PES Environmental, Inc.
Engineering & Environmental Services

August 16, 2001

546.002.01.006

3875

AUG 21 2001

Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California

Attention: Mr. Barney Chan

SUBSURFACE INVESTIGATION RESULTS
UTILITY BODY FACILITY
1530 WOOD STREET
OAKLAND, CALIFORNIA

Dear Mr. Chan:

PES Environmental, Inc. (PES) has prepared this report on behalf of Podlesak Trust to summarize the results of a subsurface investigation performed at the Utility Body facility located at 1530 Wood Street in Oakland, California (Plate 1). Soil and groundwater sampling was performed to evaluate the potential presence of residual petroleum hydrocarbons, aromatic hydrocarbons and fuel oxygenates in soil and groundwater at the site.

The investigation was performed pursuant to a request from Alameda County Environmental Health Services (ACEHS). In a letter dated April 26, 1994, ACEHS requested that Podlesak Trust prepare a work plan for a subsurface investigation at the site. The subsurface investigation was requested by ACEHS due to the presence of petroleum hydrocarbon-affected soil encountered during removal of a 1,000-gallon underground storage tank (UST). Subsequently, PES was retained by Podlesak Trust and submitted a work plan to ACEHS dated July 19, 2000. ACEHS requested that the investigation not be conducted until the groundwater flow direction from nearby sites could be obtained and reviewed. Accordingly, PES did not proceed with the proposed work until such information was available. The results of the information from the nearby sites were inconclusive. On April 17, 2001, the groundwater flow direction data were discussed by Mr. Barney Chan of ACEHS and Kyle Flory of PES. During that telephone call, PES recommended submitting a work plan addendum to initially assess soil and groundwater in the location of the former UST. Based on the initial assessment, if no significant impact to soil and/or groundwater is detected then no further action may be warranted. Mr. Chan concurred with PES' recommendation. The work plan addendum was submitted to ACEHS on May 7, 2001. The work plan addendum was approved by ACEHS in a letter to Podlesak Trust dated May 10, 2001.

SITE SETTING

PES reviewed the United States Geological Survey (USGS) Oakland West, California, 7.5 minute Quadrangle topographic map to evaluate the physical setting. A portion of the map is reproduced as Plate 1. The subject property is generally level and is situated at an elevation of approximately 10 feet above mean sea level. The nearest surface water feature is San Francisco Bay, located approximately 3,200 feet to the west-northwest.

REGIONAL GEOLOGY AND HYDROGEOLOGY

According to the 1999 *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report* by San Francisco Regional Water Quality Control Board Groundwater Committee, the upper portion of soil at the site is composed of clayey to silty sands, characterized as fill. Below the fill, "Bay Mud" occurs at a thickness of 25 to 50 feet. The fill was mechanically placed over the Bay Mud prior to the development of this portion of Oakland. The source location of the fill is suspected to be the San Francisco Bay and the Oakland Inner Harbor.

Bay Mud consists predominantly of homogeneous, plastic, olive-gray, sandy to silty clay with occasional discontinuous small sand lenses, shells and abundant organic material.

According to the report, groundwater flow generally correlates with topography and flows to the west. Groundwater flow may be locally influenced by buried stream channels that are characteristically oriented in the east to west direction.

SUBSURFACE INVESTIGATION

Prefield Activities

Prior to conducting the field activities, PES prepared a site specific Health and Safety Plan. The Health and Safety Plan was developed in accordance with applicable federal and California Occupational Safety and Health Administration (OSHA) guidelines. PES obtained an excavation permit from the City of Oakland on June 17, 2000. The permit was extended 60 days by City of Oakland personnel on May 15, 2001. PES obtained a drilling permit from the Alameda County Public Works Agency, Water Resources Section on May 15, 2001.

Prior to drilling, Foresite, Inc., a private underground utility locating service from Pleasant Hill, California, was contracted to conduct a subsurface electromagnetic survey to clear the proposed sampling locations of subsurface utilities. Underground Service Alert was also

contacted to schedule visits by public and private utility companies. Each company located its utilities with the aid of maps, and the locating service verified and marked these locations.

Sampling Methods

Gregg Drilling of Martinez, California was contracted to perform the soil boring and collect soil and groundwater samples. On June 8, 2001, one soil boring was completed using a hydraulically powered direct push drill rig. The soil boring location is shown on Plate 2. Soil boring B-1 was continuously cored to a depth of 16 feet below ground surface (bgs). A copy of the boring log is presented in Appendix A.

One soil sample was collected from the soil borehole drilled at the former UST location. The soil sample was collected for chemical analysis at 8 feet bgs in the native soil beneath the excavation backfill material. The sample was collected from the boring using a closed piston soil sampler that contains 1 ½-inch diameter clear polyvinyl chloride (PVC) sample tubes.

