



RO 2635 ✓

July 15, 2004

Ms. Donna Drogos
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Subject: Former Exxon Facility R/S # 7-4121
10605 Foothill Boulevard
SWC 106th Avenue & Foothill Boulevard
Oakland, CA 94605
AEI Project No. 8311

Alameda County
Environmental Health
JUL 19 2004

Dear Ms. Drogos:

Enclosed is a copy of AEI's *Phase II Subsurface Investigation* report performed at the above referenced property. This report was originally sent to ACHCSA in April 2004. Although the property is not currently owned by Exxon, the current owner does have an indemnification from Exxon relating to the mitigation of a release (copy enclosed).

It is AEI's opinion that the release to groundwater documented in the report warrants opening a formal LUST case.

Due to the upcoming redevelopment of the Foothill Square Shopping Center, including this parcel, the property owner has requested that we assist to expedite regulatory review of the report and oversight for the release.

We appreciate a timely response to this report. If I can be of any assistance to your office, please let me know. I can be reached at 925/283-6000, or at pmcintyre@aeiconsultants.com.

Sincerely,

Peter McIntyre, RG
Project Manager

cc: Mr. Chuck Headlee
RWQCB
1515 Clay Street, Suite 1400
Oakland, CA 94612

Mr. Ken Phares (w/o enclosures)
Jay-Phares Corporation
10700 MacArthur Boulevard, Suite 200
Oakland, CA 94605



RO 2635

2635

April 22, 2004

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

Alameda County
APR 27 2004
Environmental Health

Subject: Former Exxon Facility R/S # 7-4121
10605 Foothill Boulevard
SWC 106th Avenue & Foothill Boulevard
Oakland, CA 94605
AEI Project No. 8311

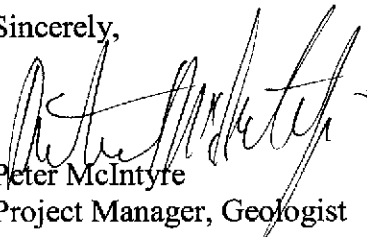
Dear Mr. Chan:

Enclosed is a copy of AEI's *Phase II Subsurface Investigation* report performed at the above referenced property. The report is sent to your office at the request of Mr. Ken Phares of the Jay-Phares Corporation.

While we understand that opening a formal case may take some time, it was our hope that by forwarding this report to your attention that the process may in some way be expedited and in the meantime that we would have an initial contact person, if needed.

Should you have any questions or need any additional information regarding this, please contact me. I can be reached at 925/283-6000, extension 104 or pmcintyre@aeiconsultants.com.

Sincerely,



Peter McIntyre
Project Manager, Geologist

cc: Mr. Ken Phares (w/o enclosures)
Jay-Phares Corporation
10700 MacArthur Boulevard, Suite 200
Oakland, CA 94605

April 7, 2004

Alameda County
APR 27 2004
Environmental Health

**PHASE II SUBSURFACE
INVESTIGATION REPORT**

10605 Foothill Boulevard
Oakland, California

Project No. 8311

Prepared For

MacArthur Boulevard Associates
c/o Jay-Phares Corporation
10700 MacArthur Boulevard, Suite 200
Oakland, CA 94605

Prepared By

AEI Consultants
2500 Camino Diablo, Suite 200
Walnut Creek, CA 94597
(925) 283-6000

AEI



April 7, 2004

Mr. John Jay
MacArthur Boulevard Associates
C/o Jay-Phares Corporation
10700 MacArthur Boulevard, Suite 200
Oakland, CA 94605

Subject: Phase II Subsurface Investigation
10605 Foothill Boulevard
Oakland, California
Project No. 8311

Dear Mr. Jay:

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). The investigation included the analyses of soil and groundwater samples collected from four soil borings advanced on the property. The investigation was designed to assess whether a release of petroleum hydrocarbons had occurred from the former fuel system on the property.

I Background

The subject property (hereinafter referred to as the "site" or "property") is located in a mixed commercial and residential area of Oakland. The property is approximately 12,000 square feet in size. Currently the property is landscaped, with no structures.

