

R02738
+ FWJ

GSZ

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Jeffrey L. Fisher, AIA

December 23, 1987

Ms. Robin Bruer
California Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street, Room 6000
Oakland, California 94607

Re: Alpha Beta Store #541
Alameda, California
Project No. 8755

CALIFORNIA REGIONAL WATER
QUALITY CONTROL BOARD

DEC 28 1987

FF RMB

Received
12-28-87
RMB

Dear Robin:

We are an Architectural Firm in Salt Lake City, Utah doing an expansion of an existing business located northeast of the intersection of Blanding Avenue and Broadway in the City of Alameda. After completing a foundation investigation and a soils testing program, it has come to our attention that there is a high content of petroleum hydrocarbons in a small area of our site. Our client has secured further testing to determine the extent of the hydrocarbons and whether the ground water has indeed been contaminated. We hope to receive this report around the first of the year.

ALAMEDA

Enclosed is a copy of the Preliminary Soil Testing Program completed by Kaldveer Associates.

We would request a copy of "Guidelines for Addressing Fuel Leaks" so we can become aware of some possible options for remediation.

Sent copy
12-28-87
RMB

Please call if you have any questions.

Thank you,

David Giles

David Giles, Project Manager
FFKR Architects/Planners II

B3
GSZ

DG/dy

2/18/88

cc: Gordon Powers
Ronald Bajuniemi
Nic Dempsey
Jeff Fisher



Kaldveer Associates Geoscience Consultants

Peter Kaldveer, P.E., G.E.
President

Richard Short, P.E., G.E.
Executive Vice President

Ronald L. Bajuniemi, P.E., G.E.
Vice President Engineering

Patrick Stevens, P.E.
Associate

David F. Hoexter, C.E.G.
Associate

Michael McRae, P.E.

Dawn Rinaldi, P.E.

December 2, 1987
KE998-1, 10593

American Store Properties, Inc.
1500 Anaheim Boulevard
Anaheim, California 92805

Attention: Mr. Gordon Powers

RE: PRELIMINARY SOIL TESTING
PROGRAM
ALPHA BETA #541 ADDITION
ALAMEDA, CALIFORNIA

Gentlemen:

In this letter report, we present a summary of our preliminary soil testing program at the proposed location of the Alpha Beta Store #541 addition. The addition will extend the southeastern end of the existing market as shown on Figure 1, Site Plan. The market is within the neighborhood shopping center located northeast of the intersection of Blanding Avenue and Broadway and northwest of Tilden Way in Alameda, California. The purpose of this preliminary soil testing program was to determine the presence and quantities, if any, of petroleum hydrocarbons in the subsurface soils, as noted in one exploratory boring during our recent supplemental foundation investigation at the site.

BACKGROUND

Kaldveer Associates has previously performed a foundation investigation for the market addition. The results of this investigation was presented in our report titled, "Supplemental Foundation Investigation, Alpha Beta Market Expansion, Alameda, California", dated October 27, 1987. During this investigation, a strong fuel-like odor was noted in the soil samples obtained from Boring 5, located at the western corner of the addition. Furthermore, our firm had conducted the initial foundation investigation for the shopping center and the results were presented in our report titled, "Foundation Investigation, Shopping Center, Alameda, California", dated May 4, 1972. We should note that in one of the borings drilled for this initial (1972) investigation, similar and unnatural coloration of the soil was noted in our Previous Boring 7, situated in the same general location as Boring 5.

425 Roland Way
Oakland, California 94621
(415) 568-4001

A California Corporation

SCOPE

The scope of work included a subsurface investigation, soil sampling, analytical testing of the obtained soil samples, and preparation of this report. The investigation was conducted by Dawn Y. Rinaldi, P.E., Senior Project Engineer.

SITE HISTORY

Based on the information presented in our initial foundation investigation, the majority of the shopping center site was formerly occupied by Loop Lumber Yard and the southeastern end of the site was occupied by California Rock and Gravel Company, a concrete mixing plant. The approximate boundaries between these two operations are unknown. In addition, details of the operations and locations of any underground tanks is unknown.

SITE INVESTIGATION

A. Subsurface Investigation

The subsurface investigation was performed using a trailer-mounted drill rig equipped with an 8-inch diameter, continuous flight, hollow stem augers to investigate and sample the subsurface soils. The augers were steam cleaned prior to the drilling operations.

Five exploratory borings, Borings 6 through 10, were drilled on November 4, 1987 to a maximum depth of 16 feet. The borings were generally located in the vicinity of our previous Boring 5, where contamination was originally observed. Previously, five borings were drilled for our supplemental foundation investigation study to a maximum depth of 20.5 feet on October 13, 1987. In addition, a total of thirteen borings, two of which were near the proposed addition site, were drilled on April 10 to 12, 1972 to a maximum depth of 24 feet. The approximate locations of the five borings drilled for this investigation, the five borings drilled for our previous supplemental foundation investigation and two previous borings drilled during our initial foundation investigation are shown on Figure 1. Logs of the borings drilled for this investigation and details regarding the field investigation are included in Appendix A.

B. Soil Sampling

Soil samples were generally obtained from each of the borings between depths of 4 to 16 feet. The sampling program was based on our field observations at the time of drilling.

