Faxed for your review
Rene
8/12/93

PORT OF OAKLAND

August 11, 1993

Mr. Rafat A. Shahid, Director
Alameda County Department of Environmental Health
80 Swan Way, Suite 210
Oakland, CA 94621

Dear Mr. Shahid:

The purpose of this letter is to inform you that a contractor has discovered hydrocarbons in soil while excavating in the Port's marine terminal area. The hydrocarbons were detected near Seventh and Ferry Streets after one of the contractor's workers reported a hydrocarbon odor. Port Environmental Department staff obtained three soil samples from the worksite where the odor was identified and submitted them to a laboratory where they were analyzed for the presence of hydrocarbons.

The attached laboratory results show that elevated levels of gasoline, diesel, BTEX and motor oil were detected in the soil samples. The contractor previously working in this area has stopped work and the Port has contracted with another contractor, specifically trained and licensed to handle hazardous waste, who will remove the affected soil. The Port will have mobile laboratory capabilities on site during the soil removal operation to help delineate the extent of the affected soils. The soil to be removed will be stockpiled on plastic at a location adjacent to the excavated area. The stockpiled soil will then be sampled and the resulting analyses will provide a characterization of the stockpile for use in determining the appropriate disposal options.

After we have further characterized the area, we will submit a follow-up letter informing you of the site's status. If you have any questions about this issue, please do not hesitate to contact me at 272-1373.

Sincerely,

Patricia Murphy
Associate Environmental Scientist

Attachment

530 Water Street ■ Jack London's Waterfront ■ P.O. Box 2064 ■ Oakland, California 94604-2064
Telephone (510) 272-1100 ■ Fax (510) 272-1172 ■ Cable address, PORTOFOAK, Oakland

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 111821
CLIENT: URIBE & ASSOCIATES
PROJECT ID: 96-216
LOCATION: 7TH ST/FERRY

DATE SAMPLED: 08/05/93
DATE RECEIVED: 08/05/93
DATE EXTRACTED: 08/06/93
DATE ANALYZED: 08/06-09/93
DATE REPORTED: 08/09/93

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	MOTOR OIL RANGE (mg/Kg)
111821-1	7TH-SOIL-1	**	170	4,100
111821-2	7TH-SOIL-2	**	1	ND(30)
111821-3	7TH-SOIL-3	**	7,900	31,000

ND = Not Detected at or above reporting limit.

* Reporting limit applies to all analytes.

** Kerosene range not reported due to overlap of hydrocarbon ranges.

QA/QC SUMMARY

RPD,%	24
RECOVERY, %	82

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 111821
CLIENT: URIBE & ASSOCIATES
PROJECT ID: 96-216
LOCATION: 7TH ST/FERRY

DATE SAMPLED: 08/05/93
DATE RECEIVED: 08/05/93
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DATE REPORTED: 08/09/93

Total Volatile Hydrocarbons with BTXE in Soils & Wastes
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
111821-1	7TH-SOIL-1	1,800	ND(1000)	ND(1000)	31,000	190,000
111821-3	7TH-SOIL-3	4,900	6,000	43,000	64,000	230,000

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 111821-003
SAMPLE ID: 7TH-SOIL-3

EPA 8270

BASE/NEUTRAL COMPOUNDS	RESULT mg/Kg	REPORTING LIMIT * mg/Kg
Dimethylphthalate	ND	100
Acenaphthylene	ND	100
2,6-Dinitrotoluene	ND	100
3-Nitroaniline	ND	500
Acenaphthene	ND	100
Dibenzofuran	ND	100
2,4-Dinitrotoluene	ND	100
Diethylphthalate	ND	100
4-Chlorophenyl-phenylether	ND	100
Fluorene	ND	100
4-Nitroaniline	ND	500
N-Nitrosodiphenylamine	ND	100
Azobenzene	ND	100
4-Bromophenyl-phenylether	ND	100
Hexachlorobenzene	ND	100
Phenanthrene	ND	100
Anthracene	ND	100
Di-n-butylphthalate	ND	100
Fluoranthene	ND	100
Pyrene	ND	100
Butylbenzylphthalate	ND	100
3,3'-Dichlorobenzidine	ND	500
Benzo(a)anthracene	ND	100
Chrysene	ND	100
Bis(2-ethylhexyl)phthalate	ND	100
Di-n-octylphthalate	ND	100
Benzo(b)fluoranthene	ND	100
Benzo(k)fluoranthene	ND	100
Benzo(a)pyrene	ND	100
Indeno(1,2,3-cd)pyrene	ND	100
Dibenzo(a,h)anthracene	ND	100
Benzo(g,h,i)perylene	ND	100

* Reporting limits raised due to high hydrocarbon background.
ND = Not detected at or above reporting limit.