The property was historically developed with a gasoline service station. According to a 1964 site plan obtained at the City of Oakland Building Department, the station was equipped with three (3) fuel underground storage tanks (USTs) located on the southwestern corner of the property and two dispenser islands located on the northern side of the property. Reportedly, the station was demolished, however no records regarding the removal of the USTs or any associated piping and equipment was available. The locations of the former dispensers and USTs, as identified on the referenced site plan, are shown on Figure 2.

In December 1998, AEI performed a geophysical survey of the southwestern corner of the property to ascertain whether the USTs were still present on the property. A magnetometer and ground-penetrating radar were employed. No underground anomalies were identified that were indicative of remaining USTs.

SB1 - SB4

II Investigative Efforts

AEI performed a subsurface investigation at the property on March 19, 2004. Prior to mobilization, a drilling permit was obtained for the Alameda County Public Works Agency (permit # W04-0246) and underground service alert was notified. A total of four soil borings (SB-1 to SB-4) were advanced. Borings SB-1 and SB-2 were placed in the former UST area and borings SB-3 and SB-4 were placed in the locations of the dispensers. The locations of the soil borings are shown on Figure 2.

Soil Sample Collection

The borings were advanced with a truck-mounted direct-push drilling system. The borings were drilled to depths ranging from 8 to 22 feet below ground surface (bgs). Soil cores were continuously collected in 2" diameter acrylic liners. The borings were logged by the onsite AEI geologist, Peter McIntyre. Soil samples were cut from the liners at selected intervals. 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.

A strong hydrocarbon odor was observed during the advancement of the boring SB-1 and SB-2. The soil samples were screened in the field using a Photo-ionizing Detector (PID). The soil screening data is presented on the borings logs located in Attachment A.

Groundwater Sample Collection

Upon drilling to the target depth, temporary 3/4" diameter slotted PVC casing was inserted into each boring to facilitate collection of groundwater samples. Groundwater was present in SB-1 and SB-2 and between 13.3 and 14 feet bgs.

Groundwater samples were collected using a drop tube equipped with a check-ball. The samples were collected in to 1-liter glass bottles and 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, then placed in a cooler with wet ice to await transportation to the laboratory.

Following sample collection, the temporary PVC casing was removed and each boring was backfilled with neat cement grout.

Laboratory Analysis

On March 19, 2004, the soil and groundwater samples were transported to McCampbell Analytical Inc. (Department of Health Services Certification #1644) under chain of custody protocol for analysis. Analytical results and chain of custody documents are included as Attachment B.

Four soil samples and two groundwater samples were selected for analyses. The samples were analyzed for total petroleum hydrocarbon (TPH) as gasoline (TPH-g) and TPH as diesel (TPH-d)

by EPA method 8015C/Cm and for, benzene, toluene, ethyl-benzene, and xylenes (BTEX) and methyl tert butyl ether (MTBE) by EPA method 8021. Any remaining soil samples were placed on hold at the laboratory.

III Findings

The near surface soil encountered during the advancement of SB-1 and SB-2 consisted of sandy and gravelly clay to between approximately 8 and 10 feet bgs, possible excavation backfill material. Below this depth clay and fine silty sand was encountered to boring termination. Saturated silty sands were observed in SB-2 below 18 feet bgs. Refer to Attachment A for detailed logs of the borings. Groundwater was measured in the temporary casings at 13.3 to 14 feet bgs. Based on local topography and information from nearby properties, groundwater is estimated to flow in a westerly direction.

The highest concentrations of petroleum hydrocarbons detected in soil were present in sample SB-1 11'. TPH-g and TPH-d were detected in this sample at 1,000 milligrams per kilogram (mg/kg) and 590 mg/kg, respectively. Benzene was detected in this sample at 0.55 mg/kg. MTBE was not detected in any of the soil samples. The only petroleum hydrocarbons detected in the two samples collected from near the dispensers (SB-3 5' and SB-4 5') was TPH-d detected at 2.1 mg/kg in SB-4 5'.

TPH-g and TPH-d were detected in groundwater samples up to 7,000 micrograms per liter ($\mu\text{g/l}$) and 26,000 $\mu\text{g/l}$, respectively. Benzene was detected in groundwater at 250 $\mu\text{g/l}$ (SB-1 W) and 17 $\mu\text{g/l}$ (SB-2 W). Toluene, ethyl benzene, and xylenes were also detected in groundwater up to 22 $\mu\text{g/l}$, 310 $\mu\text{g/l}$, and 71 $\mu\text{g/l}$, respectively. MTBE was not detected in the two groundwater samples above laboratory detection limits.

