reviewed 10/21/93 PS.

PORT OF OAKLAND

93 SEP 13 PM 2:39

September 3, 1993

Mr. Paul Smith
Senior Hazardous Materials Specialist
Alameda County Division of Hazardous Materials
80 Swan Way, Rm. 200
Oakland, CA 94621

Dear Mr. Smith:

Please find the enclosed report documenting the soil sampling and analysis that the Port conducted near the intersection of Seventh and Ferry Streets (at the intersection of the former Terminal Street). As we discussed by telephone, the Port was informed by a contractor working at this site that there were hydrocarbon odors present during the excavation of an area directly above the BART tube. In response to initial soil sampling that showed the presence of hydrocarbons in the soil, the Port Environmental Department directed its contractor to complete excavation at the site and stockpile the soil on the adjacent right-of-way. Soil samples were obtained from the stockpiled soil and from the excavation. The samples were then analyzed for the presence of hydrocarbons using a mobile laboratory at the site.

The results are contained in the enclosed report. After reviewing the analytical results, it was determined that the soil was appropriate for use as fill in the Berth 30 yard. There was no apparent source for the hydrocarbon odor noted during the soil removal operation. The samples taken in the excavation walls indicate that no significant levels of hydrocarbons were left in situ.

However, the Port recently discovered hydrocarbon-containing soil during construction in this general area. During construction of a new power line and substation along Seventh Street, construction crews digging a trench encountered hydrocarbon odors in two additional locations. At Seventh and Maritime Streets, approximately 50 cubic yards of soil were excavated. A composite sample contained TPH as diesel at 160 mg/kg and TPH as motor oil at 600 mg/kg. The soils were hauled to Vasco Road Landfill for disposal. Also, approximately 100 cubic yards of material was stockpiled at Seventh and Ferry Streets (about 200 yards from the Terminal Street site mentioned above). One composite stockpile sample contained 20 mg/kg TPH as diesel and 210 mg/kg TPH as motor oil. Another sample is currently being analyzed. Pending sample results, the soil will be disposed of at an appropriate disposal facility.

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

The source of the hydrocarbons is not known. No underground storage tanks are know to exist nearby. However, the contaminants could be associated with former bulk oil terminal facilities located in the area. A number of investigations on the Seventh Street peninsula are underway or proposed to determine the full extent of hydrocarbon contamination in the area. We will keep you updated on these investigations.

If you have any questions regarding this issue, please do not hesitate to contact me at 272-1373.

Sincerely,

Patricia Murphy

Patricia Murphy
Associate Environmental Scientist

Enclosure

URIBE & ASSOCIATES
2930 LAKESHORE AVENUE
SUITE TWO HUNDRED
OAKLAND, CALIFORNIA 94610
510 - 832 - 2233
FAX 510 - 832 - 2237

ENVIRONMENTAL CONSULTING SERVICES

August 25, 1993

Ms. Patricia Murphy
Associate Environmental Scientist
Port of Oakland
530 Water Street
Oakland, CA 94607

SUBJECT: Soil Excavation and Sampling at Former Intersection of Seventh and Ferry Streets, Oakland Outer Harbor

Dear Ms. Murphy:

The purpose of this letter is to report the activities, observations, sample results and disposition of the soils excavated from the construction site located at the former intersection of Seventh and Ferry Streets (Figure 1).

Introduction

On August 5, 1993, Gallagher and Burke (the excavation sub-contractor for the construction contractor) staff noticed a hydrocarbon odor in the soil while excavating for Berth 30 yard reconstruction. Gallagher and Burke staff notified the Port, so that as the property owner they could evaluate the situation.

U&A collected three soil samples (7th-soil-1 through 7th-soil-3) from areas that exhibited measurable hydrocarbon vapors, as indicated on a field combustible vapor monitor, for laboratory analyses to determine the type of hydrocarbon compounds present in the soils. A black tarry substance was noted and it was included in sample 7th-soil-3. Excavation activity was delayed until the laboratory could provide the soil sample analyses results.

Sampling locations were selected to maximize coverage of the area, and to obtain the "worst case" soil locations, based on PID and visual observations. Soil samples were collected in clean brass liners. The liners were driven in to the soil to be sampled with hand pressure until completely filled with soil, and then capped with Teflon™ lined end caps. The samples were immediately taken to the mobile laboratory, or to Curtis and Tompkins. All of the samples were logged on chain-of-custody recording forms.

Laboratory tests conducted on the soils indicated the hydrocarbon vapors detected at the site were associated with fuels (gasoline, diesel, and motor oil). The Port requested that U&A assist them with the excavation and analysis of soils that had been impacted at the site.

The following chronology of events documents excavation of soils and collection and analyses of stockpiled soils and confirmation samples obtained after reaching the construction grade for the site. The rationale used for the determining the limits of excavation were as follows: (1) excavate the area needed to establish the construction grade and (2) take confirmation samples to determine whether further excavation would be necessary. The highest concentration of TPH left in place was 200 mg/kg of TPH-gasoline (sample SS-5), and 260 mg/kg of TPH-motor oil (sample SW-3), at the edges of the excavation (Figure 2).

Chronology of Activities

August 5, 1993

On August 5, Gallagher and Burke staff noticed a hydrocarbon odor in soils that were being excavated. U&A was asked to collect soil samples and assess the types of hydrocarbon compounds present. U&A staff collected three soil samples which were analyzed by Curtis & Tompkins, Inc. for the following compounds:

- TPH as gasoline, diesel, motor oil, and kerosene (EPA Modified 8015),
- benzene, toluene, ethylbenzene, and xylenes (BTEX, EPA 8020),
- Volatile Organic Compounds (EPA 8240), and
- Semi-volatile Organic Compounds (EPA 8270).

A black tarry substance was noted and a portion of it was included in sample 7th-soil-3. Laboratory analysis of the soils detected hydrocarbon fuel compounds; no solvent or individual organic compounds were noted by the laboratory. The maximum hydrocarbon compound concentrations detected in the samples collected on August 5 was 4,900 mg/kg TPH-gasoline, 7,900 mg/kg TPH-diesel, 31,000 mg/kg TPH-motor oil, 6 mg/kg benzene, 43 mg/kg toluene, 64 mg/kg ethylbenzene, and 230 mg/kg xylene (sample 7th-Soil-3). Table 1 is a summary of the laboratory analysis results of the three samples collected.

August 11, 1993

U&A was on site on August 11 while Gallagher and Burke excavated soil in an area adjacent to the impacted soils discovered on August 5. The soil to be excavated in this area was not expected to be contain hydrocarbon fuels, since it had been partially excavated on August 5 and no hydrocarbon odors were detected. However, the Port requested that U&A monitor the air at the construction site to document the levels of organic vapors (if any) were detected during excavation.

U&A staff used a Photo-ionization detector (PID) to survey the soils as the excavation proceeded. Based on the PID readings, there was no additional fuel-impacted soils discovered except in the area identified on August 5. No soil samples were collected for laboratory analysis.

