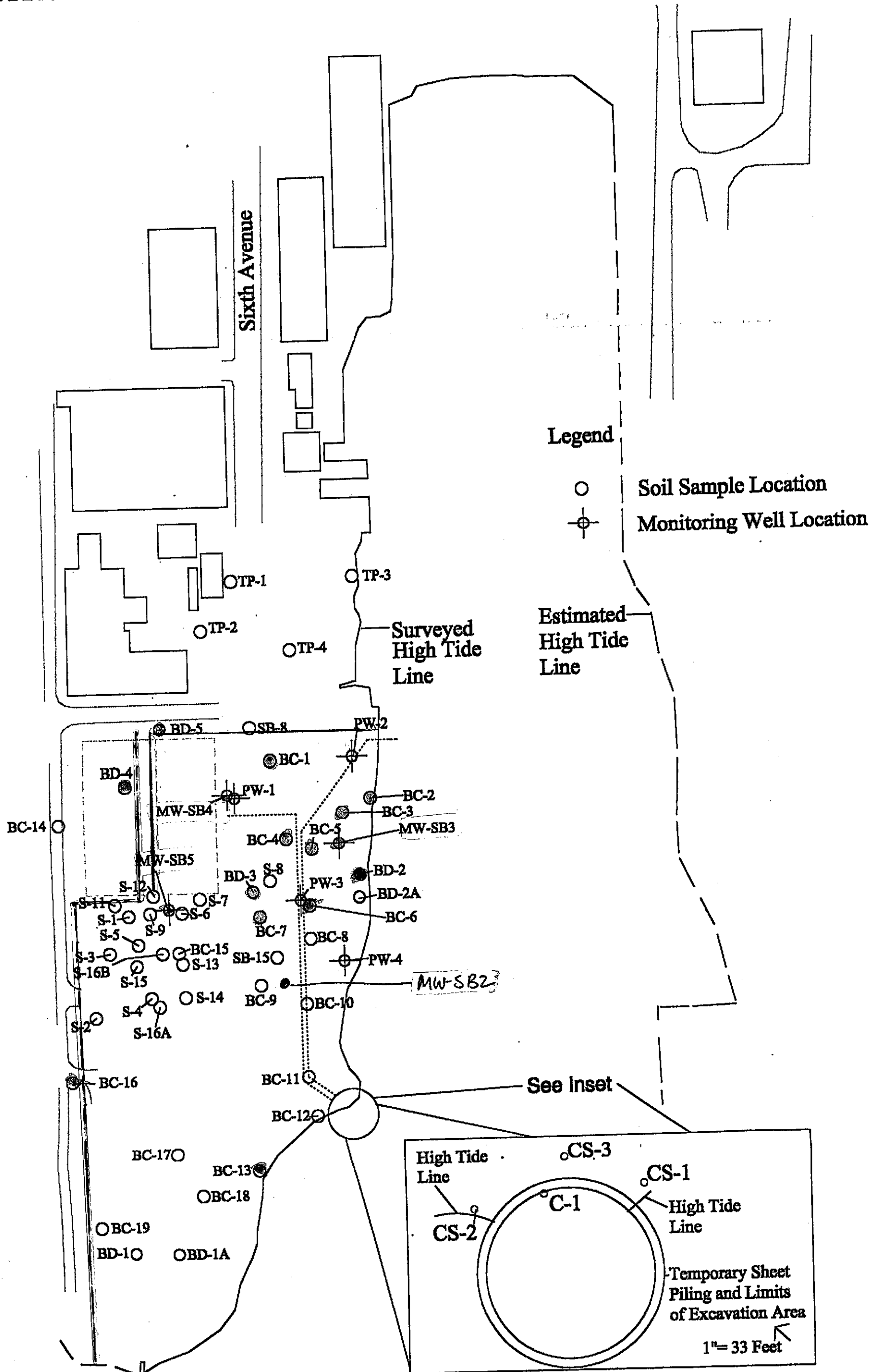
DRAFT

Prepared for the Port of Oakland and the City of Oakland by Roma Design Group in association with Gabriel Roche Inc, Hausrath Economics Group, Hansen/Murakami/Eshima Inc.

May 1997

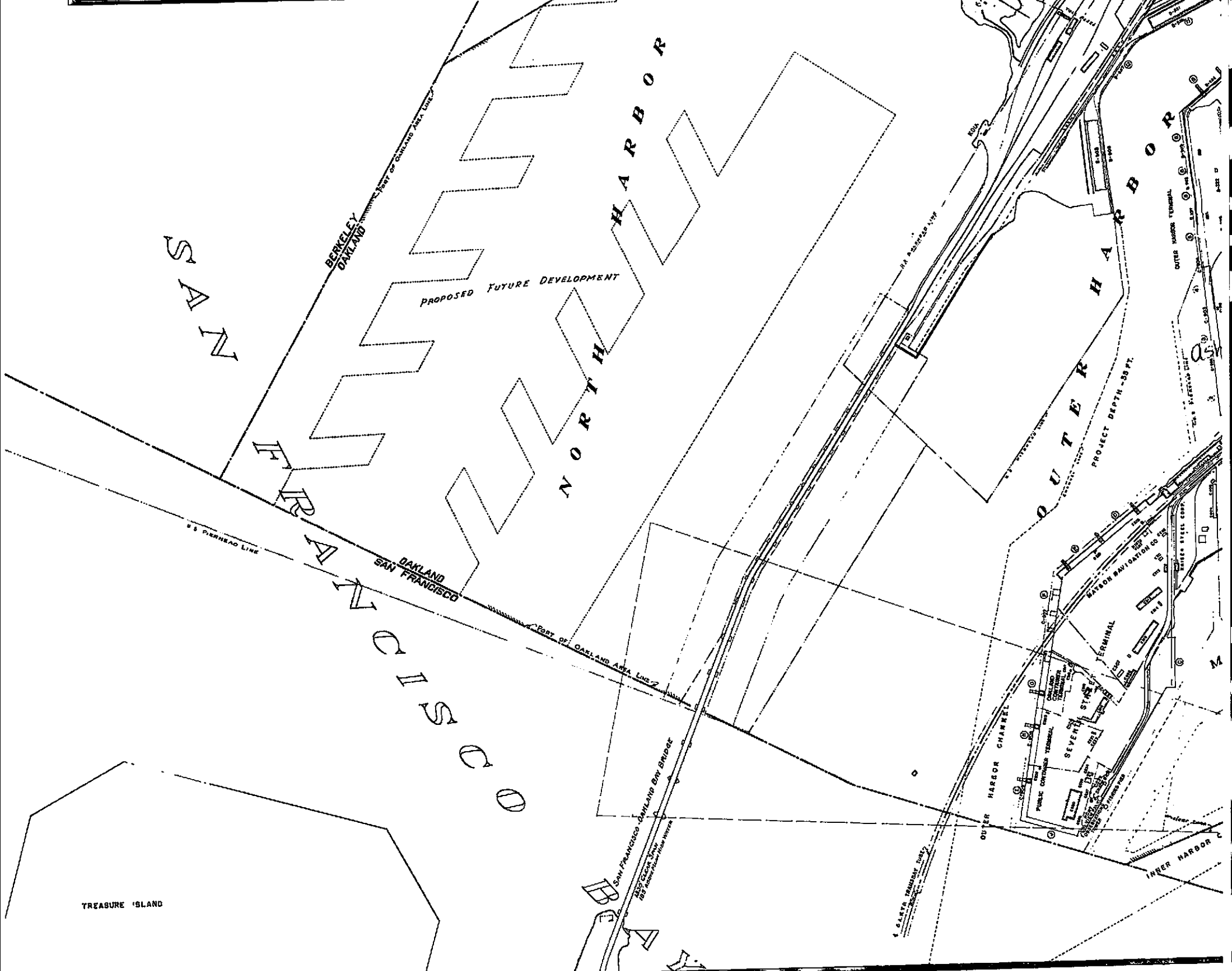
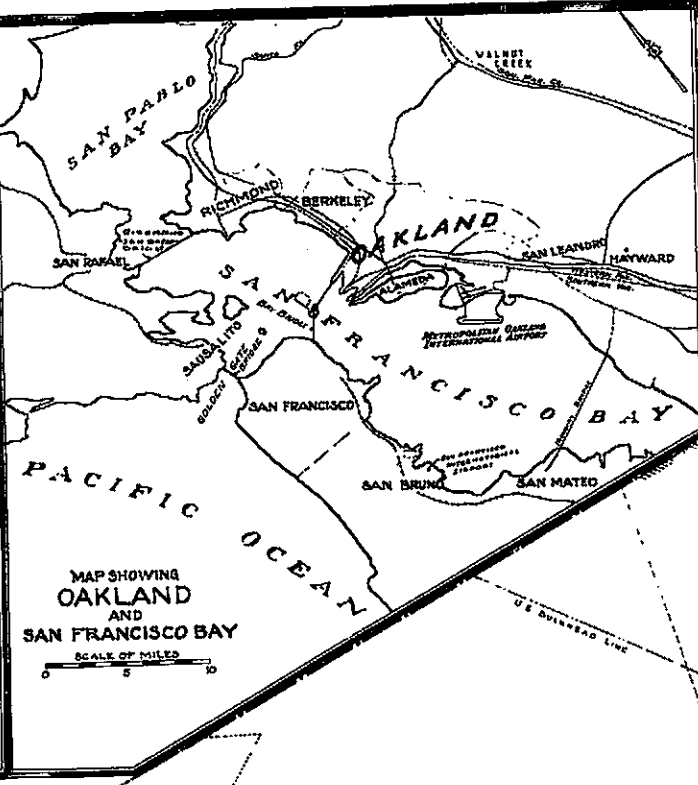
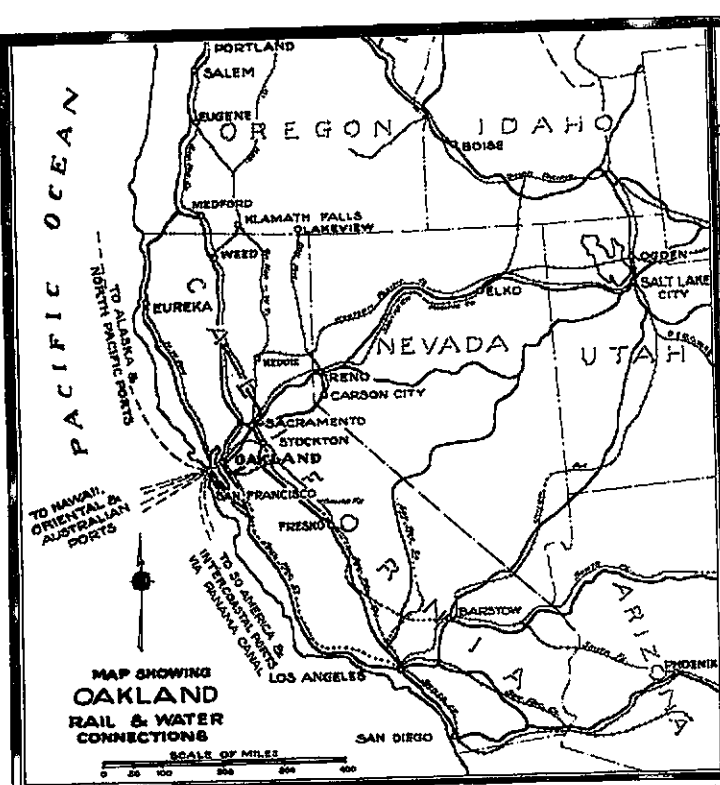
# LOCATION OF SOIL SAMPLE ANALYZED FOR PETROLEUM