Soil sample analytical data is summarized in Table 1, and groundwater sample analytical data is summarized in Table 2.

IV Summary and Conclusions

AEI collected soil and groundwater samples from four soil borings advanced on the property. The investigation was performed to assess whether the property had been impacted by a release from the former fuel system. Although the USTs were not found during the previous geophysical survey, no information on sampling during USTs removal was identified.

Based on sample analytical data and field observations, a release had occurred in the location of the former USTs. The release appears to consist of gasoline and diesel. The shallow groundwater beneath the site has been also been impacted by the release. Due to the preliminary nature of the investigation, further investigation will be necessary to further characterize the extent of impacted soil and groundwater. Because soil and groundwater have been impacted by a

release of petroleum products, the property owner should be away of their obligation to notify the appropriate regulatory agencies.

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.

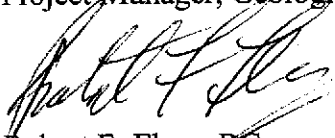
These services were performed in accordance with generally accepted practices, in the environmental engineering and construction field, which existed at the time and location of the work.

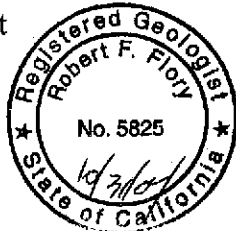
If you have any questions regarding our investigation, please do not hesitate to contact me at (925) 283-6000, extension 104.

