

October 1, 1999

**PHASE II
SUBSURFACE INVESTIGATION**

1200 East 12th Street
Oakland, California

Project No. 3406

Prepared For

Robert Baston
61 Skyway Lane
Oakland, CA 94619

Prepared By

AEI Consultants
901 Moraga Road, Suite C
Lafayette, CA 94549
(800) 801-3224

AEI

CONFIDENTIAL
PROTECTION

99 OCT -6 PM 2:55

October 1, 1999

Mr. Barney Chan
Alameda County Health Care Service Agency
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

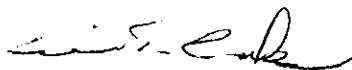
Subject: Phase II Subsurface Investigation
1200 East 12th Street
Oakland, California
AEI Project No. 3406
StID# 3284

Dear Mr. Chan:

Enclosed is a copy of the Phase II Subsurface Investigation for the property referenced above.
Also enclosed is the invoice for this project.

Please call me at (925) 283-6000 if you have any questions.

Sincerely,



Carrie E. Locke
Project Manager

Corporate Headquarters

Los Angeles
(310) 798-4255

Phoenix
(602) 240-5990

San Francisco
(800) 801-3224

Seattle
(425) 401-8500

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October 1, 1999

Robert Baston
61 Skyway Lane
Oakland, CA 94619

Subject: Phase II Subsurface Investigation
1200 East 12th Street
Oakland, California
Project No. 3406

Dear Mr. Baston:

The following letter report describes the activities and results of the subsurface investigation performed by AEI Consultants at the above referenced property (Figure 1: Site Location Map). This investigation was designed to determine whether groundwater and soil have been impacted by the storage of gasoline in two former underground storage tanks at the property. The investigation included the advancement of two shallow soil borings down gradient from the former underground storage tanks. Soil and groundwater samples were collected from the two borings.

I Background

The subject property is located on the northeastern corner of East 12th Street and 12th Avenue. The subject property is approximately 7,500 square feet in size and is developed with a 9,000 square foot two-story brick building. The building occupies the entire area of the property and is currently vacant. The subject property was occupied by a gas station and auto parts store from 1927 to the mid 1960s. The subject property was utilized as a tire and auto supply company, as well as a truck and forklift maintenance facility from the mid 1960s to the late 1980s.

In 1996, two 500-gallon gasoline underground storage tanks were removed from the sidewalk along 12th Avenue at the subject property. Soil samples collected from beneath the tanks indicated elevated levels of total petroleum hydrocarbons (TPH) as gasoline at the western end of Tank 2. Further overexcavation was performed in this area and two soil samples were collected. TPH as gasoline was detected up to 210 mg/kg. An interview with Mr. Barney Chan, an inspector at the Alameda County Health Care Services Agency (ACHCSA), indicated that the ACHCSA is requesting that additional investigations be performed to determine whether groundwater has been impacted from the storage of gasoline in the two former underground storage tanks.

AEI

SB1
SB2

II Investigative Efforts

AEI performed a subsurface investigation at the property on September 17, 1999. A total of 2 soil borings (SB-1 and SB-2) were advanced. SB-1 was placed in the southwestern end of the former tanks' location. SB-2 was advanced down gradient from the former tanks' location in the parking lane at the northeastern corner of East 12th Street and 12th Avenue. The locations of the soil borings are shown on Figure 2.

The near surface native soil encountered during the boring advancement generally consisted of silty clay. Gravel was encountered in SB-1 at 11.5 feet below ground surface (bgs), which was most likely used to backfill the excavation when the gasoline tanks were removed. Refer to Attachment A for detailed logs of the borings. Based data obtained from a nearby site, groundwater flow direction is estimated to be to the south/southwest.

Soil Sample Collection

The borings were advanced with a Geoprobe direct-push drilling rig to a depth of 16 feet bgs. Soil samples were collected at 5-foot intervals beginning at four feet bgs.

A strong hydrocarbon odor was noted during the advancement of SB-1 at approximately 11 feet bgs. At approximately 4 feet bgs a hydrocarbon odor was noted during the advancement of SB-2. Soil samples were collected in two-foot long 1" acrylic liners, from which a six inch sample was chosen. The soil samples were sealed with teflon tape and plastic caps and placed in a cooler with wet ice to await transportation to the laboratory.

