



July 7, 2000

Mr. Barney Chan
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

A

4056

Subject: Phase II Subsurface Investigation
8275 San Leandro Street
Oakland, CA 94621
AEI Project No. 3724
StID# 4056

Dear Mr. Chan:

Enclosed is the Phase II Subsurface Investigation for the above referenced property. AEI has requested case closure from the Alameda County Health Care Services Agency in the report, based on the minor concentrations of petroleum hydrocarbons found in the groundwater samples.

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

Sincerely,

Carrie E. Locke
Project Engineer

July 7, 2000

**PHASE II
SUBSURFACE INVESTIGATION**

8275 San Leandro Street
Oakland, California

Project No. 3724

Prepared For

Monterey Mechanical
8275 San Leandro Street
Oakland, CA 94621

Prepared By

AEI Consultants
~~3210 Old Tunnel Road, Suite B~~
Lafayette, CA 94549
(800) 801-3224

Correct

AEI



July 7, 2000

Mr. Richard Hamilton
Monterey Mechanical
8275 San Leandro Street
Oakland, CA 94621

Subject: Phase II Subsurface Investigation
8275 San Leandro Street
Oakland, California
Project No. 3724

Dear Mr. Hamilton:

This letter report describes the activities and results of a subsurface investigation performed by AEI Consultants (AEI) at the above referenced property (Figure 1: Site Location Map). The investigation included the collection and analysis of soil and groundwater samples from four locations on the property. The project was designed to investigate whether the soil and/or groundwater beneath the property had been impacted by the former storage of gasoline in a 2,000-gallon underground storage tank (UST) at the site.

I Background

The site is located in an industrial area of Oakland, approximately 900 feet southeast of the intersection of 85th Avenue and San Leandro Street. Monterey Mechanical, a general contracting business, currently occupies the property. Please refer to Figure 1 for the site location.

On June 3, 1999, a 2,000-gallon gasoline UST was removed from the property. Prior to removal, 325 gallons of waste liquid were removed, transported and disposed off-site. The tank was transported under non-hazardous waste manifest to the Ecology Control Industries' disposal facility in Richmond, California where the tank was cleaned and disposed of as scrap metal.

A total of 5 soil samples were collected during the tank removal activities. Minor concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline at 1.3 mg/kg were detected in the soil samples collected from the stockpile. Minor concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) were also detected in stockpile soil samples. No concentrations of petroleum hydrocarbons or associated constituents were detected in soil samples collected from the sidewalls of the tank excavation. Concentrations of lead were detected in all of the soil samples ranging from 10 mg/kg to 22 mg/kg. These concentrations can be considered background

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levels in the soil. All other constituents were not present in the soil samples above laboratory detection limits.

Groundwater was encountered at 5 feet below ground surface (bgs) during the tank removal activities. One grab groundwater sample was collected during the tank removal activities. Elevated concentrations of TPH as gasoline at 34,000 µg/L were detected in AEI GW 5'. Concentrations of MTBE were detected at 43,000 µg/L. Elevated concentrations of BTEX were also detected in AEI GW 5'.

The results of the sample analysis are summarized in the following tables.

TABLE 1 - Soil Sample Analyses

	AEI ES N 5'	AEI ES S 5'	AEI ES E 5'	AEI ES W 5'	AEI STKP 1-4
TPH-GASOLINE (mg/kg)	<1.0	<1.0	<1.0	<1.0	1.3
MTBE (mg/kg)	<0.05	<0.05	<0.05	<0.05	0.092
BENZENE (mg/kg)	<0.005	<0.005	<0.005	<0.005	0.005
TOLUENE (mg/kg)	<0.005	<0.005	<0.005	<0.005	0.098
ETHYL BENZENE (mg/kg)	<0.005	<0.005	<0.005	<0.005	0.034
TOTAL XYLENES (mg/kg)	<0.005	<0.005	<0.005	<0.005	0.20
TOTAL LEAD (mg/kg)	21	10	15	14	22

mg/kg = milligrams per kilogram (ppm).