QA/QC SUMMARY: % SURROGATE RECOVERIES

2-Fluorophenol	-diluted out-	Nitrobenzene-d5	-diluted out-
Phenol-d6	-diluted out-	2-Fluorobiphenyl	-diluted out-
2,4,6-Tribromophenol	-diluted out-	Terphenyl-d14	-diluted out-

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 111821
CLIENT: URIBE & ASSOCIATES
PROJECT ID: 96-216
LOCATION: 7TH ST/FERRY

DATE SAMPLED: 08/05/93
DATE RECEIVED: 08/06/93
DATE ANALYZED: 08/07/93
DATE REPORTED: 08/09/93

Total Volatile Hydrocarbons with BTXE in Soils & Wastes
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
111821-2	7TH-SOIL-2	ND(1)	ND(5)	ND(5)	9	31

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 111821-003
CLIENT: URIBE & ASSOCIATES
PROJECT ID: 96-216
LOCATION: 7TH STREET/FERRY
SAMPLE ID: 7TH-SOIL-3

DATE SAMPLED: 08/05/93
DATE RECEIVED: 08/05/93
DATE EXTRACTED: 08/06/93
DATE ANALYZED: 08/06/93
DATE REPORTED: 08/09/93

EPA 8270: Base/Neutral and Acid Extractables in Soils & Wastes
Extraction Method: EPA 3550 Sonication

ACID COMPOUNDS	RESULT mg/Kg	REPORTING LIMIT * mg/Kg
Phenol	ND	100
2-Chlorophenol	ND	100
Benzyl Alcohol	ND	100
2-Methylphenol	ND	100
4-Methylphenol	ND	100
2-Nitrophenol	ND	500
2,4-Dimethylphenol	ND	100
Benzoic Acid	ND	500
2,4-Dichlorophenol	ND	500
4-Chloro-3-methylphenol	ND	100
2,4,6-Trichlorophenol	ND	100
2,4,5-Trichlorophenol	ND	500
2,4-Dinitrophenol	ND	500
4-Nitrophenol	ND	500
4,6-Dinitro-2-methylphenol	ND	500
Pentachlorophenol	ND	500
BASE/NEUTRAL COMPOUNDS		
N-Nitrosodimethylamine	ND	100
Aniline	ND	100
Bis(2-chloroethyl)ether	ND	100
1,3-Dichlorobenzene	ND	100
1,4-Dichlorobenzene	ND	100
1,2-Dichlorobenzene	ND	100
Bis(2-chloroisopropyl)ether	ND	100
N-Nitroso-di-n-propylamine	ND	100
Hexachloroethane	ND	100
Nitrobenzene	ND	100
Isophorone	ND	100
Bis(2-chloroethoxy)methane	ND	100
1,2,4-Trichlorobenzene	ND	100
Naphthalene	ND	100
4-Chloroaniline	ND	100
Hexachlorobutadiene	ND	100
2-Methylnaphthalene	ND	100
Hexachlorocyclopentadiene	ND	100
2-Chloronaphthalene	ND	100
2-Nitroaniline	ND	500

Curtis & Tompkins, L

LABORATORY NUMBER: 111821-2
CLIENT: URIBE & ASSOCIATES
PROJECT ID: 96-216
LOCATION: 7TH ST/FERRY
SAMPLE ID: 7TH-SOIL-2

DATE SAMPLED: 08/05/93
DATE RECEIVED: 08/06/93
DATE ANALYZED: 08/06/93
DATE REPORTED: 08/09/93

EPA METHOD 8240: VOLATILE ORGANICS IN SOILS & WASTES

COMPOUND	Result (ug/Kg)	Reporting Limit (ug/Kg)
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Acetone	ND	20
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
Chlorobenzene	ND	5
Ethyl benzene	7	5
Styrene	ND	5
Total xylenes	21	5

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2-Dichloroethane-d4	100 %
Toluene-d8	98 %
Bromofluorobenzene	89 %

D & M LABORATORIES
3420 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808, Petaluma, CA 94953-0808
Telephone: 707-763-5265 FAX: 707-763-4065

ATTN: [redacted] Jan Schutze (17 Pages Total)
Jan Schutze
Dames & Moore
2101 Webster St., Suite 300
Oakland, CA 94612

Client Code: DMOAK16
Survey
PORT OF OAKLAND

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 922150
Date Collected: 07/16/92
Date Analyzed: 07/19/92
Date Received: 07/16/92
Date Reported: 07/20/92

ASSAY:
ARSENIC (EPA 7060),3050 ACID DIGEST
SELENIUM (EPA 7740),3050 ACID DIGEST
THALLIUM (EPA 7840),3050 ACID DIGEST
MERCURY (EPA 7470/7471)

MATRIX: SOIL, ACID DIGEST

LABNO	SMPLNO	COMPOUND	FOUND mg/kg	CA TTLC LEV	DET.LIM. mg/kg
19096	SAMPLE-A	AS	2	500	0.25
		SE	ND	100	0.25
		TL	12	700	7.5
		HG	ND	20	0.2
19097	SAMPLE-B	AS	3.7	500	0.25
		SE	ND	100	0.25
		TL	13	700	7.5
		HG	ND	20	0.2
19098	SAMPLE-C	AS	2	500	0.25
		SE	ND	100	0.25
		TL	10	700	7.5
		HG	ND	20	0.2
19099	SAMPLE-D	AS	2	500	0.25
		SE	ND	100	0.25
		TL	ND	700	7.5
		HG	0.5	20	0.2

