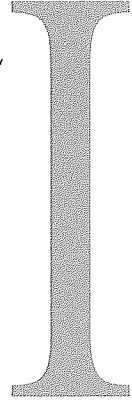


IRIS ENVIRONMENTAL



Via Hand Delivery

November 19, 2001

Jeffrey Rubin
Port of Oakland, EH&SC
530 Water Street
Oakland, CA 94607

**Re: Data Summary Tables and Figures
Third and Brush Street Site
Port of Oakland, Oakland, California
Iris Contract No. 01-172-D**

Dear Jeff,

Please find enclosed the data summary tables from the subsurface investigation conducted at the Harbor Facilities Garage, located at 209 Brush Street ("Third and Brush Streets Site"). Also enclosed are two figures containing soil and groundwater chemical compound detections for total petroleum hydrocarbons (TPH) as gas and diesel, BTEX compounds, total lead and MTBE.

Please do not hesitate to contact me at (510) 834-4747, extension 13, with any questions regarding this submittal.

Sincerely,

A handwritten signature in cursive script that reads "Abigail Posner", followed by a horizontal line.

Abigail R. Posner
Geologist

Iris\Port of Oakland\TSO#5\JeffRubinletter

Enclosures

TABLE 2: SOIL AND GROUNDWATER CHEMICAL TEST RESULTS- Volatile Organic Compounds
Third and Brush Streets
Port of Oakland
Oakland, California

LOCATION	B-1	B-1	B-1	B-1	B-1	B-1
MATRIX	Soil	Soil	Soil	Soil	Soil	Soil
COLLECTION DATE	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01
ANALYTICAL METHOD	8021	8021	8260	8021	8260	8021
BEGINNING DEPTH ⁽¹⁾	1.0	2.0	5.0	5.0	7.5	7.5
UNITS	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Acetone	--	--	< 20	--	< 20	--
Bromodichloromethane	--	--	< 5.1	--	< 4.9	--
Bromobenzene	--	--	< 5.1	--	< 4.9	--
Bromochloromethane	--	--	< 5.1	--	< 4.9	--
Bromomethane	--	--	< 10	--	< 9.8	--
n-Butylbenzene	--	--	< 5.1	--	< 4.9	--
sec-Butylbenzene	--	--	< 5.1	--	< 4.9	--
tert-Butylbenzene	--	--	< 5.1	--	< 4.9	--
Benzene	< 4.5	290	< 5.1	< 5.1	< 4.9	< 5.4
Toluene	16	23 C	< 5.1	< 5.1	< 4.9	< 5.4
Carbon Disulfide	--	--	< 5.1	--	< 4.9	--
2-Chloroethylvinylether	--	--	< 10	--	< 9.8	--
Chlorobenzene	--	--	< 5.1	--	< 4.9	--
2-Chlorotoluene	--	--	< 5.1	--	< 4.9	--
4-Chlorotoluene	--	--	< 5.1	--	< 4.9	--
Chloroethane	--	--	< 10	--	< 9.8	--
Chloromethane	--	--	< 10	--	< 9.8	--
Carbon Tetrachloride	--	--	< 5.1	--	< 4.9	--
para-Isopropyl Toluene	--	--	< 5.1	--	< 4.9	--
Dibromochloromethane	--	--	< 5.1	--	< 4.9	--
1,2-Dibromo-3-Chloropropane	--	--	< 5.1	--	< 4.9	--
Dibromomethane	--	--	< 5.1	--	< 4.9	--
1,1-Dichloroethane	--	--	< 5.1	--	< 4.9	--
1,2-Dichloroethane	--	--	< 5.1	--	< 4.9	--
1,2-Dichlorobenzene	--	--	< 5.1	--	< 4.9	--
1,3-Dichlorobenzene	--	--	< 5.1	--	< 4.9	--
1,4-Dichlorobenzene	--	--	< 5.1	--	< 4.9	--
1,1-Dichloroethene	--	--	< 5.1	--	< 4.9	--
cis-1,2-Dichloroethene	--	--	< 5.1	--	< 4.9	--
trans-1,2-Dichloroethene	--	--	< 5.1	--	< 4.9	--
1,1-Dichloropropene	--	--	< 5.1	--	< 4.9	--
cis-1,3-Dichloropropene	--	--	< 5.1	--	< 4.9	--
trans-1,3-Dichloropropene	--	--	< 5.1	--	< 4.9	--
1,2-Dichloropropane	--	--	< 5.1	--	< 4.9	--
1,3-Dichloropropane	--	--	< 5.1	--	< 4.9	--
2,2-Dichloropropane	--	--	< 5.1	--	< 4.9	--
Ethylbenzene	< 4.5	< 5.4	< 5.1	< 5.1	< 4.9	< 5.4
1,2-Dibromoethane	--	--	< 5.1	--	< 4.9	--
Trichlorofluoromethane	--	--	< 5.1	--	< 4.9	--
Freon 113	--	--	< 5.1	--	< 4.9	--
Freon 12	--	--	< 10	--	< 9.8	--
Hexachlorobutadiene	--	--	< 5.1	--	< 4.9	--
2-Hexanone	--	--	< 10	--	< 9.8	--
Isopropylbenzene	--	--	< 5.1	--	< 4.9	--
2-Butanone	--	--	< 10	--	< 9.8	--

**TABLE 2: SOIL AND GROUNDWATER CHEMICAL TEST RESULTS- Volatile Organic Compounds
Third and Brush Streets
Port of Oakland
Oakland, California**

LOCATION	B-1	B-1	B-1	B-1	B-1	B-1
MATRIX	Soil	Soil	Soil	Soil	Soil	Soil
COLLECTION DATE	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01
ANALYTICAL METHOD	8021	8021	8260	8021	8260	8021
BEGINNING DEPTH ⁽¹⁾	1.0	2.0	5.0	5.0	7.5	7.5
UNITS	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
(cont.)						
4-Methyl-2-Pentanone	--	--	< 10	--	< 9.8	--
MTBE	--	--	< 5.1	--	< 4.9	--
Methylene Chloride	--	--	< 20	--	< 20	--
Naphthalene	--	--	< 5.1	--	< 4.9	--
Propylbenzene	--	--	< 5.1	--	< 4.9	--
1,1,2,2-Tetrachloroethane	--	--	< 5.1	--	< 4.9	--
Tetrachloroethene	--	--	< 5.1	--	< 4.9	--
Styrene	--	--	< 5.1	--	< 4.9	--
Bromoform	--	--	< 5.1	--	< 4.9	--
1,1,1,2-Tetrachloroethane	--	--	< 5.1	--	< 4.9	--
1,1,1-Trichloroethane	--	--	< 5.1	--	< 4.9	--
1,1,2-Trichloroethane	--	--	< 5.1	--	< 4.9	--
1,2,3-Trichlorobenzene	--	--	< 5.1	--	< 4.9	--
1,2,4-Trichlorobenzene	--	--	< 5.1	--	< 4.9	--
Trichloroethene	--	--	< 5.1	--	< 4.9	--
Chloroform	--	--	< 5.1	--	< 4.9	--
1,2,3-Trichloropropane	--	--	< 5.1	--	< 4.9	--
1,2,4-Trimethylbenzene	--	--	< 5.1	--	< 4.9	--
1,3,5-Trimethylbenzene	--	--	< 5.1	--	< 4.9	--
Vinyl Acetate	--	--	< 51	--	< 49	--
Vinyl Chloride	--	--	< 10	--	< 9.8	--
m,p-Xylenes	6.6	15	< 5.1	< 5.1	< 4.9	< 5.4
o-Xylene	< 4.5	12	< 5.1	< 5.1	< 4.9	< 5.4