TABLE 2 - Groundwater Sample Analyses

	AEI GW 5'
TPH-GASOLINE (µg/L)	34,000
MTBE (µg/L)	43,000
BENZENE (µg/L)	650
TOLUENE (µg/L)	5,600
ETHYL BENZENE (µg/L)	1,300
TOTAL XYLENES (µg/L)	7,300
TOTAL LEAD (mg/L)	0.13

µg/L = micrograms per liter (ppb)
 mg/L = milligrams per liter (ppm)

The excavation was backfilled with stockpiled soil and clean imported ¾" aggregate base rock to replace the volume of the former tank and compacted. The excavation area was resurfaced with asphalt.

Based on the analytical results of the groundwater sample collected during the tank removal activities, the Alameda County Health Care Services Agency (ACHCSA) requested a soil and groundwater investigation to determine the extent of petroleum contamination from the UST release.

II Investigative Efforts

AEI Consultants (AEI) performed a subsurface investigation at the property on June 6, 2000. A total of 4 soil borings (AEI-1 through AEI-4) were advanced. All four borings were located between 20 and 25 feet to the northeast, northwest, southeast, and southwest of the former gasoline tank. The locations of the soil borings are shown on Figure 2.

The near surface native soil encountered during the boring advancement consisted of brown clay. Refer to Attachment A for detailed logs of the borings. Based on local topography, groundwater flow direction is estimated to be to the northwest. (*@ 8255 S.L. St. Oakland Truck Stop*)

Soil Sample Collection

The borings were advanced with a direct-push Geoprobe drilling rig to depths between 12 and 16 feet bgs. Soil samples were continuously collected in four-foot long acrylic liners, from which a six-inch sample was chosen. Soil samples were collected at approximately five-foot intervals beginning at approximately five feet bgs and at the water table. 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.

No odor or soil staining was observed during the advancement of the soil borings and sample collection. The soil samples were screened in the field using a Photo-ionization Detector (PID). The soil screening data is presented on the boring logs (Attachment A).

Groundwater Sample Collection

Groundwater was initially encountered between 12 and 16 feet bgs during the advancement of the soil borings. However, the water level rebounded in each soil boring to depths between 4 and 5 feet bgs. Groundwater was accessed by exposing a screened interval of the direct push rods within in the water bearing deposits. Groundwater samples were collected by a disposable bailer inserted through the direct push rods. The groundwater samples were placed in 40-mL volatile organic analysis (VOA) vials. The groundwater samples were capped so that there was no head space or visible air bubbles within the vials, and 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 June 6, 2000, 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.

Soil and groundwater samples were analyzed from each boring for TPH as gasoline, BTEX and MTBE. The groundwater sample containing the highest concentrations of MTBE was reconfirmed for fuel oxygenates using EPA Method 8260.

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

III Findings

No concentrations of petroleum hydrocarbons or associated constituents were detected above laboratory limits in any of the soil samples collected during this investigation or in the groundwater samples collected from borings AEI-1 and AEI-2. MTBE at 40 µg/L was the only contaminant detected in the groundwater sample collected from AEI-3. Minor concentrations of TPH as gasoline and MTBE were detected in the groundwater sample collected from AEI-4.

Results of the analytical testing are summarized in Table 1.

IV Conclusions and Recommendations

Based on the results of this investigation, AEI recommends no further investigations for the subject property and requests case closure from the ACHCSA regarding the former 2,000-gallon gasoline UST.

V References

1. Underground Storage Tank Removal Final Report, August 12, 1999, prepared by AEI Consultants

V Report Limitation

This report presents a summary of work completed by AEI Consultants (AEI). 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 E. Locke
Project Engineer