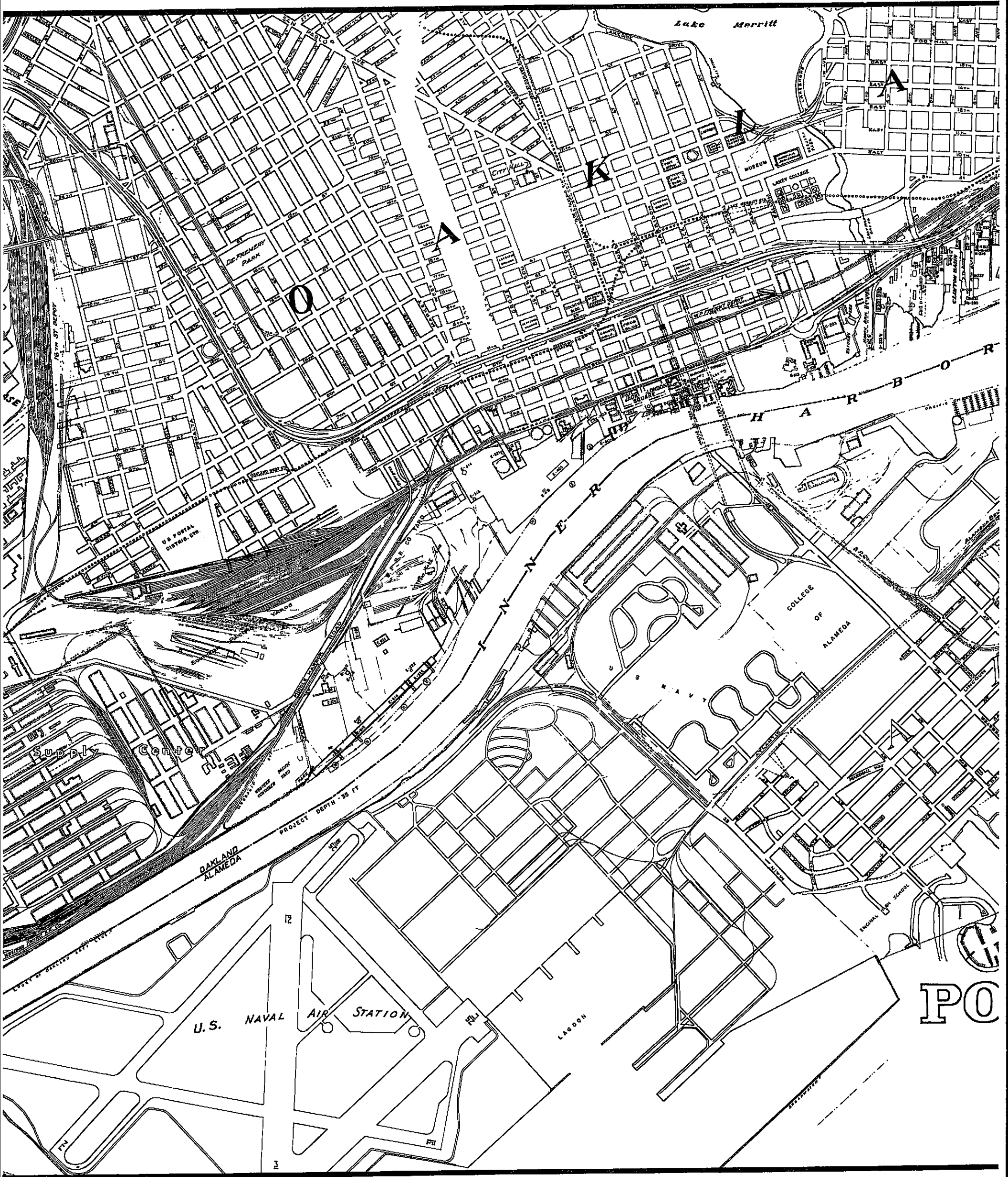
Figure 13



Seabreeze Yacht Center Study Area  
Oakland, California





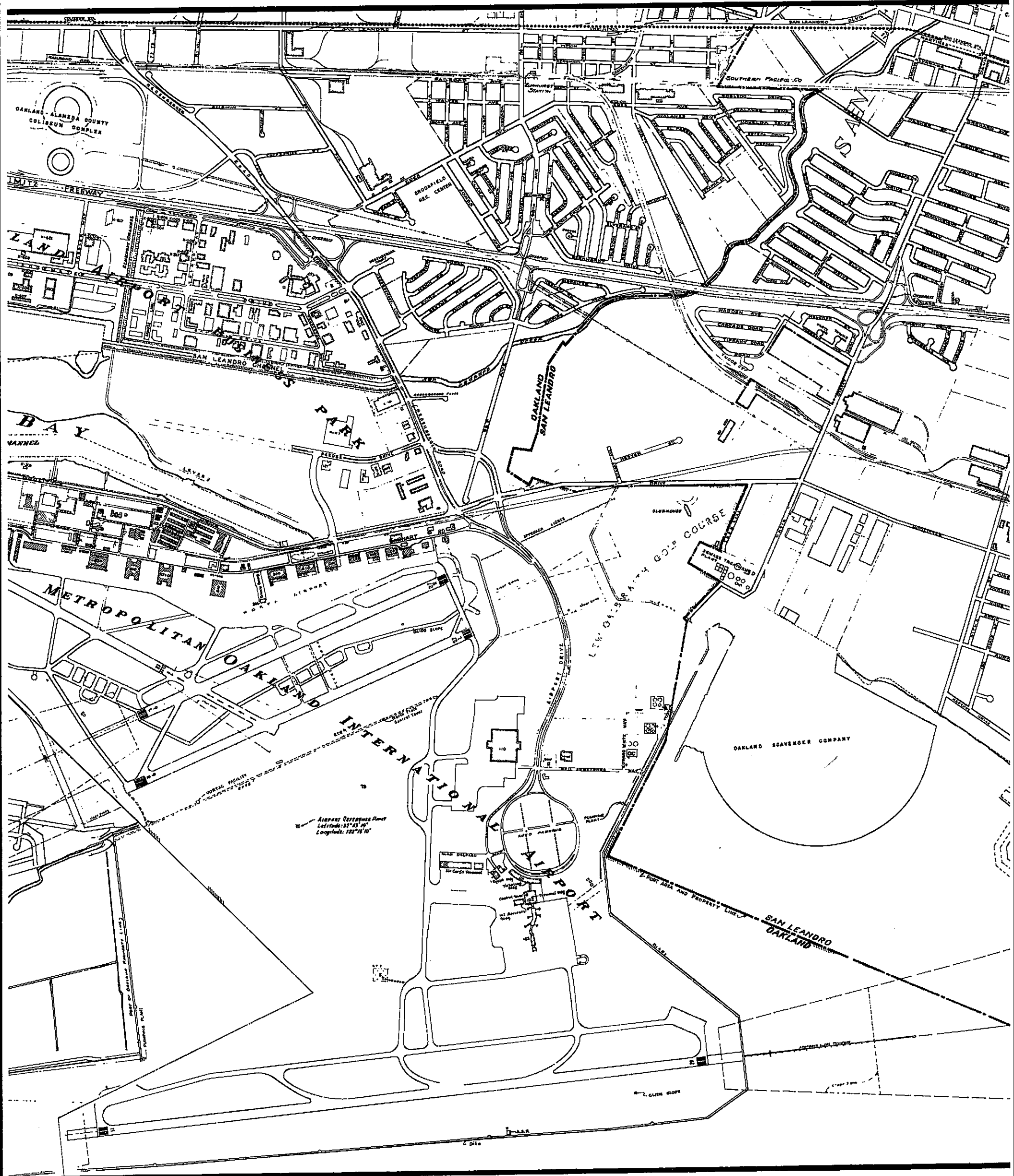




MAP OF  
**OAKLAND**  
LAND, CALIFORNIA

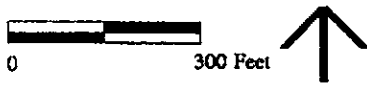
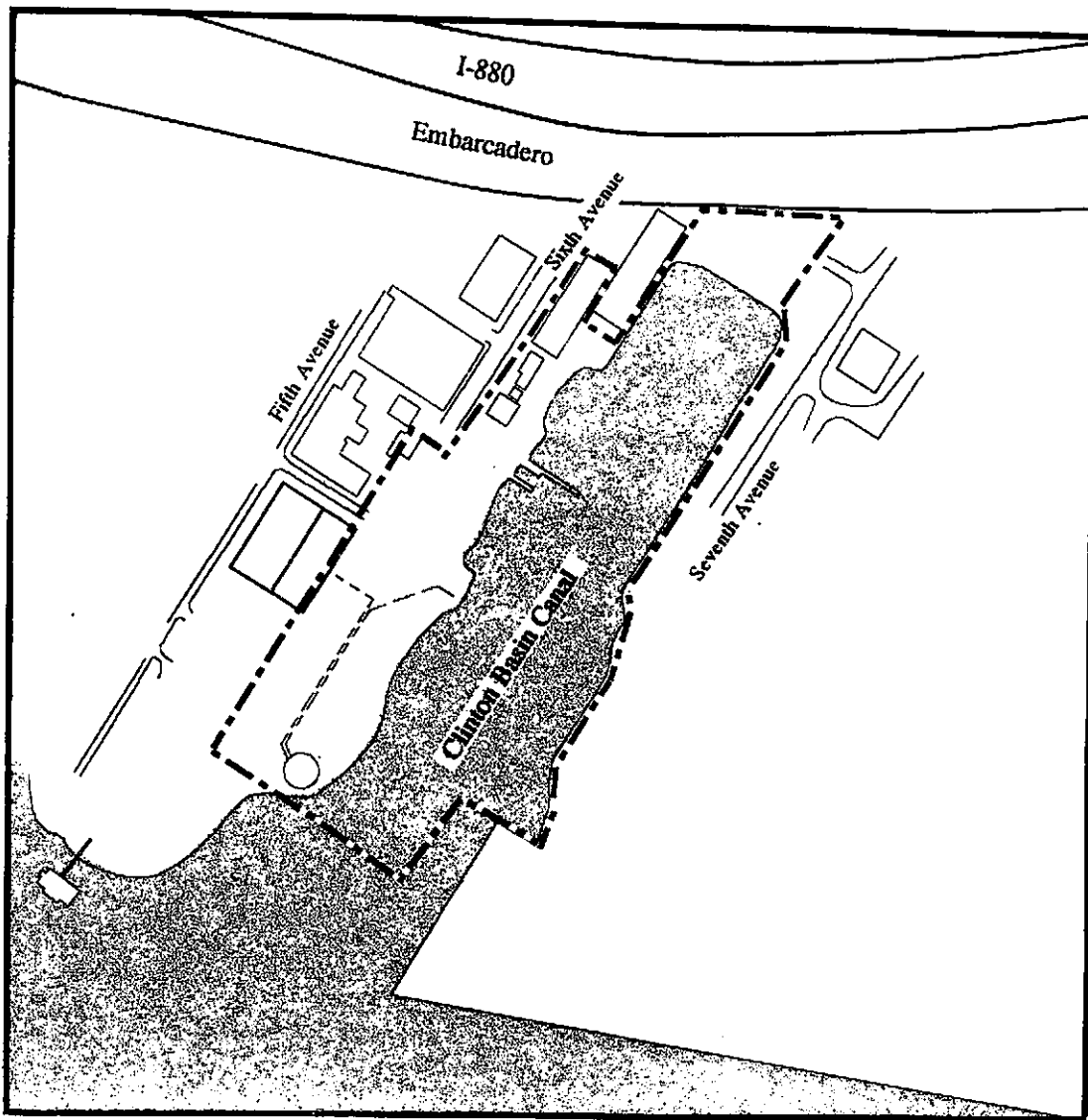


2000 3000 4000 5000 6000  
SCALE IN FEET



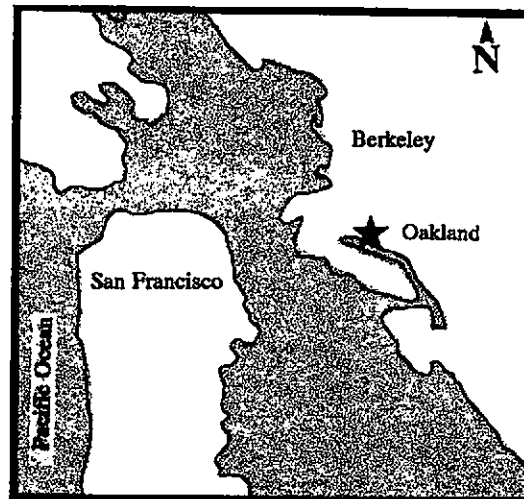
# PROJECT LOCATION

## Figure 1



### Legend

--- Project Site Boundary



Clinton Basin  
Oakland, California

**BASELINE**

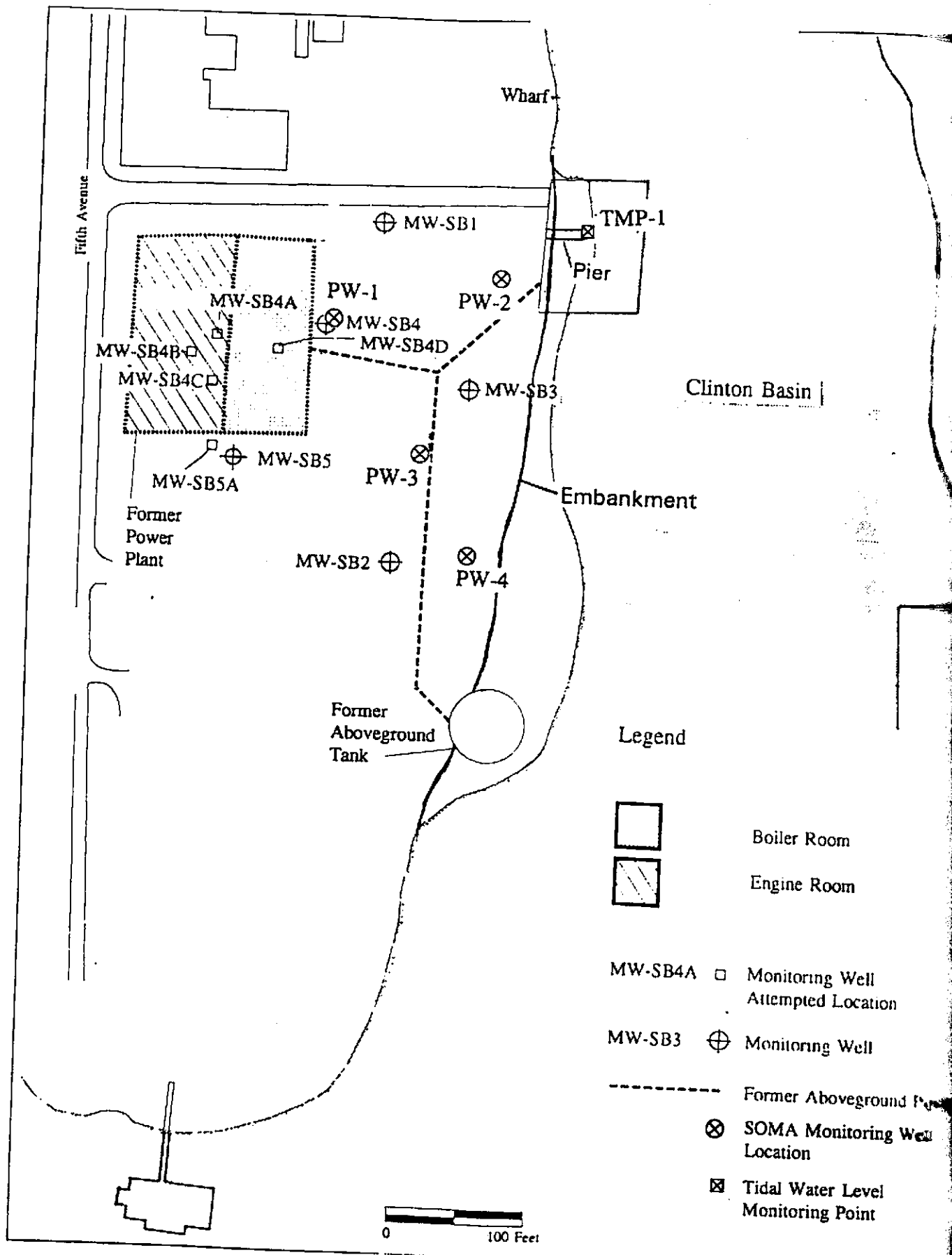


Figure 1: Monitoring Well Locations



SUMMARY OF ANALYTICAL RESULTS, GROUNDWATER  
Seabreeze Yacht Center, Oakland, California  
February/March 1995  
( $\mu\text{g/L}$ , except where noted) *ppb*