Sincerely,

AEI Consultants


Peter McIntyre
Project Manager, Geologist


Robert F. Flory, RG
Senior Project Geologist



Figures

Figure 1: Site Map

Figure 2: Site Plan

Tables

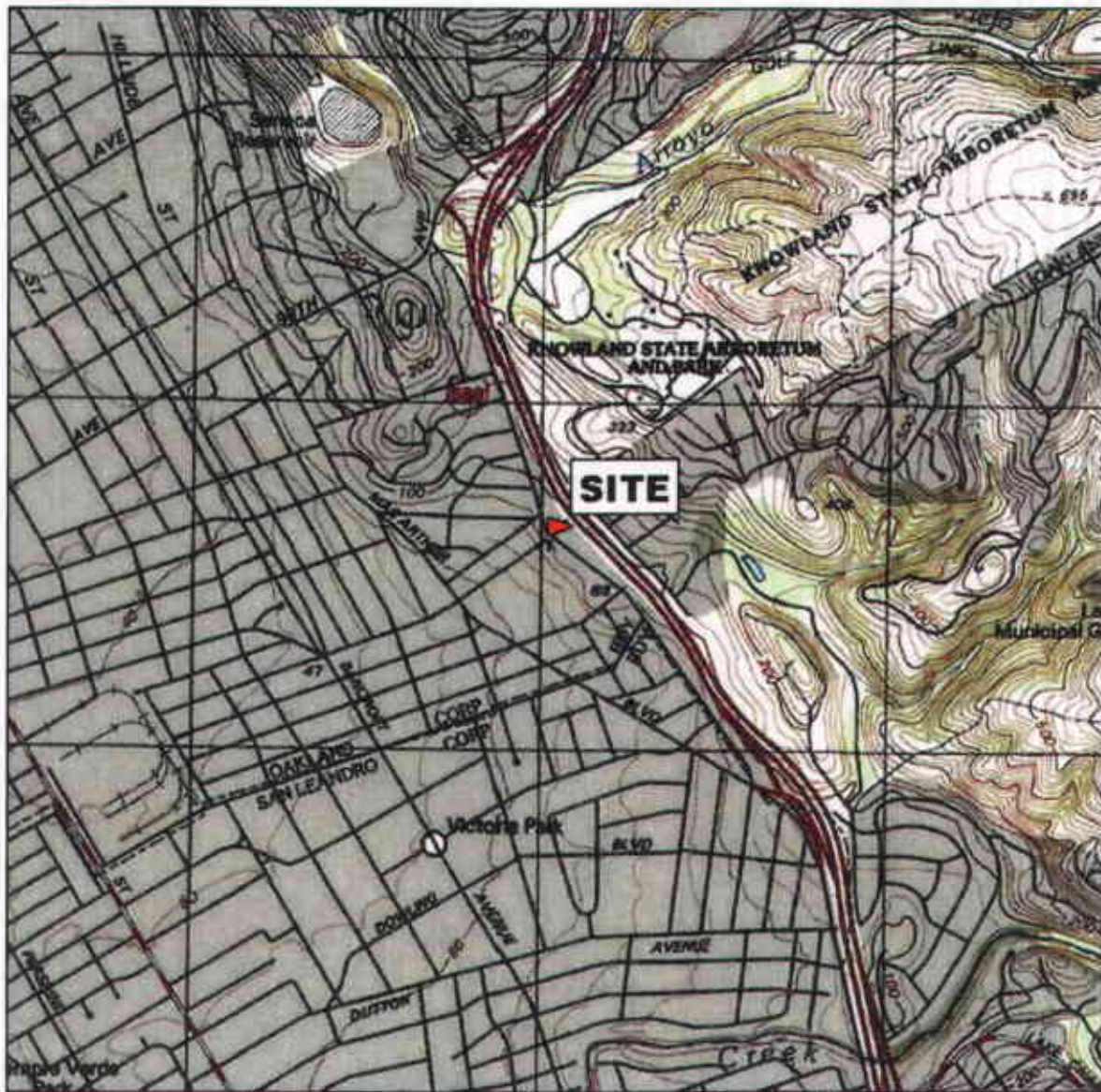
Table 1: Soil Sample Analytical Data

Table 2: Groundwater Sample Analytical Data

Attachments

Attachment A: Soil Boring Logs

Attachment B: Sample Analytical Documentation



TN \uparrow MN
15°



Printed from TOPO! ©2001 National Geographic Holdings (www.topo.com)

AEI CONSULTANTS	
SITE LOCATION MAP	
10605 FOOTHILL BOULEVARD OAKLAND, CALIFORNIA	FIGURE 1 PROJECT NO. 8311

SINGLE FAMILY RESIDENCE

PROPERTY BOUNDARY

SHOPPING CENTER DRIVEWAY

PROPERTY BOUNDARY

SIDEWALK

106th AVENUE

SB-2

SB-1

SB-4

SB-3

Former Tank Locations

Former Dispenser Islands

SIDEWALK

FOOTHILL BOULEVARD



⊗ Soil Boring Location
Drilled by AEI 3/19/04

0' 5' 10' 25'
Scale: 1 in = 25 ft

Drawn: 3/30/04

AEI CONSULTANTS

2500 CAMINO DIABLO, STE 200 WALNUT CREEK, CA 94597

SITE PLAN

10605 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

FIGURE 2
PROJECT No. 8311

Table 1
Soil Sample Analytical Data

Sample ID	Date	TPH-g mg/kg <i>EPA method 8015Cm</i>	TPH-d mg/kg	MTBE mg/kg	Benzene mg/kg	Toluene mg/kg <i>EPA method 8021B</i>	E'benzene mg/kg	Xylenes mg/kg
SB-1 11'	3/19/04	1000	590	<2.5	0.55	11	0.92	2.6
SB-2 18'	3/19/04	65	37	<0.50	<0.050	0.39	0.40	0.13
SB-3 5'	3/19/04	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-4 5'	3/19/04	<1.0	2.1	<0.05	<0.005	<0.005	<0.005	<0.005
RL		1	1	0.05	0.005	0.005	0.005	0.005

TPH-g = total petroleum hydrocarbons as gasoline

TPH-d = total petroleum hydrocarbons as diesel

mg/kg = milligrams per kilogram

RL = laboratory reporting limit (with no dilution) - see laboratory reports for sample specific dilution factors

MTBE = methyl tert-butyl ether

E'benzene = ethylbenzene

- = Sample not analyzed by this method

Table 2
Groundwater Sample Analytical Data

Sample ID	Date	TPH-g	TPH-d	MTBE	Benzene	Toluene	E'benzene	Xylenes
		$\mu\text{g/l}$ <i>EPA method 8015Cm</i>	$\mu\text{g/l}$	$\mu\text{g/l}$	$\mu\text{g/l}$	$\mu\text{g/l}$ <i>EPA method 8021B</i>	$\mu\text{g/l}$	$\mu\text{g/l}$
SB-1 W	3/19/04	3200	4200	<17	250	22	310	71
SB-2 W	3/19/04	7000	26000	<17	17	24	68	21
RL		50	50	5.0	0.5	0.5	0.5	0.5