Notes:

(1) Soil samples collected in six-inch tubes beginning with the depth indicated.

C = presence confirmed, but confirmation concentration differed by more than a factor of two.

-- = not analyzed.

TABLE 2: SOIL AND GROUNDWATER CHEMICAL TEST RESULTS- Volatile Organic

Compounds

Third and Brush Streets

Port of Oakland

Oakland, California

LOCATION	B-1	B-1	B-1-WI	B-1-WI	B-2	B-2	B-2
MATRIX	Soil	Soil	Aqueous	Aqueous	Soil	Soil	Soil
COLLECTION DATE	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01
ANALYTICAL METHOD	8260	8021	8260	8021	8021	8021	8260
BEGINNING DEPTH ⁽¹⁾	9.5	9.5	GW	GW	1.0	2.0	5.0
UNITS	µg/Kg	µg/Kg	µg/L	µg/L	µg/Kg	µg/Kg	µg/Kg
Acetone	< 20	--	< 20	--	--	--	< 20
Bromodichloromethane	< 5	--	< 5	--	--	--	< 5
Bromobenzene	< 5	--	< 5	--	--	--	< 5
Bromochloromethane	< 5	--	< 10	--	--	--	< 5
Bromomethane	< 10	--	< 10	--	--	--	< 10
n-Butylbenzene	< 5	--	< 5	--	--	--	< 5
sec-Butylbenzene	< 5	--	< 5	--	--	--	< 5
tert-Butylbenzene	< 5	--	< 5	--	--	--	< 5
Benzene	< 5	< 5.2	6.3	5.8	< 5.1	< 5.4	< 5
Toluene	< 5	< 5.2	34	30	13	35	< 5
Carbon Disulfide	< 5	--	< 5	--	--	--	< 5
2-Chloroethylvinylether	< 10	--	< 10	--	--	--	< 10
Chlorobenzene	< 5	--	< 5	--	--	--	< 5
2-Chlorotoluene	< 5	--	< 5	--	--	--	< 5
4-Chlorotoluene	< 5	--	< 5	--	--	--	< 5
Chloroethane	< 10	--	< 10	--	--	--	< 10
Chloromethane	< 10	--	< 10	--	--	--	< 10
Carbon Tetrachloride	< 5	--	< 5	--	--	--	< 5
para-Isopropyl Toluene	< 5	--	< 5	--	--	--	< 5
Dibromochloromethane	< 5	--	< 5	--	--	--	< 5
1,2-Dibromo-3-Chloropropane	< 5	--	< 5	--	--	--	< 5
Dibromomethane	< 5	--	< 5	--	--	--	< 5
1,1-Dichloroethane	< 5	--	< 5	--	--	--	< 5
1,2-Dichloroethane	< 5	--	< 5	--	--	--	< 5
1,2-Dichlorobenzene	< 5	--	< 5	--	--	--	< 5
1,3-Dichlorobenzene	< 5	--	< 5	--	--	--	< 5
1,4-Dichlorobenzene	< 5	--	< 5	--	--	--	< 5
1,1-Dichloroethene	< 5	--	< 5	--	--	--	< 5
cis-1,2-Dichloroethene	< 5	--	< 5	--	--	--	< 5
trans-1,2-Dichloroethene	< 5	--	< 5	--	--	--	< 5
1,1-Dichloropropene	< 5	--	< 5	--	--	--	< 5
cis-1,3-Dichloropropene	< 5	--	< 5	--	--	--	< 5
trans-1,3-Dichloropropene	< 5	--	< 5	--	--	--	< 5
1,2-Dichloropropane	< 5	--	< 5	--	--	--	< 5
1,3-Dichloropropane	< 5	--	< 5	--	--	--	< 5
2,2-Dichloropropane	< 5	--	< 5	--	--	--	< 5
Ethylbenzene	< 5	< 5.2	7.4	6.3	< 5.1	8.3	< 5
1,2-Dibromoethane	< 5	--	< 5	--	--	--	< 5
Trichlorofluoromethane	< 5	--	< 5	--	--	--	< 5
Freon 113	< 5	--	< 5	--	--	--	< 5
Freon 12	< 10	--	< 10	--	--	--	< 10
Hexachlorobutadiene	< 5	--	< 5	--	--	--	< 5
2-Hexanone	< 10	--	< 10	--	--	--	< 10
Isopropylbenzene	< 5	--	< 5	--	--	--	< 5
2-Butanone	< 10	--	< 10	--	--	--	< 10

TABLE 2: SOIL AND GROUNDWATER CHEMICAL TEST RESULTS- Volatile Organic Compounds
Third and Brush Streets
Port of Oakland
Oakland, California