The soil samples were obtained with a 2½-inch O.D. California sampler. Each sample was contained in 2-inch diameter, 6-inch long brass liners. The sampler and brass liners were decontaminated with a trisodium

phosphate (TSP) solution, rinsed with clear water and a final rinse of deionized water prior to each sampling. The obtained soil samples were stored using the following procedures: 1) the sample ends were covered with aluminum foil, fitted with rubber caps, and taped and 2) each sample was stored in a zip-lock plastic bag and refrigerated. The samples were delivered immediately after drilling under chain-of-custody control to Trace Analysis Laboratories in Hayward, California for testing.

C. Groundwater Sampling

A grab sample of the groundwater from Boring 6 was obtained approximately 3½ hours after the boring was drilled. The water sample was obtained with a teflon bailer which had been decontaminated as previously described above. Two 40-ml VOA vials and one 1-liter glass bottle were filled with the groundwater sample. The groundwater samples were refrigerated until delivery with the soil samples, under chain-of-custody control to Trace Analysis Laboratories. We should note that these samples were for visual observation and no analytical testing was performed.

SITE CONDITIONS

A. Surface

At the time of our field investigation, the majority of the market addition site was surfaced with approximately 2 inches of asphaltic concrete over 7 to 8 inches of baserock. In addition, a concrete sidewalk, ramp and curbing was adjacent the southeast side of the market.

B. Subsurface

The near surface soils encountered below the pavement were fill materials generally consisting of loose to medium dense silty, clayey or gravelly sands and stiff silty and sandy clays which extended to depths of 4 to 6½ feet. Underlying these fill materials were medium dense to dense silty and clayey sands and stiff sandy clays. These native materials extended to the maximum depth explored of 16 feet.

A moderate to strong fuel-like odor was noted in the soil samples from Boring 6 at depths of 5 to approximately 11.5 feet and in Boring 10 at a depth of 7 feet.

Detailed descriptions of the soils encountered in each of the exploratory borings drilled for this investigation are presented in Appendix A. The attached boring logs and related information depict subsurface conditions only at the specific locations shown on the Site Plans and on the particular date designated on the logs. Also, the passage of time may result in changes in the subsurface conditions due to environmental changes. The locations of the borings were approximately determined by pacing and

should be considered accurate only to the degree implied by the method used.

C. Groundwater

Groundwater was not encountered in any of the borings at the time of drilling. However, Borings 6 and 7 were left open for a period of 2½ to 3½ hours at which time the groundwater was measured at depths of 7 and 9 feet, respectively. The groundwater level was previously measured at depths of 9½ to 14 feet. Fluctuations of the groundwater level could occur due to change in seasons, variations in rainfall, tidal action and other factors.

We should note that a very thin oily sheen was observed floating on the groundwater in Boring 6.

ANALYTICAL TEST RESULTS

A total of five soil samples were analyzed for 1) total volatile hydrocarbons (low to medium boilers, primarily gasoline), 2) total extractable hydrocarbons (medium to high boilers, primarily diesel), and 3) benzene, toluene, and xylene. In addition, one sample from Boring 6 was tested for purgeable and aromatic volatile organics.

The following table (Table 1) presents a summary of the constituents which were identified at concentrations above the minimum detection limits. The results are also summarized on Figure 1. The complete analytical results of the chemical laboratory tests are presented in the attached Appendix B in addition to the Chain-of-Custody records for the samples. The analytical results are presented in concentrations of ug/kg or parts per billion in Appendix B, and have been converted to mg/kg or parts per million in Table 1 and Figure 1.

TABLE 1
SUMMARY OF TEST RESULTS ABOVE THE
MINIMUM DETECTION LIMITS*

<u>Boring Number</u>	<u>Depth (Feet)</u>	<u>Volatile Hydrocarbons</u>	<u>Extractable Hydrocarbons</u>	<u>Benzene</u>	<u>Toluene</u>
6	6	39	1,200	.12	.08
8	5½	ND	23	ND	ND
9	5½	34	4**	--	--
9	8	ND	4**	ND	ND
10	7	12	46	ND	ND

Note: * All concentrations in mg/kg or parts per million, ppm.
** These two samples were composited into one analysis.
ND Not detected above detection limits.

The soil test procedures were performed in accordance with the Standard EPA Test Methods and Attachment 2 of the "Guidelines for Addressing Fuel Leaks" (September 1985) by the California State Regional Water Quality Control Board. The analysis for total volatile and extractable hydrocarbon testing on the soil samples were performed using a Modified 8015 test method. The benzene, toluene and xylene analysis was performed using a Modified 8020 test method. In addition, the purgeable and aromatic volatile organics analysis was performed using the 8010 test method and the aromatic volatile organics analysis was performed using the 8020 test method.

DISCUSSION AND CONCLUSIONS

This investigation was conducted to confirm the presence of petroleum hydrocarbons apparently encountered during our previous supplemental foundation investigation. Petroleum hydrocarbons were detected in all samples submitted for testing. All of the total concentrations (volatile and extractable, combined) detected were less than 100 parts per million, ppm, except those of a sample from Boring 6, in the southeast corner of the proposed addition. Hydrocarbon levels at this location were in excess of 1,200 ppm. It should be noted that this investigation did not evaluate the extent of contamination.

The San Francisco Bay Region California Water Quality Control Board has issued guidelines for fuel leak contamination of soil. These guidelines are contained in "Guidelines for Addressing Fuel Leaks", revised September, 1985. These guidelines generally require site remediation where hydrocarbon content in soil exceeds 1000 ppm, and further investigation of potential or existing groundwater contamination at levels exceeding 100 ppm in soil.