Joseph P. Derhake, PE, CAC
Senior Author

Figures

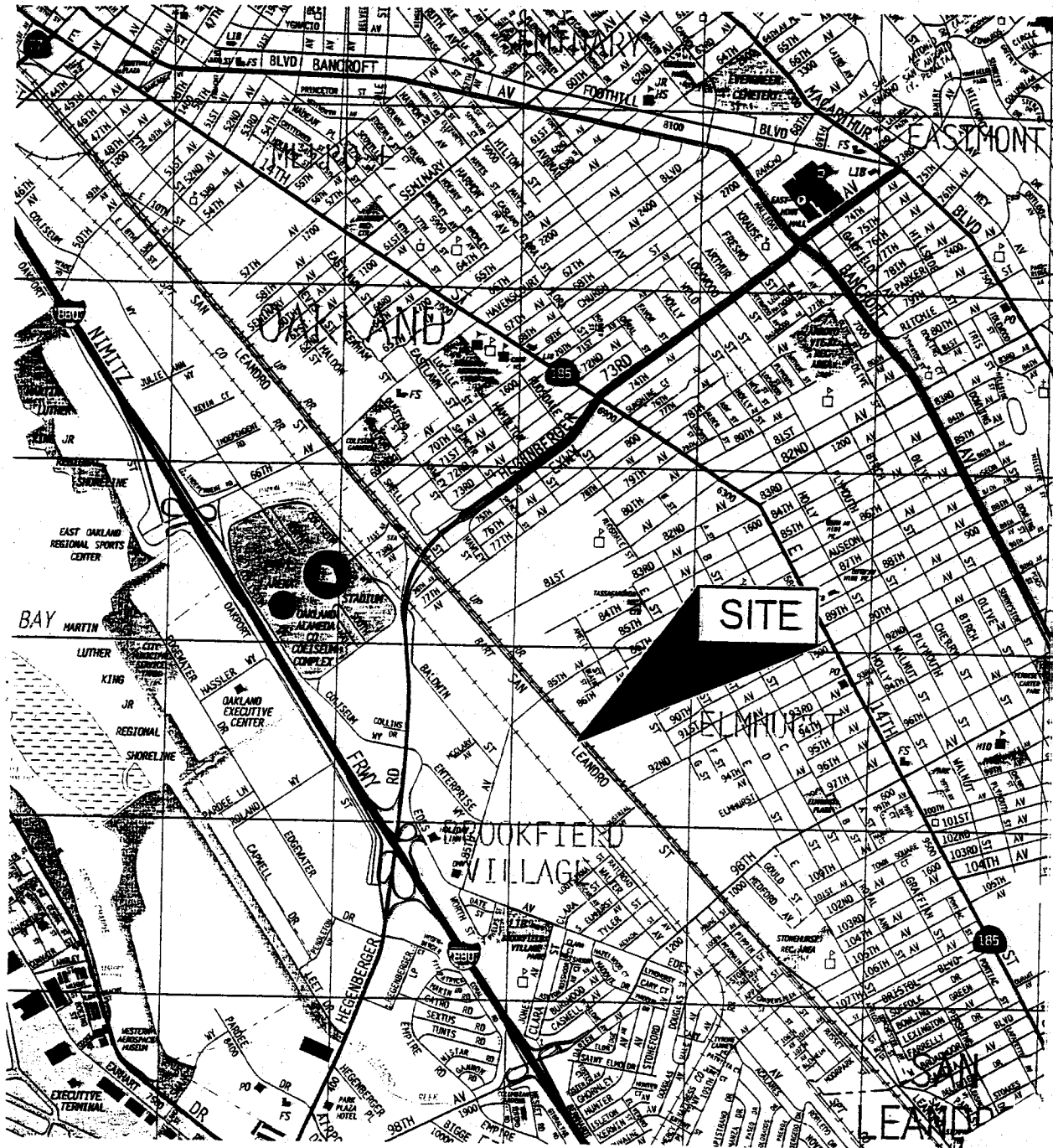
Tables

Attachment A: Soil Boring Logs

Attachment B: Sample Analytical Documentation

cc: Mr. Barney Chan, Alameda County Health Care Services Agency,
1131 Harbor Bay Parkway, Alameda, CA 94502





FROM:
THE THOMAS GUIDE
1997 EDITION

AEI CONSULTANTS
3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA

SCALE: 1"=2400'