LOCATION	B-1	B-1	B-1-WI	B-1-WI	B-2	B-2	B-2
MATRIX	Soil	Soil	Aqueous	Aqueous	Soil	Soil	Soil
COLLECTION DATE	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01
ANALYTICAL METHOD	8260	8021	8260	8021	8021	8021	8260
BEGINNING DEPTH ⁽¹⁾	9.5	9.5	GW	GW	1.0	2.0	5.0
UNITS	µg/Kg	µg/Kg	µg/L	µg/L	µg/Kg	µg/Kg	µg/Kg
(cont.)							
4-Methyl-2-Pentanone	< 10	--	< 10	--	--	--	< 10
MTBE	< 5	--	< 5	--	--	--	< 5
Methylene Chloride	< 20	--	< 20	--	--	--	< 20
Naphthalene	< 5	--	< 5	--	--	--	< 5
Propylbenzene	< 5	--	< 5	--	--	--	< 5
1,1,2,2-Tetrachloroethane	< 5	--	< 5	--	--	--	< 5
Tetrachloroethene	< 5	--	< 5	--	--	--	< 5
Styrene	< 5	--	< 5	--	--	--	< 5
Bromoform	< 5	--	< 5	--	--	--	< 5
1,1,1,2-Tetrachloroethane	< 5	--	< 5	--	--	--	< 5
1,1,1-Trichloroethane	< 5	--	< 5	--	--	--	< 5
1,1,2-Trichloroethane	< 5	--	< 5	--	--	--	< 5
1,2,3-Trichlorobenzene	< 5	--	< 5	--	--	--	< 5
1,2,4-Trichlorobenzene	< 5	--	< 5	--	--	--	< 5
Trichloroethene	< 5	--	< 5	--	--	--	< 5
Chloroform	< 5	--	< 5	--	--	--	< 5
1,2,3-Trichloropropane	< 5	--	< 5	--	--	--	< 5
1,2,4-Trimethylbenzene	< 5	--	14	--	--	--	< 5
1,3,5-Trimethylbenzene	< 5	--	< 5	--	--	--	< 5
Vinyl Acetate	< 50	--	< 50	--	--	--	< 50
Vinyl Chloride	< 10	--	< 10	--	--	--	< 10
m,p-Xylenes	< 5	< 5.2	32	26	7.9	30	< 5
o-Xylene	< 5	< 5.2	13	12	< 5.1	8.5	< 5

Notes:

(1) Soil samples collected in six-inch tubes beginning with the depth indicated.

C = presence confirmed, but confirmation concentration differed by more than a factor of two.
 -- = not analyzed.

TABLE 2: SOIL AND GROUNDWATER CHEMICAL TEST RESULTS- Volatile Organic Compounds
Third and Brush Streets
Port of Oakland
Oakland, California

LOCATION	B-2	B-2-WI	B-2-WI	B-3	B-3	B-3	B-3
MATRIX	Soil	Aqueous	Aqueous	Soil	Soil	Soil	Soil
COLLECTION DATE	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01
ANALYTICAL METHOD	8021	8260	8021	8021	8021	8260	8021
BEGINNING DEPTH ⁽¹⁾	5.0	GW	GW	1.0	3.0	4.5	4.5
UNITS	µg/Kg	µg/L	µg/L	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Acetone	--	< 67	--	--	--	75	--
Bromodichloromethane	--	< 17	--	--	--	< 5.1	--
Bromobenzene	--	< 17	--	--	--	< 5.1	--
Bromochloromethane	--	< 33	--	--	--	< 5.1	--
Bromomethane	--	< 33	--	--	--	< 10	--
n-Butylbenzene	--	< 17	--	--	--	14	--
sec-Butylbenzene	--	< 17	--	--	--	6.6	--
tert-Butylbenzene	--	< 17	--	--	--	< 5.1	--
Benzene	< 4.5	74	78	< 4.7	58	10	9.7
Toluene	6.6	< 17	4.1 C	< 4.7	12	< 5.1	1.7
Carbon Disulfide	--	< 17	--	--	--	< 5.1	--
2-Chloroethylvinylether	--	< 33	--	--	--	< 10	--
Chlorobenzene	--	< 17	--	--	--	< 5.1	--
2-Chlorotoluene	--	< 17	--	--	--	< 5.1	--
4-Chlorotoluene	--	< 17	--	--	--	< 5.1	--
Chloroethane	--	< 33	--	--	--	< 10	--
Chloromethane	--	< 33	--	--	--	< 10	--
Carbon Tetrachloride	--	< 17	--	--	--	< 5.1	--
para-Isopropyl Toluene	--	< 17	--	--	--	< 5.1	--
Dibromochloromethane	--	< 17	--	--	--	< 5.1	--
1,2-Dibromo-3-Chloropropane	--	< 17	--	--	--	< 5.1	--
Dibromomethane	--	< 17	--	--	--	< 5.1	--
1,1-Dichloroethane	--	< 17	--	--	--	< 5.1	--
1,2-Dichloroethane	--	< 17	--	--	--	< 5.1	--
1,2-Dichlorobenzene	--	< 17	--	--	--	< 5.1	--
1,3-Dichlorobenzene	--	< 17	--	--	--	< 5.1	--
1,4-Dichlorobenzene	--	< 17	--	--	--	< 5.1	--
1,1-Dichloroethene	--	< 17	--	--	--	< 5.1	--
cis-1,2-Dichloroethene	--	< 17	--	--	--	< 5.1	--
trans-1,2-Dichloroethene	--	< 17	--	--	--	< 5.1	--
1,1-Dichloropropene	--	< 17	--	--	--	< 5.1	--
cis-1,3-Dichloropropene	--	< 17	--	--	--	< 5.1	--
trans-1,3-Dichloropropene	--	< 17	--	--	--	< 5.1	--
1,2-Dichloropropane	--	< 17	--	--	--	< 5.1	--
1,3-Dichloropropane	--	< 17	--	--	--	< 5.1	--
2,2-Dichloropropane	--	< 17	--	--	--	< 5.1	--
Ethylbenzene	< 4.5	< 17	2	7 C	23	< 5.1	2.3
1,2-Dibromoethane	--	< 17	--	--	--	< 5.1	--
Trichlorofluoromethane	--	< 17	--	--	--	< 5.1	--
Freon 113	--	< 17	--	--	--	< 5.1	--
Freon 12	--	< 33	--	--	--	< 10	--
Hexachlorobutadiene	--	< 17	--	--	--	< 5.1	--
2-Hexanone	--	< 33	--	--	--	< 10	--
Isopropylbenzene	--	< 17	--	--	--	< 5.1	--
2-Butanone	--	< 33	--	--	--	16	--

**TABLE 2: SOIL AND GROUNDWATER CHEMICAL TEST RESULTS- Volatile Organic Compounds
Third and Brush Streets
Port of Oakland
Oakland, California**

