A·C·C
ENVIRONMENTAL
CONSULTANTS

March 11, 1993

Mr. Steve Chrissanthos
Alameda Cellars
1702 Lincoln Avenue
Alameda, CA 94501

RE: Soil Sampling, 901 Lincoln Avenue,
Alameda, California

Dear Mr. Chrissanthos:

Thank you for providing ACC with the opportunity to present this letter report. This letter describes the materials and procedures used during drilling and sampling of three borings located at 901 Lincoln Avenue, Alameda, California. This work was performed in accordance with the signed Modification Number 1 dated February 16, 1993.

ACC's investigative approach was to drill three borings to evaluate the extent of petroleum hydrocarbons in the soil. This work was performed to evaluate the lateral and vertical extent of soil contamination adjacent to monitoring well MW-1. Figure 1 illustrates the locations of the borings. In addition, one composite sample of the stockpiled soil generated from tank removal was collected and analyzed to evaluate disposal costs.

Background

The site is presently occupied by E-Z Liquors, a commercial liquor store. The property is owned by Mr. Steve Chrissanthos. On March of 1990, two 10,000-gallon gasoline tanks and one 2,000-gallon diesel tank were removed from the above referenced site. Analysis of the soil samples collected from beneath the two gasoline tanks indicated up to 710 parts per million (ppm) of Total Petroleum Hydrocarbons (TPH) as gasoline. Soil samples collected from beneath the diesel tank indicated less than detectable levels of TPH as diesel.

In December of 1992, ACC performed a soil and groundwater investigation adjacent to the former tank excavation to evaluate the lateral extent of impacted soil and to determine if the groundwater has been impacted. The results of soil samples collected during drilling indicated levels of TPH as gasoline at 55.96 ppm in boring MW-1. Initial groundwater samples collected from the on-site monitoring wells on December 15, 1992, indicated below detectable levels of constituents. The groundwater gradient was calculated to be 0.00175 foot per foot and the direction of flow was generally southwest.

Field Procedures

Borings S-1, S-2 and S-3 were drilled on February 24, 1993. The drilling method used a precision sampling tool equipped with 5-foot sections of 3/4-inch inside diameter galvanized steel probe pipe which was connected to a 1-foot long galvanized steel soil core tube.

1000 Atlantic Avenue, Suite 110 •Alameda, CA 94501 •(510) 522-8188 •FAX: (510) 865-5731

Stainless steel insert rods were placed through the probe pipe and sampling core. The probe pipe, soil core and insert rods were together pneumatically driven using a precision hammer to the depth desired. The insert rods were removed and the probe pipe and core were driven one foot to obtain a soil sample. The probe pipe, insert rods, and sampling core were all pre-cleaned prior to use and between sample drives by washing with trisodium phosphate (TSP) and potable water solution, a potable water rinse, and distilled water rinse.

Soil samples were collected every five feet, at any noted changes in lithology, and at the approximate soil/groundwater interface.

Soil samples were prescreened for volatile organic compounds with a photo-ionization detector (PID) calibrated for benzene. Upon removal from the sampler, each end of the sample rod was covered with Teflon tape and plastic caps, labeled, and stored in an ice-filled cooler to be transported under chain of custody to ChromaLab, Inc., a Cal-EPA certified laboratory.

The soil cuttings and samples were logged by an ACC geologist during drilling operations. Lithologic logs of the borings are shown in Figures 2 through 4, respectively. The soil cuttings are described in accordance with the Unified Soil Classification System, as shown in Figure 5

In addition, soil samples were collected from the stockpile generated during tank removal. The stockpile soil samples were obtained by removing approximately one foot of surface material, then pushing pre-cleaned stainless steel sample tubes into the pile. Four soil samples were collected approximately 1.5 feet below the surface of the stockpile.