Sample ID	Date	Kerosene <sup>1</sup>	Diesel <sup>1</sup>	Bunker C <sup>1</sup>	Motor Oil <sup>1</sup>	Turbidity <sup>2</sup> (NTU)	RCRA Metals <sup>3</sup>							
							As	Ba	Cd	Cr	Pb	Hg	Se	Ag
MW-SB1	3/3/95	--	1,800 <sup>4</sup>	4,800 <sup>4</sup>	1,400 <sup>4</sup>	23	--	--	--	--	--	--	--	--
MW-SB2	3/6/95	6 <sup>6</sup>	16,000 <sup>4</sup> /18,000 <sup>4,5</sup>	28,000 <sup>4</sup> /33,000 <sup>4,5</sup>	4,900 <sup>4</sup> / $<25,000$ <sup>4,5</sup>	130/100	--	--	--	--	--	--	--	--
MW-SB3	3/6/95	6	4,500 <sup>4</sup>	5,800 <sup>4</sup>	1,500 <sup>4</sup>	76	--	--	--	--	--	--	--	--
MW-SB4	3/3/95	--	1,400 <sup>4</sup>	3,000	660 <sup>4</sup>	130	--	--	--	--	--	--	--	--
MW-SB5	3/6/95	6 <sup>6</sup>	15,000 <sup>4</sup> /15,000 <sup>4,5</sup>	34,000 <sup>4</sup> /31,000 <sup>4,5</sup>	8,100 <sup>4</sup> /6,900 <sup>4,5</sup>	180/190	--	--	--	--	--	--	--	--
PW-1	2/2/95 <sup>7</sup>	--	--	--	--	--	19	18	$<5.0$	$<10$	6.0	$<0.20$	$<5.0$	$<10$
	3/3/95	--	1,700 <sup>4</sup>	3,900 <sup>4</sup>	1,000 <sup>4</sup>	60	--	--	--	--	--	--	--	--
PW-2	2/2/95 <sup>8</sup>	--	--	--	--	--	14	100	$<5.0$	$<10$	4.3	$<0.20$	11	$<10$
	3/6/95	6	1,700 <sup>4</sup>	4,400 <sup>4</sup>	1,100 <sup>4</sup>	84	--	--	--	--	--	--	--	--
PW-3	2/2/95 <sup>8</sup>	--	--	--	--	--	15	84	$<5.0$	$<10$	$<3.0$	$<0.20$	$<5.0$	$<10$
	3/6/95	6	5,800 <sup>4</sup>	9,400 <sup>4</sup>	1,200 <sup>4</sup>	6.8	--	--	--	--	--	--	--	--
PW-4	2/2/95 <sup>8</sup>	--	--	--	--	--	14	81	$<5.0$	$<10$	$<3.0$	$<0.20$	$<5.0$	$<10$
	3/3/95	--	610 <sup>4</sup>	1,600	$<1,300$	4.4	--	--	--	--	--	--	--	--

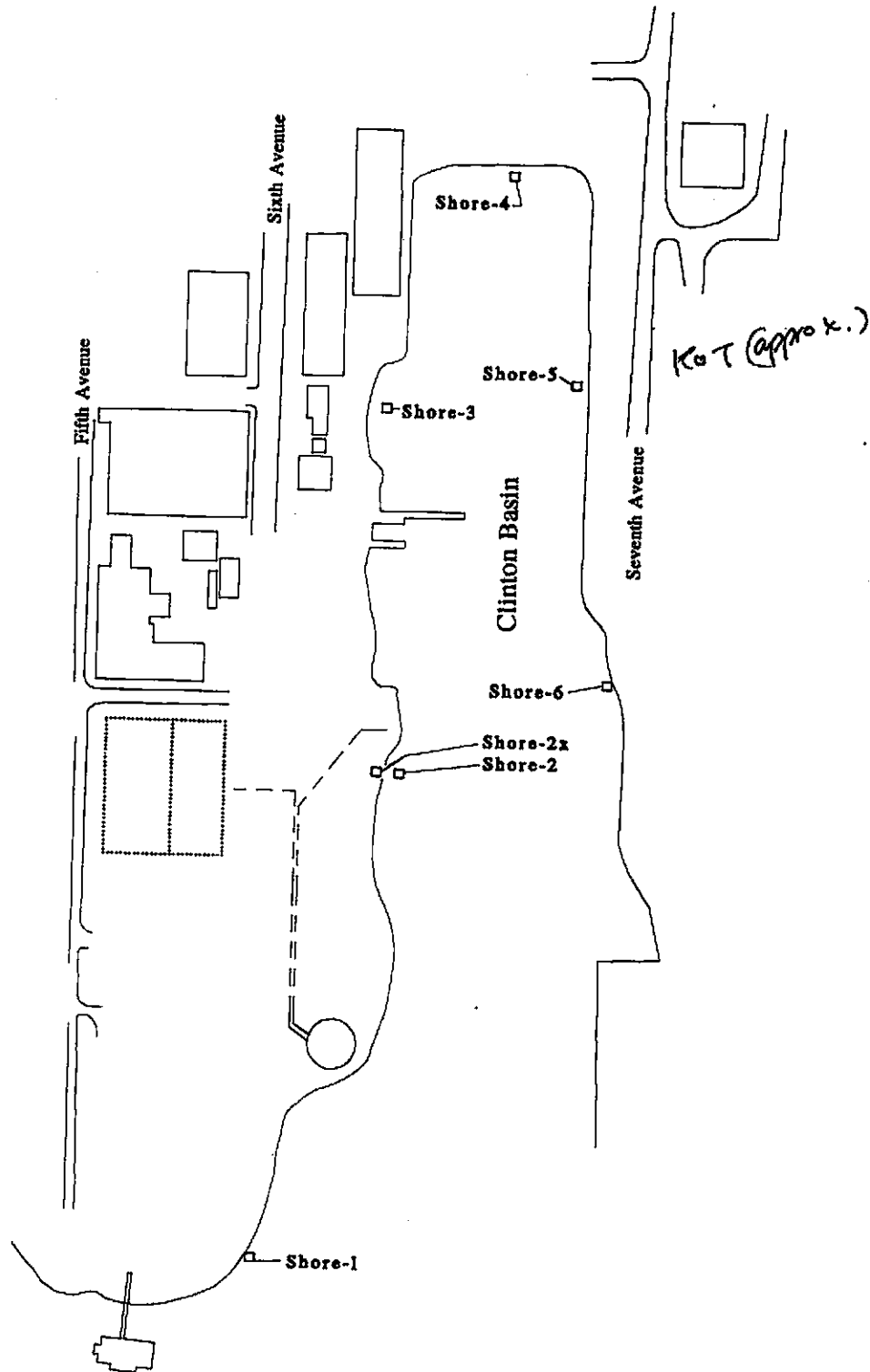
Notes: -- = No analysis requested  
 xx/xx = Duplicate sample  
 <x.x = Compound not indentified above laboratory reporting limit  
 NTU = Nephelometric turbidity units  
 Refer to Figure 3 for well locations.  
 Laboratory reports included in Appendices F and G.

- <sup>1</sup> California DOHS Method: LUFT Manual October 1989.
- <sup>2</sup> EPA Method 180.1.
- <sup>3</sup> EPA Methods 6010A and 7470.
- <sup>4</sup> Sample chromatogram does not resemble hydrocarbon standard.
- <sup>5</sup> Duplicate sample centrifuged prior to TEH analysis.
- <sup>6</sup> Not reported due to an overlap of hydrocarbon ranges.
- <sup>7</sup> Sample also analyzed for semi-volatile organic compounds (EPA Method 8270). All semi-volatiles were reported below laboratory reporting limits except for 38  $\mu\text{g/L}$  bis(2-ethylhexyl)phthal
- <sup>8</sup> Qualitative fingerprint characterization of petroleum hydrocarbons by capillary gas chromatography using flame ionization detector and electron capture detector also performed.

S9171TBLAPR-4/5/95

# SHORELINE SAMPLE LOCATIONS

Figure 2



## Legend

- Shoreline Sampling Location

**Clinton Basin**  
**Oakland, California**



**BASELINE**

TABLE 3

**SUMMARY OF TOTAL PETROLEUM HYDROCARBONS BY  
IR ANALYSIS, SHORELINE SOIL SAMPLING  
Clinton Basin Shoreline, Oakland, 19 January 1995  
( $\mu\text{g/g}$ )**

Sample ID	Depth (feet)	Total Petroleum Hydrocarbons by IR
Shore-1-Surface	0	<10
Shore-1-3'	3	15
Shore-2-Surface	0	44
Shore-2-3' <sup>1</sup>	3	<10
Shore-2d-Surface <sup>2</sup>	0	59
Shore-2d-3'	3	360
Shore-2x <sup>3</sup>	0.5-1.0	--
Shore-3-Surface	0	160
Shore-3-2.5	2.5	18
Shore-4-Surface	0	370
Shore-4-3' <sup>4</sup>	3	24
Shore-5-Surface	0	28
Shore-5-3.0	3	140
Shore-6-Surface	0	58
Shore-6-2.0	2	33

**Notes:** Analyzed by EPA Method 418.1  
 <xx = Petroleum hydrocarbons were not identified above the reporting limit  
 -- = Not analyzed  
 IR = infrared  
 Samples were collected by BASELINE; samples were analyzed by Friedman & Bruya, Inc.  
 Laboratory reports included in Appendix A.  
 Sample locations indicated on Figure 2.

<sup>1</sup> Sample also analyzed for semivolatile organic compounds (EPA Method 8270). All semivolatiles were reported below laboratory reporting limits except for 53  $\mu\text{g/kg}$  di-n-butylphthalate, 200  $\mu\text{g/kg}$  bis(2-ethylhexyl)phthalate, 37  $\mu\text{g/kg}$  benzo(b)fluoranthene, and 38  $\mu\text{g/kg}$  benzo(k)fluoranthene.

<sup>2</sup> Sample also analyzed for semivolatile organic compounds (EPA Method 8270) and polychlorinated biphenyls (PCBs) as Arochlor 1260 (Modified EPA Methods 3550/8080). All semivolatiles were reported below laboratory limits except for 1,000  $\mu\text{g/kg}$  di-n-butylphthalate, 39  $\mu\text{g/kg}$  pyrene, 67  $\mu\text{g/kg}$  butylbenzylphthalate, 20,000  $\mu\text{g/kg}$  bis(2-ethylhexyl)phthalate, and 160  $\mu\text{g/kg}$  di-n-octylphthalate.

PCBs were quantified at 2.9  $\mu\text{g/g}$ . PCBs were quantified at 2.6  $\mu\text{g/g}$  in a duplicate sample.

<sup>3</sup> Sample also analyzed for PCBs (EPA Method 3550/8080). All PCBs were reported below laboratory reporting limits except for Arochlor 1260, which was quantified at 4,700  $\mu\text{g/kg}$ .

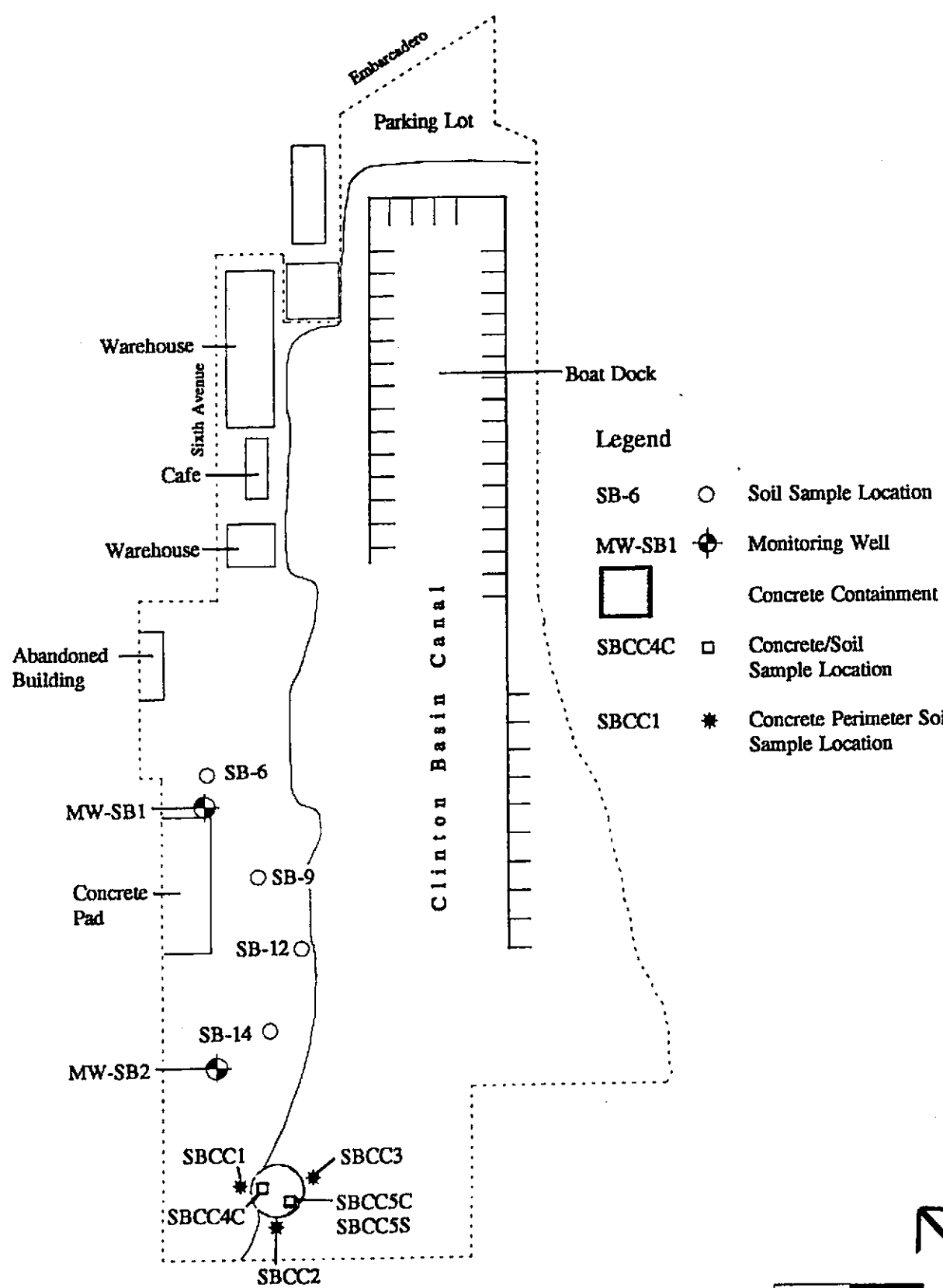
<sup>4</sup> Sample also analyzed for semivolatile organic compounds (EPA Method 8270). All semivolatiles were reported below laboratory reporting limits except for 30  $\mu\text{g/kg}$  acenaphthylene, 25  $\mu\text{g/kg}$  acenaphthene, 61  $\mu\text{g/kg}$  fluorene, 670  $\mu\text{g/kg}$  phenanthrene, 250  $\mu\text{g/kg}$  anthracene, 110  $\mu\text{g/kg}$  di-n-butylphthalate, 1,000  $\mu\text{g/kg}$  fluoranthene, 990  $\mu\text{g/kg}$  pyrene, 140  $\mu\text{g/kg}$  butylbenzylphthalate, 360  $\mu\text{g/kg}$  benzo(a)anthracene, 690  $\mu\text{g/kg}$  chrysene, 170  $\mu\text{g/kg}$  bis(2-ethylhexyl)phthalate, 470  $\mu\text{g/kg}$  benzo(a)pyrene, 630  $\mu\text{g/kg}$  benzo(b)fluoranthene, 370  $\mu\text{g/kg}$  benzo(k)fluoranthene, 270  $\mu\text{g/kg}$  indeno(1,2,3-cd)pyrene, 160  $\mu\text{g/kg}$  dibenz(a,h)anthracene, and 310  $\mu\text{g/kg}$  benzo(g,h,i)perylene.