Groundwater Sample Collection

Groundwater was encountered at 14 feet bgs during the advancement of both soil borings. A screened interval of the direct push rods was inserted into the boring and exposed in the water bearing deposits. Water samples were collected by inserting a drop tube through the direct push rods. Groundwater samples were collected into 40-mL VOA₆ vials. The groundwater samples were capped so that there was no head space or visible air bubbles within the vials, then placed in a cooler with wet ice to await transportation to the laboratory.

Following sample collection, each boring was backfilled with neat cement grout.

Laboratory Analysis

On September 18, 1999, the soil and groundwater samples were transported to McCampbell Analytical Inc. (DOHS Certification Number 1644) under chain of custody protocol for analysis. Analytical results and chain of custody documents are included as Attachment B.

AEI

One soil sample was chosen from each boring by the on-site geologist for analysis along with the two groundwater samples. The soil and groundwater samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline (EPA method 5030/8015), benzene, toluene, ethylbenzene and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) (EPA method 5030/8020).

The remaining soil samples were placed on hold at the laboratory.

III Findings

TPH as gasoline was detected in both groundwater samples at 6,700 $\mu\text{g}/\text{kg}$ and at 3,900 $\mu\text{g}/\text{kg}$. Benzene was detected up to 470 $\mu\text{g}/\text{kg}$, ethylbenzene up to 160 $\mu\text{g}/\text{kg}$, and xylenes up to 130 $\mu\text{g}/\text{kg}$ in the groundwater samples. MTBE was not detected in the groundwater or soil samples. No significant amounts of the analyzed constituents were found in the soil samples. Detailed results of the soil and groundwater sample analysis are summarized in Table 1 and 2.

IV Conclusions and Recommendations

Significant concentrations of TPH as gasoline were detected in the groundwater samples. Based on conversations with Mr. Barney Chan of the Alameda County Health Care Services Agency (ACHCSA), further investigations, including the installation of a groundwater monitoring well, may be required by the ACHCSA.

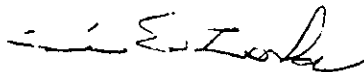
V Report Limitation

This report presents a summary of work completed by AEI Consultants. The completed work includes observations and descriptions of site conditions encountered. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide the required information, but it cannot be assumed that they are representative of areas not sampled. All conclusions and/or recommendations are based on these analyses and observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document.

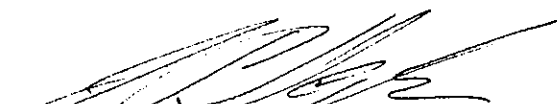
These services were performed in accordance with generally accepted practices, in the environmental engineering and construction field, which existed at the time and location of the work.

If you have any questions regarding our investigation, please do not hesitate to contact me at (925) 283-6000.