It is difficult to assess the significance of the hydrocarbon contamination due to the limited confirming investigation conducted to date. The extent of soil contamination throughout the site, possible groundwater contamination, and groundwater utilization have not been evaluated to date. After information on these factors is obtained, an overall evaluation of the contamination can be conducted, and recommendations for remediation, if any, can be developed.

RECOMMENDATIONS

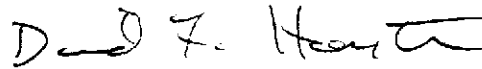
We recommend that additional investigation be conducted, to further evaluate the lateral extent of soil contamination, as well as possible groundwater contamination. A copy of this letter should be sent to the California Regional Water Quality Board, San Francisco Bay Region, located in Oakland, California, with an appropriate cover letter describing proposed further investigation.

Our services were performed in accordance with generally accepted soil and environmental engineering principles and practices. The analytical results soil testing are only specific to the locations shown on the Site Plan and the date of sampling.

If you have any questions, please call.

Very truly yours,

KALDVEER ASSOCIATES, INC.



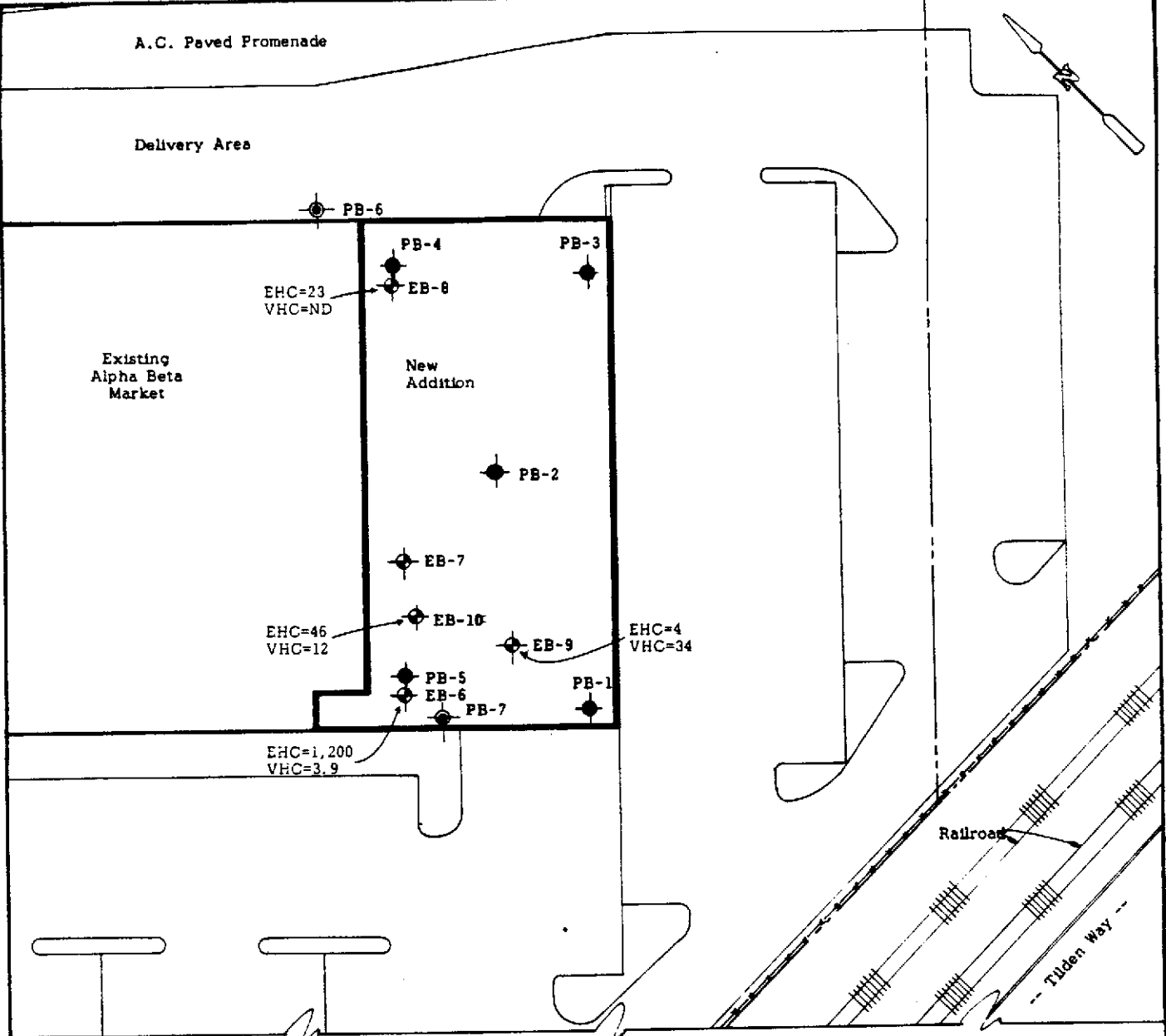
David F. Hoexter
Manager/Environmental Services



Ronald L. Bajuniemi
Vice President Engineering

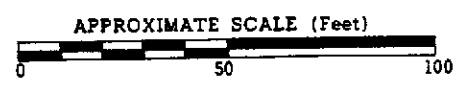


DFH/RLB:pv
Copies: Addressee (3)



LEGEND

- EB-10 Approximate Location of Exploratory Borings
 - PB-5 Approximate Location of Previous Borings drilled on October, 1987.
 - PB-7 Approximate Location of Previous Borings drilled on April, 1972.
 - EHC — Total Concentrations of Extractable Hydrocarbons in ppm
 - VHC — Total Concentrations of Volatile Hydrocarbons in ppm
 - ND — Not Detected Above Detection Limits
- Base: "Site Plan", by James W. Foug & Associates, dated November 26, 1987.