August 12, 1993

Decon Environmental Services, a Port hazardous materials contractor, was on site to excavate the fuel-impacted soils discovered on August 5. Excavated soil was segregated into two piles based on PID readings; one pile exhibited PID readings less than 10 deflection units, the other pile exhibited hydrocarbon vapor readings of greater than 10 deflection units. U&A provided a mobile laboratory (BACE Analytical) to analyze samples from the excavation sides and floor, and from the soil stockpiles.

U&A collected the following soil samples from the area excavated by Decon on August 12:

- CP-1, CP-2, CP-3, and CP-4 from the soil stockpile exhibiting less than 10 deflection units on the PID (Table 2),
- SS-1, SS-2, SS-3, and SS-4 from an area where Gallagher and Burke equipment operators thought they detected hydrocarbon odors on August 11 (Table 3),
- SS-5 and SS-6 from the excavation sidewall (Table 4), and
- SS-7 from the base of the excavation (Table 4).

Figure 2 illustrates the excavation and sample locations. Tables 2, 3, and 4 provide the laboratory results of the analyses performed on these samples.

All eleven soil samples were analyzed for TPH-gasoline, diesel, motor oil, and for BTEX. The tarry substance noted on August 5 in sample 7th-soil-3 was not noted in other areas of the excavation. The stockpile samples (CP-1 through CP-4) results were all below the detection limit, except for TPH-motor oil, which was detected in all of the samples with a maximum of 120 mg/kg.

The sample results from the areas of concern identified by Gallagher and Burke staff (SS-1 through SS-4) were all below the detection limit for all compounds, with the exception of TPH-motor oil, which was detected at a concentration of 130 mg/kg in two of the four samples collected.

The sample results of the two of the three soil samples collected from the excavation were below the detection limit for all analytes (SS-6 and SS-7). Soil sample SS-5 contained concentrations of 200 mg/kg TPH-gasoline, 60 mg/kg TPH-Motor Oil, 0.027 mg/kg benzene, 0.280 mg/kg toluene, 1.5 mg/kg ethylbenzene, and 9 mg/kg xylenes. No further soil was excavated in the vicinity of SS-5 due to the proximity of underground utilities, the

- SS-10, SS-11, and SS-12 from the excavation sidewalls (Table 7),
- SS-13 from the floor of the excavation (Table 7), and
- SC-1 through SC-5 composite samples from the soil stockpile (Table 8).

Figure 2 and Tables 7 and 8 illustrate the sample locations and the analytical results. The tarry substance noted on August 5 in sample 7th-soil-3 was not noted in other areas of the excavation. All of the samples were analyzed for TPH-gasoline, diesel, motor oil, and BTEX. The maximum concentrations detected in the samples from the excavation was 7.8 mg/kg TPH-gasoline (SS-12), 50 mg/kg TPH-motor oil (SS-10), and 0.0077 mg/kg toluene (SS-12).

The maximum concentrations detected from the composite samples from the soil stockpile was 12 mg/kg TPH-gasoline (SC-1), 20 mg/kg TPH-diesel (SC-4), 390 mg/kg TPH-motor oil (SC-4), 0.0075 mg/kg toluene, 0.060 mg/kg ethylbenzene, 0.210 mg/kg xylenes (SC-1).

Summary

A total of approximately 750 cubic feet of soil was excavated at the site and placed into one of two stockpiles. The segregation of the soil was based on field screening with a PID. Approximately 700 cubic yards of soil excavated exhibited a PID response greater than 10 deflection units; the remaining 50 cubic yards of soil exhibited a PID response of less than 10 deflection units.

Composite and discrete samples were collected and analyzed from each stockpile. The discrete samples represented approximately 20 cubic yards of soil. Composite samples were composed of four discrete samples to represent a total of 100 cubic yards of soil. The maximum concentration of hydrocarbon compounds detected in the soil stockpiles was 70 mg/kg TPH-gasoline (DP-1), 60 mg/kg TPH-diesel (DP-8), 390 mg/kg TPH-motor oil, and 0.270 mg/kg benzene 0.240 mg/kg toluene, 0.330 mg/kg ethylbenzene, 3 mg/kg xylenes (DP-1). All soil from both stockpiles was reused at the site.

If you have any questions concerning these activities or need additional information please call me at (510) 832-2233.

Sincerely,

Alan E. White
Project Manager

Attachments

Table 1:

Summary of Laboratory Results from Samples Collected on August 5

Concentrations in mg/kg

Sample Id	7th-Soil-1	7th-Soil-2	7th-Soil-3
TPH-Gasoline	1,800	<1	4,900
TPH-Diesel	170	1	7,900
TPH-Kerosene	nr[1]	nr[1]	nr[1]
TPH-Motor Oil	4,100	<30	31,000
Benzene	<1.0	<0.005	6
Toluene	<1.0	<0.005	43
Ethylbenzene	31	0.009	64
xylenes	190	0.031	230
EPA 8240			
Chloromethane	na	<0.010	na
Bromomethane	na	<0.010	na
Vinyl Chloride	na	<0.010	na
Chloroethane	na	<0.010	na
Methylene chloride	na	<0.020	na
Acetone	na	<0.020	na
Carbon disulfide	na	<0.005	na
Trichlorofluoromethane	na	<0.005	na
1,1-Dichloroethene	na	<0.005	na
1,1-Dichloroethane	na	<0.005	na
cis-1,2-Dichloroethene	na	<0.005	na
trans-1,2-Dichloroethene	na	<0.005	na
Chloroform	na	<0.005	na
Freon 113	na	<0.005	na
1,2-Dicloroethane	na	<0.005	na
2-butanone	na	<0.010	na
1,1,1-Trichloroethane	na	<0.005	na
Carbon tetrachloride	na	<0.005	na
Vinyl Acetate	na	<0.010	na
Bromodichloromethane	na	<0.005	na
1,2-Dichloropropane	na	<0.005	na
cis-1,3-Dichloropropane	na	<0.005	na

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

na = not analyzed

nr = not reported

"<" = not detected at or above the stated detection limit.