DATE: 1997

SITE LOCATION MAP

8275 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

DRAWING NUMBER:
FIGURE 1

EQUIPMENT STORAGE

DIRT

ASPHALT

FORMER LOCATION OF FUEL DISPENSER

EXCAVATION BOUNDARY

STOCKPILE

EQUIPMENT STORAGE

FORMER LOCATION OF
2,000-GALLON GASOLINE UST

OFFICE

SUBJECT PROPERTY BOUNDARY

SIDEWALK

DRIVEWAY

SAN LEANDRO STREET



AEI Consultants
901 MORAGA ROAD, SUITE C, LAFAYETTE, CA

SCALE: 1" = 20'

DRAWN BY: J.ORMEROD

DATE: 9/2/99

SITE MAP

8275 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

DRAWING NUMBER:

FIGURE 2

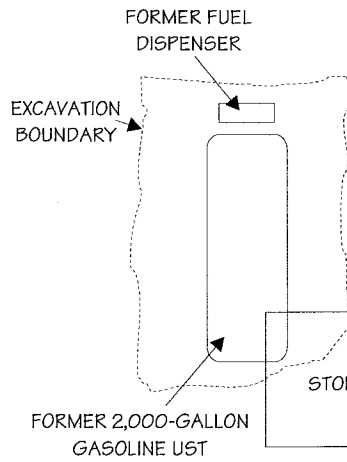
TPHg ND
MTBE ND

AEI-2

TPHg ND
MTBE ND

AEI-1

CONCRETE PAD



TPHg 71
MTBE 0.1

AEI-4

SHEET METAL BUILDING

TPHg ND
MTBE 40

AEI-3

○ BORING LOCATIONS

GROUNDWATER CONCENTRATIONS ARE IN µg/L

TPHg = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE

MTBE = METHYL TERTIARY BUTYL ETHER

SCALE 1" = 10'



AEI CONSULTANTS
3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA

SITE PLAN

8275 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

FIGURE 3

Table 1
Soil Sample Results
 June 6, 2000

Sample ID	TPHg (mg/kg)	MTBE (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)
AEI-1 12'	ND	ND	ND	ND	ND	ND
AEI-2 10'	ND	ND	ND	ND	ND	ND
AEI-3 16'	ND	ND	ND	ND	ND	ND
AEI-4 16'	ND	ND	ND	ND	ND	ND

Table 2
Groundwater Sample Results
 June 6, 2000

Sample ID	TPHg (µg/L)	MTBE (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
AEI-1	ND	ND	ND	ND	ND	ND
AEI-2	ND	ND	ND	ND	ND	ND
AEI-3	ND	40*	ND	ND	ND	ND
AEI-4	71	6.1	ND	ND	ND	ND

* Reanalyzed for Fuel Oxygenates using EPA Method 8260

TPHg Total Petroleum Hydrocarbons as gasoline

MTBE Methyl Tertiary Butyl Ether

mg/kg milligrams per kilogram

µg/L micrograms per liter

ND Not detected

ATTACHMENT A
SOIL BORING LOGS

Project No: 3724

Sheet: 1 of 1

Project Name: Monterey Mechanical

Log of Borehole: AEI-1

Client: Monterey Mechanical

Location: Northwest of former tank

Depth ft m	Soil Symbol	Subsurface Description	Sample Data				Well Data	Remarks
			Sample Label	Type	Blow Counts/	Recovery		
0		Ground Surface						
0		Clay Hard black clay						
1								
2								
3								
4								
5			AEI1-5'	SS		100%	PID = 0.00 ppm	
6							Groundwater rebounded to 5'	
7		Light brown clay						
8		Dark brown clay						
9								
10			AEI1-10'	SS		100%	PID = 0.00 ppm	
11								
12		Soft light brown clay						
13			AEI1-12'	SS		100%	PID = 1.00 ppm	
14							First encounter of groundwater	
15								
16		End of Borehole						
17								

Drill Date 6/6/00

Reviewed by: JD

AEI Consultants
3210 Old Tunnel Road, Suite B
Lafayette, CA 94549
(800) 801-3224

Drill Method: Direct push

Logged by: CL

Total Depth: 16'

Depth to Water: 13'; rebounded to 5'