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SITE PLAN		
ALPHA BETA #541 ADDITION Alameda, California		
PROJECT NO.	DATE	Figure 1
KE998-1	December 1987	

APPENDIX A - FIELD INVESTIGATION

The soils encountered in the five exploratory borings drilled for this investigation were continuously logged in the field by our representative. The soils are described in accordance with the Unified Soil Classification System (ASTM D-2487). The logs of the borings as well as a key for the classification of the soil (Figure A-1) are included as part of this appendix.

Representative soil samples were obtained from the exploratory borings at selected depths appropriate to the soil testing program. The soil samples were obtained using a 2½-inch O.D. California sampler. The sampler type is indicated in the "Sampler" column of the boring logs as designated below:

 California Sampler

Resistance blow counts were obtained with the sampler by dropping a 140-pound hammer through a 30-inch free fall. The sampler was driven 18 inches, and the number of blows were recorded for each 6 inches of penetration. The blows per foot recorded on the boring logs represent the accumulated number of blows that were required to drive the last 12 inches. Due to the larger diameter of the California sampler, the blow counts recorded for this sampler are not standard penetration resistance values. In order to convert these values to standard penetration resistance values, the indicated blow counts should be multiplied by a factor of 0.8.

The attached boring logs and related information show our interpretation of the subsurface conditions at the dates and locations indicated, and it is not warranted that they are representative of subsurface conditions at other locations and times.

PRIMARY DIVISIONS			GROUP SYMBOL	SECONDARY DIVISIONS
COARSE GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS (LESS THAN 5% FINES)	GW	Well graded gravels, gravel-sand mixtures little or no fines
			GP	Poorly graded gravels or gravel-sand mixtures, little or no fines
		GRAVEL WITH FINES	GM	Silty gravels gravel-sand-silt mixtures non-plastic fines
			GC	Clayey gravels gravel-sand-clay mixtures, plastic fines
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS (LESS THAN 5% FINES)	SW	Well graded sands, gravelly sands little or no fines
			SP	Poorly graded sands or gravelly sands, little or no fines
		SANDS WITH FINES	SM	Silty sands sand-silt mixtures non-plastic fines
			SC	Clayey sands sand-clay mixtures, plastic fines
FINE GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT IS LESS THAN 50%	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
		OL	Organic silts and organic silty clays of low plasticity	
	SILTS AND CLAYS LIQUID LIMIT IS GREATER THAN 50%	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
		CH	Inorganic clays of high plasticity, fat clays.	
		OH	Organic clays of medium to high plasticity, organic silts.	
HIGHLY ORGANIC SOILS			Pt	Peat and other highly organic soils

DEFINITION OF TERMS

SILTS AND CLAYS	U.S. STANDARD SERIES SIEVE				CLEAR SQUARE SIEVE OPENINGS			COBBLES	BOULDERS
	200	40	10	4	3/4"	3"	12"		
	SAND			GRAVEL					
	FINE	MEDIUM	COARSE	FINE	COARSE				

GRAIN SIZES

SANDS AND GRAVELS	BLOWS/FOOT [†]
VERY LOOSE	0 - 4
LOOSE	4 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	OVER 50


SILTS AND CLAYS	STRENGTH [‡]	BLOWS/FOOT [†]
VERY SOFT	0 - 1/4	0 - 2
SOFT	1/4 - 1/2	2 - 4
FIRM	1/2 - 1	4 - 8
STIFF	1 - 2	8 - 16
VERY STIFF	2 - 4	16 - 32
HARD	OVER 4	OVER 32

RELATIVE DENSITY

[†] Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O D (1-3/8 inch I.D.) split spoon (ASTM D-1586).

[‡] Unconfined compressive strength in tons/sq. ft. as determined by laboratory testing or approximated by the standard penetration test (ASTM D-1586), pocket penetrometer, torvane, or visual observation.

CONSISTENCY

 <p>Kaldveer Associates Geoscience Consultants A California Corporation</p>	KEY TO EXPLORATORY BORING LOGS		
	Unified Soil Classification System (ASTM D-2487)		
	ALPHA BETA #541 ADDITION Alameda, California		
	PROJECT NO	DATE	Figure
KE998-1	December 1987	A-1	

DRILL RIG Hollow Stem Auger	SURFACE ELEVATION --	LOGGED BY D.Y.R.
DEPTH TO GROUNDWATER 7' (see note 3)	BORING DIAMETER 8 Inches	DATE DRILLED 11/4/87

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	DRY DENSITY (PCF)	UNCONFINED COMPRESSIVE STRENGTH (KSF)
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
2" AC over 8" Baserock				1					
SAND (fine grained), silty	black	medium dense	SM	2					
SAND (fine grained), clayey, silty	black	medium dense	SC	3					
(grading to trace of clay)				4					
(FILL) ↑			SM	5		19			
SAND (fine grained), silty, trace of clay (moderate to strong fuel-like odor)	blue grey	medium dense	SM	6		23			
Notes:				7					
1. The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.				8		25			
2. For an explanation of penetration resistance values, see first page Appendix A.				9		25			
3. Groundwater water was not encountered at time of drilling. Three and one-half hours later, the groundwater level was measured at 7 feet.				10		25			
(light fuel-like odor)	mottled with tan			11		25			
(grading no clay and to trace of silt)	tan		SM	12					
				13					
				14					
				15		48			
				16					
Bottom of Boring = 16 Feet				17					
				18					
				19					
				20					



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EXPLORATORY BORING LOG

ALPHA BETA #541 ADDITION
 Alameda, California

PROJECT NO

KE998-1

DATE


December 1987

BORING NO.