# SAMPLING LOCATIONS

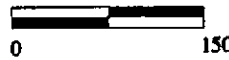
Figure

APPENDIX A

FIGURES



**Seabreeze Yacht Center, Inc.**  
**280 Sixth Avenue**  
**Oakland, California**



Sample Location	Sample Date	Depth (feet)	Oil and Grease	TPH				Lead				Total Copper <sup>6</sup>		
				Gasoline <sup>1</sup>	Diesel <sup>2</sup>	Kerosene	Motor Oil <sup>3</sup>	Benzene	Toluene	Ethylbenzene <sup>4</sup>	Xylenes <sup>4</sup>		Total <sup>5</sup>	Soluble (mg/L)
SB-CC1	1/10/94	0.5-1.0	2,100	<1.0	<50	<50	3,600	<0.005	<0.005	<0.005	<0.005	68	5.6	170
		1.0-1.5	3,700		9,400		45,000					21 <sup>8</sup>	2.6/9.5 <sup>9</sup>	
SB-CC2	1/10/94	0.5-1.0	41,000	<1.0	24,000	<sup>7</sup>	100,000	<0.005	<0.005	<0.005	<0.005	1,000	3.5	28
		1.0-1.5	150		86		220					1,800/44 <sup>9</sup>	<0.5/1.2 <sup>9</sup>	
SB-CC3	1/10/94	0.5-1.0	3,300	<1.0	2,200	<sup>7</sup>	12,000	<0.005	<0.005	<0.005	<0.005	120	<0.5	82
		1.0-1.5	680		1,100		3,500					1,300/9,100 <sup>9</sup>	<0.5/15.0 <sup>9</sup>	

Notes: **x.x** = Bold numbers indicate compounds identified above detection limits.  
 <**x.x** = Compound not identified above detection limit.  
 TPH = Total Petroleum Hydrocarbons.  
 Sample locations are shown on Figure 1.  
 Lead TTLC = 1,000 mg/kg.  
 Lead STLC = 5 mg/L.  
 Copper TTLC = 2,500 mg/kg.  
 Copper STLC = 25 mg/L.

<sup>1</sup> Test Method = 5030/M8015.

<sup>2</sup> Test Method = 3550/M8015.

<sup>3</sup> Results reported as motor oil although the hydrocarbon patterns do not exactly match the motor oil range; see Appendix \_\_\_\_.

<sup>4</sup> Test Method = 8020.

<sup>5</sup> Test Method = 7420.

<sup>6</sup> Test Method = 7210.

<sup>7</sup> Kerosene range not reported by laboratory due to overlap of hydrocarbon ranges.

<sup>8</sup> Sample reanalyzed, but sample lost during digestion.

<sup>9</sup> Sample was reanalyzed on 2/10/94.

# SAMPLING LOCATIONS FOR METALS AND BUNKER C

Figure 21

TABLES

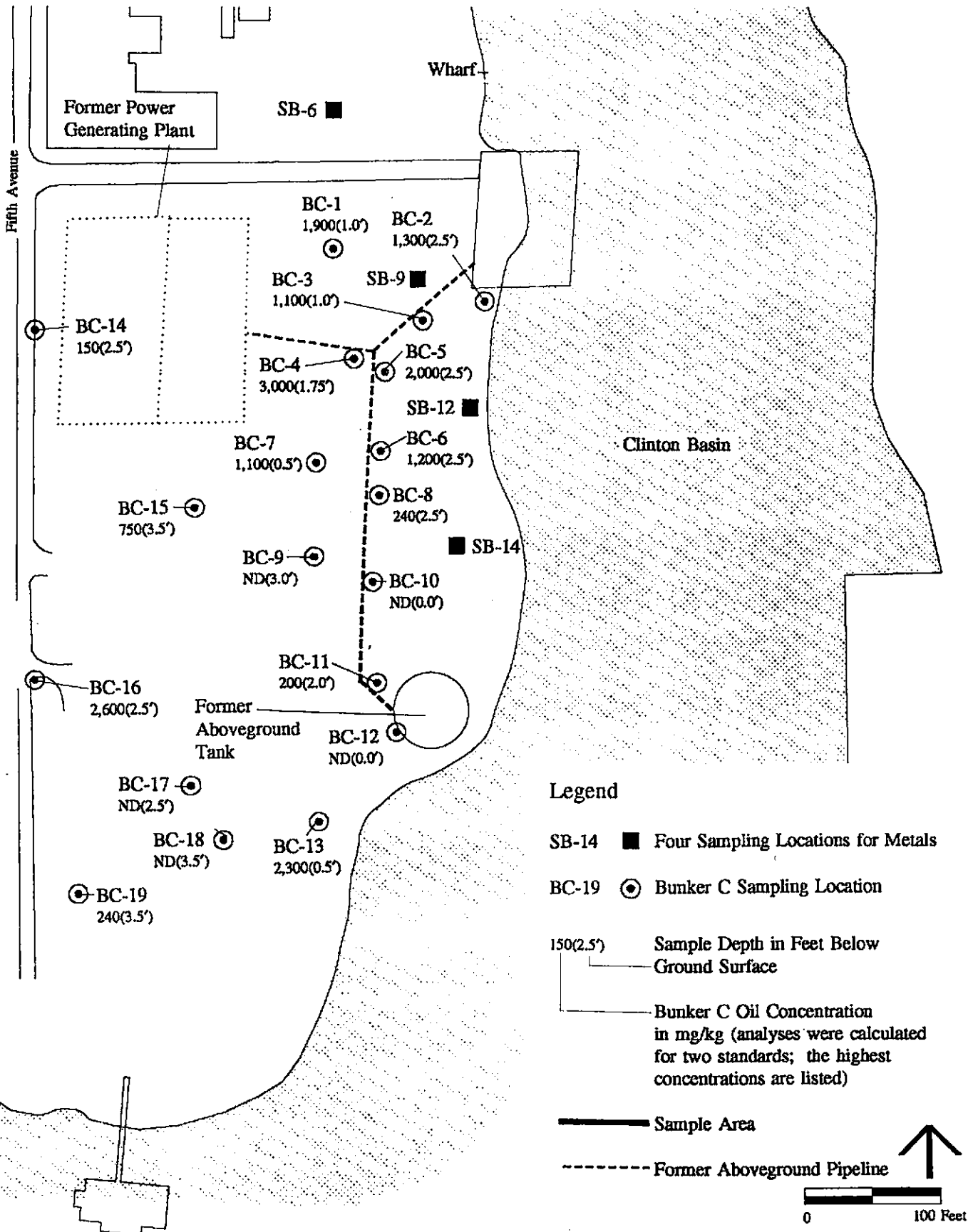


TABLE 8  
 ANALYTICAL RESULTS, SOILS LANDWARD  
 OF CONCRETE CONTAINMENT  
 Seabreeze Yacht Center, Oakland, California

(mg/kg)

Sample Location	Sample Date	Depth (feet)	Bunker C
BC-1	8/15/94	1.0-1.5	<b>1,900/1,900</b>
BC-2	8/15/94	2.5-3.0	<b>1,300/1,300</b>
BC-3	8/15/94	1.0-1.5	<b>1,100/1,100</b>
BC-4	8/15/94	1.75-2.25	<b>3,000/3,000</b>
BC-5	8/15/94	2.5-3.0	<b>2,000/2,000</b>
BC-6	8/15/94	2.5-3.0	<b>1,200/1,200</b>
BC-7	8/15/94	0.5-1.0	<b>1,100/1,000</b>
BC-8	8/15/94	2.5-3.0	<b>240/240</b>
BC-9	8/15/94	3.0-3.5	<25/<25
BC-10	8/15/94	0-0.5	<25/<25
BC-11	8/15/94	2.0-2.5	<b>200/200</b>
BC-12	8/15/94	0-0.5	<25/<25
BC-13	8/15/94	0.5-1.0	<b>2,300/2,000</b>
BC-14	8/15/94	2.5-3.0	<b>150/130</b>
BC-15	8/15/94	3.5-4.0	<b>670/750</b>
BC-16	8/15/94	2.5-3.0	<b>2,600/2,600</b>
BC-17	8/15/94	2.5-3.0	<25/<25
BC-18	8/15/94	3.5-4.0	<25/<25
BC-19	8/15/94	3.5-4.0	<b>240/240</b>

Notes: x.x = Bold numbers indicate compounds identified above detection limits.

<x.x = Compounds not identified above detection limits.

-- = Not analyzed.

Sample locations are shown on Figure 15.

Laboratory reports and chromatograms are included in Appendix L.

yy/xx = "yy" concentrations calculated based on a Bunker C standard obtained from the liquids below the concrete containment.

Concentrations "xx" were calculated based on a laboratory Bunker C standard.

Samples analyzed by EPA Method 8015M.