Findings

During drilling, the subsurface soils consisted of brown fine grained sand to the depth investigated of 10 feet below ground surface (bgs). The sand is part of the Merritt Sand formation. Groundwater was encountered at approximately 9 feet bgs during drilling.

An HNu photoionization detector (PID) was used during drilling and sampling procedures to detect field evidence of volatile hydrocarbons in the soil. No field evidence of volatile organics was detected from the borings.

Analytical Results

Two soil samples were selected from each boring and submitted to ChromaLab for analysis of Total Petroleum Hydrocarbons (TPH) as gasoline by EPA test method 5030, and benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA test method 8020. BTEX are chemicals that are part of gasoline and are considered to be health risks. Copies of the analytical results and chain of custody forms are enclosed.

Results of the chemical analysis of soil from the borings and composite samples from the stockpile indicated concentrations of TPH as gasoline and BTEX below detectable levels.

Conclusion

Based on the recent field investigation, hydrocarbon impact is limited to soil around monitoring well MW-1. Therefore, no further investigation of the site soil is needed.

Initial sampling of the groundwater from the three on-site monitoring wells on December 15, 1992, indicate that groundwater has not been impacted.

Pursuant to the Tri-Regional Board guidelines, groundwater sampling and monitoring of the on-site wells will continue on a quarterly basis. Closure of the site may be pursued upon four consecutive quarters of below detectable constituents in the groundwater.

The stockpiled soil generated during tank removal and field investigation may be removed from the site because laboratory results indicated below detectable levels. The soil can be disposed of at a Class III landfill. ACC is arranging for disposal per your request.