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 922150

LABNO	SMPLNO	COMPOUND	FOUND mg/kg	CA TTLC LEV		DET.LIM. mg/kg
	MB	AS	ND			0.25
		SE	ND			0.25
		TL	ND			7.5
		HG	ND			0.2
				SPIKE LEVELS		
	MBS	AS	11.6	12.5	mg/kg	2.5
		SE	12.1	12.5	mg/kg	2.5
		TL	255	250.0	mg/kg	7.5
		HG	0.9	1.0	mg/kg	0.2
	MX	AS	4,490			500
		SE	ND			0.25
		TL	11			7.5
		HG	ND			0.2
				SPIKE LEVELS		
	MS	AS	6,850	2500.0	mg/kg	500
		SE	10.5	12.5	mg/kg	2.5
		TL	274	250.0	mg/kg	7.5
		HG	1.0	1.0	mg/kg	0.2
				SPIKE LEVELS		
	MSD	AS	7,100	2500.0	mg/kg	500
		SE	10.9	12.5	mg/kg	2.5
		TL	277	250.0	mg/kg	7.5
		HG	1.0	1.0	mg/kg	0.2

LABORATORY RESULTS

Laboratory Job No.: 922150
Date Collected: 07/16/92
Date Received: 07/16/92
Date Analyzed: 07/17/92
Date Reported: 07/20/92

ASSAY:METAL SCAN BY ICP(EPA 6010)

LABNO	SMPLNO-ID	RESULTS		CA TTLC LEVEL	DET. LIM.	
19096	SAMPLE-A SOIL					
	AG	ND		500	2.5	mg/kg
	BA	38.5	mg/kg	10,000	2.5	mg/kg
	BE	ND		75	0.25	mg/kg
	CD	ND		100	2.5	mg/kg
	CO	ND		8,000	5.0	mg/kg
	CR	25.4	mg/kg	2,500	2.5	mg/kg
	CU	8.0	mg/kg	2,500	2.5	mg/kg
	MO	ND		3,500	5.0	mg/kg
	NI	16	mg/kg	2,000	5.0	mg/kg
	PB	9.8	mg/kg	1,000	7.5	mg/kg
	SB	ND		500	5.0	mg/kg
	V	20	mg/kg	2,400	2.5	mg/kg
	ZN	27.8	mg/kg	5,000	2.5	mg/kg
19097	SAMPLE-B SOIL					
	AG	ND		500	2.5	mg/kg
	BA	109	mg/kg	10,000	2.5	mg/kg
	BE	ND		75	0.25	mg/kg
	CD	ND		100	2.5	mg/kg
	CO	7.3	mg/kg	8,000	5.0	mg/kg
	CR	29.9	mg/kg	2,500	2.5	mg/kg
	CU	27.2	mg/kg	2,500	2.5	mg/kg
	MO	ND		3,500	5.0	mg/kg
	NI	21	mg/kg	2,000	5.0	mg/kg
	PB	142	mg/kg	1,000	7.5	mg/kg
	SB	ND		500	5.0	mg/kg
	V	29.2	mg/kg	2,400	2.5	mg/kg
	ZN	203	mg/kg	5,000	2.5	mg/kg

LABORATORY RESULTS

Laboratory Job No.: 922150

LABNO	SMPLNO-ID	RESULTS			DET. LIM.	
19098	SAMPLE-C SOIL			CA TTLC LEVEL		
	AG	ND		500	2.5	mg/kg
	BA	75.9	mg/kg	10,000	2.5	mg/kg
	BE	ND		75	0.25	mg/kg
	CD	ND		100	2.5	mg/kg
	CO	7.3	mg/kg	8,000	5.0	mg/kg
	CR	30.2	mg/kg	2,500	2.5	mg/kg
	CU	22	mg/kg	2,500	2.5	mg/kg
	MO	ND		3,500	5.0	mg/kg
	NI	25	mg/kg	2,000	5.0	mg/kg
	PB	43	mg/kg	1,000	7.5	mg/kg
	SB	ND		500	5.0	mg/kg
	V	28.4	mg/kg	2,400	2.5	mg/kg
	ZN	111	mg/kg	5,000	2.5	mg/kg
19099	SAMPLE-D SOIL			CA TTLC LEVEL		
	AG	ND		500	2.5	mg/kg
	BA	151	mg/kg	10,000	2.5	mg/kg
	BE	ND		75	0.25	mg/kg
	CD	ND		100	2.5	mg/kg
	CO	8.3	mg/kg	8,000	5.0	mg/kg
	CR	31.3	mg/kg	2,500	2.5	mg/kg
	CU	41.9	mg/kg	2,500	2.5	mg/kg
	MO	ND		3,500	5.0	mg/kg
	NI	32	mg/kg	2,000	5.0	mg/kg
	PB	204	mg/kg	1,000	7.5	mg/kg
	SB	ND		500	5.0	mg/kg
	V	34.1	mg/kg	2,400	2.5	mg/kg
	ZN	195	mg/kg	5,000	2.5	mg/kg