APPENDIX A

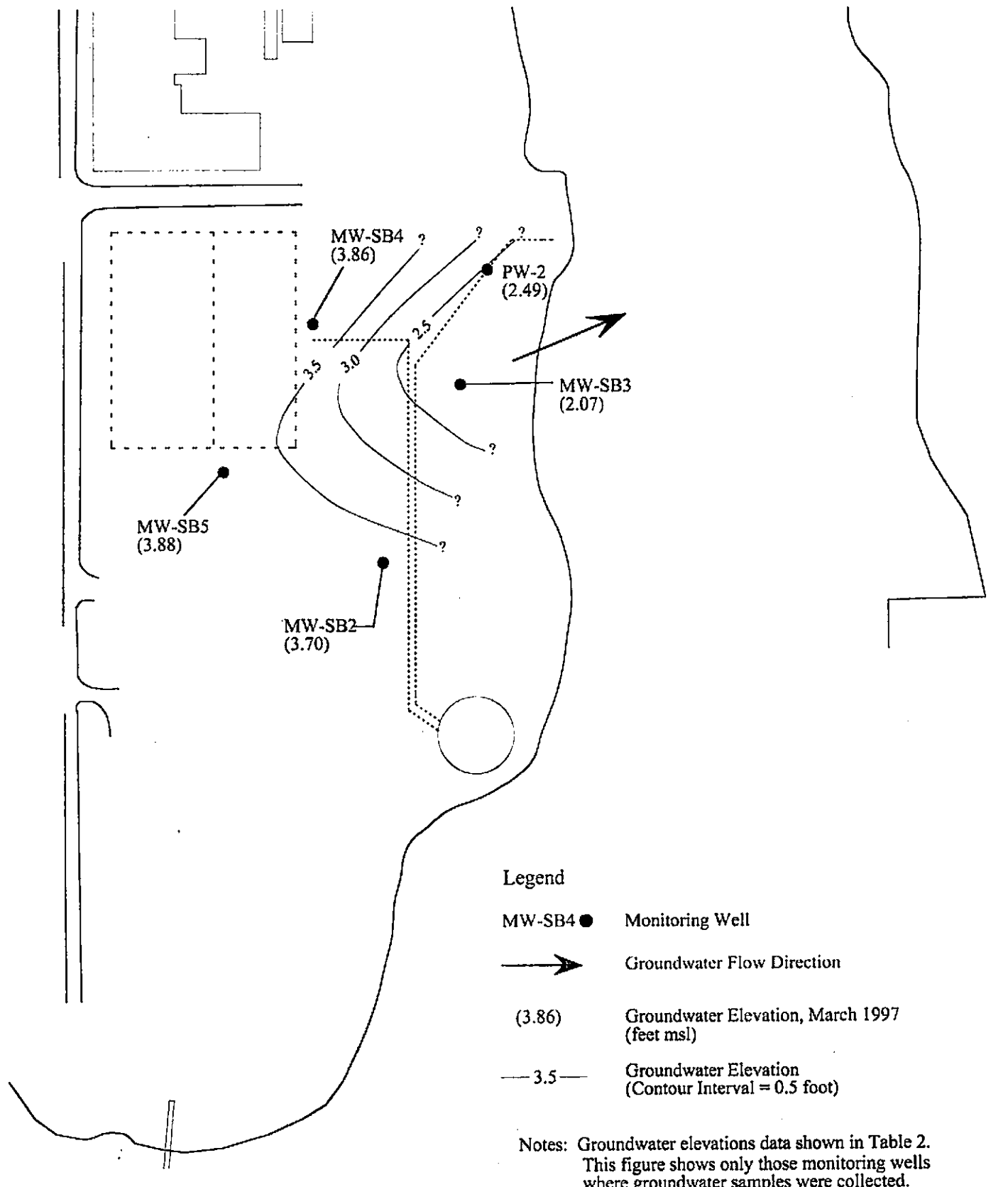
APPENDIX B

APPENDIX C

APPENDIX D

# MONITORING WELL LOCATIONS AND GROUNDWATER CONTOUR, MARCH 1997

Figure 2



**Seabreeze Yacht Center**  
Sixth Avenue  
Oakland, California



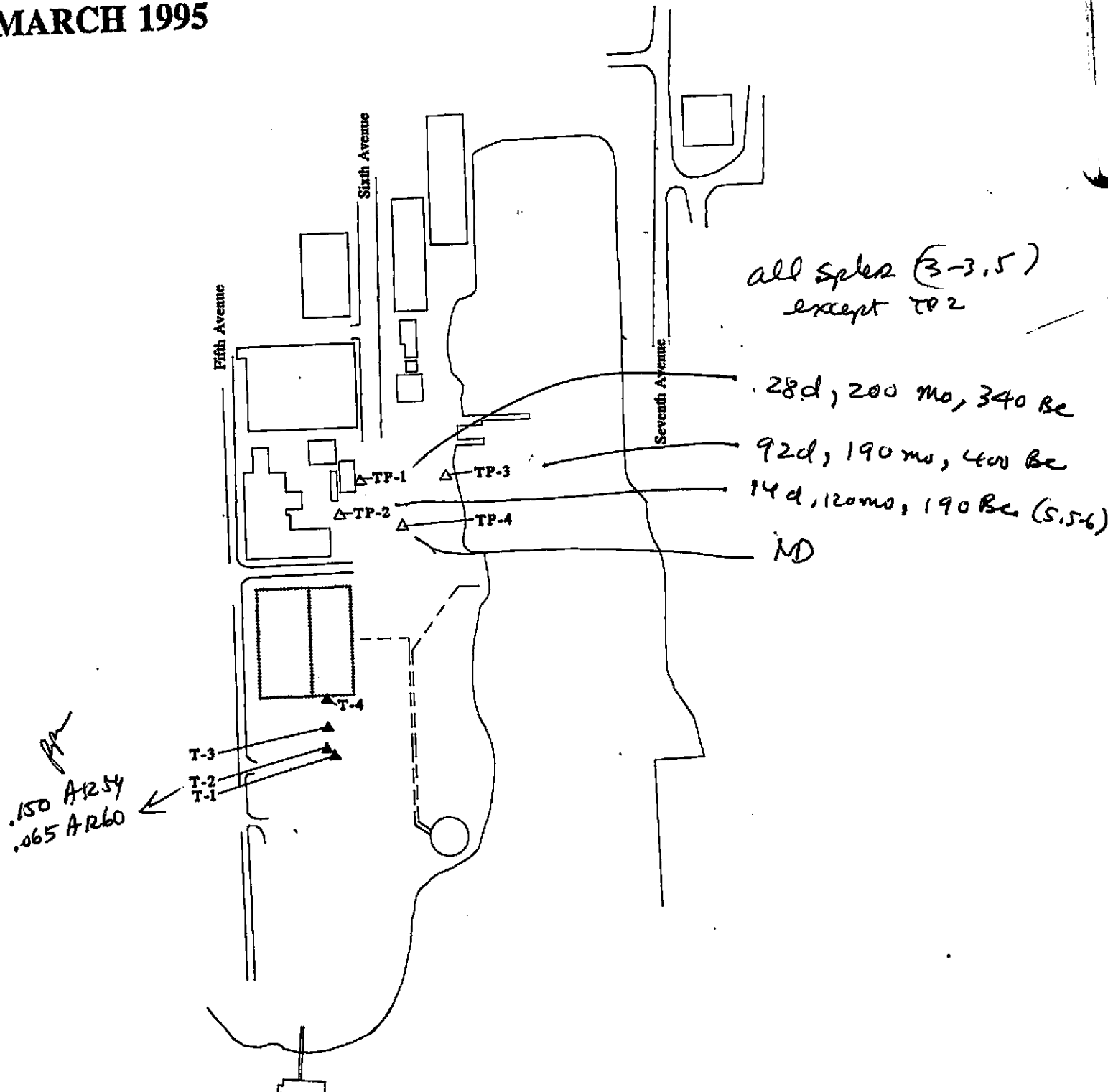
TABLE 1  
ANALYTICAL RESULTS  
Seabreeze Yacht Center, Oakland, California  
(mg/L)

Sample ID	Sample Date	Metals <sup>1</sup>		Total Extractable Hydrocarbons <sup>2</sup>		
		Lead	Copper	Diesel	Bunker C	Motor Oil
PW-2	2/2/95	0.0043	--	--	--	--
	3/6/95	--	--	1.7 <sup>3,4</sup>	4.4 <sup>3,4</sup>	1.1 <sup>3,4</sup>
	7/1/96	<0.003	<0.01	<0.049	<0.3	--
	9/16/96	<0.003 <sup>10</sup>	<0.005 <sup>11</sup>	<0.05	<0.5	<0.25
	12/11/96	0.0101 <sup>10</sup>	<0.003 <sup>11</sup>	0.11 <sup>13</sup>	<0.5	<0.25
	03/14/97	0.00401 <sup>10</sup>	<0.003 <sup>11</sup>	<0.05	<0.5	<0.25
MW-SB2	4/9/91	<0.06 <sup>7</sup>	<0.02 <sup>8</sup>	--	--	--
	4/19/91	<0.07	0.0481	--	--	--
	1/10/94	<0.10 <sup>7</sup>	<0.02 <sup>8</sup>	--	--	--
	12/26/94	<0.0048 <sup>8</sup>	0.014 <sup>8</sup>	--	--	--
	3/6/95	--	--	16.0 <sup>3,4</sup>	28.0 <sup>3,4</sup>	4.9 <sup>3,4</sup>
	7/1/96	<0.003	0.055	<0.05	<0.3	--
	9/16/96 <sup>9</sup>	<0.003 <sup>10</sup>	<0.005 <sup>11</sup>	<0.05	<0.5	<0.25
	12/11/96	0.00855 <sup>10</sup>	0.00354 <sup>11</sup>	0.16 <sup>13</sup>	<0.5	<0.25
3/14/97	0.00314 <sup>10</sup>	<0.003 <sup>11</sup>	0.061	<0.5	<0.25	
MW-SB2A	3/6/95	--	--	18.0 <sup>3,4,5</sup>	33.0 <sup>3,4,5</sup>	<25.0 <sup>3,4,5</sup>
	7/1/96	<0.003	0.065	0.17 <sup>6</sup>	<0.3 <sup>4</sup>	--
	9/16/96	<0.003 <sup>10</sup>	<0.005 <sup>11</sup>	0.17	<0.5 <sup>4</sup>	<0.25
MW-SB3	3/6/95	--	--	4.5 <sup>3,4</sup>	5.8 <sup>3,4</sup>	1.5 <sup>3,4</sup>
	7/1/96	0.0036	<0.01	<0.049	<0.3	--
	9/16/96	<0.003 <sup>10</sup>	<0.005 <sup>11</sup>	<0.05 <sup>3</sup>	<0.5	0.28 <sup>3</sup>
	12/11/96	<0.003 <sup>10</sup>	<0.003 <sup>11</sup>	0.19 <sup>13</sup>	<0.5	<0.25
	3/14/97	<0.003 <sup>10</sup>	0.00529 <sup>11</sup>	0.085 <sup>14</sup>	<0.5	<0.25
MW-SB4	3/3/95	--	--	4.5 <sup>3</sup>	3.0 <sup>3</sup>	0.66 <sup>3</sup>
	7/1/96	0.014	0.013	<0.049	<0.3	--
	9/16/96	<0.003 <sup>10</sup>	<0.005 <sup>11</sup>	<0.05	<0.5	<0.25
	12/11/96	0.00465 <sup>10</sup>	0.00674 <sup>11</sup>	0.12 <sup>13</sup>	<0.5	<0.25
	3/14/97	0.00519 <sup>10</sup>	<0.003 <sup>11</sup>	<0.05	<0.5	<0.25
MW-SB5	3/6/95	--	--	15.0 <sup>3,4</sup>	34.0 <sup>3,4</sup>	8.1 <sup>3,4</sup>
	7/1/96	0.0031	0.012	<0.049	<0.3	--
	9/16/96	<0.003 <sup>10</sup>	<0.005 <sup>11</sup>	0.14 <sup>3,12</sup>	<0.5	<0.25
	12/11/96	0.00344 <sup>10</sup>	<0.003 <sup>11</sup>	0.16 <sup>13</sup>	<0.5	<0.25
	3/14/97	<0.003 <sup>10</sup>	0.00318 <sup>11</sup>	0.29	<0.5	<0.25
MW-SB5A	3/6/95	--	--	15.0 <sup>3,4,5</sup>	31.0 <sup>3,4,5</sup>	6.9 <sup>3,4,5</sup>
	12/11/96	<0.003 <sup>10</sup>	<0.003 <sup>11</sup>	0.081 <sup>13</sup>	<0.5	<0.25
	3/14/97	<0.003 <sup>10</sup>	<0.003 <sup>11</sup>	0.22	<0.5	<0.25

# SOIL SAMPLE LOCATIONS - MARCH 1995

Figure 5

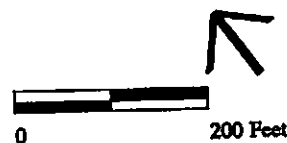
APPENDIX A



Legend

- △ Soil Sampling Location, Petroleum Hydrocarbons
- ▲ Soil Sampling Location, PCBs