TPH-g = total petroleum hydrocarbons as gasoline

TPH-d = total petroleum hydrocarbons as diesel

$\mu\text{g/l}$ = micrograms per liter

RL = reporting limit (with no dilution) - see laboratory reports for sample specific dilution factors

MTBE = methyl tert-butyl ether

E'benzene = ethylbenzene

- = Sample not analyzed by this method

ATTACHMENT A
SOIL BORING LOGS

Project: MacArthur Boulevard Associates
Project Location: 10605 Foothill Boulevard,
Oakland
Project Number: 8311

Log of Boring SB-1
 Sheet 1 of 1

Date(s) Drilled 3/19/04	Logged By Peter McIntyre	Checked By Robert F. Flory
Drilling Method Direct Push	Drill Bit Size/Type	Total Depth of Borehole 16 feet bgs
Drill Rig Type GeoProbe	Drilling Contractor	Approximate Surface Elevation 100 feet amsl
Groundwater Level and Date Measured 13.3	Sampling Method(s) Tube (push)	Hammer Data
Borehole Backfill Cement Slurry	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
100	0					Top Soil, wet		
						Sandy and gravelly clay, dark brown, medium stiff		
95	5							No Hydrocarbon (HC) odor; PID = 4.6 ppm
			8'			Clayey sand, saturated		
						Asphalt (debris ?)		
90	10					Silty sand, grey		Strong gas / diesel odor
			11'					
						Clay, beige	(ATD) ∇	
85	15							Water in liners, moderate HC odor
			16'					Moderate gas odor
						Bottom of Boring at 16 feet bgs		
80	20							
75	25							
70	30							

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\DUPLICATE INVESTIGATIONS AND MISC SAMPLING\08311 PH II (Lay Phases) Oakland - P11MSB1.bgs (Ltp1)



Project: MacArthur Boulevard Associates
Project Location: 10605 Foothill Boulevard,
Oakland
Project Number: 8311

Log of Boring SB-2
 Sheet 1 of 1

Date(s) Drilled 3/19/04	Logged By Peter McIntyre	Checked By Robert F. Flory
Drilling Method Direct Push	Drill Bit Size/Type	Total Depth of Borehole 22 feet bgs
Drill Rig Type GeoProbe	Drilling Contractor	Approximate Surface Elevation 100 feet amsl
Groundwater Level and Date Measured 14	Sampling Method(s) Tube (push)	Hammer Data
Borehole Backfill Cement Slurry	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
100	0					Top Soil		
						Sandy and gravelly clay		
						Fine to medium sand, no fines		
95	5					Clay with sand and gravel, light brown		
						Color change at 8' to black / grey		
			8'					No Hydrocarbon (HC) odor; PID = < 1.0 ppm
90	10							
			131'			Clay with very fine sand, stiff, olive / grey color	(ATD) $\frac{1}{2}$	PID = 5.0 ppm
85	15			15'				PID = 0.4 ppm, slight HC odor
				18'				
						Very fine to fine silty sand, saturated		PID > 50 ppm; very strong HC odor
80	20							
						Bottom of Boring at 22 feet bgs		
75	25							
70	30							

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\DUPLICATE DIL INVESTIGATIONS and MISC SAMPLING\8311 PH II (Jay Phares) Oakland - P\IMS\SB2.bgs Ltp11



Project: MacArthur Boulevard Associates
Project Location: 10605 Foothill Boulevard,
Oakland
Project Number: 8311

Log of Boring SB-3
 Sheet 1 of 1

Date(s) Drilled 3/19/04	Logged By Peter McIntyre	Checked By Robert F. Flory
Drilling Method Direct Push	Drill Bit Size/Type	Total Depth of Borehole 8 feet bgs
Drill Rig Type GeoProbe	Drilling Contractor	Approximate Surface Elevation 100 feet amsl
Groundwater Level and Date Measured Not Encountered ATD	Sampling Method(s) Tube (push)	Hammer Data
Borehole Backfill Cement Slurry	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
100	0					Top Soil, wet Clay, stiff, brown to dark brown		
95	5		5'					No Hydrocarbon (HC) odor; PID = <0.1 ppm
	8					Bottom of Boring at 8 feet bgs		No HC odor
90	10							
85	15							
80	20							
75	25							
70	30							