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 922150

LABNO	SMPLNO-ID	RESULTS		SPIKE LEVELS		DET. LIM.	
	MB SOIL						
	AG	ND				2.5	mg/kg
	BA	ND				2.5	mg/kg
	BE	ND				0.25	mg/kg
	CD	ND				2.5	mg/kg
	CO	ND				5.0	mg/kg
	CR	ND				2.5	mg/kg
	CU	ND				2.5	mg/kg
	MO	ND				5.0	mg/kg
	NI	ND				5.0	mg/kg
	PB	ND				7.5	mg/kg
	SB	ND				5.0	mg/kg
	V	ND				2.5	mg/kg
	ZN	ND				2.5	mg/kg
	MBS SOIL						
	AG	ND		25	mg/kg	2.5	mg/kg
	BA	26.8	mg/kg	25	mg/kg	2.5	mg/kg
	BE	2.2	mg/kg	2.5	mg/kg	0.25	mg/kg
	CD	24	mg/kg	25	mg/kg	2.5	mg/kg
	CO	26	mg/kg	25	mg/kg	5.0	mg/kg
	CR	25	mg/kg	25	mg/kg	2.5	mg/kg
	CU	25.3	mg/kg	25	mg/kg	2.5	mg/kg
	MO	52.1	mg/kg	50	mg/kg	5.0	mg/kg
	NI	27	mg/kg	25	mg/kg	5.0	mg/kg
	PB	51	mg/kg	50	mg/kg	7.5	mg/kg
	SB	49	mg/kg	50	mg/kg	5.0	mg/kg
	V	25.6	mg/kg	25	mg/kg	2.5	mg/kg
	ZN	26.2	mg/kg	25	mg/kg	2.5	mg/kg

LABORATORY RESULTS

Laboratory Job No.: 922150

LABNO	SMPLNO-ID	RESULTS		SPIKE LEVELS		DET. LIM.	
	MX SOIL						
	AG	ND				2.5	mg/kg
	BA	89.4	mg/kg			2.5	mg/kg
	BE	0.45	mg/kg			0.25	mg/kg
	CD	ND				2.5	mg/kg
	CO	17	mg/kg			4.9	mg/kg
	CR	167	mg/kg			2.5	mg/kg
	CU	122	mg/kg			2.5	mg/kg
	MO	ND				4.9	mg/kg
	NI	75.1	mg/kg			4.9	mg/kg
	PB	ND				7.4	mg/kg
	SB	ND				4.9	mg/kg
	V	63.0	mg/kg			2.5	mg/kg
	ZN	45.8	mg/kg			2.5	mg/kg
	MS SOIL						
	AG	4.0	mg/kg	25	mg/kg	2.4	mg/kg
	BA	118	mg/kg	25	mg/kg	2.4	mg/kg
	BE	1.9	mg/kg	2.5	mg/kg	0.24	mg/kg
	CD	22	mg/kg	25	mg/kg	2.4	mg/kg
	CO	42	mg/kg	25	mg/kg	4.9	mg/kg
	CR	207	mg/kg	25	mg/kg	2.4	mg/kg
	CU	155	mg/kg	25	mg/kg	2.4	mg/kg
	MO	35	mg/kg	50	mg/kg	4.8	mg/kg
	NI	91.7	mg/kg	25	mg/kg	4.9	mg/kg
	PB	49	mg/kg	50	mg/kg	7.3	mg/kg
	SB	9.6	mg/kg	50	mg/kg	4.9	mg/kg
	V	85.0	mg/kg	25	mg/kg	2.4	mg/kg
	ZN	71.8	mg/kg	25	mg/kg	2.4	mg/kg

LABORATORY RESULTS

Laboratory Job No.: 922150

LABNO	SMPLNO-ID	RESULTS	SPIKE LEVELS	DET. LIM.
	MSD SOIL			
	AG	ND	25 mg/kg	2.5 mg/kg
	BA	117 mg/kg	25 mg/kg	2.5 mg/kg
	BE	2.0 mg/kg	2.5 mg/kg	0.25 mg/kg
	CD	23 mg/kg	25 mg/kg	2.5 mg/kg
	CO	40 mg/kg	25 mg/kg	5.0 mg/kg
	CR	179 mg/kg	25 mg/kg	2.5 mg/kg
	CU	133 mg/kg	25 mg/kg	2.5 mg/kg
	MO	34 mg/kg	50 mg/kg	5.0 mg/kg
	NI	93.3 mg/kg	25 mg/kg	5.0 mg/kg
	PB	55 mg/kg	50 mg/kg	7.5 mg/kg
	SB	14 mg/kg	50 mg/kg	5.0 mg/kg
	V	85.7 mg/kg	25 mg/kg	2.5 mg/kg
	ZN	69.4 mg/kg	25 mg/kg	2.5 mg/kg

NOTE: THE MATRIX SPIKE RECOVERY WAS LOW DUE TO SAMPLE MATRIX EFFECTS. THE MBS RECOVERY WAS ACCEPTABLE.