Sincerely,

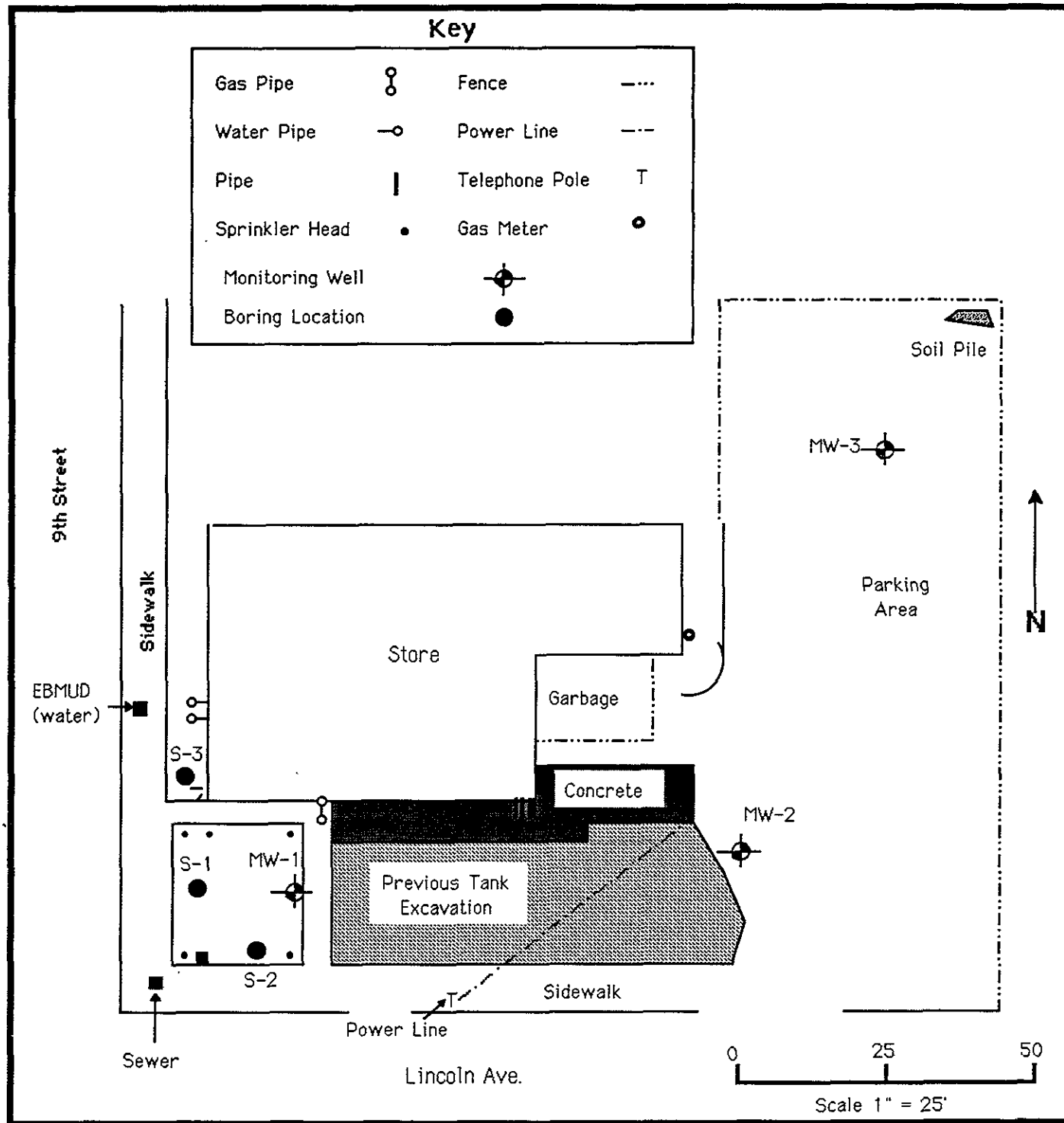
Misty C. Kaltreider
Geologist

Reviewed by:

Elizabeth Herbert, R.G.
Registered Geologist

cc: Mr. Richard Hiett - Regional Water Quality Control Board
Ms. Juliet Shin - Alameda County Health Care Services - Division of Hazardous Materials