Sincerely,



Carrie Locke
Project Manager



Joseph P. Derhake, PE, CAC
Senior Author



Figures

- Figure 1 Site Location Map
- Figure 2 Site Plan

Tables

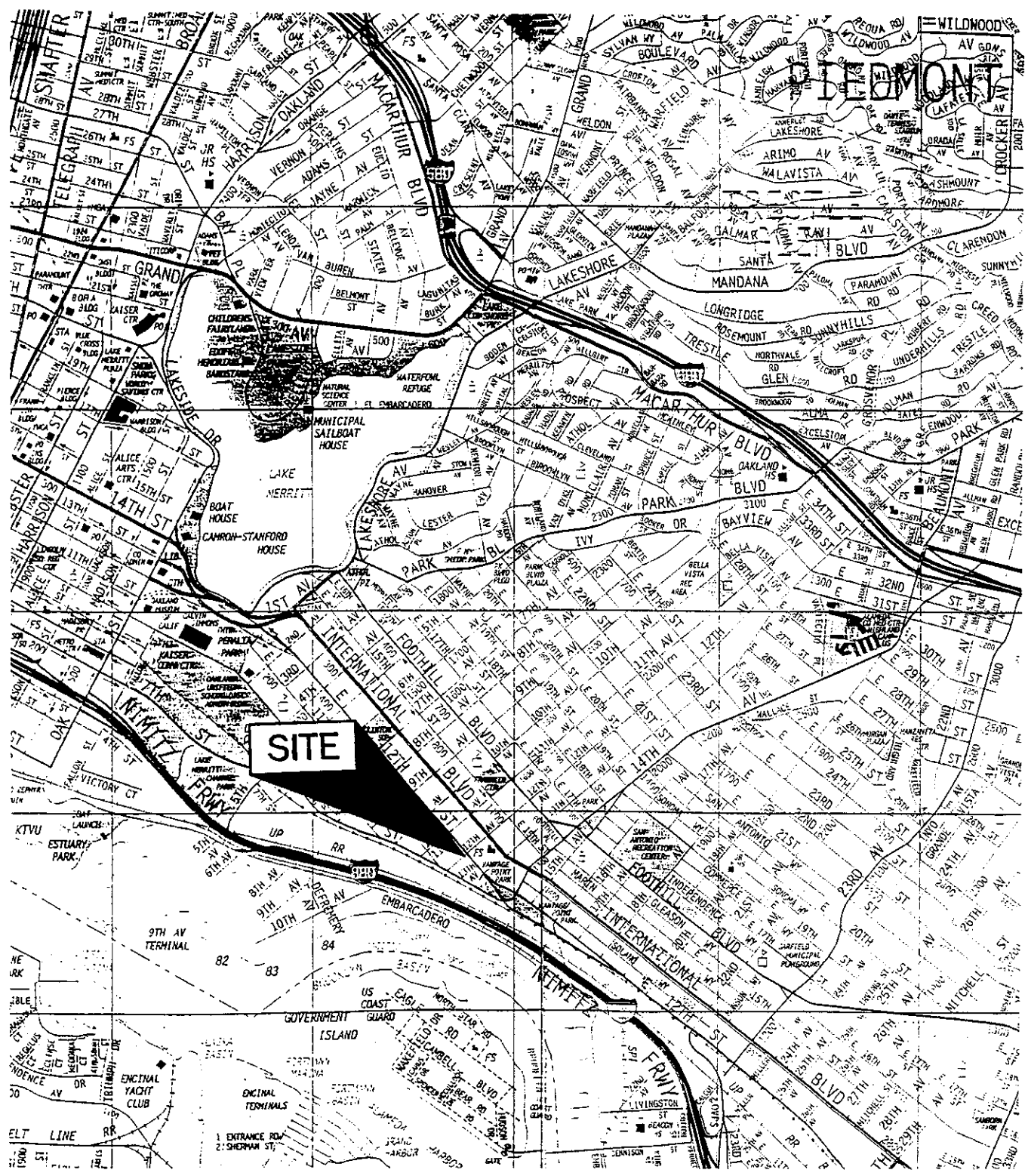
- Table 1 Soil Sample Analytical Results
- Table 2 Groundwater Sample Analytical Results

