

SITE CHARACTERIZATION REPORT

BUILDING 12

U.S. COAST GUARD

COAST GUARD ISLAND

ALAMEDA, CA

Prepared By:

Scott Vickers

RAH Environmental, Inc.

3310 Swetzer Road

Loomis, CA 95650

November 12, 1997

I. INTRODUCTION

RAH Environmental, Inc. was contracted by the United States Coast Guard under contract #DTCG88-97-D-623174 to perform underground storage tank removal operations at Building 12 on Coast Guard Island in Alameda, CA. The project included the removal of one one hundred gallon gasoline storage tank and related piping.

II. SITE DESCRIPTION

The project site is on Coast Guard Island, located in Alameda, CA. The underground storage tank was located in the front of Building 12, and formerly stored gasoline, which was probably used to power an emergency generator. The tank was immediately adjacent to the building in a landscaped area beneath some shrubs.

III. SOIL SAMPLING AND ANALYSIS

On October 30, 1997, following the removal of the tank, at approximately 10:45 A.M., one soil sample was collected from the base of the tank excavation, and one sample from the soil stockpile as shown in Figure 1. The sample from the excavation (Bldg. 12 Pit) was collected from 4' below ground surface in the center of the pit by removing approximately 6" of soil and driving a 2"x6" brass tube into the native soil. A single sample (Bldg. 12 Pile) was collected from the stockpile, also in a 2"x6" brass tube. The samples were preserved on ice at 4°C and transported under chain of custody to NEI/GTEL for analysis. NEI/GTEL is state certified under #1845 and is located at 4080-C Pike Lane in Concord, CA 94520. The following table summarizes the conditions under which the samples were taken:

Table 1

Sample ID#	Time	Temperature	Weather	Tide
Bldg. 12 Pit	10:45	72°	Clear, Sunny	5.0
Bldg. 12 Pile	11:00	72°	Clear, Sunny	5.0

Results of the soil sampling indicate that the subsurface soil was impacted slightly by very low concentrations of petroleum hydrocarbons. The sample collected from the tank excavation contained 880 parts per billion (ppb) of TPHgas, 3.7 ppb ethylbenzene, 24 ppb xylene, and 22 parts per million of lead. The sample collected from the soil stockpile contained 590 ppb of TPHgas, 2.8 ppb ethylbenzene, 18 ppb xylene and 25 parts per million of lead. The analytical results are summarized in Table 2 below, and the full laboratory reports are included as an attachment.