The soil sample was sealed inside the sample tube with Teflon-lined plastic end caps and sealed with silicone adhesive tape to prevent moisture and/or contaminant loss. The samples were labeled for identification and immediately stored in a thermally insulated cooler containing ice until delivery under chain-of-custody protocol to Entech Analytical Labs, Inc. of Santa Clara, California, a state-certified laboratory.

Groundwater was encountered at 13 feet bgs. One groundwater sample was collected from the soil boring using a Hydropunch sampling technique. The Hydropunch sampler consisted of a 1.25-inch-diameter cylinder inside an outer 2-inch-diameter, 5-foot-long stainless-steel retractable cylinder. The bottom 4 feet of the inner cylinder was screened to allow water to enter the screened sampling chamber when the outer cylinder was retracted. The groundwater sample was collected through the hollow stem of the sampling rod from the inner cylinder with a 1-inch diameter stainless-steel bailer and decanted into laboratory supplied glass sample containers.

Upon completion of coring and soil and groundwater sampling activities, the borehole was grouted to the surface with neat cement grout.

CHEMICAL ANALYTICAL PROGRAM

The soil and groundwater samples were analyzed for: (1) total petroleum hydrocarbons (TPH) quantified as gasoline and diesel using U.S. Environmental Protection Agency (EPA) Test Method 8015-Modified; and (2) methyl tertiary-butyl ether (MTBE) and benzene, toluene, ethylbenzenes, and total xylenes (BTEX) using U.S. EPA Test Method 8020. The results of

the soil and groundwater analyses are summarized in Table 1 and Table 2, respectively. Laboratory data reports and chain-of-custody forms are included as Appendix B.

SUBSURFACE INVESTIGATION RESULTS

Subsurface Lithology and Depth to Water Measurements

The soil boring indicated that the site is underlain by sandy fill material. This fill material continued to 16 feet bgs, the total depth of the borehole. A 2- to 4-inch layer of concrete debris was present at a depth of 4 ft bgs. This layer may be a remnant of the previous tank removal activities. A petroleum hydrocarbon odor was noted at a depth of 5.5 and 13 ft bgs. Groundwater was encountered at a depth of 13 ft bgs.

Soil Sampling Analytical Results

MTBE, BTEX, and TPH quantified as gasoline (TPHg) were not detected in the soil sample, B-1, at concentrations at or above the respective laboratory reporting limits. TPH quantified as diesel (TPHd) was detected at a concentration of 1.2 milligrams per kilogram (mg/Kg).

Groundwater Sampling Analytical Results

MTBE and BTEX were not detected in the groundwater sample, GW-1, at or above the laboratory reporting limit. TPHd and TPHg were detected at concentrations of 250 and 89 micrograms per Liter (μg/L), respectively.

SUMMARY, DISCUSSION AND RECOMMENDATIONS

PES conducted a subsurface investigation at the Utility Body Facility, at 1530 Wood Street in Oakland, California. The investigation was conducted in accordance with PES' work plan addendum approved by ACEHS. On June 8, 2001, soil and groundwater samples were collected from one soil boring located within the excavation backfill of the former UST. Samples were analyzed for TPHg and TPHd using U.S. EPA Test Method 8015-Modified and BTEX and MTBE using U.S. EPA Test Method 8020.

Laboratory analyses indicate that MTBE and BTEX were not detected at or above the reporting limits in the soil or groundwater samples. A low level of TPHg (89 μg/L) was detected in the groundwater sample. TPHd was detected in the soil and groundwater samples at a concentration of 1.2 mg/Kg and 250 μg/L, respectively.

PES reviewed an August 2000 California Regional Water Quality Control Board - San Francisco Bay Region (RWQCB) report entitled *Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater* in order to determine an appropriate cleanup level for this setting. The RWQCB document contains Tier 1 risk-based screening level (RBSL) for soil and groundwater in specific settings. The Tier 1 RBSLs were developed by the RWQCB to be protective of human health and the environment. The RBSLs address the following concerns: (1) groundwater quality, (a) protection of human health, (i) drinking water resources, (ii) emission of vapors to building interiors, (b) protection of aquatic life, and (c) protection of nuisance concerns and general source degradation; and (2) soil quality, (a) protection of human health, (i) direct and indirect contact with affected soil, (ii) emission of vapors to building interiors, (b) protection of groundwater quality, (c) protection of terrestrial ecological receptors, and (d) protection against nuisance concerns and general source degradation (RWQCB, 2000).