ND=Not Detected

LABORATORY RESULTS

Date Collected: 07/16/92
Date Extracted: 07/17/92
Date Analyzed: 07/17/92

Laboratory Job No.: 922150
Date Received: 07/16/92
Date Reported: 07/20/92

ASSAY: TPH/GASOLINE (EPA 5030/MOD. 8015)
MATRIX: SOIL

LABNO SMPLNO-ID	RESULTS mg/kg	DET. LIM. mg/kg
19096 SAMPLE-A GASOLINE	ND	0.20
19097 SAMPLE-B GASOLINE	ND	0.20
19098 SAMPLE-C GASOLINE	ND	0.20
19099 SAMPLE-D GASOLINE	ND	0.20
MB GASOLINE	ND	0.20
MBS GASOLINE	0.97	0.20
MX GASOLINE	ND	0.20
MS GASOLINE	4.6	0.20

LABORATORY RESULTS

Laboratory Job No.: 922150

ASSAY: TPH/GASOLINE (EPA 5030/MOD. 8015)
MATRIX: SOIL

LABNO	SMPLNO-ID	RESULTS mg/kg	DET. LIM. mg/kg
	MSD		
	GASOLINE	3.8	0.20

NOTE: MBS WAS SPIKED AT 1.0 mg/L. MS AND MSD WERE SPIKED AT 5.0 mg/kg.

MBS

LABORATORY RESULTS

Date Collected: 07/16/92
Date Extracted: 07/17/92
Date Analyzed: 07/17/92

Laboratory Job No.: 922150
Date Received: 07/16/92
Date Reported: 07/20/92

ASSAY: BTEX (EPA 5030/8020)
MATRIX: SOIL

LABNO SMPLNO-ID	RESULTS mg/kg	DET. LIM. mg/kg
19096 SAMPLE-A		
BENZENE	ND	0.0050
TOLUENE	ND	0.0050
ETHYLBENZENE	ND	0.0050
XYLENES	ND	0.0050
19097 SAMPLE-B		
BENZENE	ND	0.0050
TOLUENE	ND	0.0050
ETHYLBENZENE	ND	0.0050
XYLENES	ND	0.0050
19098 SAMPLE-C		
BENZENE	ND	0.0050
TOLUENE	ND	0.0050
ETHYLBENZENE	ND	0.0050
XYLENES	ND	0.0050
19099 SAMPLE-D		
BENZENE	ND	0.0050
TOLUENE	ND	0.0050
ETHYLBENZENE	ND	0.0050
XYLENES	ND	0.0050
MB		
BENZENE	ND	0.0050
TOLUENE	ND	0.0050
ETHYLBENZENE	ND	0.0050
XYLENES	ND	0.0050

LABORATORY RESULTS

Laboratory Job No.: 922150

ASSAY: BTEX (EPA 5030/8020)
MATRIX: SOIL

LABNO SMPLNO-ID	RESULTS mg/kg	DET. LIM. mg/kg
MBS		
BENZENE	0.010	0.0050
TOLUENE	0.010	0.0050
ETHYLBENZENE	0.010	0.0050
XYLENES	0.029	0.0050
MX		
BENZENE	ND	0.0050
TOLUENE	ND	0.0050
ETHYLBENZENE	ND	0.0050
XYLENES	ND	0.0050
MS		
BENZENE	0.049	0.0050
TOLUENE	0.048	0.0050
ETHYLBENZENE	0.048	0.0050
XYLENES	0.14	0.0050
MSD		
BENZENE	0.051	0.0050
TOLUENE	0.050	0.0050
ETHYLBENZENE	0.050	0.0050
XYLENES	0.15	0.0050

NOTE: MBS WAS SPIKED AT 0.010 mg/L FOR ALL ANALYTES EXCEPT FOR XYLENES WHICH WERE SPIKED AT 0.030 mg/L.

MS AND MSD WERE SPIKED AT 0.050 mg/kg FOR ALL ANALYTES EXCEPT FOR XYLENES WHICH WERE SPIKED AT 0.15 mg/kg.