6

DRILL RIG Hollow Stem Auger	SURFACE ELEVATION --	LOGGED BY DYR
DEPTH TO GROUNDWATER 9' (see note 3)	BORING DIAMETER 8 Inches	DATE DRILLED 11/4/87

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	DRY DENSITY (PCF)	UNCONFINED COMPRESSIVE STRENGTH (PSF)
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
2" AC over 8" Baserock				1					
SAND, gravelly	tan	medium dense	SM	2					
SAND (fine grained), silty, with clay	black	medium dense	SC	3					
CLAY, silty, some sand	black	stiff	CL	4					
SAND (fine grained), silty, with clay	black	medium dense	SC	5		12			
(FILL) ↓				6					
CLAY, very sandy (fine grained)	tan mottled with grey	stiff	CL-SC	7		19			
SAND (fine grained), silty, some clay	mottled tan grey	medium dense	SM-SC	8		22			
(grading no clay and some silt)			SM	9			▽		
				10		24			
				11					
				12		24			
Bottom of Boring = 12 Feet				13					
Notes:				14					
1. The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.				15					
2. For an explanation of penetration resistance values, see first page, Appendix A.				16					
3. Groundwater level was not encountered at time of drilling. Two and one-half hours later, the groundwater level was measured at 9 feet.				17					
				18					
				19					
				20					

 <p>Kaldveer Associates Geoscience Consultants A California Corporation</p>	EXPLORATORY BORING LOG		
	ALPHA BETA #541 ADDITION Alameda, California		
	PROJECT NO	DATE	BORING NO.
	KE998-1	December 1987	7

DRILL RIG Hollow Stem Auger	SURFACE ELEVATION --	LOGGED BY DYR
DEPTH TO GROUNDWATER Not Encountered	BORING DIAMETER 8 Inches	DATE DRILLED 11/4/87

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	DRY DENSITY (PCF)	UNCONFINED COMPRESSIVE STRENGTH (KSF)
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
2" AC over 8" Baserock				1					
SAND (fine grained), clayey	black	loose	SC	2					
CLAY, silty, with sand	black	stiff	CL	3					
				4					
				5		19			
(FILL) ↑				6					
CLAY, silty, sandy (fine grained)	blue grey	stiff	CL-SC	7					
				8					
SAND (fine grained), clayey	light grey tan	medium dense	SC	9		25			
				10					
Bottom of Boring = 10 Feet				11					
Notes:				12					
1. The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.				13					
2. For an explanation of penetration resistance values, see first page, Appendix A.				14					
3. Groundwater level was not encountered at time of drilling. Two and one-half hours later, the groundwater level was not measureable.				15					
				16					
				17					
				18					
				19					
				20					



Kaldveer Associates
Geoscience Consultants
 A California Corporation

EXPLORATORY BORING LOG

ALPHA BETA #541 ADDITION
 Alameda, California

PROJECT NO.

DATE

BORING NO.


KE998-1

December 1987

8

DRILL RIG Hollow Stem Auger	SURFACE ELEVATION --	LOGGED BY D Y R
DEPTH TO GROUNDWATER Not Encountered	BORING DIAMETER 8 Inches	DATE DRILLED 11/4/87

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	DRY DENSITY (PCF)	UNCONFINED COMPRESSIVE STRENGTH (KSF)
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
2" AC over 7" Baserock				1					
SAND (fine grained), with some silt and gravel	orange tan	medium dense	SM	2					
CLAY, sandy (fine grained)	black	stiff	CL	3					
(FILL) ↓				4					
SAND (fine grained), some silt, trace of clay	grey tan	medium dense	SM	5		13			
				6					
				7					
				8		16			
Bottom of Boring = 8½ Feet				9					
Notes:				10					
1. The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.				11					
2. For an explanation of penetration resistance values, see first page, Appendix A.				12					
				13					
				14					
				15					
				16					
				17					
				18					
				19					
				20					

 <p>Kaldveer Associates Geoscience Consultants A California Corporation</p>	EXPLORATORY BORING LOG		
	ALPHA BETA #541 ADDITION Alameda, California		
	PROJECT NO. KE998-1	DATE December 1987	BORING NO. 9

DRILL RIG Hollow Stem Auger				SURFACE ELEVATION --		LOGGED BY D Y R				
DEPTH TO GROUNDWATER Not Encountered				BORING DIAMETER 8 Inches		DATE DRILLED 11/4/87				
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	DRY DENSITY (PCF)	UNCONFINED COMPRESSIVE STRENGTH (KSF)
DESCRIPTION AND REMARKS	COLOR	CONSIST	SOIL TYPE							
2" AC over 8" Baserock					1					
SAND, with some gravel, some silt					2					
CLAY, sandy (fine grained)					3					
					4					
(FILL) ↑					5		15			
CLAY, sandy (fine grained)					6					
					7		18			
(moderate fuel-like odor)					8					
Bottom of Boring = 7½ Feet					9					
					10					
Notes: 1. The stratification lines represent the approximate boundaries between soil types and the transition may be gradual. 2. For an explanation of penetration resistance values, see first page, Appendix A. 3. Groundwater level was not encountered at time of drilling.					11					
					12					
					13					
					14					
					15					
					16					
					17					
					18					
					19					
					20					



Kaldveer Associates
Geoscience Consultants
A California Corporation

EXPLORATORY BORING LOG

ALPHA BETA #541 ADDITION
Alameda, California

PROJECT NO.