The Tier 1 look up table for surface soil (defined as less than 3 meters bgs) where groundwater is not a current or potential source of drinking water indicates that the RBSL for TPH (middle distillates) (considered equivalent to TPHd) is 500 mg/Kg. The Tier 1 look up table for groundwater in a setting where groundwater is not a current or potential source of drinking water indicates that the RBSLs for TPH (gasoline) and TPH (middle distillates) (considered equivalent to TPHd) are 500 μg/L and 640 μg/L, respectively (RWQCB, 2000).

The levels of TPHd and TPHg detected in the groundwater and soil are not considered a human health or environmental risk for the following reasons:

1. No carcinogens were detected in the soil or groundwater samples;

2. First-encountered groundwater in the area is typically not a used as a drinking water source due to the low groundwater yields and the high total dissolved solids content that typify groundwater in this setting;

3. Results of the soil sample analysis indicates that the soil does not contain TPHd at a concentration above the Tier 1 RBSL; and

4. Results of the groundwater sample analysis indicate that the levels of TPHg and TPHd present in the groundwater are below the Tier 1 RBSLs for TPH (gasoline) and TPH (middle distillates).

In accordance with the above discussion, PES concludes that no further investigation nor remediation is warranted, and no further action is required at the site with respect to the former UST excavation area. Accordingly, PES requests that ACEHS grant case closure for the site.

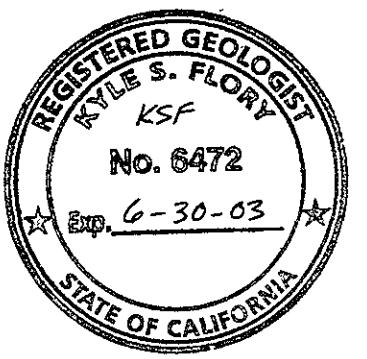
We look forward to receiving your comments. Thank you for your attention to this case. Please call if you have any questions.

Yours very truly,

PES ENVIRONMENTAL, INC.

Honor Hutton
Staff Engineer

Kyle S. Flory, R.G.
Associate Geologist



cc: Mr. Bill Thomas - Podlesak Trust

Attachments: Table 1 - Soil Analytical Results
Table 2 - Groundwater Analytical Results
Plate 1 - Site Location Map
Plate 2 - Site Map
Appendix A - Soil Boring Log
Appendix B - Laboratory Reports and Chain-of-Custody Form

REFERENCES

California Regional Water Quality Control Board - San Francisco Bay Region. 2000. *Application of Risk-Based Screening Levels and Decision Making to Sites With Impacted Soil and Groundwater.* Interim Final. August.

San Francisco Bay Regional Water Quality Control Board, 1999. *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report.* August 4.

QUALITY CONTROL REVIEWER

William F. Frizzell
Principal Engineer

TABLES

Table 1
Soil Analytical Results
Utility Body Facility
1530 Wood Street
Oakland, California

Sample ID	Date Sampled	Depth (ft. bgs)	U.S. EPA Method 8020		U.S. EPA Method 8015-Modified	
			MTBE mg/Kg	BTEX mg/Kg	TPHg mg/Kg	TPHd mg/Kg
B-1	6/8/01	8	ND	ND	ND	1.2