Clinton Basin  
Oakland, California

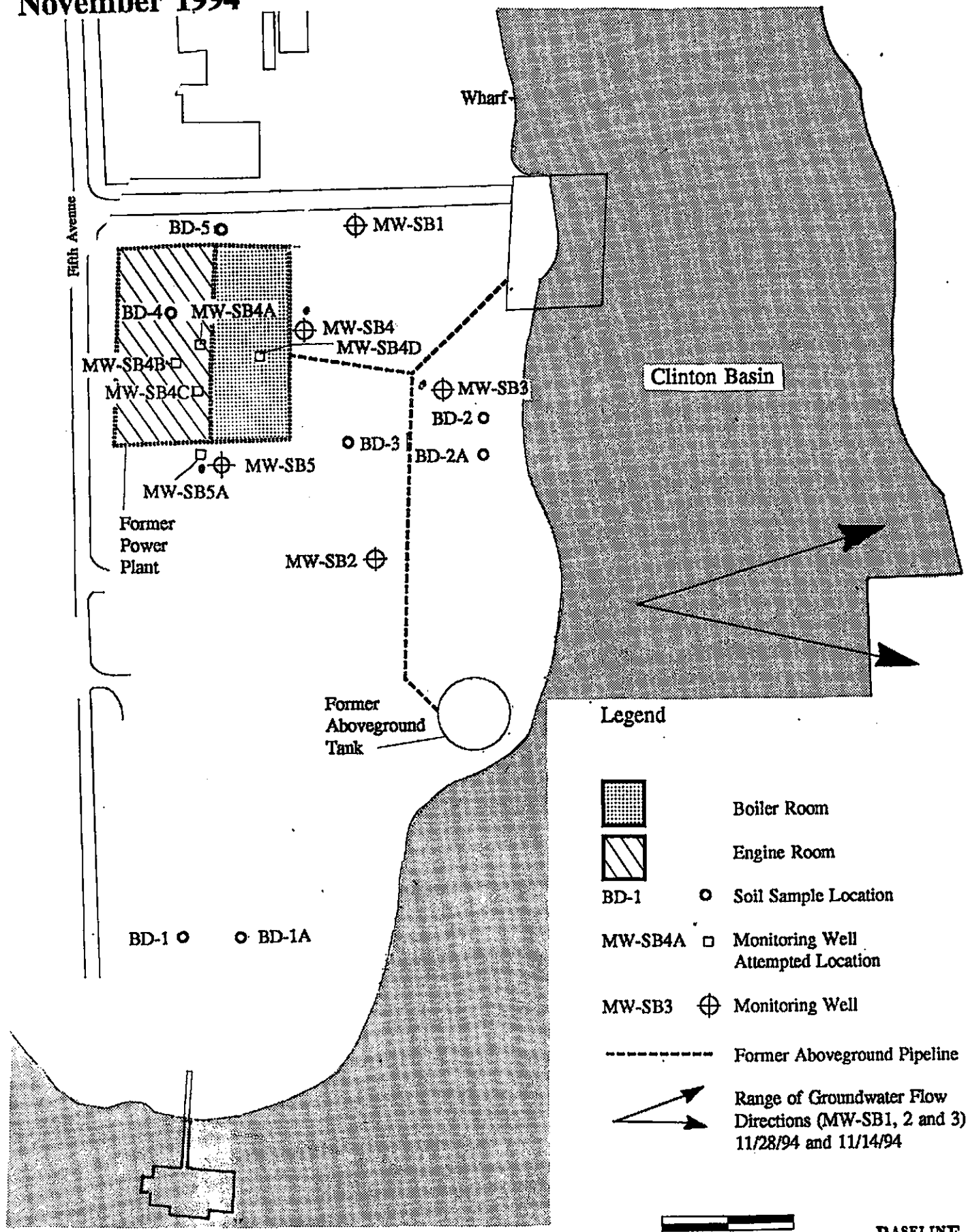


BASELINE



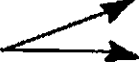
# SAMPLING LOCATIONS

# Figure 1

## November 1994



### Legend

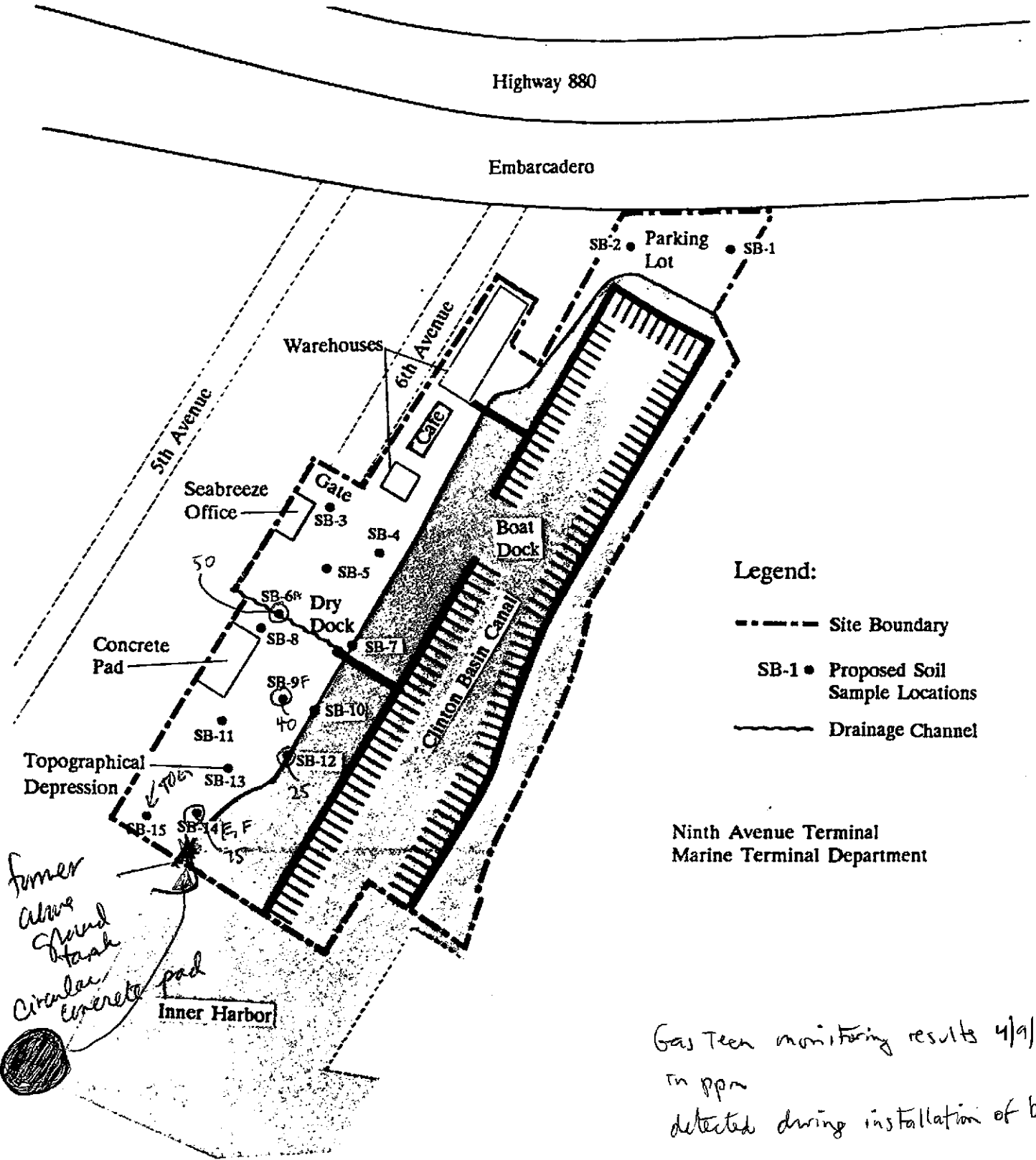
-  Boiler Room
-  Engine Room
- BD-1 ○ Soil Sample Location
- MW-SB4A □ Monitoring Well Attempted Location
- MW-SB3 ⊕ Monitoring Well
- Former Aboveground Pipeline
-  Range of Groundwater Flow Directions (MW-SB1, 2 and 3) 11/28/94 and 11/14/94

0 100 Feet

**BASELINE**

# PROPOSED SOIL SAMPLING LOCATIONS

Figure 3



### Legend:

- Site Boundary
- SB-1 Proposed Soil Sample Locations
- Drainage Channel

Ninth Avenue Terminal  
Marine Terminal Department

Gas Teen monitoring results 4/9/91  
in ppm  
detected during installation of borings

**Seabreeze Yacht Center  
Oakland, California**



TABLE 7

## SUMMARY OF ANALYTICAL RESULTS, GROUNDWATER

Seabreeze Yacht Center, Oakland, California

February/March 1995

(µg/L, except where noted) *ppb*

Sample ID	Date	Kerosene <sup>1</sup>	Diesel <sup>1</sup>	Bunker C <sup>1</sup>	Motor Oil <sup>1</sup>	Turbidity <sup>2</sup> (NTU)	RCRA Metals <sup>3</sup>							
							As	Ba	Cd	Cr	Pb	Hg	Se	Ag
MW-SB1	3/3/95	--	1,800 <sup>4</sup>	4,800 <sup>4</sup>	1,400 <sup>4</sup>	23	--	--	--	--	--	--	--	--
MW-SB2	3/6/95	6 <sup>6</sup>	16,000 <sup>4</sup> /18,000 <sup>4,5</sup>	28,000 <sup>4</sup> /33,000 <sup>4,5</sup>	4,900 <sup>4</sup> / $<25,000^{4,5}$	130/100	--	--	--	--	--	--	--	--
MW-SB3	3/6/95	6	4,500 <sup>4</sup>	5,800 <sup>4</sup>	1,500 <sup>4</sup>	76	--	--	--	--	--	--	--	--
MW-SB4	3/3/95	--	1,400 <sup>4</sup>	3,000	660 <sup>4</sup>	130	--	--	--	--	--	--	--	--
MW-SB5	3/6/95	6 <sup>6</sup>	15,000 <sup>4</sup> /15,000 <sup>4,5</sup>	34,000 <sup>4</sup> /31,000 <sup>4,5</sup>	8,100 <sup>4</sup> /6,900 <sup>4,5</sup>	180/190	--	--	--	--	--	--	--	--
PW-1	2/2/95 <sup>7</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/3/95	--	1,700 <sup>4</sup>	3,900 <sup>4</sup>	1,000 <sup>4</sup>	60	19	18	<5.0	<10	6.0	<0.20	<5.0	<10
PW-2	2/2/95 <sup>8</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/6/95	6	1,700 <sup>4</sup>	4,400 <sup>4</sup>	1,100 <sup>4</sup>	84	14	100	<5.0	<10	4.3	<0.20	11	<10
PW-3	2/2/95 <sup>8</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/6/95	6	5,800 <sup>4</sup>	9,400 <sup>4</sup>	1,200 <sup>4</sup>	6.8	15	84	<5.0	<10	<3.0	<0.20	<5.0	<10
PW-4	2/2/95 <sup>8</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/3/95	--	610 <sup>4</sup>	1,600	<1,300	4.4	14	81	<5.0	<10	<3.0	<0.20	<5.0	<10

Notes: -- = No analysis requested  
 xx/xx = Duplicate sample  
 <x.x = Compound not identified above laboratory reporting limit  
 NTU = Nephelometric turbidity units  
 Refer to Figure 3 for well locations.  
 Laboratory reports included in Appendices F and G.

California DOHS Method: LUFT Manual October 1989.

EPA Method 180.1.

EPA Methods 6010A and 7470.

Sample chromatogram does not resemble hydrocarbon standard.

Duplicate sample centrifuged prior to TEH analysis.

Not reported due to an overlap of hydrocarbon ranges.

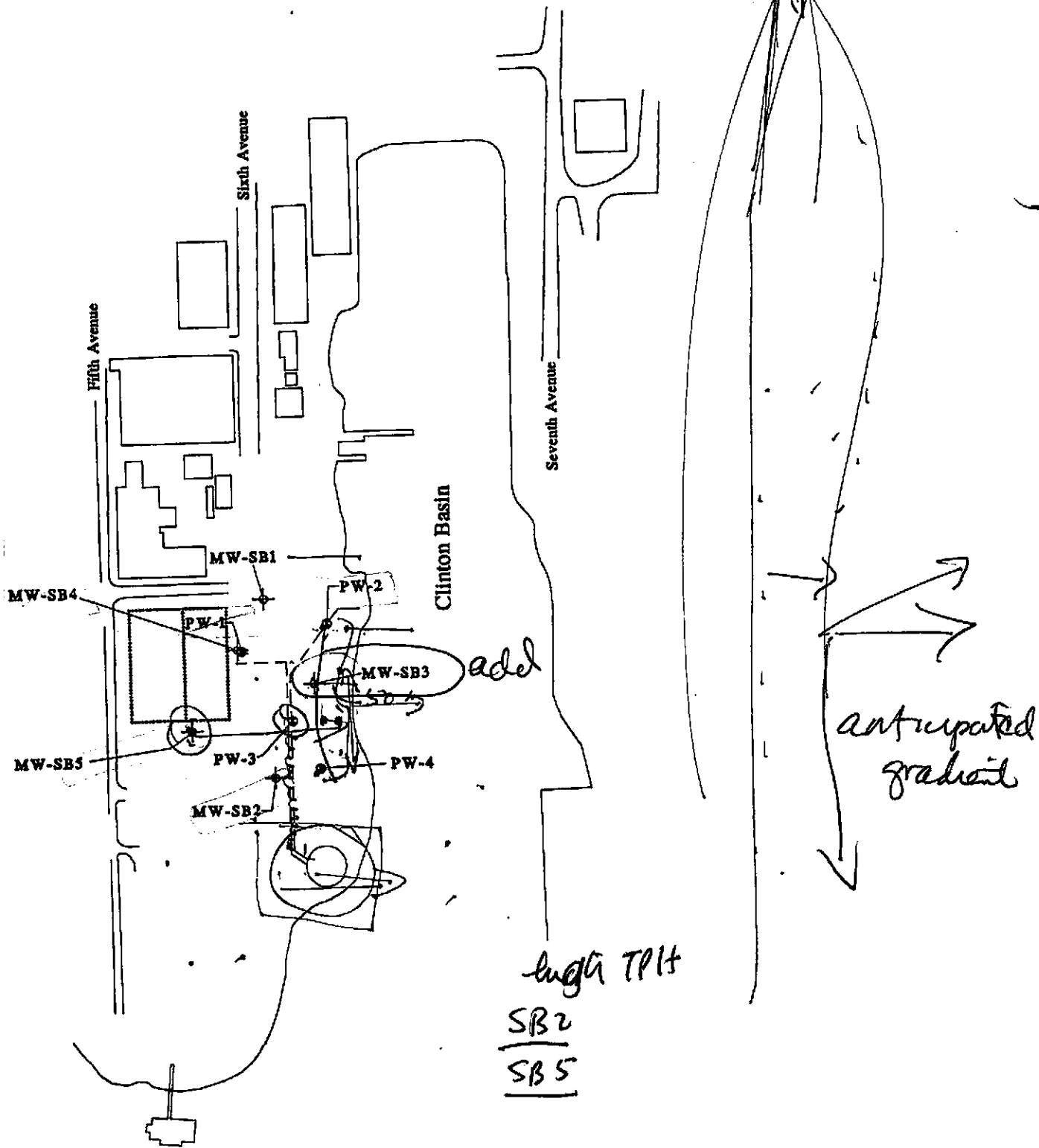
Sample also analyzed for semi-volatile organic compounds (EPA Method 8270). All semi-volatiles were reported below laboratory reporting limits except for 38 µg/L bis(2-ethylhexyl)phthalate.

Qualitative fingerprint characterization of petroleum hydrocarbons by capillary gas chromatography using flame ionization detector and electron capture detector also performed.

S9171TBL.APR-4/5/95

# MONITORING WELL LOCATIONS

Figure 3

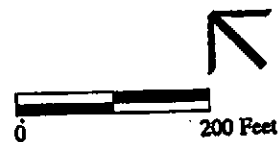


TABLES

## Legend

- MW-SB2  Monitoring Well Location
- PW-1 

Clinton Basin  
Oakland, California



**BASELINE**

# SAMPLING LOCATIONS

## Figure 1

### November 1994

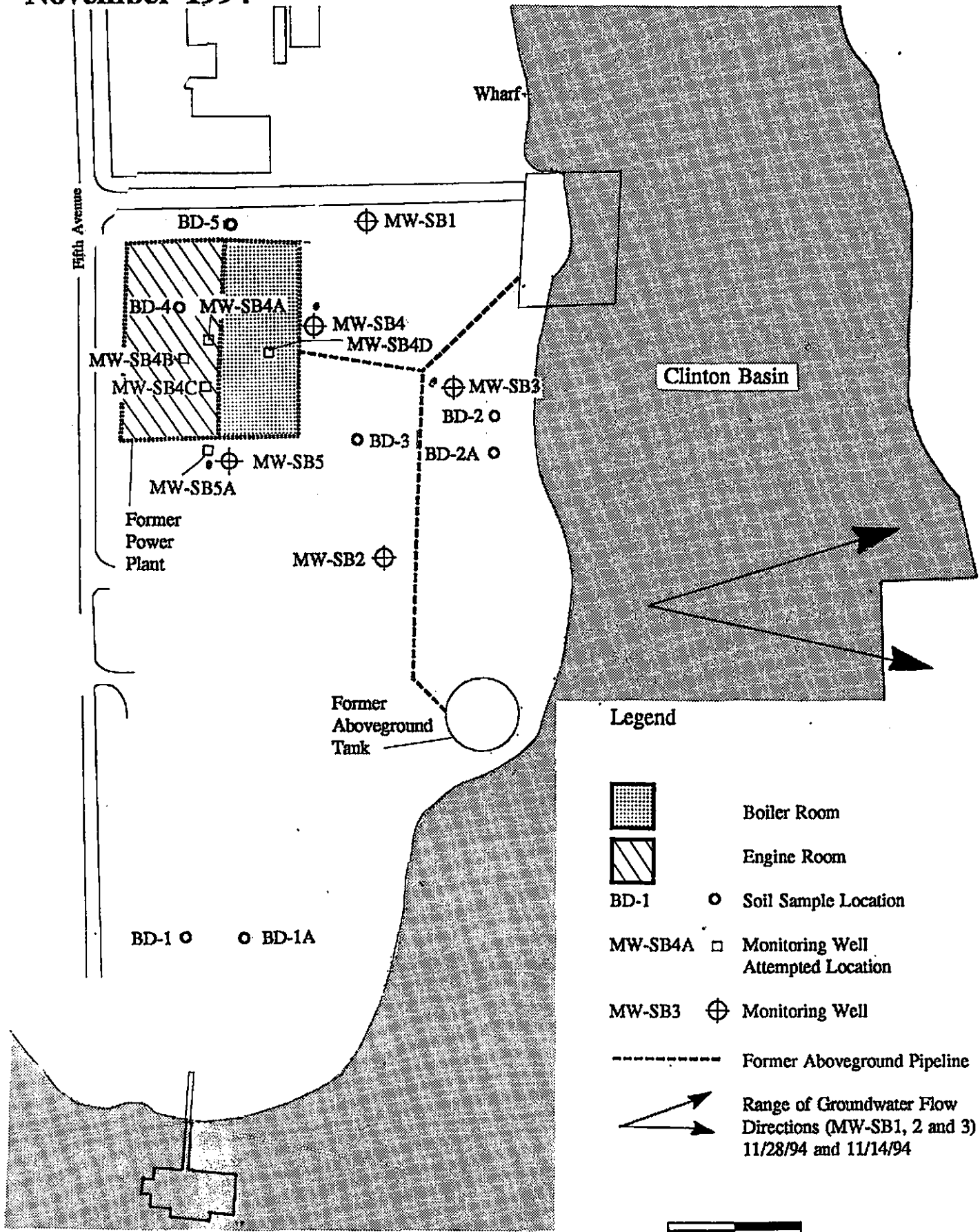


TABLE 3

SUMMARY OF ORGANIC ANALYTICAL RESULTS, SOILS  
Seabreeze Yacht Center, Oakland, California  
November 1994  
(mg/kg)