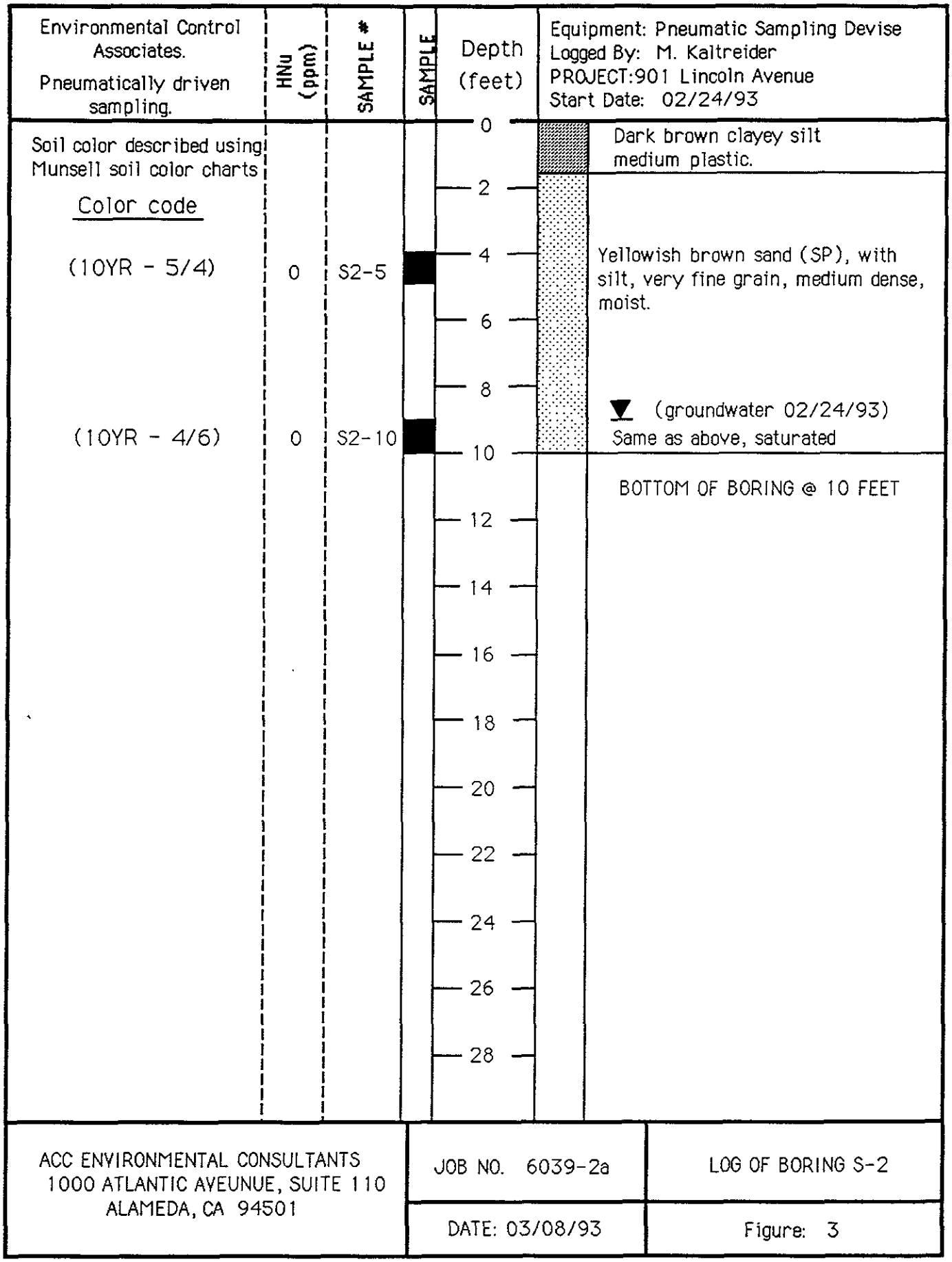
Enclosures



ACC Environmental Consultants, Inc. 1000 Atlantic Avenue, Suite 110 Alameda, California 94501		Site Map 901 Lincoln Ave. Alameda, California	
Project No. 6039-2a	Date: 3/8/93	Dn by: MCK	Figure 1

Environmental Control Associates. Pneumatically driven sampling.	HNu (ppm)	SAMPLE #	SAMPLE	Depth (feet)	Equipment: Pneumatic Sampling Devise Logged By: M. Kaltreider PROJECT:901 Lincoln Avenue Start Date: 02/24/93
Soil color described using Munsell soil color charts Color code (10YR - 4/6)	0	S1-5		0 2 4 6 8	Dark brown clayey silt medium plastic. Yellowish brown sand (SP), with silt, very fine grain, medium dense, moist. ▼ (groundwater 02/24/93)
	0	S1-10		10	Same as above, saturated BOTTOM OF BORING @ 10 FEET
				12 14 16 18 20 22 24 26 28	

ACC ENVIRONMENTAL CONSULTANTS 1000 ATLANTIC AVEUNUE, SUITE 110 ALAMEDA, CA 94501	JOB NO. 6039-2a	LOG OF BORING S-1
	DATE: 03/08/93	Figure: 2


Environmental Control Associates.
Pneumatically driven sampling.
HNu (ppm)
SAMPLE #
SAMPLE
Depth (feet)
Equipment: Pneumatic Sampling Devise
Logged By: M. Kaltreider
PROJECT:901 Lincoln Avenue
Start Date: 02/24/93
Soil color described using Munsell soil color charts
Color code
(10YR - 5/4)
0
S2-5
Dark brown clayey silt medium plastic.
Yellowish brown sand (SP), with silt, very fine grain, medium dense, moist.
(groundwater 02/24/93)
(10YR - 4/6)
0
S2-10
Same as above, saturated
BOTTOM OF BORING @ 10 FEET
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
ACC ENVIRONMENTAL CONSULTANTS
1000 ATLANTIC AVEUNUE, SUITE 110
ALAMEDA, CA 94501
JOB NO. 6039-2a
LOG OF BORING S-2
DATE: 03/08/93
Figure: 3