Table 2

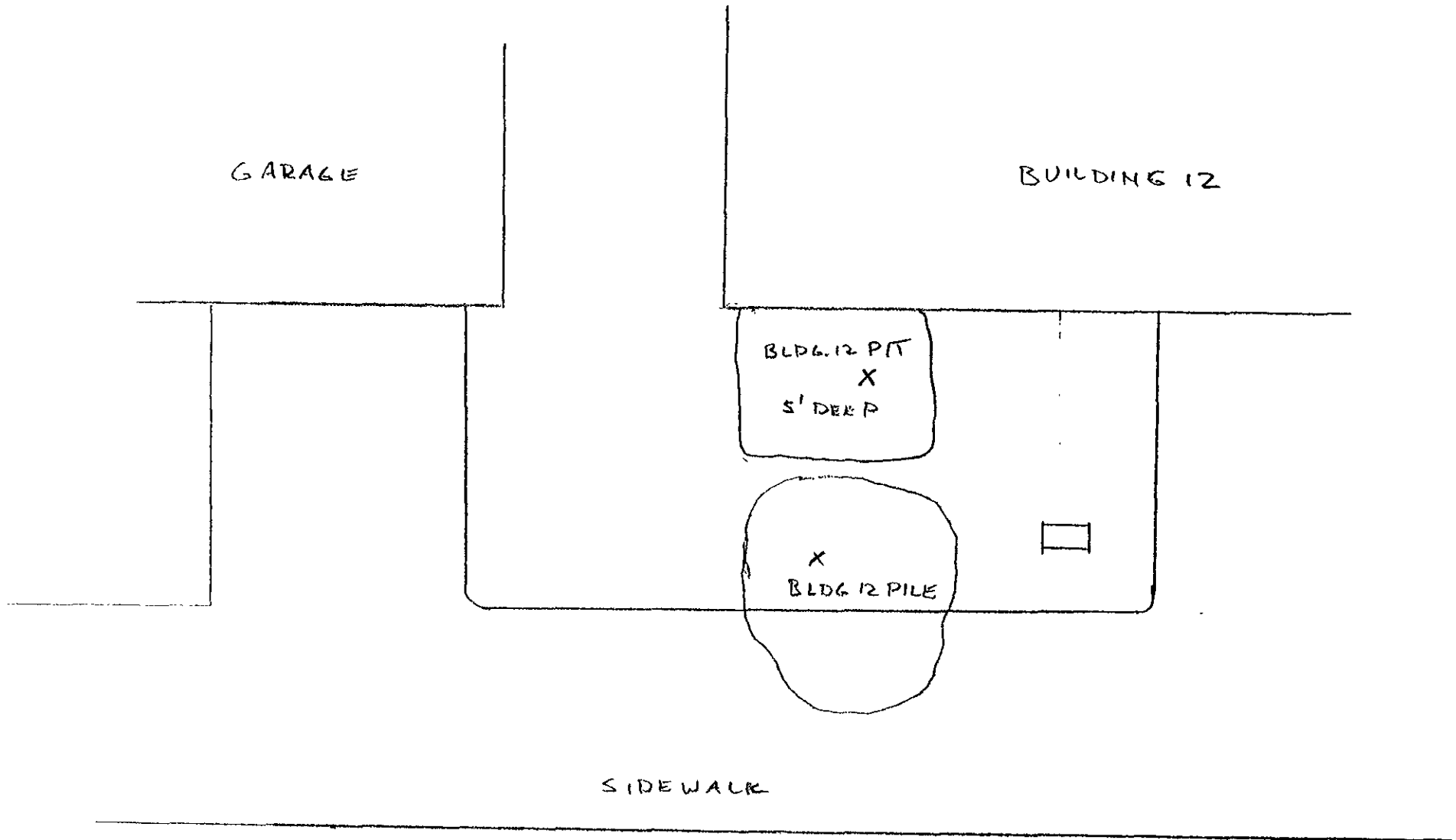
Sample ID	TPHgas	TPHdiesel	Benzene	Toluene	Ethylbenzene	Xylene	Lead
Bldg. 12 Pit	880	<10 ppm	<1.0	<2.0	3.7	24	22 ppm
Bldg. 12 Pile	590	<10 ppm	<1.0	<2.0	2.8	18	25 ppm

All results reported in **parts per billion(ug/kg)**, unless otherwise indicated.

IV. RECOMMENDATIONS

Based on the results of the soil sampling and analysis, there are no significant concentrations of petroleum hydrocarbons in the soil, and the site should be eligible for regulatory closure.

US.C.G. - ISC ALAMEDA
BLDG, 12 100 GALLON TANK
UST REMOVAL



MCCULLOUGH

FIGURE 1



Midwest Region

4211 May Avenue
Wichita, KS 67209
(316) 945-2624
(800) 633-7936
(316) 945-0506 (FAX)

November 13, 1997

Scott Vickers
RAH Environmental Inc.
3310 Swetzer Road
Loomis, CA 95650

RE: NEI/GTEL Client ID: RAH01RAH01
Login Number: W7100447
Project ID (number):
Project ID (name): USCG/ISC/ALAMEDA/AFB

Dear Scott Vickers:

Enclosed please find the analytical results for the samples received by NEI/GTEL Environmental Laboratories, Inc. on 10/31/97 under Chain-of-Custody Number(s) 36375.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by NEI/GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes. This report is to be reproduced only in full.

NEI/GTEL is certified by the U.S. Army Corp of Engineers Laboratory Validation, expiration date March 18, 1997.

If you have any questions regarding this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
NEI/GTEL Environmental Laboratories, Inc.