Location	Depth (feet bgs)	Sample Date	Kerosene	Diesel	Bunker C	
					Lab Standard	Site Standard
BD-1 <sup>1</sup>	2.0-2.5	11/10/94	--	2	210	230
	6.0-6.5	11/10/94	--	6	370	410
BD-1A	2.0-2.5	11/10/94	--	2	280	250
	4.0-4.5	11/10/94	--	1	<30	<30
BD-2	2.0-2.5	11/10/94	--	40	1,600	1,800
	4.0-4.5	11/10/94	--	<20	2,300	2,500
BD-2A	2.0-2.5	11/10/94	--	<1	110	100
	4.5-5.0	11/10/94	--	<20	11,000	12,000
BD-3	2.5-3.0	11/22/94	--	70	1,700	1,500
	5.0-5.5	11/22/94	--	480	1,500	1,800
BD-4 <sup>2</sup>	0.0-0.4	11/10/94	<10	<1	1,600	1,900
BD-5	2.5-3.0	11/22/94	--	350	7,100	7,800
MW-SB3	2.0-2.5	11/10/94	--	66	4,000	4,500
	4.5-5.0	11/10/94	--	11	300	340
MW-SB4	2.0-2.5	11/22/94	--	2	160	140
	5.0-5.5	11/22/94	--	21	410	460
MW-SB4A	5.0-5.5	11/10/94	<sup>3</sup>	11,000	49,000	55,000
MW-SB5	2.0-2.5	11/22/94	--	30	1,200	1,100
	3.0-3.5	11/22/94	--	820	16,000	15,000
MW-SB5-grab <sup>4</sup>	NA	11/22/94	--	8	140	150

Notes: -- = Analysis not requested.  
NA = Not applicable.  
Refer to Table 1 for analytical methods.  
Refer to Figure 1 for sampling locations.

- <sup>1</sup> Samples also analyzed for creosote (EPA Method 8270). Creosote was not identified above laboratory reporting limits (2,000 µg/kg).
- <sup>2</sup> Sample also analyzed for volatile organic compounds (EPA Method 8240). Concentrations of all volatile organic compounds were below laboratory reporting limits.
- <sup>3</sup> Kerosene range not reported due to overlap of hydrocarbon ranges.
- <sup>4</sup> Sample also analyzed for volatile organic compounds (EPA Method 8240). All compounds were below reporting limits, except ethylbenzene (150 µg/kg) and total xylenes (340 µg/kg). This sample was collected from borehole MW-SB5A.



TABLE 5

**SUMMARY OF ANALYTICAL RESULTS, GROUNDWATER**  
**Seabreeze Yacht Center, Oakland, California**  
**November/December 1994**  
**( $\mu\text{g/L}$ )**

Sample ID	Date	Gasoline	Diesel	Bunker C		Total Lead	Total Copper	VOCs	BTXE
				Lab Standard	Site Standard				
MW-SB1	11/28/94	--	1,300	4,800	4,800	<3.0	14	2	--
MW-SB2	11/28/94	--	12,000	30,000	30,000	<3.0	54	3	--
MW-SB3	11/14/94	--	--	--	460	<3.0	10	--	--
	12/07/94	--	1,400/1,100	3,000/2,500	3,000/2,300	--	--	--	<0.5
MW-SB3A <sup>1</sup>	11/14/94	--	--	--	350	<3.0	<10	--	--
MW-SB4	11/28/94	--	1,100	4,300	4,300	93	78	4	--
MW-SB5	11/28/94	--	34,000	74,000	74,000	<3.0	19	5	--

**Notes:** -- = No analysis requested.  
 xx/xx = Duplicate sample.  
 VOCs = Volatile organic compounds.  
 BTXE = Benzene, toluene, xylenes, and ethylbenzene.  
 Refer to Table 1 for analytical methods.  
 Refer to Figure 1 for well locations.

<sup>1</sup> Duplicate sample.

<sup>2</sup> All compounds below reporting levels except acetone (43  $\mu\text{g/L}$ ), a common laboratory contaminant.

<sup>3</sup> All compounds below reporting levels except acetone (33  $\mu\text{g/L}$ ), a common laboratory contaminant. Toluene was detected below the reporting limit (5  $\mu\text{g/L}$ ) at 3  $\mu\text{g/L}$ .

<sup>4</sup> All compounds below reporting levels except acetone (75  $\mu\text{g/L}$ ), a common laboratory contaminant.

<sup>5</sup> All compounds below reporting levels except acetone (130  $\mu\text{g/L}$ ), a common laboratory contaminant. Chloroform was detected below the reporting limit of 5  $\mu\text{g/L}$  (detected concentration not reported).

COMPLETE	PCode*	INSP	StID	SITE NAME	ADDRESS	CITY	ZIP
-0-	-0-	SOS	3719	Shell Service Station	6039 College Ave	Oakland	94618
-0-	-0-	ML	4021	City of Oakland Fire Sta #19	5776 Miles Ave	Oakland	94618
-0-	2B4	ML	3069	SAAB Saver	2601 35th Ave	Oakland	94619
-0-	-0-	SH	515	Exxon Gas & Auto Service	3055 35th Ave	Oakland	94619
-0-	2B3	SH	3878	BP Oil Facility #11132	3201 35th Ave	Oakland	94619
-0-	-0-	SH	518	Unocal SS #6129	3420 35th Ave	Oakland	94619
-0-	-0-	SH	519	Exxon # 7-0234	3450 35th Ave	Oakland	94619
-0-	2A2	ML	891	Floyd's Appliance Service	3775 Brookdale Ave	Oakland	94619
03/03/94	1C3	CL	3666	Merritt College	12500 Campus Dr	Oakland	94619
-0-	2A2	ML	1038	High St. ARCO	2951 High St	Oakland	94619
-0-	2B4	SH	1075	A&P Service Ctr, BP Oil #11124	3315 High St	Oakland	94619
-0-	2A2	ML	1042	Chevron	3530 MacArthur Blvd	Oakland	94619
-0-	2A2	ML	1289	Scooter Wilson	3600 MacArthur Blvd	Oakland	94619
-0-	3A3	ML	3758	Kragen Auto Supply	4200 MacArthur Blvd	Oakland	94619
-0-	3A2	ML	3769	Shell	4255 MacArthur Blvd	Oakland	94619
-0-	-0-	ML	1185	Amir Chevron	4300 MacArthur Blvd	Oakland	94619
-0-	2A4	ML	3221	Mills College	5000 MacArthur Blvd	Oakland	94619
-0-	-0-	ML	3669	Golden Gate Academy	3800 Mountain Blvd	Oakland	94619
-0-	-0-	SH	1111	Unocal Service Sta #5781	3535 Pierson St	Oakland	94619
-0-	1B4	ML	4145	Redwood Regional Park	7867 Redwood Ave	Oakland	94619
-0-	-0-	ML	1188	Skyline Chevron	11880 Skyline Blvd	Oakland	94619
-0-	-0-	BC	2162	All Metal Fabrication	5725 E 14th St	Oakland	94621
-0-	2A4	BC	5020	Acts Full Gospel Church	6118 E 14th St	Oakland	94621
-0-	2B3	TP	1068	Exxon # 7-0236	6630 E 14th St	Oakland	94621
-0-	-0-	BC	1070	Former Shell Station	7915 E 14th St	Oakland	94621
-0-	-0-	BC	4284	Former Texaco	8124 E 14th St	Oakland	94621
-0-	1C3	BC	4477	East Oakland Youth Dev Center	8200 E 14th St	Oakland	94621
-0-	-0-	BC	1302	Eddie Mae Jones	8332 E 14th St	Oakland	94621
02/15/95	1c3	CL	525	Armor Equipment Sales	1137 57th Ave	Oakland	94621
-0-	3A3	BC	3576	Pacific Bell	1189 58th Ave	Oakland	94621
-0-	-0-	BC	3693	Unocal Station #3135	845 66th Ave	Oakland	94621
-0-	1B3	BC	565	Pacific Electric Motor	1009 66th Ave	Oakland	94621
-0-	-0-	BC	3685	Firehouse #29	1016 66th Ave	Oakland	94621
-0-	-0-	BC	3819	Silva Association Roofing	814 69th Ave	Oakland	94621
-0-	-0-	BC	3622	County Recycling Services, Inc	800 77th Ave	Oakland	94621
-0-	-0-	BC	3657	R&A Trucking	865 77th Ave	Oakland	94621
-0-	-0-	BC	3803	Chip & Steak	958 77th Ave	Oakland	94621

\*Priority Codes: 1xx: High 2xx: Moderate 3xx: Low

TABLE 4

**SUMMARY OF METAL ANALYTICAL RESULTS, SOILS**  
**Seabreeze Yacht Center, Oakland, California**  
**November 1994**  
**(mg/kg)**

Sample ID	Depth (feet)	Sample Date	Sb	Ar	Ba	Be	Cd	Cr (total)	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	V	Zn
BD-1	2.0-2.5	11/10/94	--	--	--	--	--	--	--	7.6	<5	--	--	--	--	--	--	--	--
	6.0-6.5	11/10/94	--	--	--	--	--	--	--	15	190	--	--	--	--	--	--	--	--
BD-1A	2.0-2.5	11/10/94	--	--	--	--	--	--	--	13	21	--	--	--	--	--	--	--	--
	4.0-4.5	11/10/94	--	--	--	--	--	--	--	14	23	--	--	--	--	--	--	--	--
BD-2	2.0-2.5	11/10/94	--	--	--	--	--	--	--	18	230	--	--	--	--	--	--	--	--
	4.0-4.5	11/10/94	--	--	--	--	--	--	--	20	130	--	--	--	--	--	--	--	--
BD-2A	2.0-2.5	11/10/94	--	--	--	--	--	--	--	23	590	--	--	--	--	--	--	--	--
	4.5-5.0	11/10/94	--	--	--	--	--	--	--	28	91	--	--	--	--	--	--	--	--
BD-3	2.5-3.0	11/22/94	--	--	--	--	--	--	--	2,300	160	--	--	--	--	--	--	--	--
	5.0-5.5	11/22/94	<3.0	<2.5	33	0.40	<0.25	41	5.5	19	8.1	<0.10	<0.99	35	<2.5	<0.50	<2.5	31	43
BD-4	0.0-0.4	11/10/94	<5.9	11	360	0.63	0.77	31	8.2	53	150	0.29	<2	39	<2.5	<0.99	<2.5	40	300
BD-5	2.5-3.0	11/22/94	--	--	--	--	--	--	--	38	78	--	--	--	--	--	--	--	--
MW-SB3	2.0-2.5	11/10/94	--	--	--	--	--	--	--	50	190	--	--	--	--	--	--	--	--
	4.5-5.0	11/10/94	--	--	--	--	--	--	--	53	310	--	--	--	--	--	--	--	--
MW-SB4	2.0-2.5	11/22/94	--	--	--	--	--	--	--	35	79	--	--	--	--	--	--	--	--
	5.0-5.5	11/22/94	<3.0	3.9	35	0.33	<0.25	37	4.5	15	10	<0.091	<1.0	28	<2.5	<0.50	<2.5	29	32
MW-SB4A	5.0-5.5	11/10/94	<6	13	440	1	<0.50	29	8.1	13	6.2	<0.091	<2	34	<2.5	<1	<2.5	30	30
MW-SB5	2.0-2.5	11/22/94	--	--	--	--	--	--	--	24	63	--	--	--	--	--	--	--	--
	3.0-3.5	11/22/94	<3.0	11	200	1.2	2.4	38	11	150	320	0.40	1.7	180	<2.5	<0.5	<2.5	250	280

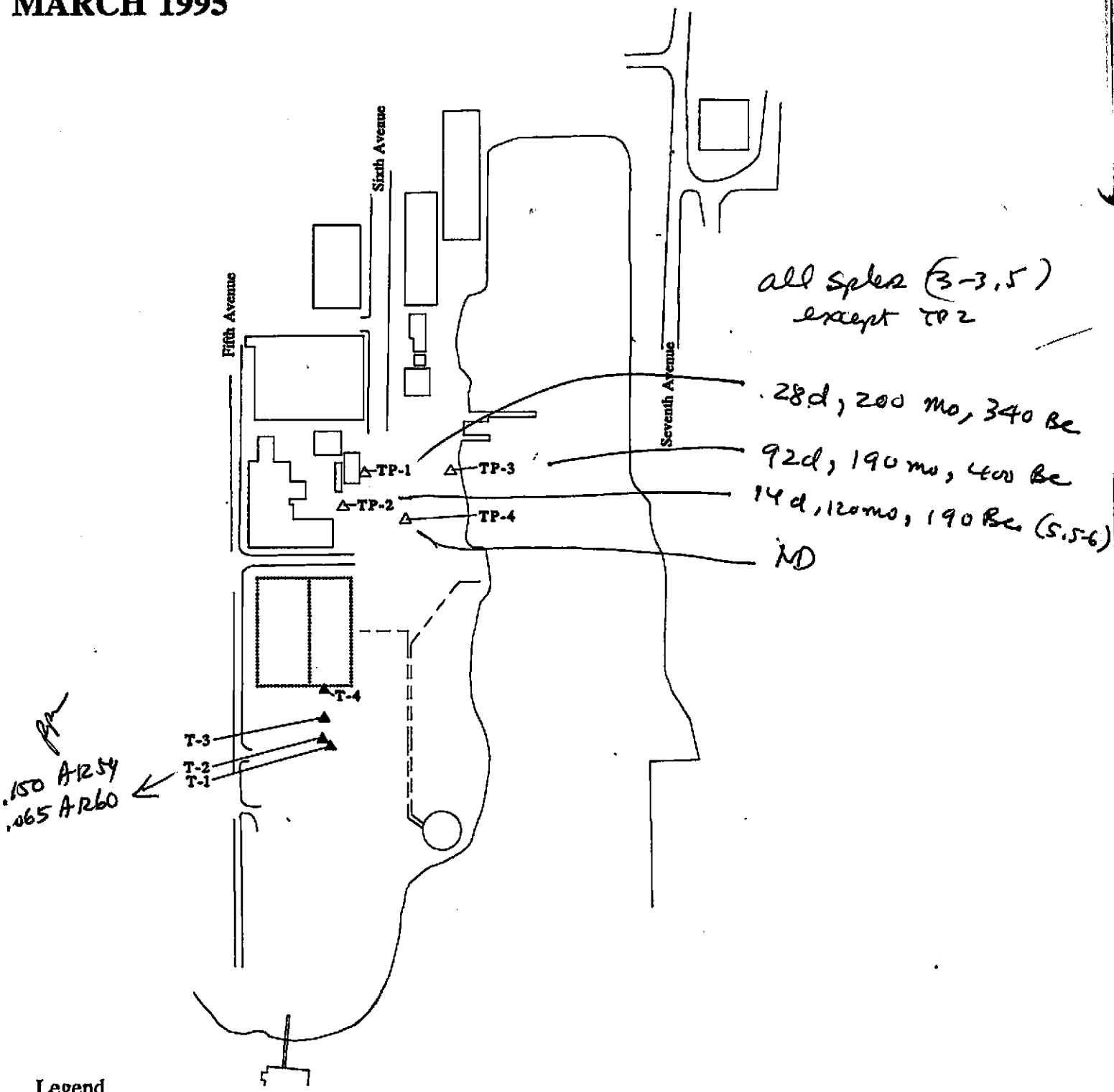
**Notes:** -- = No analysis requested.  
Refer to Table 1 for analytical methods.  
Refer to Figure 1 for sampling locations.