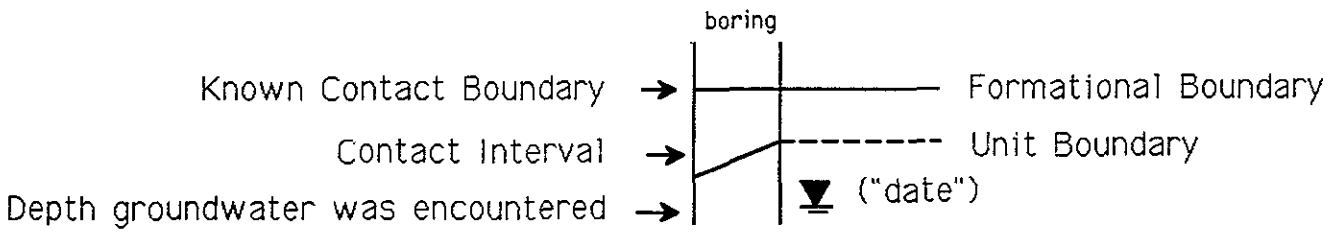
Environmental Control Associates. Pneumatically driven sampling.	HNu (ppm)	SAMPLE #	SAMPLE	Depth (feet)	Equipment: Pneumatic Sampling Devise Logged By: M. Kaltreider PROJECT:901 Lincoln Avenue Start Date: 02/24/93
Soil color described using Munsell soil color charts Color code				0	Dark brown clayey silt medium plastic.
(10YR - 5/4)	0	S3-5		2 4	Yellowish brown sand (SP), with silt, very fine grain, medium dense, moist.
				6 8	▼ (groundwater 02/24/93)
(10YR - 4/6)	0	S3-10		10	Same as above, saturated
				12 14 16 18 20 22 24 26 28	BOTTOM OF BORING @ 10 FEET

ACC ENVIRONMENTAL CONSULTANTS 1000 ATLANTIC AVEUNUE, SUITE 110 ALAMEDA, CA 94501	JOB NO. 6039-2a	LOG OF BORING S-3
	DATE: 03/08/93	Figure: 4

UNIFIED SOIL CLASSIFICATION SYSTEM

	MAJOR DIVISIONS				TYPICAL NAMES
COARSE GRAINED SOILS more than half > #200 sieve	GRAVELS more than half coarse fraction is larger than No. 4 sieve	CLEAN GRAVELS WITH LITTLE OR NO FINES	G W		well graded gravels, gravel-sand mixtures
			G P		poorly graded gravels, gravel-sand mixtures
		GRAVELS WITH OVER 12% FINES	G M		silty gravels, poorly graded gravel-sand silt mixtures
			G C		clayey gravels, poorly graded gravel-sand clay mixtures
	SANDS more than half coarse fraction is smaller than No. 4 sieve	CLEAN SANDS WITH LITTLE OR NO FINES	S W		well graded sands, gravelly sands
			S P		poorly graded sands, gravelly sands
		SANDS WITH OVER 12% FINES	S M		silty sands, poorly graded sand-silt mixtures
			S C		clayey sands, poorly graded sand-clay mixtures
FINE GRAINED SOILS more than half < #200 sieve	SILTS AND CLAYS liquid limit less than 50		M L		inorg. silts and v.fine sands, rock flour silty or clayey sands, or clayey silts w/sl. plasticity
			C L		inorg. clays of low-med plasticity, gravelly clays, sandy clays, silty clays, lean clays
			O L		organic clays and organic silty clays of low plasticity
	SILTY AND CLAYS liquid limit greater than 50		MH		inorganic silty, micaceous or diatomacious fine sandy or silty soils, elastic silts
			C H		inorganic clays of high plasticity, fat clays
			O H		organic clays of medium to high plasticity organic silts
	HIGHLY ORGANIC SOILS		Pt		peat and other highly organic soils