LOCATION	B-2	B-2-WI	B-2-WI	B-3	B-3	B-3	B-3
MATRIX	Soil	Aqueous	Aqueous	Soil	Soil	Soil	Soil
COLLECTION DATE	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01
ANALYTICAL METHOD	8021	8260	8021	8021	8021	8260	8021
BEGINNING DEPTH ⁽¹⁾	5.0	GW	GW	1.0	3.0	4.5	4.5
UNITS	µg/Kg	µg/L	µg/L	µg/Kg	µg/Kg	µg/Kg	µg/Kg
(cont.)							
4-Methyl-2-Pentanone	--	< 33	--	--	--	< 10	--
MTBE	--	590	--	--	--	< 5.1	--
Methylene Chloride	--	< 67	--	--	--	< 20	--
Naphthalene	--	< 17	--	--	--	35	--
Propylbenzene	--	< 17	--	--	--	12	--
1,1,2,2-Tetrachloroethane	--	< 17	--	--	--	< 5.1	--
Tetrachloroethene	--	< 17	--	--	--	< 5.1	--
Styrene	--	< 17	--	--	--	< 5.1	--
Bromoform	--	< 17	--	--	--	< 5.1	--
1,1,1,2-Tetrachloroethane	--	< 17	--	--	--	< 5.1	--
1,1,1-Trichloroethane	--	< 17	--	--	--	< 5.1	--
1,1,2-Trichloroethane	--	< 17	--	--	--	< 5.1	--
1,2,3-Trichlorobenzene	--	< 17	--	--	--	< 5.1	--
1,2,4-Trichlorobenzene	--	< 17	--	--	--	< 5.1	--
Trichloroethene	--	< 17	--	--	--	< 5.1	--
Chloroform	--	< 17	--	--	--	< 5.1	--
1,2,3-Trichloropropane	--	< 17	--	--	--	< 5.1	--
1,2,4-Trimethylbenzene	--	< 17	--	--	--	13	--
1,3,5-Trimethylbenzene	--	< 17	--	--	--	< 5.1	--
Vinyl Acetate	--	< 170	--	--	--	< 51	--
Vinyl Chloride	--	< 33	--	--	--	< 10	--
m,p-Xylenes	5.7	< 17	5.7	8.3	30	< 5.1	2.2
o-Xylene	< 4.5	< 17	2.3	< 4.7	18 C	< 5.1	1.3 C

Notes:

(1) Soil samples collected in six-inch tubes beginning with the depth indicated.

C = presence confirmed, but confirmation concentration differed by more than a factor of two.

-- = not analyzed.

TABLE 2: SOIL AND GROUNDWATER CHEMICAL TEST RESULTS- Volatile Organic Compounds
Third and Brush Streets
Port of Oakland
Oakland, California

LOCATION	B-3	B-3	B-3	B-3	B-3-WI	B-3-WI
MATRIX	Soil	Soil	Soil	Soil	Aqueous	Aqueous
COLLECTION DATE	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01
ANALYTICAL METHOD	8260	8021	8260	8021	8260	8021
BEGINNING DEPTH ⁽¹⁾	7.5	7.5	9.5	9.5	GW	GW
UNITS	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/L	µg/L
Acetone	< 40000	--	< 10000	--	< 4000	--
Bromodichloromethane	< 10000	--	< 2500	--	< 1000	--
Bromobenzene	< 10000	--	< 2500	--	< 1000	--
Bromochloromethane	< 10000	--	< 2500	--	< 2000	--
Bromomethane	< 20000	--	< 5000	--	< 2000	--
n-Butylbenzene	38000	--	4100	--	< 1000	--
sec-Butylbenzene	12000	--	< 2500	--	< 1000	--
tert-Butylbenzene	< 10000	--	< 2500	--	< 1000	--
Benzene	24000	40000	7800	8800	9300	8000
Toluene	40000	30000 C	79000	74000	19000	15000
Carbon Disulfide	< 10000	--	< 2500	--	< 1000	--
2-Chloroethylvinylether	< 20000	--	< 5000	--	< 2000	--
Chlorobenzene	< 10000	--	< 2500	--	< 1000	--
2-Chlorotoluene	< 10000	--	< 2500	--	< 1000	--
4-Chlorotoluene	< 10000	--	< 2500	--	< 1000	--
Chloroethane	< 20000	--	< 5000	--	< 2000	--
Chloromethane	< 20000	--	< 5000	--	< 2000	--
Carbon Tetrachloride	< 10000	--	< 2500	--	< 1000	--
para-Isopropyl Toluene	15000	--	< 2500	--	< 1000	--
Dibromochloromethane	< 10000	--	< 2500	--	< 1000	--
1,2-Dibromo-3-Chloropropane	< 10000	--	< 2500	--	< 1000	--
Dibromomethane	< 10000	--	< 2500	--	< 1000	--
1,1-Dichloroethane	< 10000	--	< 2500	--	< 1000	--
1,2-Dichloroethane	< 10000	--	< 2500	--	< 1000	--
1,2-Dichlorobenzene	< 10000	--	< 2500	--	< 1000	--
1,3-Dichlorobenzene	< 10000	--	< 2500	--	< 1000	--
1,4-Dichlorobenzene	< 10000	--	< 2500	--	< 1000	--
1,1-Dichloroethene	< 10000	--	< 2500	--	< 1000	--
cis-1,2-Dichloroethene	< 10000	--	< 2500	--	< 1000	--
trans-1,2-Dichloroethene	< 10000	--	< 2500	--	< 1000	--
1,1-Dichloropropene	< 10000	--	< 2500	--	< 1000	--
cis-1,3-Dichloropropene	< 10000	--	< 2500	--	< 1000	--
trans-1,3-Dichloropropene	< 10000	--	< 2500	--	< 1000	--
1,2-Dichloropropane	< 10000	--	< 2500	--	< 1000	--
1,3-Dichloropropane	< 10000	--	< 2500	--	< 1000	--
2,2-Dichloropropane	< 10000	--	< 2500	--	< 1000	--
Ethylbenzene	120000	150000	24000	23000	2700	2300
1,2-Dibromoethane	< 10000	--	< 2500	--	< 1000	--
Trichlorofluoromethane	< 10000	--	< 2500	--	< 1000	--
Freon 113	< 10000	--	< 2500	--	< 1000	--
Freon 12	< 20000	--	< 5000	--	< 2000	--
Hexachlorobutadiene	< 10000	--	< 2500	--	< 1000	--
2-Hexanone	< 20000	--	< 5000	--	< 2000	--
Isopropylbenzene	15000	--	< 2500	--	< 1000	--
2-Butanone	< 20000	--	< 5000	--	< 2000	--

TABLE 2: SOIL AND GROUNDWATER CHEMICAL TEST RESULTS- Volatile Organic Compounds
Third and Brush Streets
Port of Oakland
Oakland, California