Table 1:

Summary of Laboratory Results from Samples Collected on August 5

Concentrations in mg/kg

Sample Id	7th-Soil-1	7th-Soil-2	7th-Soil-3
Trichloroethene	na	<0.005	na
Dibromochloromethane	na	<0.005	na
1,1,2-Trichloroethane	na	<0.005	na
Benzene	na	<0.005	na
trans-1,3-Dichloropropane	na	<0.005	na
Bromoform	na	<0.005	na
2-Hexanone	na	<0.010	na
4-Methyl-2-Pentanone	na	<0.010	na
1,1,2,2-Tetrachloroethane	na	<0.005	na
Tetrachloroethene	na	<0.005	na
Toluene	na	<0.005	na
Chlorobenzene	na	<0.005	na
Ethylbenzene	na	0.007	na
Styrene	na	<0.005	na
Total Xylenes	na	0.021	na
EPA 8270 [2]			
Acid fraction			
Phenol	na	na	<100
2-Chlorophenol	na	na	<100
Benzyl Alcohol	na	na	<100
2-Methylphenol	na	na	<100
4-Methylphenol	na	na	<100
2-Nitrophenol	na	na	<500
2,4-Dimethylphenol	na	na	<100
Benzoic Acid	na	na	<500
2,4-Dichlorophenol	na	na	<500
4-Chloro-3-Methylphenol	na	na	<100
2,4,6-Trichlorophenol	na	na	<100
2,4,5-Trichlorophenol	na	na	<500
2,4-Dinitrophenol	na	na	<500
4-nitrophenol	na	na	<500
4,6-Dinitro-2-methylphenol	na	na	<500
Pentachlorophenol	na	na	<500

[2] *Detection limits raised due to high hydrocarbon background*

na = not analyzed

nr = not reported

"<" = not detected at or above the stated detection limit.

Table 1:

Summary of Laboratory Results from Samples Collected on August 5

Concentrations in mg/kg

Sample Id	7th-Soil-1	7th-Soil-2	7th-Soil-3
Base/Neutral fraction			
N-Nitrosodimethylamine	na	na	<100
Aniline	na	na	<100
Bis(2-chloroethyl)ether	na	na	<100
1,3-Dichlorobenzene	na	na	<100
1,4-Dichlorobenzene	na	na	<100
1,2-Dichlorobenzene	na	na	<100
Bis(2-chloroisopropyl)ether	na	na	<100
N-Nitroso-di-n-propylamine	na	na	<100
Hexachloroethane	na	na	<100
Nitrobenzene	na	na	<100
Isophorone	na	na	<100
Bis(2-chloroethoxy)methane	na	na	<100
1,2,4-Trichlorobenzene	na	na	<100
Naphthalene	na	na	<100
4-chloroaniline	na	na	<100
Hexachlorobutadiene	na	na	<100
2-Methylnaphthalene	na	na	<100
Hexachlorocyclopentadiene	na	na	<100
2-Chloronaphthalene	na	na	<100
2-Nitroaniline	na	na	<500
Dimethylphthalate	na	na	<100
Acenaphthalene	na	na	<100
2,6-Dinitrotoluene	na	na	<100
3-Nitroaniline	na	na	<500
Acenaphthene	na	na	<100
Dibenzofuran	na	na	<100
2,4-Dinitrotoluene	na	na	<100
Diethylphthalate	na	na	<100
4-chlorophenyl-phenylether	na	na	<100
Fluorene	na	na	<100
4-Nitroaniline	na	na	<500
N-Nitrosodiphenylamine	na	na	<100
Azobenzene	na	na	<100
4-Bromophenyl-phenylether	na	na	<100
Hexachlorobenzene	na	na	<100

na = not analyzed

nr = not reported

"<" = not detected at or above the stated detection limit.

Table 2:
Summary of Laboratory Results from Stockpile Samples
with Less Than 10 DU on PID
Collected and Analyzed on August 12
Concentration in mg/kg

Sample Id	TPH-Gas	TPH-Diesel	TPH-Motor Oil	Benzene	Toluene	Ethylbenzene	xylenes
CP-1	<1.0	<1.0	60	<0.005	<0.005	<0.005	<0.005
CP-2	<1.0	<1.0	120	<0.005	<0.005	<0.005	<0.005
CP-3	<1.0	<1.0	30	<0.005	<0.005	<0.005	<0.005
CP-4	<1.0	<1.0	110	<0.005	<0.005	<0.005	<0.005

Table 3:
Summary of Laboratory Results from Samples of
Areas of Concern Identified by Gallagher and Burke
Collected and Analyzed on August 12
Concentration in mg/kg

Sample Id	TPH-Gas	TPH-Diesel	TPH-Motor Oil	Benzene	Toluene	Ethylbenzene	xylenes
SS-1	<1.0	<1.0	130	<0.005	<0.005	<0.005	<0.005
SS-2	<1.0	<1.0	130	<0.005	<0.005	<0.005	<0.005
SS-3	<1.0	<1.0	<10	<0.005	<0.005	<0.005	<0.005
SS-4	<1.0	<1.0	<10	<0.005	<0.005	<0.005	<0.005

Table 4:
Summary of Laboratory Results from
Side Walls and Floor of the Contaminated Soil Excavation
Collected and Analyzed on August 12
Concentration in mg/kg

Sample Id	Date	TPH-Gas	TPH-Diesel	TPH-Motor Oil	Benzene	Toluene	Ethylbenzene	xylenes
SS-5	8/12	200	<1.0	60	0.027	0.280	1.500	9.000
SS-6	8/12	<1.0	<1.0	<10	<0.005	<0.005	<0.005	<0.005
SS-7	8/12	<1.0	<1.0	<10	<0.005	<0.005	<0.005	<0.005

Table 4:
Summary of Laboratory Results from
Side Walls and Floor of the Contaminated Soil Excavation
Collected and Analyzed on August 13
Concentration in mg/kg

Sample Id	Date	TPH-Gas	TPH-Diesel	TPH-Motor Oil	Benzene	Toluene	Ethylbenzene	xylenes
SW-1	8/13	<1.0	<1.0	<10	<0.005	<0.005	<0.005	<0.005
SW-2	8/13	7.6	<1.0	<10	<0.005	<0.005	0.030	0.070
SW-3	8/13	1.2	<1.0	260	<0.005	<0.005	0.0096	0.013
FS-3	8/13	<1.0	<1.0	<10	<0.005	<0.005	<0.005	<0.005

Table 6:
Summary of Laboratory Results from Soil Stockpile Samples
with Greater than 10 DU on PID
Collected and Analyzed on August 13, 1993
Concentration in mg/kg