LEGEND FOR BORING LOGS



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1000 ATLANTIC AVENUE, SUITE 110
ALAMEDA, CA 94501

Soil Classification System

Project No. 6064-2	Date: 3/9/93	DRN: MCK	Figure: 5

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

March 2, 1993 ChromaLab File No.: 0293238

ACC ENVIRONMENTAL CONSULTANTS

Attn: Misty Kaltreider

RE: Seven soil samples for Gasoline and BTEX analysis

Project Name: 901 LINCOLN
Project Number: 6039-2a
Date Sampled: Feb. 24, 1993 Date Submitted: Feb. 25, 1993
Date Analyzed: Feb. 26, 1993

RESULTS:

Sample I.D.	Gasoline (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethyl Benzene (µg/Kg)	Total Xylenes (µg/Kg)
S1-5	N.D.	N.D.	N.D.	N.D.	N.D.
S1-10	N.D.	N.D.	N.D.	N.D.	N.D.
S2-5	N.D.	N.D.	N.D.	N.D.	N.D.
S2-10	N.D.	N.D.	N.D.	N.D.	N.D.
S3-5	N.D.	N.D.	N.D.	N.D.	N.D.
S3-10	N.D.	N.D.	N.D.	N.D.	N.D.
C-1,C-2,C-3,C-4	N.D.	N.D.	N.D.	N.D.	N.D.
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE RECOVERY	106%	106%	108%	95%	98%
DUP SPIKE RECOVERY	---	106%	113%	99%	98%
DETECTION LIMIT	1.0	5.0	5.0	5.0	5.0
METHOD OF ANALYSIS	5030/8015	8020	8020	8020	8020

ChromaLab, Inc.

Billy Thach
Analytical Chemist

Eric Tam
Laboratory Director

do

2239 Omega Road,#1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

ACC Environmental Consultants
1000 Atlantic Ave, Suite 110
Alameda, CA 94501

Lab Name Chromalab

CHROMALAB FILE # 29323B
ORDER # 10584

PROJECT NUMBER	PROJECT NAME
6039-2a	901 Lincoln

SAMPLER(S): (Signature)
Misty Kaltreider

ID#	Depth	Date	Time	Water	Soil	Location	# Containers	TPH-g w/BTEX	Remarks
S1-5	5'	2/24/93	9:00		X		1	X	Standard turnaround
S1-10	10'		9:15				1	X	
S2-5	5'		9:30				1	X	
S2-10	10'		10:00				1	X	
S3-5	5'		10:15				1	X	
S3-10	10		10:30				1	X	
C-1						Stockpile	1	X	Composite into one
C-2						"	1	X	
C-3						"	1	X	
C-4		↓			↓	"	1	X	

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
Misty Kaltreider	2/25/93	1330					
Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Sample Integrity:	

MOBILE CHEM LABS INC.

1678 Reliez Valley Road
Lafayette, CA 94549 • (415) 945-1266

Zaccor Corporation
791 Hamilton Ave.
Menlo Park, CA 94025
Attn: Gary Zacoor

Date Sampled: 05-04-90
Date Received: 05-04-90
Date Reported: 05-04-90

Sample Number	Sample Description
B050008	Job # 003-117 Alameda Cellars 901 Lincoln Ave. Alameda, CA. 2 (A-D) SOIL

ANALYSIS

	Detection Limit	Sample Results
	PPM	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.1	<0.1
Toluene	0.1	<0.1
Xylenes	0.1	<0.1
Ethylbenzene	0.1	<0.1

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.

MOBILE CHEM LABS

Joyce A V Dishman

Ronald G. Evans
Lab Director