LOCATION	B-3	B-3	B-3	B-3	B-3-WI	B-3-WI
MATRIX	Soil	Soil	Soil	Soil	Aqueous	Aqueous
COLLECTION DATE	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01
ANALYTICAL METHOD	8260	8021	8260	8021	8260	8021
BEGINNING DEPTH ⁽¹⁾	7.5	7.5	9.5	9.5	GW	GW
UNITS	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/L	µg/L
(cont.)						
4-Methyl-2-Pentanone	< 20000	--	< 5000	--	< 2000	--
MTBE	< 10000	--	< 2500	--	< 1000	--
Methylene Chloride	< 40000	--	< 10000	--	< 4000	--
Naphthalene	86000	--	6500	--	< 1000	--
Propylbenzene	51000	--	7600	--	< 1000	--
1,1,2,2-Tetrachloroethane	< 10000	--	< 2500	--	< 1000	--
Tetrachloroethene	< 10000	--	< 2500	--	< 1000	--
Styrene	< 10000	--	< 2500	--	< 1000	--
Bromoform	< 10000	--	< 2500	--	< 1000	--
1,1,1,2-Tetrachloroethane	< 10000	--	< 2500	--	< 1000	--
1,1,1-Trichloroethane	< 10000	--	< 2500	--	< 1000	--
1,1,2-Trichloroethane	< 10000	--	< 2500	--	< 1000	--
1,2,3-Trichlorobenzene	< 10000	--	< 2500	--	< 1000	--
1,2,4-Trichlorobenzene	< 10000	--	< 2500	--	< 1000	--
Trichloroethene	< 10000	--	< 2500	--	< 1000	--
Chloroform	< 10000	--	< 2500	--	< 1000	--
1,2,3-Trichloropropane	< 10000	--	< 2500	--	< 1000	--
1,2,4-Trimethylbenzene	320000	--	47000	--	1900	--
1,3,5-Trimethylbenzene	79000	--	15000	--	< 1000	--
Vinyl Acetate	< 100000	--	< 25000	--	< 10000	--
Vinyl Chloride	< 20000	--	< 5000	--	< 2000	--
m,p-Xylenes	320000	310000	96000	96000	10000	8700
o-Xylene	84000	100000	38000	37000	4300	3800

Notes:

(1) Soil samples collected in six-inch tubes beginning with the depth indicated.

C = presence confirmed, but confirmation concentration differed by more than a factor of two.
 -- = not analyzed.

TABLE 3: SOIL AND GROUNDWATER CHEMICAL TEST RESULTS- Semivolatile Organic Compounds
Third and Brush Streets
Port of Oakland
Oakland, California

LOCATION	B-1	B-2	B-3
MATRIX	Soil	Soil	Soil
COLLECTION DATE	10/18/01	10/18/01	10/18/01
ANALYTICAL METHOD	8270	8270	8270
BEGINNING DEPTH ⁽¹⁾	COMP	COMP	COMP
UNITS	µg/kg	µg/kg	µg/kg
Acenaphthene	< 3300	< 330	< 330
Acenaphthylene	< 3300	< 330	< 330
Anthracene	< 3300	< 330	340
Azobenzene	< 3300	< 330	< 330
Butylbenzylphthalate	< 3300	< 330	< 330
bis(2-Chloroethoxy)methane	< 3300	< 330	< 330
bis(2-Chloroethyl)ether	< 3300	< 330	< 330
bis(2-Chloroisopropyl) ether	< 3300	< 330	< 330
bis(2-Ethylhexyl)phthalate	< 3300	< 330	< 330
4-Bromophenyl-phenylether	< 3300	< 330	< 330
Benzo(a)anthracene	< 3300	< 330	630
Benzoic acid	< 17000	< 1700	< 1700
Benzo(a)pyrene	< 3300	< 330	540
Benzo(b)fluoranthene	< 3300	< 330	480
Benzo(g,h,i)perylene	< 3300	< 330	< 330
Benzo(k)fluoranthene	< 3300	< 330	540
Benzyl alcohol	< 3300	< 330	< 330
4-Chloro-3-methylphenol	< 3300	< 330	< 330
Chrysene	< 3300	< 330	620
4-Chloroaniline	< 3300	< 330	< 330
2-Chlorophenol	< 3300	< 330	< 330
2-Chloronaphthalene	< 3300	< 330	< 330
4-Chlorophenyl-phenylether	< 3300	< 330	< 330
Dibenz(a,h)anthracene	< 3300	< 330	< 330
Dibenzofuran	< 3300	< 330	< 330
3,3'-Dichlorobenzidine	< 17000	< 1700	< 1700
1,2-Dichlorobenzene	< 3300	< 330	< 330
1,3-Dichlorobenzene	< 3300	< 330	< 330
1,4-Dichlorobenzene	< 3300	< 330	< 330
2,4-Dichlorophenol	< 3300	< 330	< 330
Diethylphthalate	< 3300	< 330	< 330
2,4-Dimethylphenol	< 3300	< 330	< 330
Dimethylphthalate	< 3300	< 330	< 330
4,6-Dinitro-2-methylphenol	< 17000	< 1700	< 1700
Di-n-butylphthalate	< 3300	< 330	< 330
Di-n-octylphthalate	< 3300	< 330	< 330
2,4-Dinitrophenol	< 17000	< 1700	< 1700
2,4-Dinitrotoluene	< 3300	< 330	< 330
2,6-Dinitrotoluene	< 3300	< 330	< 330
Fluorene	< 3300	< 330	< 330
Fluoranthene	< 3300	< 330	1300
Hexachlorobutadiene	< 3300	< 330	< 330
Hexachlorocyclopentadiene	< 17000	< 1700	< 1700

TABLE 3: SOIL AND GROUNDWATER CHEMICAL TEST RESULTS- Semivolatile Organic Compounds
Third and Brush Streets
Port of Oakland
Oakland, California

LOCATION	B-1	B-2	B-3
MATRIX	Soil	Soil	Soil
COLLECTION DATE	10/18/01	10/18/01	10/18/01
ANALYTICAL METHOD	8270	8270	8270
BEGINNING DEPTH ⁽¹⁾	COMP	COMP	COMP
UNITS	µg/kg	µg/kg	µg/kg
(cont.)			
Hexachlorobenzene	< 3300	< 330	< 330
Hexachloroethane	< 3300	< 330	< 330
Indeno(1,2,3-cd)pyrene	< 3300	< 330	< 330
Isophorone	< 3300	< 330	< 330
2-Methylphenol	< 3300	< 330	< 330
4-Methylphenol	< 3300	< 330	< 330
2-Methylnaphthalene	< 3300	< 330	920
Naphthalene	< 3300	< 330	1100
N-Nitrosodimethylamine	< 3300	< 330	< 330
N-Nitrosodiphenylamine	< 3300	< 330	< 330
N-Nitroso-di-n-propylamine	< 3300	< 330	< 330
2-Nitroaniline	< 17000	< 1700	< 1700
3-Nitroaniline	< 17000	< 1700	< 1700
4-Nitroaniline	< 17000	< 1700	< 1700
Nitrobenzene	< 3300	< 330	< 330
2-Nitrophenol	< 17000	< 1700	< 1700
4-Nitrophenol	< 17000	< 1700	< 1700
Pentachlorophenol	< 17000	< 1700	< 1700
Phenanthrene	< 3300	< 330	1300
Phenol	< 3300	< 330	< 330
Pyrene	< 3300	< 330	1700
1,2,4-Trichlorobenzene	< 3300	< 330	< 330
2,4,5-Trichlorophenol	< 3300	< 330	< 330
2,4,6-Trichlorophenol	< 3300	< 330	< 330
Pentachlorophenol			
Phenanthrene			
Phenol			
Pyrene			