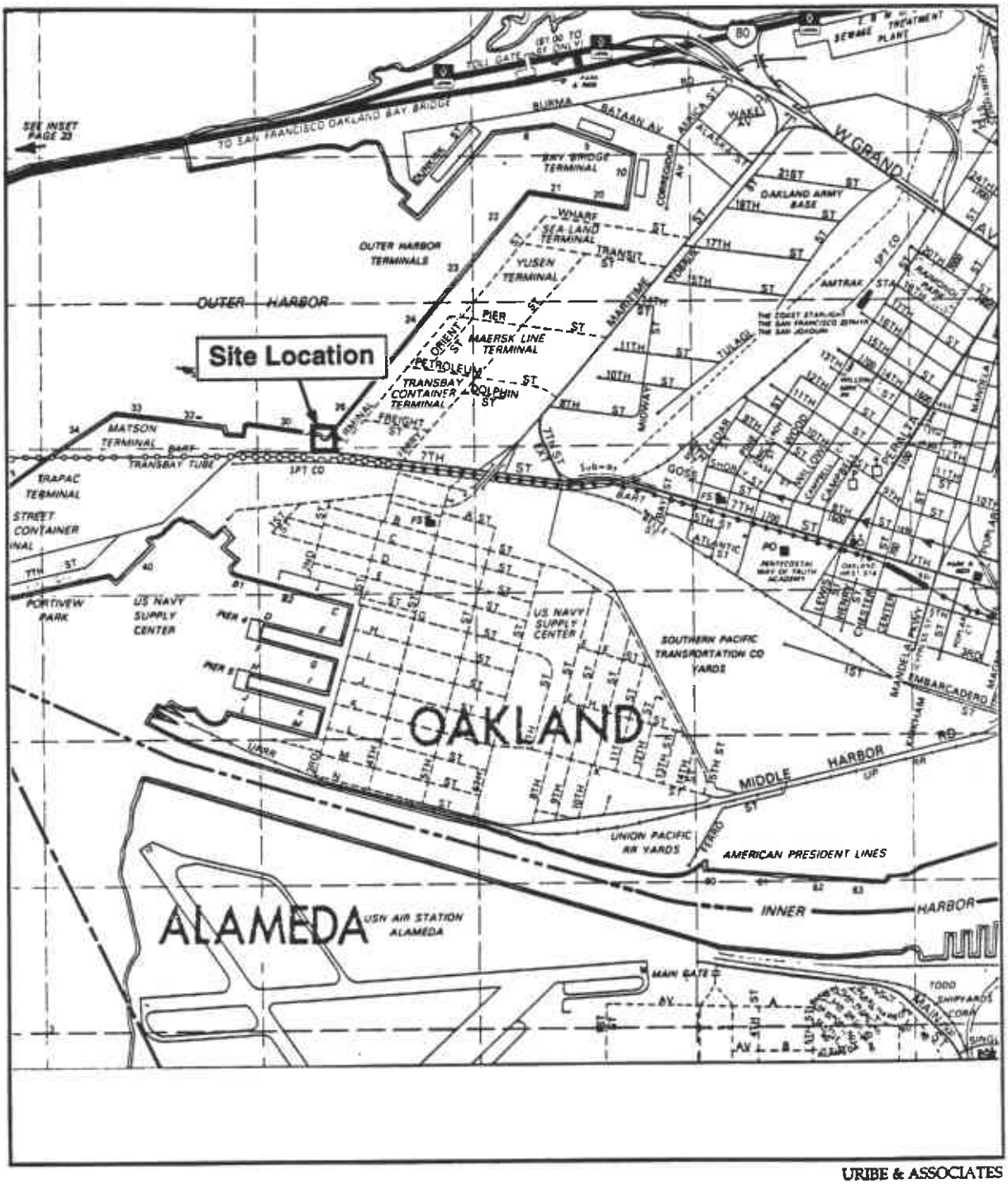
Sample Id	TPH-Gas	TPH-Diesel	TPH-Motor Oil	Benzene	Toluene	Ethylbenzene	xylenes
DP-1	70	<1.0	280	0.270	0.240	0.330	3.000
DP-2	2.3	<1.0	160	<0.005	<0.005	<0.005	<0.005
DP-3	1.2	<1.0	60	<0.005	<0.005	<0.005	<0.005
DP-4	12	<1.0	50	<0.005	<0.005	0.086	0.460
DP-5	4.2	28	200	<0.005	<0.005	<0.005	0.078
DP-6	22	<1.0	46	<0.005	0.068	0.190	0.820
DP-7	<1.0	<1.0	170	<0.005	<0.005	<0.005	<0.005
DP-8	6.5	60	130	<0.005	0.0057	0.022	0.200

Table 7:
Summary of Laboratory Results from
Side Walls and Floor of the Contaminated Soil Excavation
Collected and Analyzed on August 17
Concentration in mg/kg

Sample Id	Date	TPH-Gas	TPH-Diesel	TPH-Motor Oil	Benzene	Toluene	Ethylbenzene	xylenes
SS-10	8/17	1.0	<1.0	50	<0.005	<0.005	<0.005	<0.005
SS-11	8/17	<1.0	<1.0	<10	<0.005	<0.005	<0.005	<0.005
SS-12	8/17	7.8	<1.0	40	<0.005	0.0077	<0.005	<0.005
SS-13	8/17	<1.0	<1.0	<10	<0.005	<0.005	<0.005	<0.005

Table 8:
Summary of Laboratory Results from Soil Stockpile Composite Samples with Greater than 10 DU on PID Collected and Analyzed on August 17, 1993
Concentration in mg/kg

Sample Id	TPH-Gas	TPH-Diesel	TPH-Motor Oil	Benzene	Toluene	Ethylbenzene	xylenes
SC-1	12	<1.0	70	<0.005	0.0075	0.060	0.210
SC-2	<1.0	<1.0	60	<0.005	<0.005	<0.005	<0.005
SC-3	5.6	<1.0	60	<0.005	0.0051	<0.005	0.0054
SC-4	1.2	20	390	<0.005	<0.005	<0.005	<0.005
SC-5	<1.0	<1.0	40	<0.005	<0.005	<0.005	<0.005