Attachment A: Soil Boring Logs

Attachment B: Sample Analytical Documentation

cc: Mr. Barney Chan, ACHCSA, 1131 Harbor Bay Parkway, Alameda, CA 94502-6577

AEI



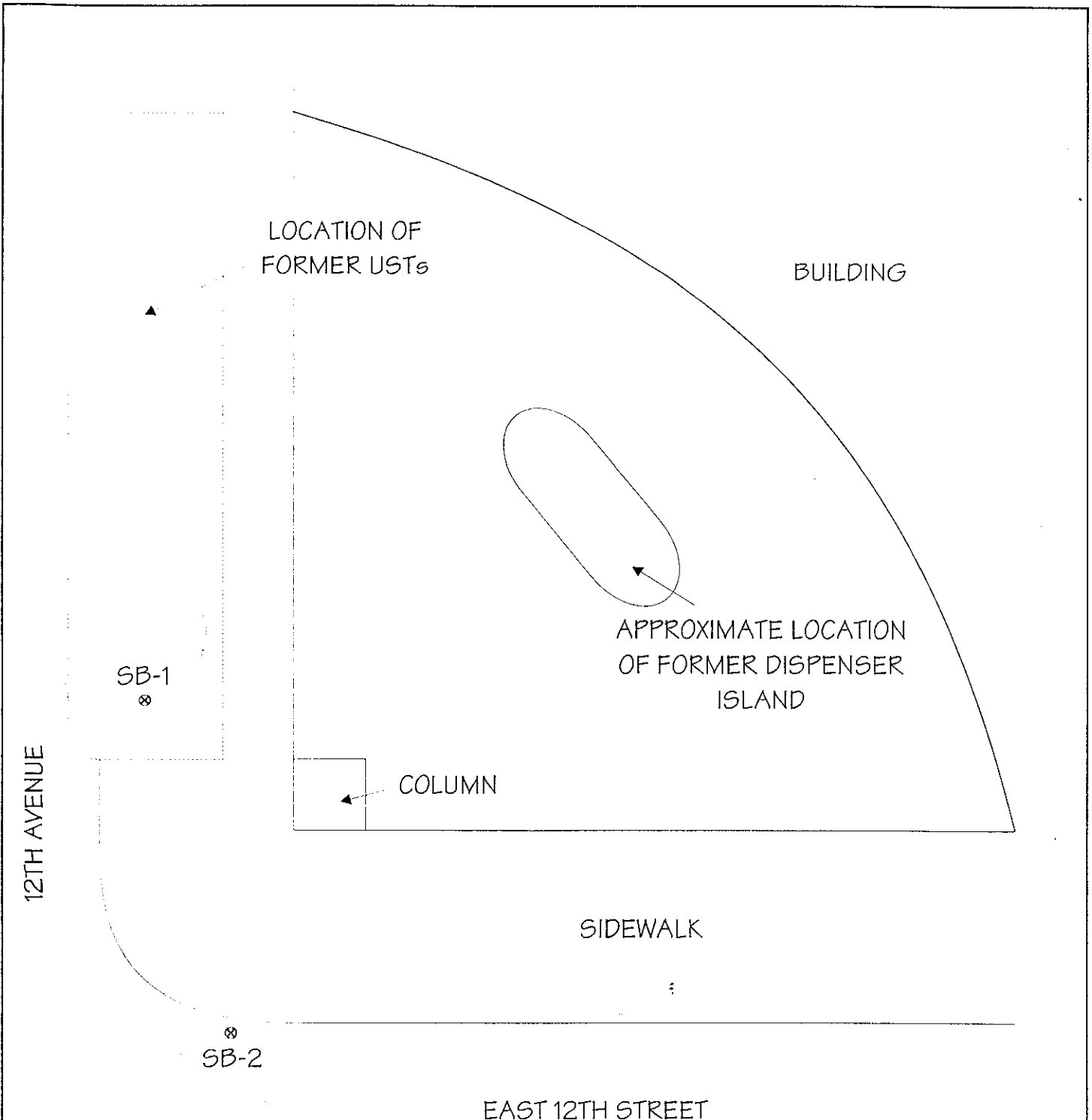
SOURCE:
 THOMAS GUIDE
 1998, SCALE: 1" = 1900'

ALL ENVIRONMENTAL, INC.
 901 MORAGA ROAD, SUITE C, LAFAYETTE, CA

SITE LOCATION MAP

1200 EAST 12TH STREET
 OAKLAND, CALIFORNIA

FIGURE 1



⊗ BORING LOCATIONS
 SCALE: 1 in. = 6 ft.



AEI CONSULTANTS 901 MORAGA ROAD, SUITE C, LAFAYETTE, CA	
SITE PLAN	
1200 EAST 12TH STREET OAKLAND, CALIFORNIA	FIGURE 2

**Table 1:
Soil Sample Analytical Results**

Sample ID	TPH as gasoline mg/kg	MTBE mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzen mg/kg	Xylenes mg/kg
SB-1 14'	ND	ND	ND	ND	ND	ND
SB-2 14'	2.2	ND	0.13	ND	0.07	0.021
MDL	1.0	0.05	0.005	0.005	0.005	0.005

**Table 2:
Groundwater Sample Analytical Results**

Sample ID	TPH as gasoline µg/L	MTBE µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzen µg/L	Xylenes µg/L
SB-1 W	6,700	ND	26	6.1	22	130
SB-2 W	3,900	ND	470	9.5	160	57
MDL	50.0	5	0.5	0.5	0.5	0.5