Notes:

(1) Soil samples collected in six-inch tubes beginning with the depth indicated.
"COMP" = Composite Sample

TABLE 4: SOIL AND GROUNDWATER CHEMICAL TEST RESULTS- Organochlorine Pesticides
Third and Brush Streets
Port of Oakland
Oakland, California

LOCATION	B-1	B-2	B-3
MATRIX	Soil	Soil	Soil
COLLECTION DATE	10/18/01	10/18/01	10/18/01
ANALYTICAL METHOD	8081/8082	8081/8082	8081/8082
BEGINNING DEPTH ⁽¹⁾	COMP	COMP	COMP
UNITS	µg/kg	µg/kg	µg/kg
4,4'-DDD	< 60	< 60	< 59
4,4'-DDE	200 b	< 60	< 59
4,4'-DDT	< 60	< 60	< 59
Aldrin	< 30	< 30	< 30
alpha-BHC	< 30	< 30	< 30
alpha-Chlordane	< 30	< 30	< 30
Aroclor-1016	210	< 12	< 12
Aroclor-1221	< 24	< 24	< 48
Aroclor-1232	< 12	< 12	< 12
Aroclor-1242	< 12	< 12	< 12
Aroclor-1248	< 12	< 12	< 12
Aroclor-1254	4,200	< 12	730
Aroclor-1260	240	< 12	110
beta-BHC	< 30	< 30	< 30
delta-BHC	< 30	< 30	< 30
Dieldrin	150 C	< 60	< 59
Endosulfan I	< 30	< 30	< 30
Endosulfan II	< 60	< 60	< 59
Endosulfan sulfate	< 60	< 60	< 59
Endrin	< 60	< 60	< 59
Endrin aldehyde	< 60	< 60	< 59
gamma-BHC	< 30	< 30	< 30
gamma-Chlordane	< 30	< 30	< 30
Heptachlor	< 30	< 30	< 30
Heptachlor epoxide A	< 30	< 30	< 30
Heptachlor epoxide B	37 C	< 30	< 30
Methoxychlor	< 300	< 300	< 300
Toxaphene	< 600	< 600	< 590

(1) Soil samples collected in six-inch tubes beginning with the depth indicated.

"COMP" = Composite Sample

b = calibration standard failure; does not affect the integrity of the data.

C = presence confirmed, but confirmation concentration differed by more than a factor of two.

TABLE 5: SOIL AND GROUNDWATER CHEMICAL TEST RESULTS- Total Petroleum Hydrocarbons
Third and Brush Streets
Port of Oakland
Oakland, California

LOCATION MATRIX	B-1	B-1	B-1	B-1	B-1	B-1	B-1	B-1	B-1-WI	B-2	B-2	B-2
COLLECTION DATE	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01
ANALYTICAL METHOD	8015M	8015M	8015M	8015M	8015M	8015M	8015M	8015M	8015M	8015M	8015M	8015M
BEGINNING DEPTH ⁽¹⁾	1.0	2.0	5.0	7.5	9.5	1.0	2.0	5.0	GW	1.0	2.0	5.0
UNITS	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/L	mg/kg	mg/kg	mg/kg
Gasoline	1YH	14 YL	<1	<1.1	<1	<1	<1	<1	<1	<1	<1.1	<0.91
Diesel	1300 YH	5900 YH	6900 YH	1.8 Y	<1	<1	<1	--	--	3 Y	8.2 Y	<1
Motor Oil	2000 L	3400 L	4000 L	<5	<5	<5	<5	--	--	18	22	<5
Oil and Grease	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

- (1) Soil samples collected in six-inch tubes beginning with the depth indicated.
- Y = Sample exhibits fuel pattern which does not resemble standard.
- H = Heavier hydrocarbons contributed to the quantitation.
- L = Lighter hydrocarbons contributed to the quantitation.

**TABLE 5: SOIL AND GROUNDWATER CHEMICAL TEST RESULTS- Total Petroleum Hydrocarbons
Third and Brush Streets
Port of Oakland
Oakland, California**

LOCATION MATRIX	B-2-WI Aqueous	B-3 Soil	B-3 Soil	B-3 Soil	B-3 Soil	B-3 Soil	B-3-WI Aqueous
COLLECTION DATE	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01
ANALYTICAL METHOD	8015M/1664	8015M	8015M	8015M	8015M	8015M	8015M/1664
BEGINNING DEPTH ⁽¹⁾	GW	1.0	3.0	4.5	7.5	9.5	GW
UNITS	µg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/L
Gasoline	860 YL	1.5 YH	5.4 YH	0.99 YH	11000 H	1400	97000
Diesel	170	6.4 YH	16 YL	9.8 YL	2600 YL	210 YL	11000 YL
Motor Oil	<300	13	<5	<5	<200	35 Y	<1500
Oil and Grease	<5.2 mg/L	--	--	--	--	--	8.1 mg/L

Notes:

- (1) Soil samples collected in six-inch tubes beginning with the depth indicated.
- Y = Sample exhibits fuel pattern which does not resemble standard.
- H = Heavier hydrocarbons contributed to the quantitation.
- L= Lighter hydrocarbons contributed to the quantitation.