URIBE & ASSOCIATES

Figure 1 Site Location Map

SOURCE: Thomas Brothers 1993 Maps

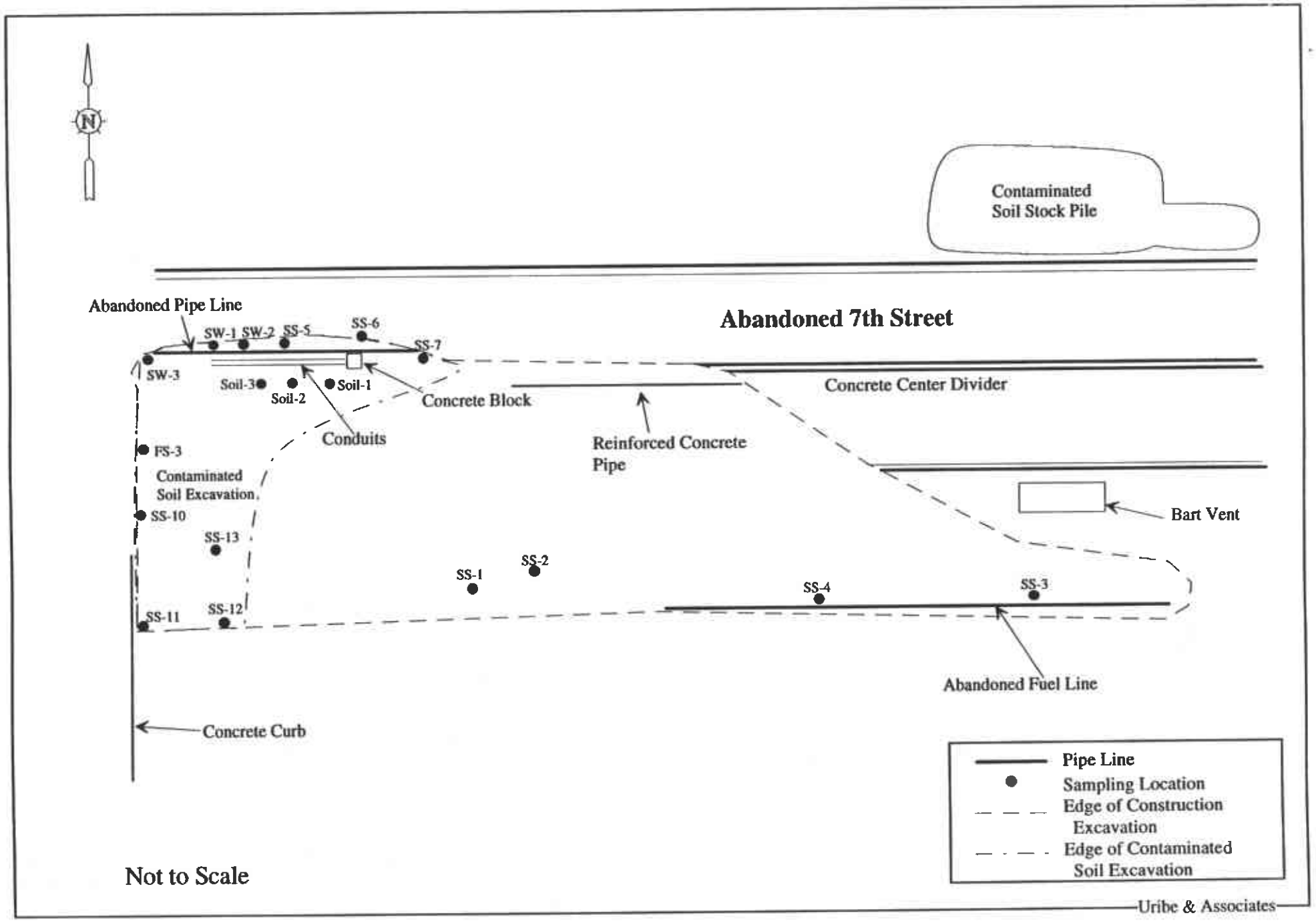


Figure 2: Site Plan with Sampling Locations and Extent of Excavation

Curtis & Tompkins, Ltd., Analytical Laboratories. Since 1878
2323 Fifth Street. Berkeley. CA 94710. Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Uribe & Associates
2930 Lakeshore Avenue
Suite Two Hundred
Oakland, CA 94610

Date: 09-AUG-93
Lab Job Number: 111821
Project ID: 96-216
Location: Port of Oakland

Reviewed by: _____

Reviewed by: _____

Curtis & Tompkins, Ltd.

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: 08/05/93
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 %

Curtis & Tompkins, Ltd.

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

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	ND	5
Styrene	ND	5
Total xylenes	ND	5

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2-Dichloroethane-d4	103 %
Toluene-d8	97 %
Bromofluorobenzene	97 %

Curtis & Tompkins, Ltd.

QC SUMMARY SHEET FOR EPA 8240

Laboratory Number:	111821		
Client:	Uribe & Associates	Spike file:	bh613
Analysis date:	08/06/93	Spike dup file:	bh614
Sample type:	Water		

SPIKE DATA (spiked at 50 ppb)

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	60.78	122 %	OK	61 - 145
Trichloroethene	45.44	91 %	OK	71 - 120
Benzene	47.63	95 %	OK	76 - 127
Toluene	48.90	98 %	OK	76 - 125
Chlorobenzene	48.27	97 %	OK	75 - 130
SURROGATES				
1,2-Dichloroethane-d4	49.32	99 %	OK	76 - 114
Toluene-d8	53.86	108 %	OK	88 - 110
Bromofluorobenzene	44.97	90 %	OK	86 - 115

SPIKE DUP DATA (spiked at 50 ppb)

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	60.84	122 %	OK	61 - 145
Trichloroethene	47.72	95 %	OK	71 - 120
Benzene	49.42	99 %	OK	76 - 127
Toluene	51.58	103 %	OK	76 - 125
Chlorobenzene	48.42	97 %	OK	75 - 130
SURROGATES				
1,2-Dichloroethane-d4	50.46	101 %	OK	76 - 114
Toluene-d8	54.04	108 %	OK	88 - 110
Bromofluorobenzene	44.94	90 %	OK	86 - 115

MATRIX RESULTS	
1,1-Dichloroethene	0
Trichloroethene	0
Benzene	0
Toluene	0
Chlorobenzene	0

RPD DATA

SPIKE COMPOUNDS	SPIKE	SPIKE DUP	RPD	STATUS	LIMITS
1,1-Dichloroethene	60.78	60.84	0 %	OK	< 14
Trichloroethene	45.44	47.72	5 %	OK	< 14
Benzene	47.63	49.42	4 %	OK	< 11
Toluene	48.90	51.58	5 %	OK	< 13
Chlorobenzene	48.27	48.42	0 %	OK	< 13

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 ANALYZED: 08/09/93
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)
111821-1	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

QA/QC SUMMARY

RPD, %	2
RECOVERY, %	86

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 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.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	88

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: 111821-003
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, 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-

URIBE & ASSOCIATES
2930 LAKESHORE AVENUE
SUITE TWO HUNDRED
OAKLAND, CALIFORNIA 94610
415 - 832 - 2233
FAX 415 - 832 - 2237

PO#019389

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
96-216	7th St / Ferry

SAMPLERS: (Signature)

1 - CT

* run TPH-G, TPH-D, TPH-K
TPH-O, to ID compound
Call once TPH is identified for further tests.

NO	DATE	TIME	COMP	GRAB	SAMPLE I.D.	NO. OF CONTAINERS	ANALYSIS: TPH-8015-MOD*	8020-BTEX	8240	8270	REMARKS
1	8/5	3:45		✓	7TH-SOIL-1	1	X	X			Rush
2	8/5	3:55		✓	7TH-SO.1-2	1	X	X	X		Rush
3	8/5	4:00		✓	7TH-SO.1-3	1	X	X		X	Rush

CHECK IF RUSH
24 hr on TPH
48 hr on others

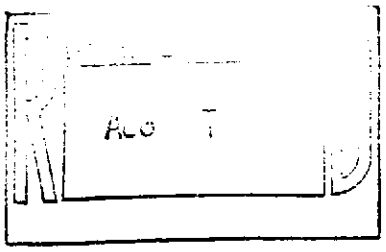
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	8/5/93 5:15	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
	8/5/93 1715	

NAME
ADDRESS
PHONE NO

BACE Analytical & Field Services, Inc.

P. O. Box 838, Windsor, CA 95492
707-838-8338 FAX 707-838-4420

August 16, 1993
Log No: 1811



Uribe & Associates
2930 Lakeshore Ave, Suite 200
Oakland, CA 94610

ATTN: Allen White

RE: Results of the analyses of soil samples obtained for project number 96216 on August 12 and 13, 1993.