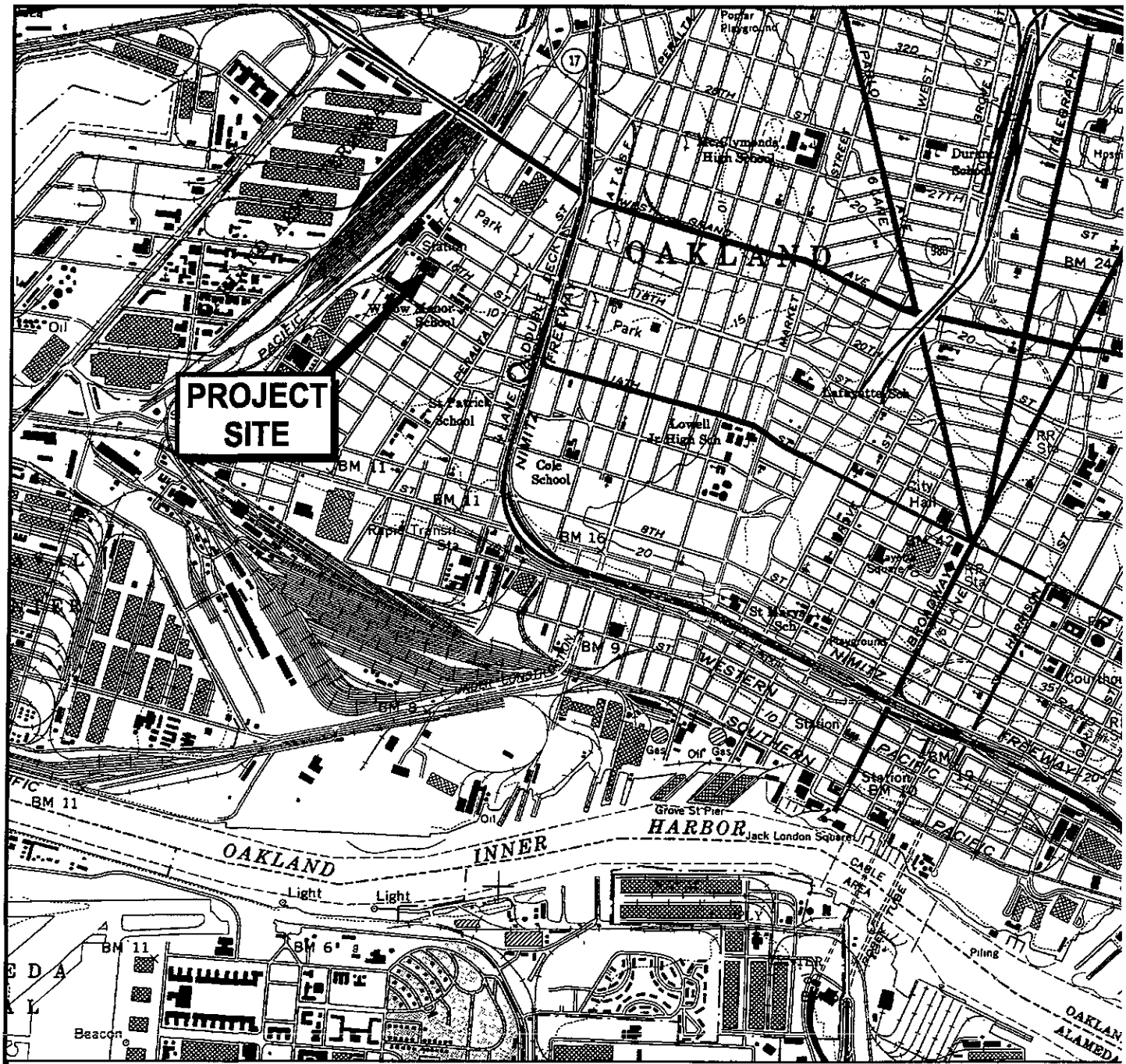
Note:
mg/Kg = milligrams per kilogram
ft. bgs = feet below ground surface
MTBE = methyl tertiary-butyl ether
BTEX = benzene, toluene, ethylbenzene, and total xylenes
TPHg = total petroleum hydrocarbons quantified as gasoline
TPHd = total petroleum hydrocarbons quantified as diesel
ND = Not detected above laboratory reporting limit (See Appendix B).

Table 2
Groundwater Analytical Results
Utility Body Facility
1530 Wood Street
Oakland, California

Sample ID	Date Sampled	U.S. EPA Method 8020		U.S. EPA Method 8015-Modified	
		MTBE µg/L	BTEX µg/L	TPHg µg/L	TPHd µg/L
GW-1	6/8/01	ND	ND	89	250

Note:
µg/L = micrograms per Liter
MTBE = methyl tert-butyl ether
BTEX = benzene, toluene, ethylbenzene, and total xylenes
TPHg = total petroleum hydrocarbons quantified as gasoline
TPHd = total petroleum hydrocarbons quantified as diesel
ND = Not detected above laboratory reporting limit (see Appendix B)

ILLUSTRATIONS



U.S.G.S. Topo Map - Oakland West, California, 7.5-minute quadrangle.1959 photorevised 1980.