Project No: 3724

Sheet: 1 of 1

Project Name: Monterey Mechanical

Log of Borehole: AEI-2

Client: Monterey Mechanical

Location: Southwest of former tank

Depth ft/m	Soil Symbol	Subsurface Description	Sample Data				Well Data	Remarks
			Sample Label	Type	Blow Counts/	Recovery		
0		Ground Surface						
0		Clay Hard black clay						
1								
2								
3								
4							Groundwater rebounded to 4' PID = 0.00 ppm	
5			AEI2-5'	SS		100%		
6								
7								
8		Softer light brown clay						
9								
10			AEI2-10'	SS		100%	PID = 0.00 ppm	
11								
12		End of Borehole					First encounter of groundwater	
13								

Drill Date 6/6/00

Reviewed by: JD

AEI Consultants
3210 Old Tunnel Road, Suite B
Lafayette, CA 94549
(800) 801-3224

Drill Method: Direct push

Logged by: CL

Total Depth: 12'

Depth to Water: 12'; rebounded to 4'

Project No: 3724

Sheet: 1 of 1

Project Name: Monterey Mechanical

Log of Borehole: AEI-3

Client: Monterey Mechanical

Location: Northeast of former tank

Depth ft/m	Soil Symbol	Subsurface Description	Sample Data				Well Data	Remarks
			Sample Label	Type	Blow Counts/	Recovery		
0		Ground Surface						
0		Clay Hard black clay						
1								
2								
3								
4							Groundwater rebounded to 4' PID = 0.00 ppm	
5			AEI3-5'	SS		100%		
6								
7								
8		Light brown clay						
9								
10			AEI3-10'	SS		100%	PID = 0.00 ppm	
11								
12								
13								
14								
15		Soft light brown clay						
16			AEI3-16'	SS		100%	PID = 1.00 ppm First encounter of groundwater	
16		End of Borehole						
17								

Drill Date 6/6/00

Reviewed by: JD

AEI Consultants
3210 Old Tunnel Road, Suite B
Lafayette, CA 94549
(800) 801-3224

Drill Method: Direct push

Logged by: CL

Total Depth: 16'

Depth to Water: 16'; rebounded to 4'

Project No: 3724

Sheet: 1 of 1

Project Name: Monterey Mechanical

Log of Borehole: AEI-4

Client: Monterey Mechanical

Location: Southeast of former tank

Depth	Soil Symbol	Subsurface Description	Sample Data				Well Data	Remarks
			Sample Label	Type	Blow Counts/	Recovery		
0		Ground Surface						
0		Clay Hard black clay						
1								
2								
3								
4			AEI4-4'	SS		100%	Groundwater rebounded to 4' PID = 0.00 ppm	
5			AEI4-5'	SS		100%		
6								
7								
8		Soft light brown clay						
9								
10			AEI4-10'	SS		80%	PID = 0.00 ppm	
11								
12								
13								
14								
15								
16			AEI4-16'	SS		100%	PID = 1.00 ppm First encounter of groundwater	
16		End of Borehole						
17								

Drill Date 6/6/00

Reviewed by: JD

Drill Method: Direct push

Logged by: CL

Total Depth: 16'

Depth to Water: 16'; rebounded to 4'

AEI Consultants
3210 Old Tunnel Road, Suite B
Lafayette, CA 94549
(800) 801-3224

ATTACHMENT B

SAMPLE ANALYTICAL DOCUMENTATION



McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
 Telephone : 925-798-1620 Fax : 925-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

All Environmental, Inc. 3210 Old Tunnel Road, Suite B Lafayette, CA 94549-4157	Client Project ID: #3724; Monterey Mech.	Date Sampled: 06/06/00
	Client Contact: Carrie Locke	Date Received: 06/06/00
	Client P.O:	Date Extracted: 06/06/00
		Date Analyzed: 06/06/00