Dear Mr. White,

This letter serves to confirm the analytical results previously communicated to you. Should any questions arise concerning procedure or results, please feel free to contact us.

Sincerely,

William G. Rotz
Director, Mobile Analytical Services

Tami Hucke Norgrove
Laboratory Manager

Client: Uribe & Associates
Client Contact: Allen White

BAFS Log No: 1811

Sample Date: 8/12/92
Analysis Date: 8/12/92

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Lab No: Descriptor:	Results - µg/kg 1811-1 (96216 SS-1)	1811-2 (96216 SS-2)
Benzene	5.0		ND	ND
Toluene	5.0		ND	ND
Ethylbenzene	5.0		ND	ND
Xylenes (total)	5.0		ND	ND
Dilution Factor:	1			

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-1 (96216 SS-1)	1811-2 (96216 SS-2)
TPH - gasoline	1.0		ND	ND
Dilution Factor:	1			

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-1 (96216 SS-1)	1811-2 (96216 SS-2)
TPH - diesel	1.0		ND	ND
TPH - motor oil	10		130	130
Dilution Factor:	1			

NOTE: ND = not detected.

BACE Analytical
& Field Services, Inc.

Client: Uribe & Associates
Client Contact: Allen White

BAFS Log No: 1811

Sample Date: 8/12/92
Analysis Date: 8/12/92

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Lab No: Descriptor:	Results - µg/kg 1811-3 (96216 SS-3)	1811-4 (96216 SS-4)
Benzene	5.0		ND	ND
Toluene	5.0		ND	ND
Ethylbenzene	5.0		ND	ND
Xylenes (total)	5.0		ND	ND
Dilution Factor:	1			

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-3 (96216 SS-3)	1811-4 (96216 SS-4)
TPH - gasoline	1.0		ND	ND
Dilution Factor:	1			

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-3 (96216 SS-3)	1811-4 (96216 SS-4)
TPH - diesel	1.0		ND	ND
TPH - motor oil	10		ND	ND
Dilution Factor:	1			

NOTE: ND = not detected.

Client: Uribe & Associates
Client Contact: Allen White

Sample Date: 8/12/92
Analysis Date: 8/12/92

BAFS Log No: 1811

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Lab No: Descriptor:	Results - µg/kg 1811-5 (96216 SS-5)	1811-6 (96216 SS-6)
Benzene	5.0		27	ND
Toluene	5.0		280	ND
Ethylbenzene	5.0		1500	ND
Xylenes (total)	5.0		9000	ND
Dilution Factor:			5	1

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-5 (96216 SS-5)	1811-6 (96216 SS-6)
TPH - gasoline	1.0		200	ND
Dilution Factor:			8	1

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-5 (96216 SS-5)	1811-6 (96216 SS-6)
TPH - diesel	1.0		ND	ND
TPH - motor oil	10		60	ND
Dilution Factor:	1			

NOTE: ND = not detected.

Client: Uribe & Associates
Client Contact: Allen White

Sample Date: 8/12/92
Analysis Date: 8/12/92

BAFS Log No: 1811

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Lab No: 1811-7 Descriptor: (96216 SS-7)	Results - µg/kg 1811-8 (96216 CP-1)
Benzene	5.0	ND	ND
Toluene	5.0	ND	ND
Ethylbenzene	5.0	ND	ND
Xylenes (total)	5.0	ND	ND
Dilution Factor:	1		

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: 1811-7 Descriptor: (96216 SS-7)	Results - mg/kg 1811-8 (96216 CP-1)
TPH - gasoline	1.0	ND	ND
Dilution Factor:	1		

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: 1811-7 Descriptor: (96216 SS-7)	Results - mg/kg 1811-8 (96216 CP-1)
TPH - diesel	1.0	ND	ND
TPH - motor oil	10	ND	60
Dilution Factor:	1		

NOTE: ND = not detected.

Client: Uribe & Associates
Client Contact: Allen White

Sample Date: 8/12/92
Analysis Date: 8/12/92

BAFS Log No: 1811

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Lab No: Descriptor:	Results - µg/kg 1811-9 (96216 CP-2)	1811-10 (96216 CP-3)
Benzene	5.0		ND	ND
Toluene	5.0		ND	ND
Ethylbenzene	5.0		ND	ND
Xylenes (total)	5.0		ND	ND
Dilution Factor:	1			

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-9 (96216 CP-2)	1811-10 (96216 CP-3)
TPH - gasoline	1.0		ND	ND
Dilution Factor:	1			

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-9 (96216 CP-2)	1811-10 (96216 CP-3)
TPH - diesel	1.0		ND	ND
TPH - motor oil	10		120	30
Dilution Factor:	1			

NOTE: ND = not detected.

Client: Uribe & Associates
Client Contact: Allen White

Sample Date: 8/12 & 13/92
Analysis Date: 8/12 & 13/92

BAFS Log No: 1811

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Lab No: Descriptor:	Results - µg/kg 1811-11 (96216 CP-4)	1811-12 (96216 DP-1)
Benzene	5.0		ND	270
Toluene	5.0		ND	240
Ethylbenzene	5.0		ND	330
Xylenes (total)	5.0		ND	3000
Dilution Factor:			1	10

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-11 (96216 CP-4)	1811-12 (96216 DP-1)
TPH - gasoline	1.0		ND	70
Dilution Factor:			1	10

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-11 (96216 CP-4)	1811-12 (96216 DP-1)
TPH - diesel	1.0		ND	ND
TPH - motor oil	10		110	280
Dilution Factor:	1			

NOTE: ND = not detected.

Client: Uribe & Associates
Client Contact: Allen White

Sample Date: 8/13/92
Analysis Date: 8/13/92

BAFS Log No: 1811

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Lab No: Descriptor:	Results - µg/kg 1811-13 (96216 DP-2)	1811-14 (96216 DP-3)
Benzene	5.0		ND	ND
Toluene	5.0		ND	ND
Ethylbenzene	5.0		ND	ND
Xylenes (total)	5.0		ND	ND
Dilution Factor:	1			

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-13 (96216 DP-2)	1811-14 (96216 DP-3)
TPH - gasoline	1.0		2.3	1.2
Dilution Factor:	1			

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-13 (96216 DP-2)	1811-14 (96216 DP-3)
TPH - diesel	1.0		ND	ND
TPH - motor oil	10		160	60
Dilution Factor:	1			

NOTE: ND = not detected.

Client: Uribe & Associates
Client Contact: Allen White

Sample Date: 8/13/92
Analysis Date: 8/13/92

BAFS Log No: 1811

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Lab No: Descriptor:	Results - µg/kg 1811-15 (96216 DP-4)	1811-16 (96216 DP-5)
Benzene	5.0		ND	ND
Toluene	5.0		ND	ND
Ethylbenzene	5.0		86	ND
Xylenes (total)	5.0		460	78
Dilution Factor:			5	1

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-15 (96216 DP-4)	1811-16 (96216 DP-5)
TPH - gasoline	1.0		12	4.2
Dilution Factor:	1			

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-15 (96216 DP-4)	1811-16 (96216 DP-5)
TPH - diesel	1.0		ND	28
TPH - motor oil	10		50	200
Dilution Factor:	1			

NOTE: ND = not detected.