TABLE 6: SOIL AND GROUNDWATER CHEMICAL TEST RESULTS- Metals

Third and Brush Streets
Port of Oakland
Oakland, California

LOCATION MATRIX	B-1 Soil	B-1 Soil	B-1 Soil	B-1 Soil	B-1 Soil	B-1 Soil	B-1 Soil	B-1 Soil	B-2 Soil	B-2 Soil	B-2 Soil
COLLECTION DATE	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01
ANALYTICAL METHOD	6010/7470	6010/7470	6010/7470	6010/7470	6010/7470	6010/7470	6010/7470	6010/7470	6010/7470	6010/7470	6010/7470
BEGINNING DEPTH ⁽¹⁾	1.0	2.0	5.0	7.5	9.5	1.0	2.0	5.0	2.0	2.0	5.0
UNITS	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Antimony	<2.7	<2.7	<2.8	<3	<2.8	<2.6	<2.8	<2.8	<2.8	<2.8	<2.8
Arsenic	1.9	0.95	1.3	1.6	2.1	4.1	2.1	1.3	1.3	1.8	
Barium	79	68	41	50	67	72	35	35	35	46	
Beryllium	1	0.13	0.15	0.25	0.28	0.19	0.11	0.11	0.11	0.14	
Cadmium	2	0.65	0.8	1.3	1.5	2.8	1.2	1.2	1.2	1.5	
Cobalt	20	19	23	32.0	43.0	18	14	14	14	19	
Chromium	7	2.6	3.7	6.4	4.4	17	5	5	5	5	
Copper	22	9.2	8.7	6.7	7.5	25	15	15	15	15	
Mercury	69	31	2.2	2.2	2.8	13	9.2	9.2	9.2	16	
Molybdenum	0	0.19	0.039	0.019	<0.017	0.094	0.038	0.038	0.038	0.032	
Nickel	<0.9	<0.9	<0.94	<0.99	<0.93	<0.87	<0.93	<0.93	<0.93	<0.92	
Lead	22	14	16	30	37	27	29	29	29	37	
Silver	0	0.24	<0.23	0.31	0.23	0.68	<0.23	<0.23	<0.23	0.33	
Selenium	<0.23	<0.23	<0.23	<0.25	<0.23	0.32	<0.23	<0.23	<0.23	<0.23	
Thallium	<0.23	<0.23	<0.23	<0.25	<0.23	<0.22	<0.23	<0.23	<0.23	<0.23	
Vanadium	21	11	19	26	24	37	12	12	12	14	
Zinc	55	36	11	14	19	55	28	28	28	29	

Notes:

(1) Soil samples collected in six-inch tubes beginning with the depth indicated.

TABLE 6: SOIL AND GROUNDWATER CHEMICAL TEST RESULTS- Metals
Third and Brush Streets
Port of Oakland
Oakland, California

LOCATION MATRIX	B-2-WI	B-3	B-3	B-3	B-3	B-3	B-3
COLLECTION DATE	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01	10/18/01
ANALYTICAL METHOD	6010/7470	6010/7470	6010/7470	6010/7470	6010/7470	6010/7470	6010/7470
BEGINNING DEPTH ⁽¹⁾	GW	1.0	3.0	4.5	7.5	9.5	9.5
UNITS	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Antimony	< 60	5.3	< 3	< 3	< 2.8	< 3	< 3
Arsenic	8.4	7.5	1.8	1	1.20	1.50	1.50
Barium	540	480	63	45	37	46	46
Beryllium	< 2	0.22	0.19	0.17	0	0	0
Cadmium	< 5	7.0	0.92	0.76	0.9	1	1
Cobalt	< 10	33	25	22	29	29	29
Chromium	< 20	6.4	3.5	2.4	2	8	8
Copper	13	790	13	5.8	6	7	7
Mercury	19	24000	36	3.4	2	3	3
Molybdenum	0.21	0.99	0.18	< 0.016	0	0	0
Nickel	< 20	1.9	< 1	< 0.99	< 0.95	< 1	< 1
Lead	< 20	44	19	16	20	32	32
Silver	5	0.59	0.31	< 0.25	< 0.24	< 0.25	< 0.25
Selenium	< 5	1.8	< 0.25	< 0.25	< 0.24	< 0.25	< 0.25
Thallium	16	< 0.21	< 0.25	< 0.25	< 0.24	< 0.25	< 0.25
Vanadium	< 10	26	16	15	17	24	24
Zinc	49	2800	44	12	12	15	15


Notes:

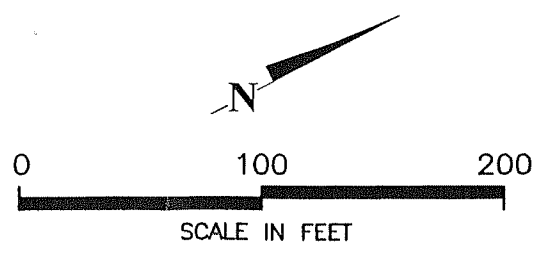
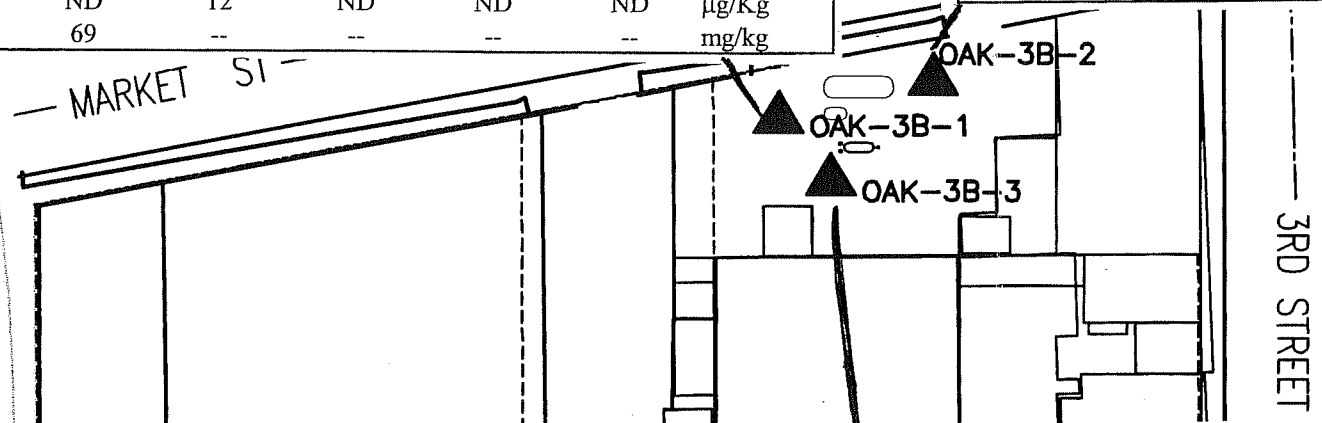
(1) Soil samples collected in six-inch tubes beginning with the depth indicated.