Terry R. Loucks
Laboratory Director

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: RAH01RAH01
 Login Number: W7100447
 Project ID (number): RAH01RAH01
 Project ID (name): USCG/ISC/ALAMEDA/AFB

Method: EPA 8020A
 Matrix: Low Soil

NEI/GTEL Sample Number	W7100447-01	W7100447-02	--	--
Client ID	BLDG 12-PIT	BLDG 12-PILE	--	--
Date Sampled	10/30/97	10/30/97	--	--
Date Analyzed	11/06/97	11/07/97	--	--
Dilution Factor	1.00	1.00	--	--

Analyte	Reporting		Concentration: Dry Weight	
	Limit	Units		
Benzene	1.0	ug/kg	< 1.0	< 1.0
Toluene	2.0	ug/kg	< 2.0	< 2.0
Ethylbenzene	2.0	ug/kg	3.7	2.8
Xylenes (total)	4.0	ug/kg	24.	18.
TPH as Gasoline	100	ug/kg	880	590
Percent Solids	--	%	86.6	87.5

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020A:

Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap and modified EPA Method 8015. "Test Methods for Evaluating Solid Waste. Physical/Chemical Methods". SW-846. Third Edition including promulgated Update II.

ANALYTICAL RESULTS
Metals

NEI/GTEL Client ID: RAH01RAH01
 Login Number: W7100447
 Project ID (number): RAH01RAH01
 Project ID (name): USCG/ISC/ALAMEDA/AFB

Method: EPA 6010A
 Matrix: Solids

NEI/GTEL Sample Number	W7100447-01	W7100447-02	--	--
Client ID	BLDG 12-PIT	BLDG 12-PILE	--	--
Date Sampled	10/30/97	10/30/97	--	--
Date Analyzed	11/04/97	11/04/97	--	--
Dilution Factor	1.00	1.00	--	--

Analyte	Reporting		Concentration:Wet Weight		
	Limit	Units			
Lead	7.0	mg/kg	22.	25.	--
Percent Solids	--	%	86.6	87.5	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 6010A:

Digestion by EPA Method 3050A. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods". SW-846. Third Edition including Update 2.

W7100447-01:

The maximum relative percent difference was exceeded for LEAD in the matrix spike and the matrix spike duplicate due to sample heterogeneity.

ANALYTICAL RESULTS
Total Petroleum Hydrocarbons By GC

NEI/GTEL Client ID: RAH01RAH01
 Login Number: W7100447
 Project ID (number): RAH01RAH01
 Project ID (name): USCG/ISC/ALAMEDA/AFB

Method: GC
 Matrix: Solids

NEI/GTEL Sample Number	W7100447-01	W7100447-02	--	--
Client ID	BLDG 12-PIT	BLDG 12-PILE	--	--
Date Sampled	10/30/97	10/30/97	--	--
Date Prepared	11/04/97	11/04/97		
Date Analyzed	11/05/97	11/05/97	--	--
Dilution Factor	1.00	1.00	--	--

Analyte	Reporting		Concentration: Dry Weight			
	Limit	Units				
TPH as Diesel	10.	mg/kg	< 10.	< 10.	--	--
Percent Solids	--	%	86.6	87.5	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution

GC:

Extraction by EPA Method 3550 (sonication). ASTM Method D3328(modified) is used for qualitative identification of fuel patterns. The method has been modified to include quantitation by applying calibration and quality assurance guidelines outlined in "Test Methods for Evaluating Solid Waste. Physical/Chemical Methods". SW-846. Third Edition including promulgated Update 1. This method is equivalent to the California LUFT manual DHS method for diesel fuel.