MS

L A B O R A T O R Y R E S U L T S

Date Collected: 07/16/92
Date Extracted: 07/17/92
Date Analyzed: 07/17/92

Laboratory Job No.: 922150
Date Received: 07/16/92
Date Reported: 07/20/92

ASSAY: TPH/DIESEL (EPA 3550/8015 MOD.)
MATRIX: SOIL

LAB NUMBER	SAMPLE NUMBER	RESULTS mg/kg	DET.LIM mg/kg	
19096	SAMPLE-A			
	DIESEL	ND	5.0	
19097	SAMPLE-B			
	DIESEL	12	5.0	< 100 mg/kg ok
19098	SAMPLE-C			
	DIESEL	13	5.0	"
19099	SAMPLE-D			
	DIESEL	13	5.0	"
	MB			
	DIESEL	ND	5.0	
	MBS			
	DIESEL	120	5.0	
	MX			
	DIESEL	ND	5.0	
	MS			
	DIESEL	160	5.0	

LABORATORY RESULTS

Laboratory Job No.: 922150

LAB NUMBER	SAMPLE NUMBER	RESULTS mg/kg	DET.LIM mg/kg
19104	MSD DIESEL	130	5.0

NOTE: MBS, MS, AND MSD WERE SPIKED AT 130 mg/kg.

NOTE: CHROMATOGRAMS FOR SAMLPLES 19097 (B), 19098 (C), AND 19099 (D) DID NOT RESEMBLE THE DIESEL PATTERN BUT INDICATED THE PRESENCE OF HIGH BOILING POINT FUEL HYDROCARBONS.

LABORATORY RESULTS

Date Collected: 07/16/92
Date Extracted: 07/17/92
Date Analyzed: 07/17/92

Laboratory Job No.: 922150
Date Received: 07/16/92
Date Reported: 07/20/92

ASSAY: CHLORINATED BIPHENYL EPA (8080/3540)
MATRIX: SOIL

LABNO SMPLNO-ID		RESULTS	DET.LIM.		
19096	SAMPLE-A				SRL TTLC
	ARO1016	ND	50	ug/kg	
	ARO1221	ND	50	ug/kg	
	ARO1232	ND	50	ug/kg	
	ARO1242	ND	50	ug/kg	
	ARO1248	ND	50	ug/kg	
	ARO1254	ND	50	ug/kg	
	ARO1260	ND	50	ug/kg	
19097	SAMPLE-B				
	ARO1016	ND	50	ug/kg	
	ARO1221	ND	50	ug/kg	
	ARO1232	ND	50	ug/kg	
	ARO1242	ND	50	ug/kg	
	ARO1248	ND	50	ug/kg	
	ARO1254	ND	50	ug/kg	
	ARO1260	140 µg/kg?	50	ug/kg	5.0 mg/L 50 mg/kg
19098	SAMPLE-C				
	ARO1016	ND	50	ug/kg	
	ARO1221	ND	50	ug/kg	
	ARO1232	ND	50	ug/kg	
	ARO1242	ND	50	ug/kg	
	ARO1248	ND	50	ug/kg	
	ARO1254	ND	50	ug/kg	
	ARO1260	170 µg/kg?	50	ug/kg	" "

LABORATORY RESULTS

Laboratory Job No.: 922150

LABNO SMPLNO-ID	RESULTS	DET.LIM.	
19099 SAMPLE-D			
ARO1016	ND	50	ug/kg
ARO1221	ND	50	ug/kg
ARO1232	ND	50	ug/kg
ARO1242	ND	50	ug/kg
ARO1248	ND	50	ug/kg
ARO1254	ND	50	ug/kg
ARO1260	ND	50	ug/kg
19100 MB			
ARO1016	ND	50	ug/kg
ARO1221	ND	50	ug/kg
ARO1232	ND	50	ug/kg
ARO1242	ND	50	ug/kg
ARO1248	ND	50	ug/kg
ARO1254	ND	50	ug/kg
ARO1260	ND	50	ug/kg

NOTE: ALL SPIKED SAMPLES WERE SPIKED TO A LEVEL OF 1000 ug/kg WITH AROCLOR 1254.

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 922239

LABNO	SMPLNO-ID	RESULTS		DET. LIM.
	MS SOIL		SPIKE LEVEL	
	PB	7.08 mg/L	5.0 mg/L	0.15 mg/L
	MSD SOIL		SPIKE LEVEL	
	PB	7.35 mg/L	5.0 mg/L	0.15 mg/L

spike

ND=Not Detected

L A B O R A T O R Y R E S U L T S

Date Collected: 07/16/92
Date Extracted: 07/28/92
Date Analyzed: 07/31/92

Laboratory Job No.: 922239
Date Received: 07/28/92
Date Reported: 07/31/92

ASSAY: METAL SCAN BY ICP (EPA 6010)