# SOIL SAMPLE LOCATIONS - MARCH 1995

Figure 5

APPENDIX A

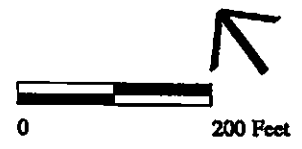
TABLES



Legend

- △ Soil Sampling Location, Petroleum Hydrocarbons
- ▲ Soil Sampling Location, PCBs

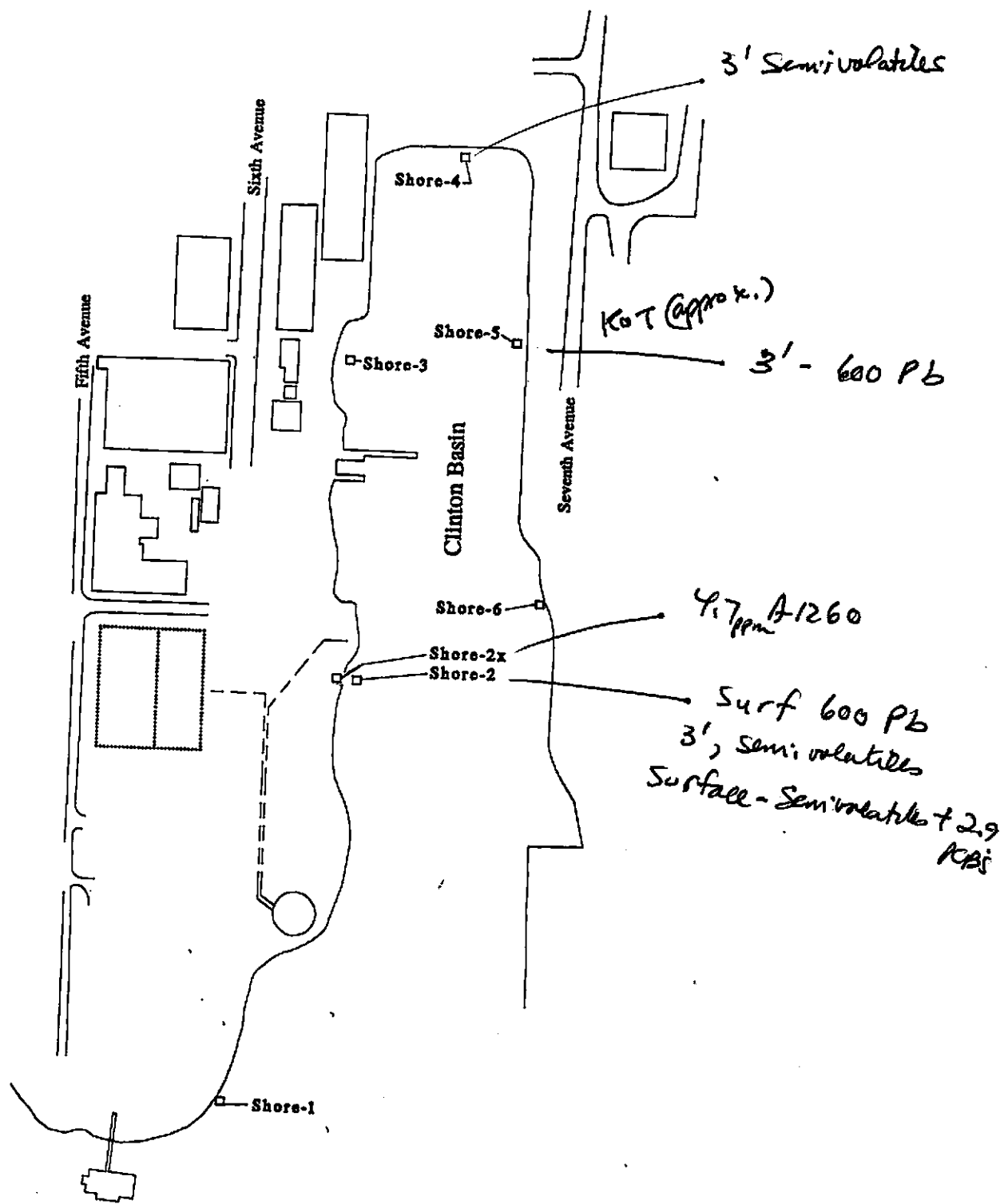
Clinton Basin  
Oakland, California



BASELINE

# SHORELINE SAMPLE LOCATIONS

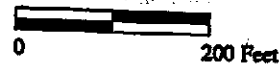
Figure 2



## Legend

□ Shoreline Sampling Location

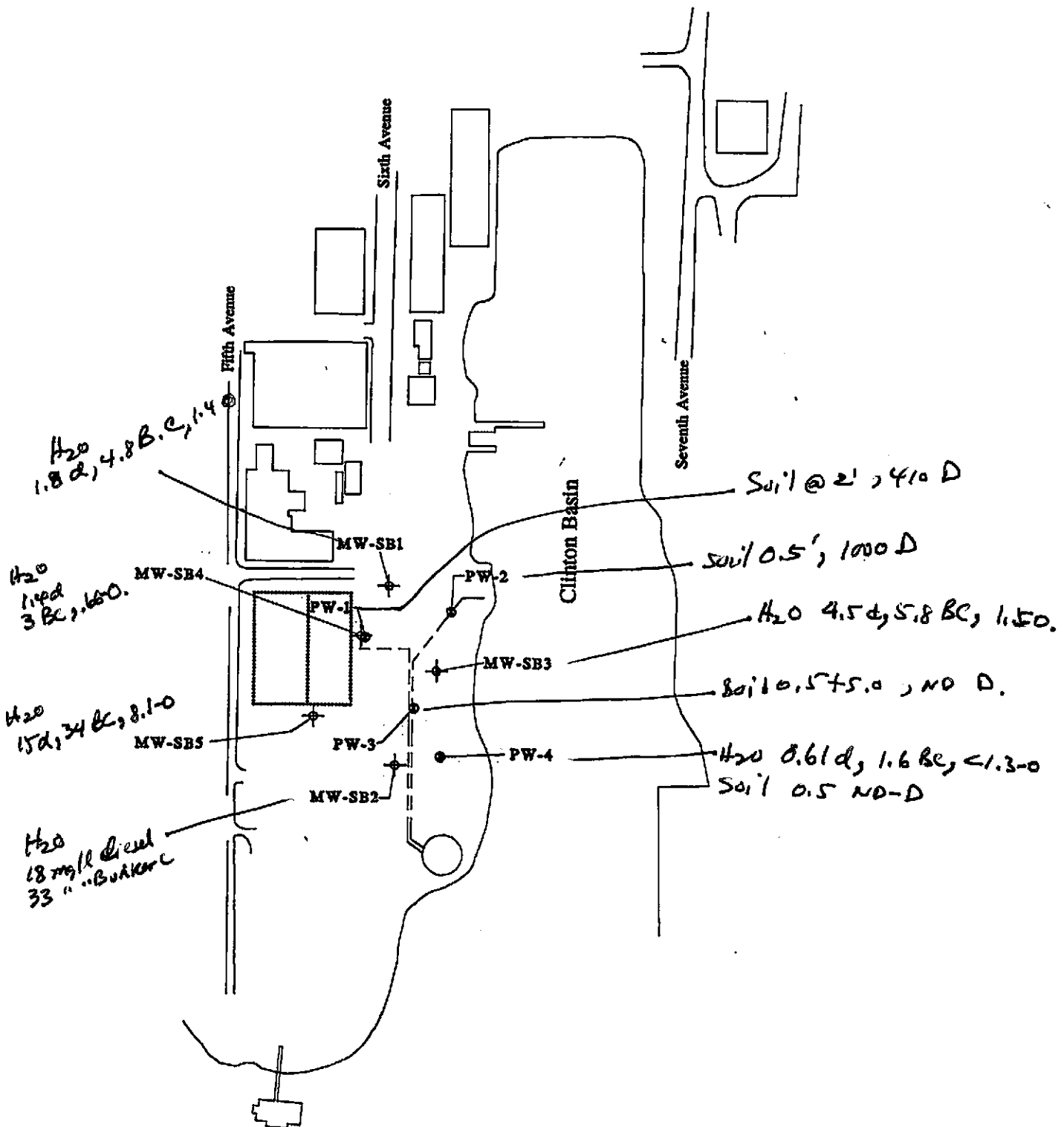
**Clinton Basin**  
**Oakland, California**



**BASELINE**

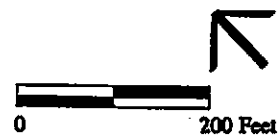
# MONITORING WELL LOCATIONS

Figure 3



Legend

- MW-SB2 Monitoring Well Location
- PW-1 Pumping Well Location



**Clinton Basin  
Oakland, California**

**BASELINE**

TABLE 3

**SUMMARY OF TOTAL PETROLEUM HYDROCARBONS BY  
IR ANALYSIS, SHORELINE SOIL SAMPLING  
Clinton Basin Shoreline, Oakland, 19 January 1995  
( $\mu\text{g/g}$ )**

Sample ID	Depth (feet)	Total Petroleum Hydrocarbons by IR
Shore-1-Surface	0	<10
Shore-1-3'	3	15
Shore-2-Surface	0	44
Shore-2-3' <sup>1</sup>	3	<10
Shore-2d-Surface <sup>2</sup>	0	59
Shore-2d-3'	3	360
Shore-2x <sup>3</sup>	0.5-1.0	--
Shore-3-Surface	0	160
Shore-3-2.5	2.5	18
Shore-4-Surface	0	370
Shore-4-3' <sup>4</sup>	3	24
Shore-5-Surface	0	28
Shore-5-3.0	3	140
Shore-6-Surface	0	58
Shore-6-2.0	2	33

**Notes:** Analyzed by EPA Method 418.1  
 <xx = Petroleum hydrocarbons were not identified above the reporting limit  
 -- = Not analyzed  
 IR = infrared  
 Samples were collected by BASELINE; samples were analyzed by Friedman & Bruya, Inc. Laboratory reports included in Appendix A. Sample locations indicated on Figure 2.

- <sup>1</sup> Sample also analyzed for semivolatile organic compounds (EPA Method 8270). All semivolatiles were reported below laboratory reporting limits except for 53  $\mu\text{g/kg}$  di-n-butylphthalate, 200  $\mu\text{g/kg}$  bis(2-ethylhexyl)phthalate, 37  $\mu\text{g/kg}$  benzo(b)fluoranthene, and 38  $\mu\text{g/kg}$  benzo(k)fluoranthene.
- <sup>2</sup> Sample also analyzed for semivolatile organic compounds (EPA Method 8270) and polychlorinated biphenyls (PCBs) as Arochlor 1260 (Modified EPA Methods 3550/8080). All semivolatiles were reported below laboratory limits except for 1,000  $\mu\text{g/kg}$  di-n-butylphthalate, 39  $\mu\text{g/kg}$  pyrene, 67  $\mu\text{g/kg}$  butylbenzylphthalate, 20,000  $\mu\text{g/kg}$  bis(2-ethylhexyl)phthalate, and 160  $\mu\text{g/kg}$  di-n-octylphthalate.

PCBs were quantified at 2.9  $\mu\text{g/g}$ . PCBs were quantified at 2.6  $\mu\text{g/g}$  in a duplicate sample.

- <sup>3</sup> Sample also analyzed for PCBs (EPA Method 3550/8080). All PCBs were reported below laboratory reporting limits except for Arochlor 1260, which was quantified at 4,700  $\mu\text{g/kg}$ .
- <sup>4</sup> Sample also analyzed for semivolatile organic compounds (EPA Method 8270). All semivolatiles were reported below laboratory reporting limits except for 30  $\mu\text{g/kg}$  acenaphthylene, 25  $\mu\text{g/kg}$  acenaphthene, 61  $\mu\text{g/kg}$  fluorene, 670  $\mu\text{g/kg}$  phenanthrene, 250  $\mu\text{g/kg}$  anthracene, 110  $\mu\text{g/kg}$  di-n-butylphthalate, 1,000  $\mu\text{g/kg}$  fluoranthene, 990  $\mu\text{g/kg}$  pyrene, 140  $\mu\text{g/kg}$  butylbenzylphthalate, 360  $\mu\text{g/kg}$  benzo(a)anthracene, 690  $\mu\text{g/kg}$  chrysene, 170  $\mu\text{g/kg}$  bis(2-ethylhexyl)phthalate, 470  $\mu\text{g/kg}$  benzo(a)pyrene, 630  $\mu\text{g/kg}$  benzo(b)fluoranthene, 370  $\mu\text{g/kg}$  benzo(k)fluoranthene, 270  $\mu\text{g/kg}$  indeno(1,2,3-cd)pyrene, 160  $\mu\text{g/kg}$  dibenz(a,h)anthracene, and 310  $\mu\text{g/kg}$  benzo(g,h,i)perylene.