4080 PIKE LANE, SUITE C
CONCORD, CA 94520
(510) 685-7852
(800) 423-7143

**CHAIN-OF-CUSTODY RECORD
AND ANALYSIS REQUEST**

36375

Company Name: RAH Environmental, Inc Phone #: 415 752 3121

Company Address: 3310 Sycamore Lane, CA Site Location: USCG ISC Alameda

Project Manager: Scott Vickers Client Project ID: (#) _____

I attest that the proper field sampling procedures were used during the collection of these samples. Sampler Name (Print): Scott Vickers

ANALYSIS REQUEST

OTHER

Field Sample ID	GTEL Lab # (Lab Use only)	# CONTAINERS	Matrix						Method Preserved						Sampling	
			WATER	SOIL	AIR	SLUDGE	PRODUCT	OTHER	HCl	HNO3	H2SO4	ICE	UNPRE-SERVED	OTHER (Specify)	DATE	TIME
Bldg 12 - Pit				X							X				10/30	10:45
Bldg 12 - Pile				X						X					10/30	11:00

<input type="checkbox"/> BTEX 802 <input type="checkbox"/> 8020 <input type="checkbox"/> with MTBE <input type="checkbox"/>	<input type="checkbox"/> BTEX/Gas Hydrocarbons PID/FID <input checked="" type="checkbox"/> with MTBE <input type="checkbox"/>	<input type="checkbox"/> Hydrocarbons GC/FID Gas <input type="checkbox"/> Diesel <input checked="" type="checkbox"/> Screen <input type="checkbox"/>	<input type="checkbox"/> Hydrocarbon Profile (SIMDIS) <input type="checkbox"/>	<input type="checkbox"/> Oil and Grease 413.1 <input type="checkbox"/> 413.2 <input type="checkbox"/> SM-503 <input type="checkbox"/>	<input type="checkbox"/> TPH/IR 418.1 <input type="checkbox"/> SM 503 <input type="checkbox"/>	<input type="checkbox"/> EDB by 504 <input type="checkbox"/> DBCP by 504 <input type="checkbox"/>	<input type="checkbox"/> EPA 503.1 <input type="checkbox"/> EPA 502.2 <input type="checkbox"/>	<input type="checkbox"/> EPA 801 <input type="checkbox"/> EPA 8010 <input type="checkbox"/>	<input type="checkbox"/> EPA 802 <input type="checkbox"/> EPA 8020 <input type="checkbox"/>	<input type="checkbox"/> EPA 608 <input type="checkbox"/> 8080 <input type="checkbox"/> PCB only <input type="checkbox"/>	<input type="checkbox"/> EPA 624/PPL <input type="checkbox"/> 8240/TAL <input type="checkbox"/> NBS (+15) <input type="checkbox"/>	<input type="checkbox"/> EPA 625/PPL <input type="checkbox"/> 8270/TAL <input type="checkbox"/> NBS (+25) <input type="checkbox"/>	<input type="checkbox"/> EPA 610 <input type="checkbox"/> 8310 <input type="checkbox"/>	<input type="checkbox"/> EP TOX Metals <input type="checkbox"/> Pesticides <input type="checkbox"/> Herbicides <input type="checkbox"/>	<input type="checkbox"/> TCLP Metals <input type="checkbox"/> VOA <input type="checkbox"/> Semi-VOA <input type="checkbox"/> Pest <input type="checkbox"/> Herb <input type="checkbox"/>	<input type="checkbox"/> EPA Metals - Priority Pollutant <input type="checkbox"/> TAL <input type="checkbox"/> RCRA <input type="checkbox"/>	<input type="checkbox"/> CAM Metals <input type="checkbox"/> TLCL <input type="checkbox"/> STLC <input type="checkbox"/>	<input type="checkbox"/> Lead 239.2 <input type="checkbox"/> 200.7 <input type="checkbox"/> 7420 <input type="checkbox"/> 7421 <input type="checkbox"/> 6010 <input type="checkbox"/>	<input type="checkbox"/> Organic Lead <input type="checkbox"/>	<input type="checkbox"/> Corrosivity <input type="checkbox"/> Flash Point <input type="checkbox"/> Reactivity <input type="checkbox"/>
---	---	--	--	---	--	---	--	---	---	---	--	--	---	---	--	--	--	---	--	--

TAT
Priority (24 hr)
Expedited (48 hr)
7 Business Days
Other 5 DAY
Business Days

Special Handling
GTEL Contact _____
Quote/Contract # _____
Confirmation # _____
P.O. # _____