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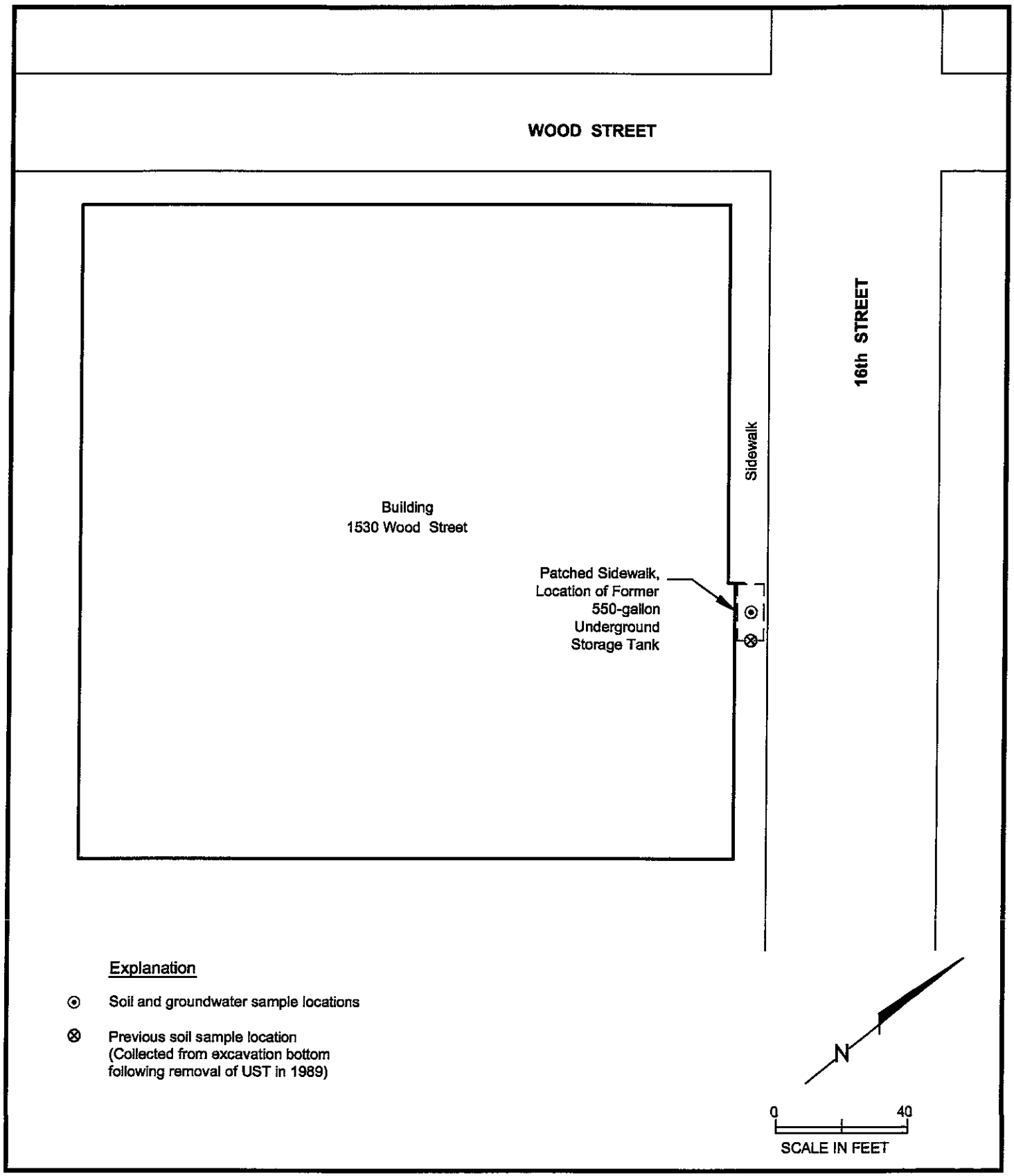
Engineering & Environmental Services

Site Location Map
Utility Body Facility
1530 Wood Street
Oakland, California

PLATE
1

546-00201-001	546-002_0700	DRAFT	07/01
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



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Engineering & Environmental Services

Site Plan and Sampling Locations
Utility Body Facility
1530 Wood Street
Oakland, California

PLATE
2

546-00201-001	546-002_0700	DRAFT	8/01
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

APPENDIX A

SOIL BORING LOG

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING B-1

PID (ppm)	BLOWS/6IN	DEPTH (FT)	SYMBOLS	MATERIALS DESCRIPTION
				CONCRETE
				OLIVE BROWN SAND (SP), 2 5Y 4/4, moist, loose, medium grained sand, 100% sand, fill material
0.4				Color change to DARK OLIVE BROWN, 2.5Y 3/3
				Layer of concrete debris, 2"-4" diameter
		5		BLACK SAND WITH FINES (SM), 2 5Y 2 5/1, very moist, loose, medium grained sand, 5% gravel, 80% sand, 15% fines, petroleum hydrocarbon odor
				Color change to VERY DARK GRAYISH BROWN, 2.5Y 3/2,
0 8				Color change to DARK GRAY 2.5Y 4/1 mottled with OLIVE BROWN 2 5Y 4/4
0.8		10		
				Color change to BLACK 2.5Y 2.5/1, organic material present in sample, petroleum hydrocarbon odor
			▽	Color change to OLIVE BROWN 2 5Y 4/3, change in moisture content to wet
		15		
				Bottom of borehole at 16 feet bgs
		20		