Client: Uribe & Associates
Client Contact: Allen White

Sample Date: 8/13/92
Analysis Date: 8/13/92

BAFS Log No: 1811

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Lab No: Descriptor:	Results - µg/kg 1811-17 (96216 DP-6)	1811-18 (96216 DP-7)
Benzene	5.0		ND	ND
Toluene	5.0		68	ND
Ethylbenzene	5.0		190	ND
Xylenes (total)	5.0		820	ND
Dilution Factor:			5	1

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-17 (96216 DP-6)	1811-18 (96216 DP-7)
TPH - gasoline	1.0		22	ND
Dilution Factor:			5	1

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-17 (96216 DP-6)	1811-18 (96216 DP-7)
TPH - diesel	1.0		ND	ND
TPH - motor oil	10		46	170
Dilution Factor:	1			

NOTE: ND = not detected.

Client: Uribe & Associates
Client Contact: Allen White

Sample Date: 8/13/92
Analysis Date: 8/13/92

BAFS Log No: 1811

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Lab No: Descriptor:	Results - µg/kg 1811-19 (96216 DP-8)	1811-20 (96216 SW-1)
Benzene	5.0		ND	ND
Toluene	5.0		5.7	ND
Ethylbenzene	5.0		22	ND
Xylenes (total)	5.0		200	ND
Dilution Factor:	1			

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-19 (96216 DP-8)	1811-20 (96216 SW-1)
TPH - gasoline	1.0		6.5	ND
Dilution Factor:	1			

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-19 (96216 DP-8)	1811-20 (96216 SW-1)
TPH - diesel	1.0		60	ND
TPH - motor oil	10		130	ND
Dilution Factor:	1			

NOTE: ND = not detected.

Client: Uribe & Associates
Client Contact: Allen White

Sample Date: 8/13/92
Analysis Date: 8/13/92

BAFS Log No: 1811

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Lab No: Descriptor:	Results - µg/kg 1811-21 (96216 SW-2)	1811-22 (96216 FS-3)
Benzene	5.0		ND	ND
Toluene	5.0		ND	ND
Ethylbenzene	5.0		30	ND
Xylenes (total)	5.0		70	ND
Dilution Factor:	1			

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-21 (96216 SW-2)	1811-22 (96216 FS-3)
TPH - gasoline	1.0		7.6	ND
Dilution Factor:	1			

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1811-21 (96216 SW-2)	1811-22 (96216 FS-3)
TPH - diesel	1.0		ND	ND
TPH - motor oil	10		ND	ND
Dilution Factor:	1			

NOTE: ND = not detected.

Client: Uribe & Associates
Client Contact: Allen White

Sample Date: 8/13/92
Analysis Date: 8/13/92

BAFS Log No: 1811

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Lab No: / Descriptor:	Results - µg/kg 1811-23 (96216 SW-3)
Benzene	5.0		ND
Toluene	5.0		ND
Ethylbenzene	5.0		9.6
Xylenes (total)	5.0		13
Dilution Factor:	1		

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: / Descriptor:	Results - mg/kg 1811-23 (96216 SW-3)
TPH - gasoline	1.0		1.2
Dilution Factor:	1		

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: / Descriptor:	Results - mg/kg 1811-23 (96216 SW-3)
TPH - diesel	1.0		ND
TPH - motor oil	10		260
Dilution Factor:	1		

NOTE: ND = not detected.

QUALITY CONTROL SUMMARY

Client: Uribe & Associates
Client Contact: Allen White
Sample Date: 8/12 & 13/93
Analysis Date: 8/12 & 13/93

BAFS Log No. : 1811

Matrix: Soil

Parameter	% RECOVERY				
	CCV%*	Blank	Spike	Spike Dup	RPD
Benzene	102	ND	103	102	1.0
Toluene	104	ND	100	99	1.0
Ethylbenzene	100	ND	103	103	<1
Xylenes	99	ND	104	104	<1
Gasoline	91	ND	90	94	4.2
Diesel	94	ND	104	98	6.0

* Continuous Calibration Verification Standard

PROJ. NO.	PROJECT NAME
	96216
L.P. NO.	SAMPLERS: (Signature)
	[signature]

№ 1657

DATE	SAMPLE I.D.	TYPE	NO. OF CONTAINERS	TPH G	TPH D, M.O.	BTEX	REMARKS
8/12/93							1811
	96216-SS-1	S	1	X	X	X	-1
	-SS-2	S	1	X	X	X	-2
	96216-SS-3	S	1	X	X	X	-3
	-SS-4	S	1	X	X	X	-4
	-SS-5	S	1	X	X	X	-5
	-SS-6	S	1	X	X	X	-6
	-SS-7	S	1	X	X	X	-7
	-CP-1	S	1	X	X	X	-8
	-CP-2	S	1	X	X	X	-9
	-CP-3	S	1	X	X	X	-10
	-CP-4	S	1	X	X	X	-11

ANALYSIS

LABORATORY:

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Remarks
[signature]	8/12 9a-3p	[signature]	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	

BRUNSING ASSOCIATES, INC.

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707-838-3027

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415-364-9031

1515 Ninth Street
Rock Springs WY 82901
307-362-9277

PROJ. NO.	PROJECT NAME		NO. OF CONTAINERS	ANALYSIS: TPH G	TPH D & M.O.	BTEX	№ 1658
✓	96216						
L.P. NO.	SAMPLERS: (Signature) [signature]						REMARKS

DATE	SAMPLE I.D.	TYPE	NO. OF CONTAINERS	TPH G	TPH D & M.O.	BTEX	REMARKS
							1811 cont'd
8/13/93							
	96216 DP-1	S	1	X	X	X	1811-12
	DP-2	S	1	↓	↓	↓	-13
	DP-3	S	1	↓	↓	↓	-14
	DP-4	S	1	↓	↓	↓	-15
	DP-5	S	1	↓	↓	↓	-16
	DP-6	S	1	↓	↓	↓	-17
	DP-7	S	1	↓	↓	↓	-18
	DP-8	S	1	↓	↓	↓	-19
	SW-1	S	1	↓	↓	↓	-20
	SW-2	S	1	↓	↓	↓	-21
	FS-3	S	1	↓	↓	↓	-22
	SW-3	S	1	↓	↓	↓	-23
	FS-2	S	1	↓	↓	↓	HOLD
	FS-1	S	1	↓	↓	↓	HOLD
							STEPHANIE KNOT

LABORATORY:

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Remarks
[signature]	8/13/93 4:30	[signature] William	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
		↓	
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	
		✓	

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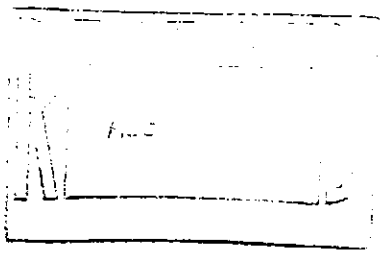
BACE Analytical & Field Services, Inc.