QA/QC Level
Blue CLP Other

SPECIAL DETECTION LIMITS

SPECIAL REPORTING REQUIREMENTS
FAX

REMARKS:
15 Day TAT
Quote # QW970141

Lab Use Only, Lot #: _____ Storage Location _____

Work Order #: _____

CUSTODY RECORD

Relinquished by Sampler: <u>Scott Vickers</u>	Date <u>10-30-97</u>	Time <u>14:30</u>	Received by: <u>John Weber</u>
Relinquished by: <u>John Weber</u>	Date <u>10-30-97</u>	Time <u>16:00</u>	Received by:
Relinquished by:	Date	Time	Received by Laboratory: Waybill #

SITE CHARACTERIZATION REPORT

BUILDING 12

U.S. COAST GUARD

COAST GUARD ISLAND

ALAMEDA, CA

Prepared By:

Scott Vickers

RAH Environmental, Inc.

3310 Swetzer Road

Loomis, CA 95650

November 12, 1997

I. INTRODUCTION

RAH Environmental, Inc. was contracted by the United States Coast Guard under contract #DTCG88-97-D-623174 to perform underground storage tank removal operations at Building 12 on Coast Guard Island in Alameda, CA. The project included the removal of one one hundred gallon gasoline storage tank and related piping.

II. SITE DESCRIPTION

The project site is on Coast Guard Island, located in Alameda, CA. The underground storage tank was located in the front of Building 12, and formerly stored gasoline, which was probably used to power an emergency generator. The tank was immediately adjacent to the building in a landscaped area beneath some shrubs.

III. SOIL SAMPLING AND ANALYSIS

On October 30, 1997, following the removal of the tank, at approximately 10:45 A.M., one soil sample was collected from the base of the tank excavation, and one sample from the soil stockpile as shown in Figure 1. The sample from the excavation (Bldg. 12 Pit) was collected from 4' below ground surface in the center of the pit by removing approximately 6" of soil and driving a 2"x6" brass tube into the native soil. A single sample (Bldg. 12 Pile) was collected from the stockpile, also in a 2"x6" brass tube. The samples were preserved on ice at 4°C and transported under chain of custody to NEI/GTEL for analysis. NEI/GTEL is state certified under #1845 and is located at 4080-C Pike Lane in Concord, CA 94520. The following table summarizes the conditions under which the samples were taken:

Table 1

Sample ID#	Time	Temperature	Weather	Tide
Bldg. 12 Pit	10:45	72°	Clear, Sunny	5.0
Bldg. 12 Pile	11:00	72°	Clear, Sunny	5.0

Results of the soil sampling indicate that the subsurface soil was impacted slightly by very low concentrations of petroleum hydrocarbons. The sample collected from the tank excavation contained 880 parts per billion (ppb) of TPHgas, 3.7 ppb ethylbenzene, 24 ppb xylene, and 22 parts per million of lead. The sample collected from the soil stockpile contained 590 ppb of TPHgas, 2.8 ppb ethylbenzene, 18 ppb xylene and 25 parts per million of lead. The analytical results are summarized in Table 2 below, and the full laboratory reports are included as an attachment.