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) ⁺	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
39559	AEI 1-12'	S	ND	ND	ND	ND	ND	ND	106
39560	AEI 1-GW	W	ND	ND	ND	ND	ND	ND	100
39562	AEI 2-10'	S	ND	ND	ND	ND	ND	ND	106
39563	AEI 2-GW	W	ND	ND	ND	ND	ND	ND	99
39566	AEI 3-16'	S	ND	ND	ND	ND	ND	ND	103
39567	AEI 3-GW	W	ND	31	ND	ND	ND	ND	99
39571	AEI 4-16'	S	ND	ND	ND	ND	ND	ND	103
39572	AEI 4-GW	W	71,b	6.1	ND	3.2	3.4	16	96
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W	50 ug/L	5.0	0.5	0.5	0.5	0.5	0.5	
	S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

* cluttered chromatogram; sample peak coelutes with surrogate peak

*The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant (aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director



McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
 Telephone: 925-798-1620 Fax: 925-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

All Environmental, Inc. 3210 Old Tunnel Road, Suite B Lafayette, CA 94549-4157	Client Project ID: #3724; Monterey Mech.	Date Sampled: 06/06/00
	Client Contact: Carrie Locke	Date Received: 06/06/00
	Client P.O:	Date Extracted: 06/18-06/19/00
		Date Analyzed: 06/18-06/19/00

EPA method 8260 modified **Oxygenated Volatile Organics By GC/MS**


Lab ID	39567	Reporting Limit	
Client ID	AET 3-GW		
Matrix	W	S	W
Compound	Concentration*	ug/kg	ug/L
Di-isopropyl Ether (DIPE)	ND	5.0	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	1.0
Methyl-tert Butyl Ether (MTBE)	40	5.0	1.0
tert-Amyl Methyl Ether (TAME)	ND	5.0	1.0
tert-Butanol	ND	25	5.0

Surrogate Recoveries (%)

Dibromofluoromethane	108
Comments:	

* water samples are reported in ug/L, soil and sludge samples in ug/kg, wipes in ug/wipe and all TCLP / STLC / SPLP extracts in ug/l.
 ND means not detected above the reporting limit; N/A means surrogate not applicable to this analysis
 (h) lighter than water immiscible sheen is present; (i) liquid sample that contains greater than -5 vol. % sediment; (j) sample diluted due to high organic content

DHS Certification No. 1644

 Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #117
PACIFIC, CA 94553-5560

Telephone: (925) 798-1620

Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH

24 HR

48 HR

72 HR

5 DAY

Report To: Cara Locke

Bill To: AEI Consultants

Company: AEI Consultants

Tele: (925) 283-6000

Fax: (925) 283-6121

Project #: 3704

Project Name: Monterey Mosh.

Project Location: Oakland

Sampler Signature: [Signature]

Analysis Request

Other

Comments

SAMPLE ID	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED								
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO ₃	Other					
X AEI4-6W		6/12/00	8:41	2		X					X	X							

<input type="checkbox"/> BTEX & TPH as Gas (802/803 - 8015) MTBE	<input type="checkbox"/> TPH as Diesel (801.5)	<input type="checkbox"/> Total Petroleum Oil & Grease (5520 H&F/B&F)	<input type="checkbox"/> Total Petroleum Hydrocarbons (418.1)	<input type="checkbox"/> EPA 601 / 8010	<input type="checkbox"/> BTEX ONLY (EPA 602 / 8020)	<input type="checkbox"/> EPA 608 / 8080	<input type="checkbox"/> EPA 608 / 8080 PCB's ONLY	<input type="checkbox"/> EPA 624 / 8240 / 8260	<input type="checkbox"/> EPA 625 / 8270	<input type="checkbox"/> PAH's / PNA's by EPA 625 / 8270 / 8310	<input type="checkbox"/> CAM-17 Metals	<input type="checkbox"/> LUFT 5 Metals	<input type="checkbox"/> Lead (7240/7421/239-2/6010)	<input type="checkbox"/> RCI
--	--	--	---	---	---	---	--	--	---	---	--	--	--	------------------------------

39572

Remarks:

Relinquished By: <u>[Signature]</u>	Date: <u>6/12/00</u>	Time: <u>1:58</u>	Received By: <u>[Signature]</u>
Relinquished By: <u>[Signature]</u>	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE / GOOD CONDITION / HEAD SPACE ABSENT / PRESERVATION APPROPRIATE / CONTAINERS

VOAS / O&G / METALS / OTHER