LOG OF BORING/WELL UTILBODY.GPJ PES_ENV.GDT 8/16/01

PROJECT	Utility Body Facility	DIAMETER OF HOLE	2.0 inches
LOCATION	1530 Wood Street, Oakland, CA	TOTAL DEPTH OF HOLE	16 feet
JOB NUMBER	546.002.01.004	TOP OF CASING ELEVATION	0.00 ft
GEOLOGIST/ENGINEER	Honor Hutton	DATE STARTED	6/8/01
DRILL RIG	MARL 2.5 Direct Push	DATE COMPLETED	6/8/01

PLATE

APPENDIX B

LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORMS

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

RECEIVED JUN 2 2 2001

June 15, 2001

Kyle Flory
PES Environmental, Inc.
1682 Novato Boulevard, Suite 100
Novato, CA 94947

Order: 25851
Project Name: Utility Body
Project Number: 546.002.01.004
Project Notes:

Date Collected: 6/8/01
Date Received: 6/8/01
P.O. Number: 546.002.01.004

On June 08, 2001, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Liquid	Gas/BTEX/MTBE	EPA 8015 MOD. (Purgeable)
		EPA 8020
	TPH as Diesel w/ Si-Gel Std	EPA 8015 MOD. (Extractable)
Solid	Gas/BTEX/MTBE	EPA 8015 MOD. (Purgeable)
		EPA 8020
	TPH as Diesel w/ Si-Gel Std	EPA 8015 MOD. (Extractable)

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-588-0200.

Sincerely,

Patti Sandrock
QA/QC Manager

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

PES Environmental, Inc.
1682 Novato Boulevard, Suite 100
Novato, CA 94947
Attn: Kyle Flory

Date: 06/15/01
Date Received: 6/8/01
Project Name: Utility Body
Project Number: 546.002.01.004
P.O. Number: 546.002.01.004
Sampled By: Honor Hutton

Certified Analytical Report

Order ID: 25851 **Lab Sample ID:** 25851-002 **Client Sample ID:** GW-1

Sample Time: 10:30 AM **Sample Date:** 6/8/01 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L	N/A	6/12/01	WGC22050	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L	N/A	6/12/01	WGC22050	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	6/12/01	WGC22050	EPA 8020
Xylenes, Total	ND		1	0.5	0.5	µg/L	N/A	6/12/01	WGC22050	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	84	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	6/12/01	WGC22050	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	84	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	89	x	1	50	50	µg/L	N/A	6/12/01	WGC22050	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	97	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

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PES Environmental, Inc.
1682 Novato Boulevard, Suite 100
Novato, CA 94947
Attn: Kyle Flory

Date: 06/15/01
Date Received: 6/8/01
Project Name: Utility Body
Project Number: 546.002.01.004
P.O. Number: 546.002.01.004
Sampled By: Honor Hutton

Certified Analytical Report

Order ID: 25851 **Lab Sample ID:** 25851-001 **Client Sample ID:** B-1

Sample Time: 10:00 AM **Sample Date:** 6/8/01 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	1.2	x	1	1	1	mg/Kg	6/11/01	6/13/01	DS4017B	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	69	38 - 112

Comment: TPH-Diesel extraction performed with silica gel cleanup.

Order ID: 25851 **Lab Sample ID:** 25851-002 **Client Sample ID:** GW-1

Sample Time: 10:30 AM **Sample Date:** 6/8/01 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	250		1	69	69	µg/L	6/12/01	6/13/01	DW4024A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	51	41 - 139

Comment: TPH-Diesel extraction performed with silica gel cleanup.
Comment: Reporting limit increased due to limited sample volume.

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

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PES Environmental, Inc.
1682 Novato Boulevard, Suite 100
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Attn: Kyle Flory

Date: 06/15/01
Date Received: 6/8/01
Project Name: Utility Body
Project Number: 546.002.01.004
P.O. Number: 546.002.01.004
Sampled By: Honor Hutton

Certified Analytical Report

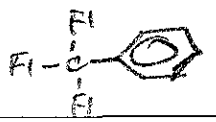
Order ID: 25851 **Lab Sample ID:** 25851-001 **Client Sample ID:** B-1

Sample Time: 10:00 AM **Sample Date:** 6/8/01 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.005	0.005	mg/Kg	N/A	6/13/01	SGC12049	EPA 8020
Toluene	ND		1	0.005	0.005	mg/Kg	N/A	6/13/01	SGC12049	EPA 8020
Ethyl Benzene	ND		1	0.005	0.005	mg/Kg	N/A	6/13/01	SGC12049	EPA 8020
Xylenes, Total	ND		1	0.005	0.005	mg/Kg	N/A	6/13/01	SGC12049	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	104	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	0.05	0.05	mg/Kg	N/A	6/13/01	SGC12049	EPA 8020



Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	104	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	1	1	mg/Kg	N/A	6/13/01	SGC12049	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	115	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

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Quality Control Results Summary

QC Batch #: DW4024A
Matrix: Liquid
Units: µg/L
Date Analyzed: 6/13/01

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
Test: TPH as Diesel w/ Si-Gel Std											
TPH as Diesel	EPA 8015 M	ND		1000		906.32	LCS	90.6			50.0 - 130.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
o-Terphenyl			81			41 - 139					
Test: TPH as Diesel w/ Si-Gel Std											
TPH as Diesel	EPA 8015 M	ND		500		541.97	LCSD	~~54.2~~ 102	50.31	25.00	50.0 - 130.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
o-Terphenyl			70			41 - 139					

Notes: The LCSD was spiked for TPH as Diesel at one half of the normal concentration (500ppb rather than 1000ppb). As a result, the %RPD between the LCS/LCSD falls outside of the laboratory control limts. The poor RPD results will be treated as an anomalie and will not be included in laboratory control chart statistics.

Entech Analytical Labs, Inc.

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Quality Control Results Summary

QC Batch #: DS4017B
Matrix: Solid
Units: mg/Kg
Date Analyzed: 6/13/01

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
Test: TPH as Diesel w/ Si-Gel Std											
TPH as Diesel	EPA 8015 M	ND		25		21.33	LCS	85.3			37.9 - 128.0
	Surrogate		**Surrogate Recovery**			**Control Limits (%)**					
	o-Terphenyl		79			38 - 112					
Test: TPH as Diesel w/ Si-Gel Std											
TPH as Diesel	EPA 8015 M	ND		25		18.88	LCSD	75.5	12.19	30.00	37.9 - 127.7
	Surrogate		**Surrogate Recovery**			**Control Limits (%)**					
	o-Terphenyl		74			38 - 112					

Entech Analytical Labs, Inc.

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Quality Control Results Summary

QC Batch #: SGC12049 **Units:** mg/Kg
Matrix: Solid **Date Analyzed:** 6/12/01

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
Test: TPH as Gasoline											
TPH as Gasoline	EPA 8015 M	ND		0.561		0.461	LCS	82.2			65.0 - 135.0
	Surrogate		**Surrogate Recovery**			**Control Limits (%)**					
	aaa-Trifluorotoluene		104			65 - 135					
Test: BTEX											
Benzene	EPA 8020	ND		0.0062		0.004	LCS	64.5			55.0 - 153.0
Ethyl Benzene	EPA 8020	ND		0.0078		0.005	LCS	64.1			58.4 - 116.0
Toluene	EPA 8020	ND		0.0358		0.028	LCS	78.2			56.1 - 127.0
Xylenes, total	EPA 8020	ND		0.043		0.030	LCS	69.8			64.9 - 105.0
	Surrogate		**Surrogate Recovery**			**Control Limits (%)**					
	aaa-Trifluorotoluene		101			65 - 135					
Test: MTBE by EPA 8020											
Methyl-t-butyl Ether	EPA 8020	ND		0.062		0.041	LCS	66.1			45.0 - 119 0
	Surrogate		**Surrogate Recovery**			**Control Limits (%)**					
	aaa-Trifluorotoluene		101			65 - 135					
Test: TPH as Gasoline											
TPH as Gasoline	EPA 8015 M	ND		0.561		0.490	LCSD	87.3	6.10	30.00	65.0 - 135.0
	Surrogate		**Surrogate Recovery**			**Control Limits (%)**					
	aaa-Trifluorotoluene		107			65 - 135					
Test: BTEX											
Benzene	EPA 8020	ND		0.0062		0.004	LCSD	64.5	0.00	30.00	55.0 - 153.0
Ethyl Benzene	EPA 8020	ND		0.0078		0.006	LCSD	76.9	18.18	30.00	58.4 - 116.0
Toluene	EPA 8020	ND		0.0358		0.030	LCSD	83.8	6.90	30.00	56.1 - 127.0
Xylenes, total	EPA 8020	ND		0.043		0.033	LCSD	76.7	9.52	30.00	64.9 - 105.0
	Surrogate		**Surrogate Recovery**			**Control Limits (%)**					
	aaa-Trifluorotoluene		102			65 - 135					
Test: MTBE by EPA 8020											
Methyl-t-butyl Ether	EPA 8020	ND		0.062		0.043	LCSD	69.4	4.76	30.00	45.0 - 119.0
	Surrogate		**Surrogate Recovery**			**Control Limits (%)**					
	aaa-Trifluorotoluene		102			65 - 135					

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Quality Control Results Summary