Table 2

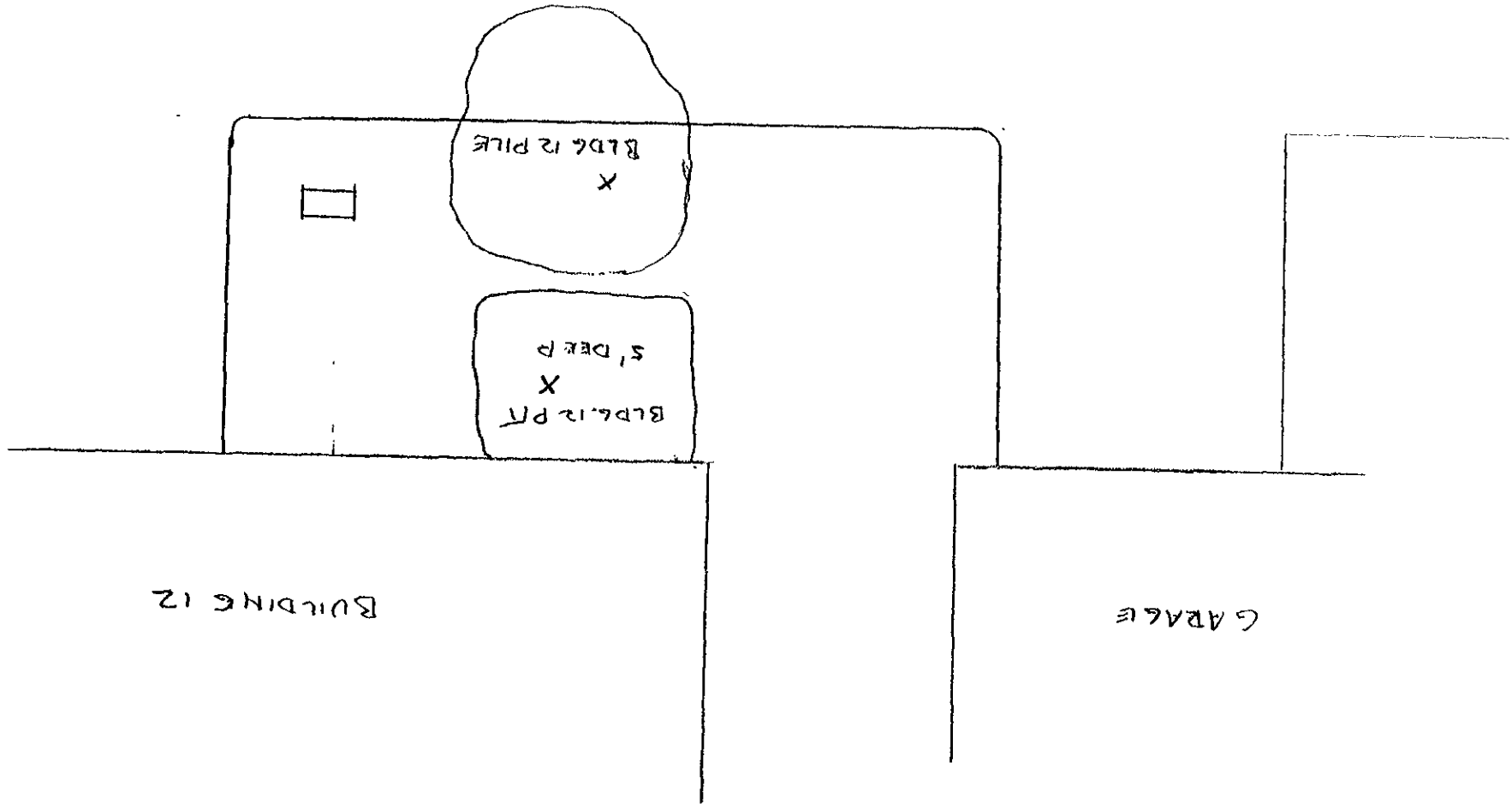
Sample ID	TPHgas	TPHdiesel	Benzene	Toluene	Ethylbenzene	Xylene	Lead
Bldg. 12 Pit	880	<10 ppm	<1.0	<2.0	3.7	24	22 ppm
Bldg. 12 Pile	590	<10 ppm	<1.0	<2.0	2.8	18	25 ppm

All results reported in **parts per billion(ug/kg)**, unless otherwise indicated.

IV. RECOMMENDATIONS

Based on the results of the soil sampling and analysis, there are no significant concentrations of petroleum hydrocarbons in the soil, and the site should be eligible for regulatory closure.

U.S.G. - 15C ALAMEDA
BLDG, 12 100 GALLON TANK
UST REMOVAL



SIDEWALK

McCULLOUGH

FIGURE 1



Midwest Region

4211 May Avenue
Wichita, KS 67209
(316) 945-2624
(800) 633-7936
(316) 945-0506 (FAX)

November 13, 1997

Scott Vickers
RAH Environmental Inc.
3310 Swetzer Road
Loomis, CA 95650

RE: NEI/GTEL Client ID: RAH01RAH01
Login Number: W7100447
Project ID (number):
Project ID (name): USCG/ISC/ALAMEDA/AFB

Dear Scott Vickers:

Enclosed please find the analytical results for the samples received by NEI/GTEL Environmental Laboratories, Inc. on 10/31/97 under Chain-of-Custody Number(s) 36375.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by NEI/GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes. This report is to be reproduced only in full.