KE998-1

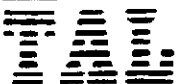
DATE

December 1987

BORING

No. 10

APPENDIX B
ANALYTICAL TEST RESULTS
AND
CHAIN-OF-CUSTODY RECORDS



DATE: 11/23/87
 LOG NO.: 5365A
 DATE SAMPLED: 11/4/87
 DATE RECEIVED: 11/4/87

CUSTOMER: Peter Kaldveer and Associates, Inc.
 REQUESTER: Dawn Rinaldi
 PROJECT: No. KE998-1, Alpha Beta #541, Addition, Alameda

Sample Type: Soil

Method and Constituent	Units	#6, 6'		#8, 5 1/2'		#9, 5 1/2'	
		Concentration	Detection Limit	Concentration	Detection Limit	Concentration	Detection Limit
Modified EPA Method 8015:							
Volatile Hydrocarbons	ug/kg	39,000	1,000	< 1,000	1,000	34,000	1,000
Extractable Hydrocarbons	ug/kg	1,200,000	2,000	23,000	2,000		
Modified EPA Method 8020:							
Benzene	ug/kg	< 500	500	< 500	500	< 500	500
Toluene	ug/kg	< 400	400	< 400	400	< 400	400
Xylenes	ug/kg	< 400	400	< 400	400	< 400	400

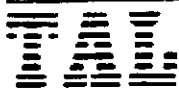
DATE: 11/23/87
 LOG NO.: 5365A
 DATE SAMPLED: 11/4/87
 DATE RECEIVED: 11/4/87
 PAGE: Two

Sample Type: Soil

Method and Constituent	Units	#9, 8'		#10, 7'	
		Concen- tration	Detection Limit	Concen- tration	Detection Limit
Modified EPA Method 8015:					
Volatile Hydrocarbons	ug/kg	< 1,000	1,000	12,000	1,000
Extractable Hydrocarbons	ug/kg			46,000	2,000
Modified EPA Method 8020:					
Benzene	ug/kg	< 500	500	< 500	500
Toluene	ug/kg	< 400	400	< 400	400
Xylenes	ug/kg	< 400	400	< 400	400
		<u>Composite of #9, 5 1/2' & #9, 8'</u>			
Modified EPA Method 8015:					
Extractable Hydrocarbons	ug/kg	4,000	2,000		

Hugh R. McLean
 Hugh R. McLean
 Supervisory Chemist

HRM:vlS



NOV 16 1987

DATE: 11/13/87

LOG NO.: 5365

DATE SAMPLED: 11/4/87

DATE RECEIVED: 11/4/87

CUSTOMER: Peter Kaldveer and Associates, Inc.

REQUESTER: Dawn Rinaldi

PROJECT: No. KE998-1, Alpha Beta #541 Addition, Alameda

Sample Type: Soil

Method and Constituent	Units	#6, 6'	
		Concentration	Detection Limit
EPA Method 8010:			
Benzyl chloride	ug/kg	< 40	40
Bis (2-chloroethoxy) methane	ug/kg	< 40	40
Bis (2-chloroisopropyl) ether	ug/kg	< 40	40
Bromobenzene	ug/kg	< 40	40
Bromodichloromethane	ug/kg	< 40	40
Bromoform	ug/kg	< 40	40
Bromomethane	ug/kg	< 40	40
Carbon tetrachloride	ug/kg	< 40	40
Chloroacetaldehyde	ug/kg	< 40	40
Chloral	ug/kg	< 40	40
Chlorobenzene	ug/kg	< 40	40
Chloroethane	ug/kg	< 40	40
Chloroform	ug/kg	< 40	40
1-Chlorohexane	ug/kg	< 40	40
2-Chloroethyl vinyl ether	ug/kg	< 40	40

DATE: 11/13/87
 LOG NO.: 5365
 DATE SAMPLED: 11/4/87
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Sample Type: Soil

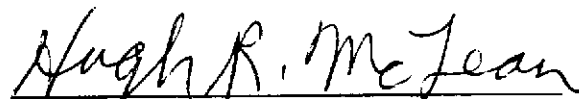
<u>Method and Constituent</u>	<u>Units</u>	<u>#6, 6'</u>	
		<u>Concentration</u>	<u>Detection Limit</u>
EPA Method 8010 (Continued):			
Chloromethane	ug/kg	< 40	40
Chloromethyl methyl ether	ug/kg	< 40	40
Chlorotoluene	ug/kg	< 40	40
Dibromochloromethane	ug/kg	< 40	40
Dibromomethane	ug/kg	< 40	40
1,2-Dichlorobenzene	ug/kg	< 40	40
1,3-Dichlorobenzene	ug/kg	< 40	40
1,4-Dichlorobenzene	ug/kg	< 40	40
Dichlorodifluoromethane	ug/kg	< 40	40
1,1-Dichloroethane	ug/kg	< 40	40
1,2-Dichloroethane	ug/kg	< 40	40
1,1-Dichloroethylene	ug/kg	< 40	40
trans-1,2-Dichloro- ethylene	ug/kg	< 40	40
Dichloromethane	ug/kg	< 40	40
1,2-Dichloropropane	ug/kg	< 40	40
1,3-Dichloropropylene	ug/kg	< 40	40
1,1,2,2-Tetrachloro- ethane	ug/kg	< 40	40
1,1,1,2-Tetrachloro- ethane	ug/kg	< 40	40
Tetrachloroethylene	ug/kg	< 40	40
1,1,1-Trichloroethane	ug/kg	< 40	40
1,1,2-Trichloroethane	ug/kg	< 40	40
Trichloroethylene	ug/kg	< 40	40
Trichlorofluoro- methane	ug/kg	< 40	40
Trichloropropane	ug/kg	< 40	40
Vinyl chloride	ug/kg	< 40	40