MDL = Method Detection Limit

ND = Not detected above Method Detection Limit

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

Project No: 3406

Sheet: 1 of 1

Project Name: Baston

Log of Borehole: SB-1

Client: Baston

Location: 1200 East 12th Street, Oakland

Depth ft/m	Soil Symbol	Subsurface Description	Sample Data				Well Data	Remarks
			Sample Label	Type	Blow Counts/ Recovery	Recovery		
0		Ground Surface						
0	[Diagonal Hatching]	CLAY Dark yellowish orange 10YR6/6 silty clay					Continuous sampling	
1								
2								
3								
4	1	Fine sand present changes to more brown	SB-1 4'	SS		100		
5								
6	2							
7		Clay Light olive gray silty clay; organics present						
8			SB-1 8'	SS		100		
9								
10	3							
11							Hydrocarbon odor present	
12		Gravel Poorly sorted gravel up 1/2"	SB-1 12'	SS		25		
13	4	Clay Greenish gray clay with medium stiffness 5GY6/1; strong odor present						
14			SB-1 14'	SS		100		
15		Clay Wet silty clay with fine sand present						
16	5	End of Borehole						
17								
18								
19								
20	6							

Drill Date 9/17/99

Reviewed by: CL

AEI Consultants
901 Moraga Road, Suite C
Lafayette, CA 94549
(800) 801-3224

Drill Method: Direct Push

Logged by: JP

Total Depth: 16'

Depth to Water: 14'

Project No: 3406

Sheet: 1 of 1

Project Name: Baston

Log of Borehole: SB-2

Client: Baston

Location: 1200 East 12th Street, Oakland

Depth ft m	Soil Symbol	Subsurface Description	Sample Data				Well Data	Remarks
			Sample Label	Type	Blow Counts/	Recovery		
0		Ground Surface						
0		CLAY Grayish green silty clay; odor present						Hand auger
1							Continuous sampling	
2								
3								
4	1		SB-2 4'	SS		25		Hydrocarbon odor present
5								
6								
7	2	Clay Grayish green clay						
8			SB-2 8'	SS		100		
9								
10	3							
11								
12		Clay Green silty clay	SB-2 12'	SS		100		
13								
14	4	Clay Greenish gray silty sandy clay; very fine grained	SB-2 14'	SS		75		▼
15								
16	5	End of Borehole						
17								
18								
19								
20	6							

Drill Date 9/17/99

Reviewed by: CL

AEI Consultants
901 Moraga Road, Suite C
Lafayette, CA 94549
(800) 801-3224

Drill Method: Direct Push

Logged by: JP

Total Depth: 16'

Depth to Water: 14'

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560

Telephone: (925) 798-1620

Fax: (925) 798-1622

10770 ZALE 07

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH 24 HOUR 48 HOUR 5 DAY

Report To: *Jennifer Pucci* Bill To: *Same*

Company: *A&Z Consultants*

Tele: *925 283 6000* Fax: *925 283 421*

Project #: *3406* Project Name:

Project Location: *1200 E 72th Street*

Sampler Signature: *J. Pucci*

Analysis Request

Other

Comments

SAMPLE ID	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				Analysis Request	Other	Comments
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO ₃	Other			
SB-1, 4'	-	9/7/99	845	1	S	✓											19539 H
SB-1, 8'	-		850	1		X											19540 H
SB-1, 12'	-		855	1		X											19541 H
SB-1, 14'	-		900	1		X											19542
SB-2, 4'	-		935	1		X											19543 H
SB-2, 8'	-		940	1		X											19544 H
SB-2, 12'	-		945	1		X											19545 H
SB-2, 14'	-		950	1		X											19546
SB-1LW	-	9/7/99	905	2		X											19547
SB-2LW	-	9/7/99	1000	2		X											19548

Relinquished By: <i>J. Pucci</i>	Date: <i>9/8/99</i>	Time: <i>9:30</i>	Received By:
Relinquished By:	Date: <i>09/19/99</i>	Time: <i>4:30 PM</i>	Received By: <i>Manuel Mendez</i>
Relinquished By:	Date:	Time:	Received By:

Remarks:

ICE ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓

PRESERVATION APPROPRIATE ✓
CONTAINERS ✓

VOCS ✓ O&G ✓ METALS ✓ OTHER ✓