LABNO	SMPLNO-ID	RESULTS		DET. LIM.
19811	04-01-8 SOIL		CA STLC LEVEL	
	PB	ND	5.0	0.15 mg/L
19812	05-01-4 SOIL		CA STLC LEVEL	
	PB	ND	5.0	0.15 mg/L
19813	05-01-8 SOIL		CA STLC LEVEL	
	PB	ND	5.0	0.15 mg/L
19814	06-01-4 SOIL		CA STLC LEVEL	
	PB	ND	5.0	0.15 mg/L
19815	06-01-8 SOIL		CA STLC LEVEL	
	PB	ND	5.0	0.15 mg/L
19816	18-01-4 SOIL		CA STLC LEVEL	
	PB	ND	5.0	0.15 mg/L
19817	18-01-8 SOIL		CA STLC LEVEL	
	PB	ND	5.0	0.15 mg/L
19818	17-01-4 SOIL		CA STLC LEVEL	
	PB	ND	5.0	0.15 mg/L
19819	17-01-8 SOIL		CA STLC LEVEL	
	PB	ND	5.0	0.15 mg/L
19820	16-01-4 SOIL		CA STLC LEVEL	
	PB	ND	5.0	0.15 mg/L

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 922239

LABNO	SMPLNO-ID	RESULTS		DET. LIM.
19821	16-01-8 SOIL		CA STLC LEVEL	
	PB	ND	5.0	0.15 mg/L
19822	09-01-4 SOIL		CA STLC LEVEL	
	PB	2.26 mg/L	5.0	0.15 mg/L
19823	09-01-8 SOIL		CA STLC LEVEL	
	PB	59.9 mg/L	5.0*	0.75 mg/L
19824	10-01-4 SOIL		CA STLC LEVEL	
	PB	5.57 mg/L	5.0*	0.15 mg/L
19825	10-01-8 SOIL		CA STLC LEVEL	
	PB	10.3 mg/L	5.0*	0.15 mg/L
19828	12-01-4 SOIL		CA STLC LEVEL	
	PB	21.3 mg/L	5.0*	0.15 mg/L
19829	12-01-8 SOIL		CA STLC LEVEL	
	PB	8.73 mg/L	5.0*	0.15 mg/L
19830	13-01-4 SOIL		CA STLC LEVEL	
	PB	11.2 mg/L	5.0*	0.15 mg/L
19831	13-01-8 SOIL		CA STLC LEVEL	
	PB	0.39 mg/L	5.0	0.15 mg/L
	MB SOIL			
	PB	ND		0.15 mg/L
spike	MBS SOIL		SPIKE LEVEL	
	PB	4.75 mg/L	5.0 mg/L	0.15 mg/L
	MX SOIL			
	PB	2.26 mg/L		0.15 mg/L

LABORATORY RESULTS

Date Collected: 07/16/92
Date Extracted: 07/13/92
Date Analyzed: 07/13/92

Laboratory Job No.: 922150
Date Received: 07/16/92
Date Reported: 07/20/92

ASSAY: CHLORINATED BIPHENYL (EPA 8080/3540)
MATRIX: SOIL

LABNO	SMPLNO-ID	RESULTS	DET.LIM.	
	MBS			
ARO1016		ND	50	ug/kg
ARO1221		ND	50	ug/kg
ARO1232		ND	50	ug/kg
ARO1242		ND	50	ug/kg
ARO1248		ND	50	ug/kg
ARO1254		880 ug/kg	50	ug/kg
ARO1260		ND	50	ug/kg
	MX			
ARO1016		ND	50	ug/kg
ARO1221		ND	50	ug/kg
ARO1232		ND	50	ug/kg
ARO1242		ND	50	ug/kg
ARO1248		ND	50	ug/kg
ARO1254		ND	50	ug/kg
ARO1260		ND	50	ug/kg
	MS			
ARO1016		ND	50	ug/kg
ARO1221		ND	50	ug/kg
ARO1232		ND	50	ug/kg
ARO1242		ND	50	ug/kg
ARO1248		ND	50	ug/kg
ARO1254		1,100 ug/kg	50	ug/kg
ARO1260		ND	50	ug/kg

D & M LABORATORIES

3700 Lakeville Highway, Petaluma, CA 94954
P.O.Box 808024, Petaluma, CA 94975-8024
Telephone: 707-763-8245 FAX: 707-763-4065

ATTN: PLEASE DELIVER ASAP, THX (4 Pages Total)
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Dames & Moore
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Oakland, CA 94612

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PORT OF OAKLAND
Project/Release
01938-007-043-0424

L A B O R A T O R Y R E S U L T S

Date Collected: 07/16/92
Date Extracted: 07/29/92
Date Analyzed: 07/31/92

Laboratory Job No.: 922239
Date Received: 07/28/92
Date Reported: 07/31/92

ASSAY: METAL SCAN BY ICP (EPA 6010)
WET EXTRACTION

LABNO	SMPLNO-ID	RESULTS		DET. LIM.
19810	04-01-4 SOIL		CA STLC LEVEL	
	PB	ND	5.0	0.15 mg/L
19826	11-01-4 SOIL		CA STLC LEVEL	
	PB	17.4 mg/L	5.0*	0.15 mg/L
19827	11-01-8 SOIL		CA STLC LEVEL	
	PB	4.46 mg/L	5.0	0.15 mg/L
	MB-2 SOIL			
	PB	ND		0.15 mg/L
	MBS-2 SOIL		SPIKE LEVEL	
	PB	4.69 mg/L	5.00 mg/L	0.15 mg/L
	MX-2 SOIL			
	PB	ND		0.15 mg/L
	MS-2 SOIL		SPIKE LEVEL	
	PB	3.72 mg/L	5.00 mg/L	0.15 mg/L
	MSD-2 SOIL		SPIKE LEVEL	
	PB	3.90 mg/L	5.00 mg/L	0.15 mg/L