NEI/GTEL is certified by the U.S. Army Corp of Engineers Laboratory Validation, expiration date March 18, 1997.

If you have any questions regarding this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
NEI/GTEL Environmental Laboratories, Inc.

Project Coordinator for
Terry R. Loucks
Laboratory Director

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: RAH01RAH01
 Login Number: W7100447
 Project ID (number): RAH01RAH01
 Project ID (name): USCG/ISC/ALAMEDA/AFB

Method: EPA 8020A
 Matrix: Low Soil

NEI/GTEL Sample Number	W7100447-01	W7100447-02	--	--
Client ID	BLDG 12-PIT	BLDG 12-PILE	--	--
Date Sampled	10/30/97	10/30/97	--	--
Date Analyzed	11/06/97	11/07/97	--	--
Dilution Factor	1.00	1.00	--	--

Analyte	Reporting		Concentration: Dry Weight		--	--
	Limit	Units				
Benzene	1.0	ug/kg	< 1.0	< 1.0	--	--
Toluene	2.0	ug/kg	< 2.0	< 2.0	--	--
Ethylbenzene	2.0	ug/kg	3.7	2.8	--	--
Xylenes (total)	4.0	ug/kg	24.	18.	--	--
TPH as Gasoline	100	ug/kg	880	590	--	--
Percent Solids	--	%	86.6	87.5	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020A:

Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap and modified EPA Method 8015. "Test Methods for Evaluating Solid Waste. Physical/Chemical Methods". SW-846, Third Edition including promulgated Update II.

ANALYTICAL RESULTS

Metals

NEI/GTEL Client ID: RAH01RAH01
 Login Number: W7100447
 Project ID (number): RAH01RAH01
 Project ID (name): USCG/ISC/ALAMEDA/AFB

Method: EPA 6010A
 Matrix: Solids

NEI/GTEL Sample Number	W7100447-01	W7100447-02	--	--
Client ID	BLDG 12-PIT	BLDG 12-PILE	--	--
Date Sampled	10/30/97	10/30/97	--	--
Date Analyzed	11/04/97	11/04/97	--	--
Dilution Factor	1.00	1.00	--	--

Analyte	Reporting		Concentration:Wet Weight	
	Limit	Units		
Lead	7.0	mg/kg	22.	25.
Percent Solids	--	%	86.6	87.5

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution

EPA 6010A:

Digestion by EPA Method 3050A. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods". SW-846. Third Edition including Update 2.

W7100447-01:

The maximum relative percent difference was exceeded for LEAD in the matrix spike and the matrix spike duplicate due to sample heterogeneity.

ANALYTICAL RESULTS
Total Petroleum Hydrocarbons By GC

NEI/GTEL Client ID: RAH01RAH01
 Login Number: W7100447
 Project ID (number): RAH01RAH01
 Project ID (name): USCG/ISC/ALAMEDA/AFB

Method: GC
 Matrix: Solids

NEI/GTEL Sample Number	W7100447-01	W7100447-02	--	--
Client ID	BLDG 12-PIT	BLDG 12-PILE	--	--
Date Sampled	10/30/97	10/30/97	--	--
Date Prepared	11/04/97	11/04/97	--	--
Date Analyzed	11/05/97	11/05/97	--	--
Dilution Factor	1.00	1.00	--	--

Analyte	Reporting		Concentration: Dry Weight		
	Limit	Units			
TPH as Diesel	10.	mg/kg	< 10.	< 10.	--
Percent Solids	--	%	86.6	87.5	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution

GC:

Extraction by EPA Method 3550 (sonication). ASTM Method D3328(modified) is used for qualitative identification of fuel patterns. The method has been modified to include quantitation by applying calibration and quality assurance guidelines outlined in "Test Methods for Evaluating Solid Waste. Physical/Chemical Methods", SW-846, Third Edition including promulgated Update 1. This method is equivalent to the California LUFT manual DHS method for diesel fuel.