B-1	1.0'	2.0'	5.0'	7.5'	9.5'	Units
Gasoline	1.0	14	ND	ND	ND	mg/kg
Diesel	1,300	5,900	6,900	1.8	ND	mg/kg
Motor oil	2,000	3,400	4,000	ND	ND	mg/kg
Benzene	ND	290	ND	ND	ND	µg/Kg
Toluene	16	23	ND	ND	ND	µg/Kg
Ethylbenzene	ND	ND	ND	ND	ND	µg/Kg
m,p-Xylenes	6.6	15	ND	ND	ND	µg/Kg
o-Xylene	ND	12	ND	ND	ND	µg/Kg
Lead	69	--	--	--	--	mg/kg

B-2	1.0'	2.0'	5.0'	Units
Gasoline	ND	ND	ND	mg/kg
Diesel	3.0	8.2	ND	mg/kg
Motor oil	18	22	ND	mg/kg
Benzene	ND	ND	ND	µg/Kg
Toluene	13	35	6.6	µg/Kg
Ethylbenzene	ND	8.3	ND	µg/Kg
m,p-Xylenes	7.9	30	5.7	µg/Kg
o-Xylene	ND	8.5	ND	µg/Kg

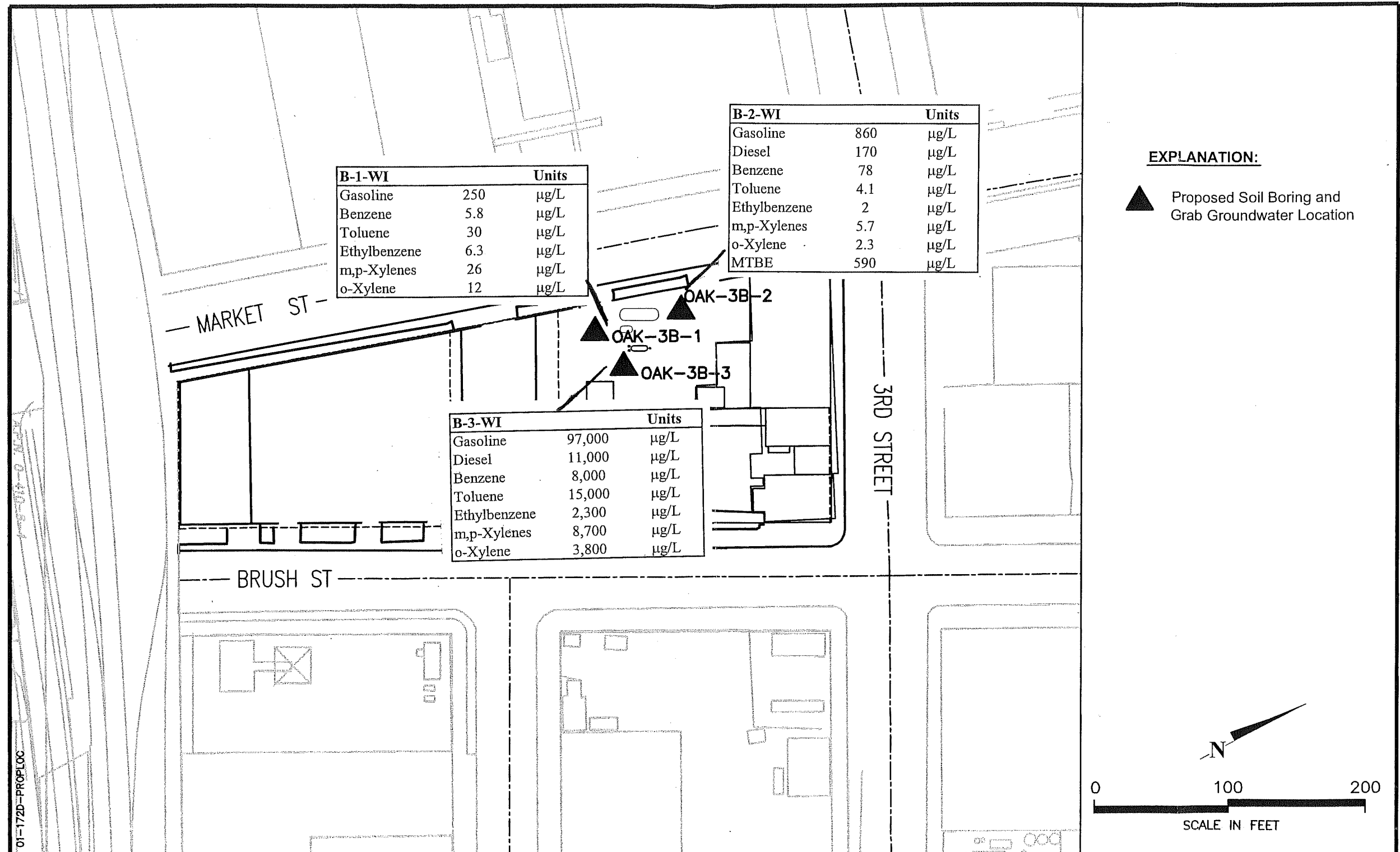
B-3	1.0'	3.0'	4.5'	7.5'	9.5'	Units
Gasoline	1.5	5.4	0.99	11,000	1,400	mg/kg
Diesel	6.4	16	9.8	2,600	210	mg/kg
Motor oil	13	ND	ND	ND	35	mg/kg
Benzene	ND	58	9.7	40,000	8,800	µg/Kg
Toluene	ND	12	1.7	30,000	74,000	µg/Kg
Ethylbenzene	7	23	2.3	150,000	23,000	µg/Kg
m,p-Xylenes	8.3	30	2.2	310,000	96,000	µg/Kg
o-Xylene	ND	18	1.3	100,000	37,000	µg/Kg
Lead	24,000	--	--	--	--	mg/kg

EXPLANATION:
 Proposed Soil Boring and Grab Groundwater Location



01-172D-PROPLOC

<p>IRIS ENVIRONMENTAL 1615 Broadway, Suite 1003, Oakland, California 94612</p>	<p align="center">Soil Chemical Compound Detections: TPH, BTEX, and Lead (>50 ppm) 3rd and Brush Streets Facility Port of Oakland Oakland, California</p>	<p align="right">Figure</p>
<p>Drafter: MAS Date: 8/24/01 Contract Number: 01-172D Approved: Revised:</p>		



01-172D-PROPLOC

<p>IRIS ENVIRONMENTAL 1615 Broadway, Suite 1003, Oakland, California 94612</p>	<p>Groundwater Chemical Compound Detections: TPH, BTEX, and MTBE 3rd and Brush Streets Facility Port of Oakland Oakland, California</p>	<p>Figure</p>
<p>Drafter: MAS Date: 8/24/01 Contract Number: 01-172D</p>		<p>Approved: Revised:</p>