QC Batch #: WGC22050 **Units:** µg/L
Matrix: Liquid **Date Analyzed:** 6/12/01

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
Test: TPH as Gasoline											
TPH as Gasoline	EPA 8015 M	ND		561		454.677	LCS	81.0			65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
aaa-Trifluorotoluene			98			65 - 135					
Test: BTEX											
Benzene	EPA 8020	ND		6.2		5.834	LCS	94.1			65.0 - 135.0
Ethyl Benzene	EPA 8020	ND		7.8		6.316	LCS	81.0			65.0 - 135.0
Toluene	EPA 8020	ND		35.8		30.135	LCS	84.2			65.0 - 135.0
Xylenes, total	EPA 8020	ND		43		35.553	LCS	82.7			65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
aaa-Trifluorotoluene			90			65 - 135					
Test: MTBE by EPA 8020											
Methyl-t-butyl Ether	EPA 8020	ND		52.8		46.732	LCS	88.5			65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
aaa-Trifluorotoluene			90			65 - 135					
Test: TPH as Gasoline											
TPH as Gasoline	EPA 8015 M	ND		561		432.623	LCSD	77.1	4.97	25 00	65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
aaa-Trifluorotoluene			98			65 - 135					
Test: BTEX											
Benzene	EPA 8020	ND		6.2		6.214	LCSD	100.2	6.31	25.00	65.0 - 135.0
Ethyl Benzene	EPA 8020	ND		7.8		6.273	LCSD	80.4	0.68	25.00	65.0 - 135.0
Toluene	EPA 8020	ND		35.8		29.776	LCSD	83 2	1.20	25.00	65.0 - 135 0
Xylenes, total	EPA 8020	ND		43		35.537	LCSD	82.6	0.05	25.00	65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
aaa-Trifluorotoluene			88			65 - 135					
Test: MTBE by EPA 8020											
Methyl-t-butyl Ether	EPA 8020	ND		52.8		40.180	LCSD	76.1	15.08	25.00	65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
aaa-Trifluorotoluene			88			65 - 135					

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STANDARD LAB QUALIFIERS (FLAGS)

All Entech lab reports now reference standard lab qualifiers. These qualifiers are noted in the adjacent column to the analytical result and are adapted from the U.S. EPA CLP program. The current qualifier list is as follows:

Qualifier (Flag)	Description
U	Compound was analyzed for but not detected
J	Estimated value for tentatively identified compounds or if result is below PQL but above MDL
N	Presumptive evidence of a compound (for Tentatively Identified Compounds)
B	Analyte is found in the associated Method Blank
E	Compounds whose concentrations exceed the upper level of the calibration range
D	Multiple dilutions reported for analysis; discrepancies between analytes may be due to dilution
X	Results within quantitation range; chromatographic pattern not typical of fuel

PES ENVIRONMENTAL, Inc.
Engineering & Environmental Services

CHAIN OF CUSTODY RECORD

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

JOB NUMBER: 546.002.01.004
NAME / LOCATION: Utility Body
PROJECT MANAGER: Kyle Flory
SAMPLERS: Honor Hutton
RECORDER: HMH

DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	SOURCE CODE	MATRIX: Water	Sedim't	Soil	Oil	# CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	HCl VoA	Filtered	1-Amber	6-inch	DEPTH IN FEET	COL MTD CD	QA CODE
01	06	08	1000	B-1	48			X								X	8.0	3410	
01	06	08	1030	GW-1	10	X							3		2		—	2610	

ANALYSIS REQUESTED

EPA 601 / 8010	EPA 602 / 8020 (BTEX)*	EPA 624 / 8240	EPA 625 / 8270	TPHg by 5030 / 8015 (mod)	TPHd by 3550 / 8015 (mod)**	
	X			X	X	25851-001
	X			X	X	-002

NOTE

5 DAY TAT
* Run for MTBE and BTEX only.
** Perform silica gel cleanup for (d) ~~TPHg analysis~~ HMH 6/8/01 added TPHd analysis.
per C. Flory - Grab BTEX MTBE wanted 6/11/01 @9am

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY (Signature): Honor Hutton	RECEIVED BY (Signature): Jeff Fallas	6/8	2200
RELINQUISHED BY (Signature): Jeff Fallas	RECEIVED BY (Signature): Joseph Machado	6/8/01	1753
RELINQUISHED BY (Signature):	RECEIVED BY (Signature):		
RELINQUISHED BY (Signature):	RECEIVED BY (Signature):		
DISPATCHED BY (Signature) / DATE / TIME	RECEIVED FOR LAB BY (Signature)		
METHOD OF SHIPMENT			

...E-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office C...