P. O. Box 838, Windsor, CA 95492
707-838-8338 FAX 707-838-4420

August 18, 1993
Log No: 1816

Uribe & Associates
2930 Lakeshore Ave, Suite 200
Oakland, CA 94610

ATTN: Allen White



RE: **Results of the analyses of soil samples obtained for project number 96216 on August 17, 1993.**

Dear Mr. White:

This letter serves to confirm the analytical results previously communicated to you. Should any questions arise concerning procedure or results, please feel free to contact us.

Sincerely,

William G. Rotz
Director, Mobile Analytical Services

Tami Hucke Norgrove
Laboratory Manager

Client: Uribe & Associates
Client Contact: Allen White

Sample Date: 8/17/92
Analysis Date: 8/17/92

BAFS Log No: 1816

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Lab No: Descriptor:	Results - µg/kg 1816-1 (SS - 10)	1816-2 (SS - 11)
Benzene	5.0		ND	ND
Toluene	5.0		ND	ND
Ethylbenzene	5.0		ND	ND
Xylenes (total)	5.0		ND	ND
Dilution Factor:	1			

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1816-1 (SS - 10)	1816-2 (SS - 11)
TPH - gasoline	1.0		1.0	ND
Dilution Factor:	1			

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1816-1 (SS - 10)	1816-2 (SS - 11)
TPH - diesel	1.0		ND	ND
TPH - motor oil	10		50	ND
Dilution Factor:	1			

NOTE: ND = not detected.
NR = not requested.

Sample Date: 8/17/92
Analysis Date: 8/17/92

BAFS Log No: 1816

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Lab No: Descriptor:	Results - µg/kg 1816-3 (SS - 12)	1816-4 (SS - 13)
Benzene	5.0		ND	ND
Toluene	5.0		7.7	ND
Ethylbenzene	5.0		ND	ND
Xylenes (total)	5.0		ND	ND
Dilution Factor:	1			

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1816-3 (SS - 12)	1816-4 (SS - 13)
TPH - gasoline	1.0		7.8	ND
Dilution Factor:	1			

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1816-3 (SS - 12)	1816-4 (SS - 13)
TPH - diesel	1.0		ND	ND
TPH - motor oil	10		40	ND
Dilution Factor:	1			

NOTE: ND = not detected.
NR = not requested.

Sample Date: 8/17/92
Analysis Date: 8/17/92

BAFS Log No: 1816

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Lab No: Descriptor:	Results - µg/kg 1816-5 (SC - 1)	1816-6 (SC - 2)
Benzene	5.0		ND	ND
Toluene	5.0		7.5	ND
Ethylbenzene	5.0		60	ND
Xylenes (total)	5.0		210	ND
Dilution Factor:	1			

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1816-5 (SC - 1)	1816-6 (SC - 2)
TPH - gasoline	1.0		12	ND
Dilution Factor:	1			

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1816-5 (SC - 1)	1816-6 (SC - 2)
TPH - diesel	1.0		ND	ND
TPH - motor oil	10		70	60
Dilution Factor:	1			

NOTE: ND = not detected.
NR = not requested.

Client: Uribe & Associates
Client Contact: Allen White

Sample Date: 8/17/92
Analysis Date: 8/17/92

BAFS Log No: 1816

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Lab No: Descriptor:	Results - µg/kg 1816-7 (SC - 3)	1816-8 (SC - 4)
Benzene	5.0		ND	ND
Toluene	5.0		5.1	ND
Ethylbenzene	5.0		ND	ND
Xylenes (total)	5.0		5.4	ND
Dilution Factor:	1			

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1816-7 (SC - 3)	1816-8 (SC - 4)
TPH - gasoline	1.0		5.6	1.2
Dilution Factor:	1			

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Lab No: Descriptor:	Results - mg/kg 1816-7 (SC - 3)	1816-8 (SC - 4)
TPH - diesel	1.0		ND	20
TPH - motor oil	10		60	390
Dilution Factor:	1			

NOTE: ND = not detected.
NR = not requested.

Client: Uribe & Associates
Client Contact: Allen White

Sample Date: 8/17/92
Analysis Date: 8/17/92

BAFS Log No: 1816

METHOD: EPA 5030/8020

Matrix: Soil

Parameter	Reporting Limit µg/kg	Results - µg/kg Lab No: 1816-9 Descriptor: (SC - 5)
Benzene	5.0	ND
Toluene	5.0	ND
Ethylbenzene	5.0	ND
Xylenes (total)	5.0	ND
Dilution Factor:	1	

METHOD: 5030 / GC FID

Parameter	Reporting Limit mg/kg	Results - mg/kg Lab No: 1816-9 Descriptor: (SC - 5)
TPH - gasoline	1.0	ND
Dilution Factor:	1	

METHOD: 3550 / GC FID

Parameter	Reporting Limit mg/kg	Results - mg/kg Lab No: 1816-9 Descriptor: (SC - 5)
TPH - diesel	1.0	ND
TPH - motor oil	10	40
Dilution Factor:	1	

NOTE: ND = not detected.
NR = not requested.

QUALITY CONTROL SUMMARY

Client: Uribe & Associates
Client Contact: Allen Whit4e
Sample Date: 8/17/93
Analysis Date: 8/17/93

BAFS Log No. : 1816

Matrix: Soil

Parameter	% RECOVERY				
	CCV%*	Blank	Spike	Spike Dup	RPD
Benzene	94	ND	102	97	5.0
Toluene	96	ND	102	100	2.0
Ethylbenzene	98	ND	98	99	1.0
Xylenes	99	ND	98	96	2.1
Gasoline	94	ND	92	96	4.2
Diesel	93	ND	103	97	6.0

* Continuous Calibration Verification Standard

BACE Analytical
& Field Services, Inc.

PROJ. NO.	PROJECT NAME	NO. OF CONTAINERS	ANALYSIS: 10# Gas, Diesel, BTEX	№ 1656
	96216			
L.P. NO.	SAMPLERS: (Signature)			
	John C Brunger			

DATE	SAMPLE I.D.	TYPE	NO. OF CONTAINERS	ANALYSIS: 10# Gas, Diesel, BTEX	REMARKS
					1816
	96216 SS-10	S	1	X X X	-1
	SS-11				-2
	SS-12				-3
	SS-13				-4
	SC-1 (comp)				-5
	SC-2 (comp)				-6
	SC-3 (comp)				-7
	SC-4 (comp)				-8
	SC-5 (comp)				-9

LABORATORY:

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Remarks
John C Brunger	8/4/93		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	

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