DATE: 11/13/87
LOG NO.: 5365
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PAGE: Three

Sample Type: Soil

<u>Method and Constituent</u>	<u>Units</u>	<u>#6, 6'</u>	
		<u>Concentration</u>	<u>Detection Limit</u>
EPA Method 8020:			
Benzene	ug/kg	120	9
Chlorobenzene	ug/kg	< 9	9
1,2-Dichlorobenzene	ug/kg	< 9	9
1,3-Dichlorobenzene	ug/kg	< 9	9
1,4-Dichlorobenzene	ug/kg	< 9	9
Ethyl benzene	ug/kg	< 9	9
Toluene	ug/kg	80	9
Xylenes	ug/kg	< 9	9

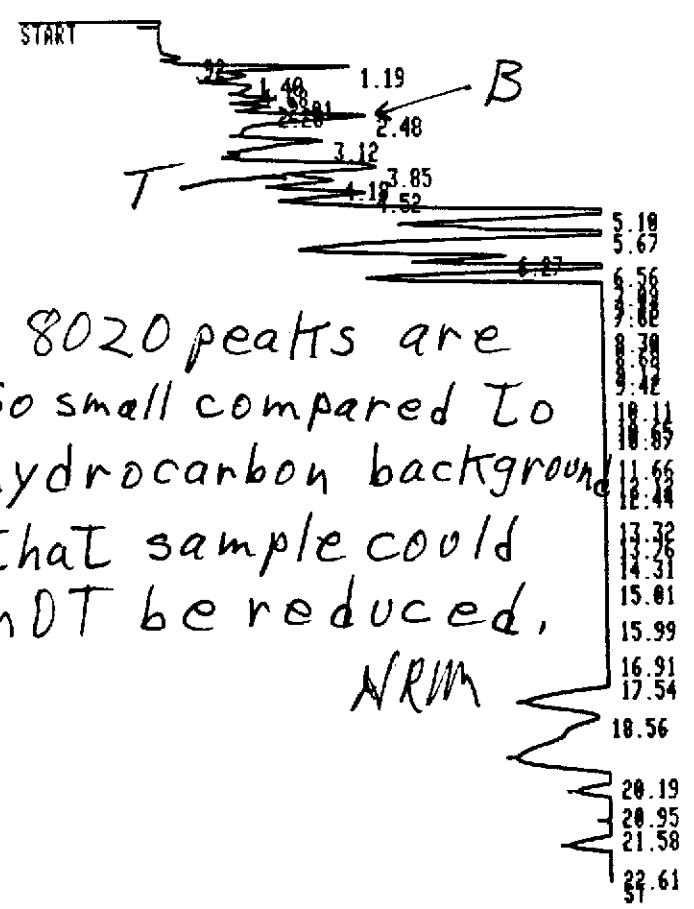
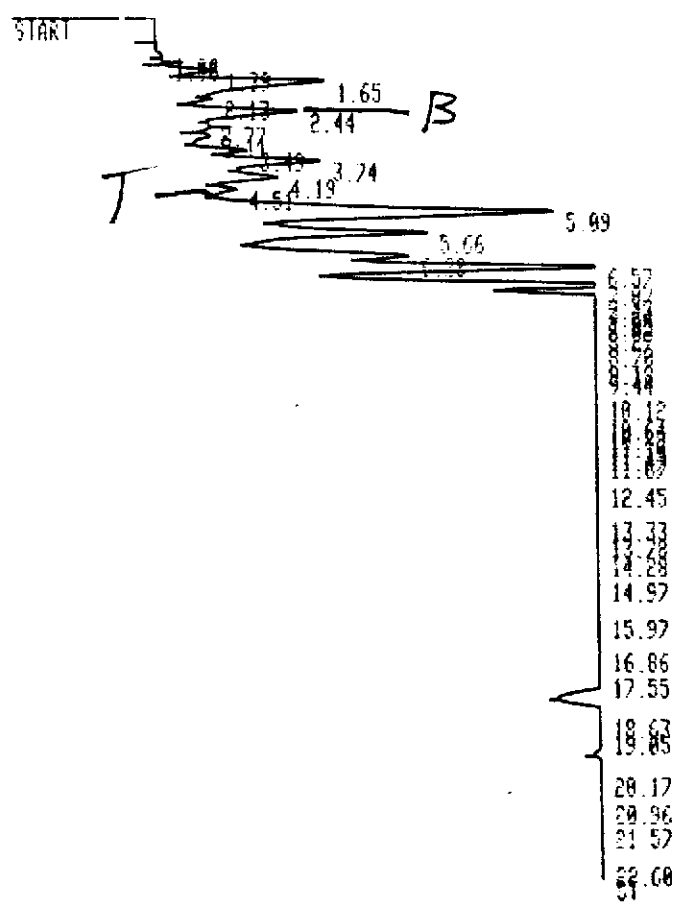
8020 peaks are so small compared to hydrocarbon background that sample could not be reduced.