ND=Not Detected

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: S22150

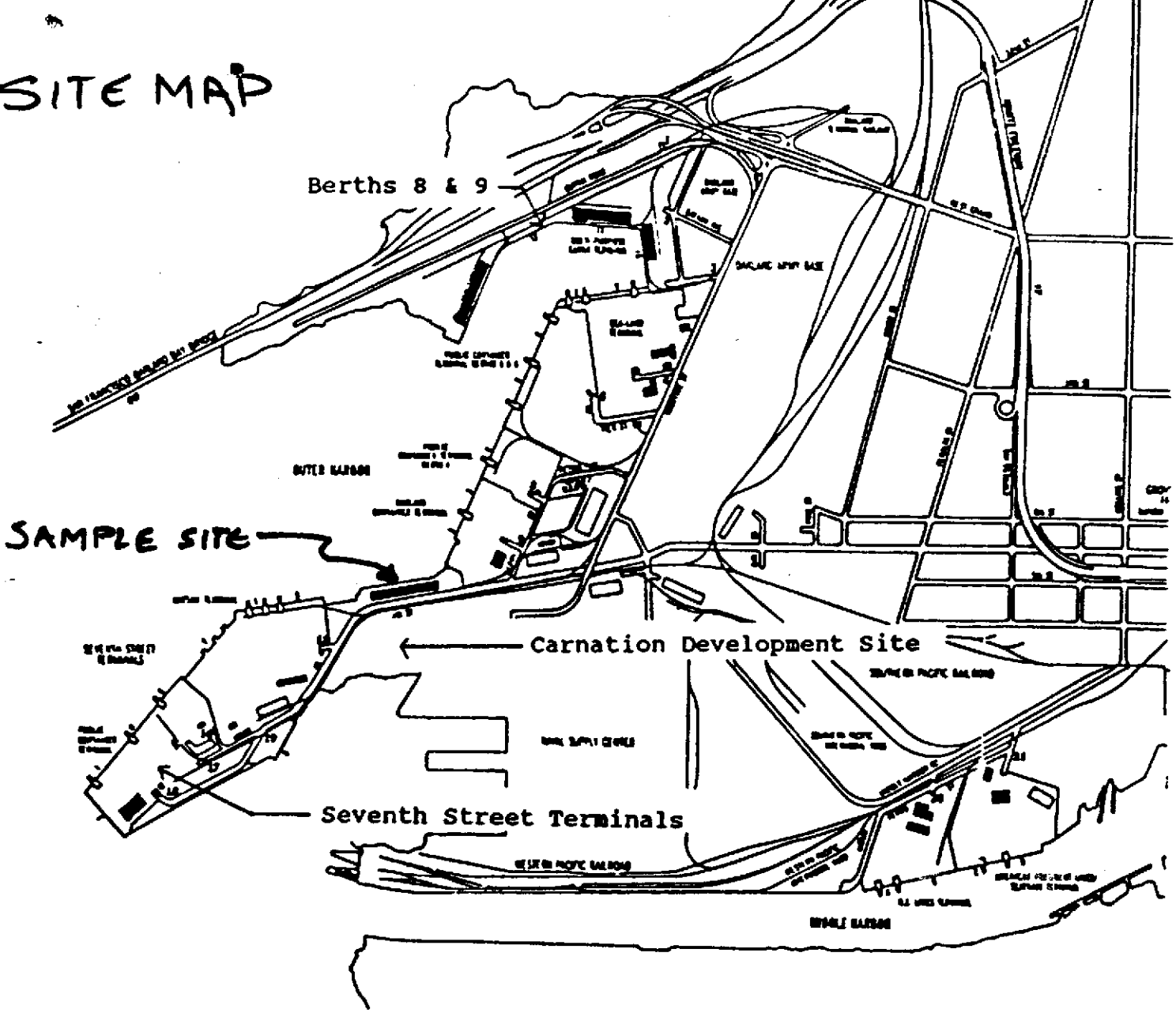
LABNO	SMPLNO-ID	RESULTS	DET.LIM.	
	MSD			
ARO1016		ND	50	ug/kg
ARO1221		ND	50	ug/kg
ARO1232		ND	50	ug/kg
ARO1242		ND	50	ug/kg
ARO1248		ND	50	ug/kg
ARO1254		990	50	ug/kg
ARO1260		ND	50	ug/kg

NOTE: MBS, MS AND MSD WERE SPIKED TO A LEVEL OF 1000 ug/kg WITH AROCLOR 1254.

19 samples
4 composite samples zones

1

SITE MAP



SAMPLE PLAN