Hugh R. McLean
Supervisory Chemist

HRM:t1h

PID 500ul 5365 (1.7g)

FID 500ul 5365 (1.7g)



8020 peaks are so small compared to hydrocarbon background that sample could not be reduced, NRM

RUN # 301 NOV/11/87 13:36:21

RUN # 268 NOV/11/87 13:38:39

RT	AREA	TYPE	AR/HT	AREA%
1.00	0	FP	0.000	0.000
1.10	10898	PB	0.045	8.2142E-04
1.39	835130	BV	0.159	0.063
1.65	4694600	VV	0.275	0.354
2.13	383570	YP	0.117	0.029
2.44	2307200	PV	0.196	0.174
2.77	26213	VB	0.087	0.002
3.11	171470	BP	0.126	0.013
3.49	911340	PV	0.151	0.069
3.74	3491400	VV	0.245	0.263
4.19	2459900	VV	0.260	0.185
4.51	1082900	VV	0.224	0.082
5.09	1.3502E+07	VV	0.335	1.024
5.66	7987600	VV	0.305	0.602
6.28	6689000	VV	0.278	0.504
6.57	1.2532E+07	VV	0.266	0.945
7.07	1.4806E+07	VV	0.279	1.122
7.43	1.6017E+07	VV	0.212	1.207
7.64	2.3506E+07	VV	0.228	1.772
7.89	7187200	VV	0.131	0.542
8.02	1.0765E+07	VV	0.192	0.811
8.27	1.7337E+07	VV	0.258	1.307
8.70	5.8209E+07	VV	0.387	4.327
9.18	2.9704E+07	VV	0.243	2.239
9.44	5.8630E+07	VV	0.414	4.419
10.12	7.9591E+07	VV	0.421	5.999

RT	AREA	TYPE	AR/HT	AREA%
0.92	357190	PV	0.151	0.025
1.19	3066800	VV	0.143	0.216
1.40	1960300	VV	0.200	0.138
1.68	2934500	VV	0.284	0.206
2.01	2716900	VV	0.207	0.191
2.20	2094100	VV	0.175	0.147
2.48	8054600	VV	0.382	0.623
3.12	5978800	VV	0.329	0.421
3.85	8444800	VV	0.348	0.594
4.18	5602500	VV	0.289	0.394
4.52	6755100	VV	0.293	0.475
5.10	2.3121E+07	VV	0.425	1.626
5.67	2.2563E+07	VV	0.374	1.587
6.27	1.0855E+07	VV	0.279	0.764
6.56	1.7057E+07	VV	0.294	1.200
7.09	1.6503E+07	VH	0.279	1.161
7.42	3.4527E+07	SHH	0.249	2.429
7.62	2.9904E+07	SHH	0.226	2.103
8.30	5.4227E+07	SHH	0.463	3.814
8.68	6.0586E+07	SHH	0.460	4.261
9.17	3.1595E+07	SHH	0.253	2.222
9.42	5.1568E+07	SHH	0.398	3.627
10.11	1.0048E+08	SHH	0.389	7.067
10.65	5.0968E+07	SHH	0.337	3.585
10.87	5.1417E+07	SHH	0.405	7.616

CHAIN OF CUSTODY RECORD

Project Number KE448-1		Project Name Alpha Beta #541 Addition, Alameda				Number of Containers	Tests						Remarks
Sampler's (signature) Dawn Rinaldi							Back-up Samples	VHC	EHC	BO10	BO20	VHC w/ BTX	
Boring Number	Date	Time	Soil	Water	Sample Location or Depth								
6	11-4	8:15	X		5'							Blue grey sand Mod. color	
		8:30	X		6'				X	X		Blue grey sand strong color	
		8:40	X		8'							"	
		8:50	X		7 1/2'							"	
7	11-4	9:10	X		11'							Black sand, no color	
		9:50	X		5'							Tan grey clay, no color	
		10:15	X		8 1/2'							"	
8	11-4	10:30	X		10'								
		10:45	X		11 1/2'								
		11:10	X		5 1/2'	HOLD						Added these tests to request on 11-6-87 Black clay, no color	
9	11-4	11:20	X		8 1/2'							Tan, Blue grey, sandy clay, no color	
		11:40	X		5 1/2'							Composite grey fine silty SAND, no color	
10	11-4	11:55	X		8'								
		12:20	X		5 1/2'								
		12:35	X		7'								
Relinquished by: (Signature)		Date/Time		Received by: (Signature)			Relinquished by: (Signature)		Date/Time		Received by: (Signature)		
Relinquished by: (Signature)		Date/Time		Received by: (Signature)			Relinquished by: (Signature)		Date/Time		Received by: (Signature)		
Relinquished by: (Signature) Dawn Rinaldi		Date/Time Nov 4 / 18:30		Received for Laboratory by: (Signature) [Signature]			Date/Time 4/7/88 18:30		Remarks: 2 week turnaround				

- 2 week turnaround (test request may change after results from all turnaround tests are determined)
- 1 wk turnaround

PETER KALDVEER AND ASSOCIATES, INC.
Geotechnical Consultants