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\DUPLICATE DIL INVESTIGATIONS and MISC SAMPLING\8311 PH II Uay Phares Oakland - P\MSB3.bgs (.t.lpl)



Project: MacArthur Boulevard Associates
 Project Location: 10605 Foothill Boulevard,
 Oakland
 Project Number: 8311

Log of Boring SB-4
 Sheet 1 of 1

Date(s) Drilled	3/19/04	Logged By	Peter McIntyre	Checked By	Robert F. Flory
Drilling Method	Direct Push	Drill Bit Size/Type		Total Depth of Borehole	8 feet bgs
Drill Rig Type	GeoProbe	Drilling Contractor		Approximate Surface Elevation	100 feet amsl
Groundwater Level and Date Measured	Not Encountered ATD	Sampling Method(s)	Tube (push)	Hammer Data	
Borehole Backfill	Cement Slurry	Location			

Elevation, feet	Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
100	0					Top Soil, wet Clay, stiff		
						Fine sand, dry Clay, stiff		
95	5		5'			Fine sand		No Hydrocarbon (HC) odor; PID = <0.1 ppm
			8'					No HC odor
						Bottom of Boring at 8 feet bgs		
90	10							
85	15							
80	20							
75	25							
70	30							

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\DUKE DIL INVESTIGATIONS and MISC SAMPLING\8311 PH II (Lay Phares) Oakland - P1M\sb4.bgs (.tpl)



ATTACHMENT B

SAMPLE ANALYTICAL DOCUMENTATION



McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mcccampbell.com E-mail: main@mcccampbell.com

All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #8311; Jay	Date Sampled: 03/19/04
		Date Received: 03/19/04
	Client Contact: Peter McIntyre	Date Reported: 03/26/04
	Client P.O.:	Date Completed: 03/26/04

WorkOrder: 0403331

March 26, 2004

Dear Peter:

Enclosed are:

- 1). the results of 6 analyzed samples from your #8311; Jay project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions please contact me. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager



QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: S

WorkOrder: 0403331

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		BatchID: 10835		Spiked Sample ID: 0403332-009A				
	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex) [£]	ND	0.60	96.1	98.4	2.29	103	102	0.305	70	130
MTBE	ND	0.10	92	88.8	3.50	98.4	93.5	5.12	70	130
Benzene	ND	0.10	102	114	10.8	117	116	1.69	70	130
Toluene	ND	0.10	87.2	93.5	6.97	97.4	96.8	0.526	70	130
Ethylbenzene	ND	0.10	114	108	5.30	115	115	0	70	130
Xylenes	ND	0.30	96.7	100	3.39	107	103	3.17	70	130
%SS:	90.4	0.10	102	101	0.985	106	98.3	7.54	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W

WorkOrder: 0403331

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		BatchID: 10836			Spiked Sample ID: 0403328-003A			
	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex) [£]	ND	60	97.2	101	3.88	97	99.1	2.11	70	130
MTBE	ND	10	95.1	100	4.97	112	104	7.82	70	130
Benzene	ND	10	107	116	7.97	113	109	3.16	70	130
Toluene	ND	10	103	109	5.90	105	101	3.36	70	130
Ethylbenzene	ND	10	104	115	10.2	109	108	1.39	70	130
Xylenes	ND	30	95.3	100	4.78	96	96	0	70	130
%SS:	101	10	106	104	1.67	103	102	0.874	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mcccampbell.com E-mail: main@mcccampbell.com

QC SUMMARY REPORT FOR SW8015C

Matrix: S

WorkOrder: 0403331

EPA Method: SW8015C		Extraction: SW3550C		BatchID: 10804		Spiked Sample ID: 0403284-010A				
	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	ND	150	102	102	0	85.7	85.8	0.0980	70	130
%SS:	88.2	50	95.8	96.1	0.294	102	101	0.122	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = $100 * (MS - Sample) / (Amount\ Spiked)$; RPD = $100 * (MS - MSD) / ((MS + MSD) / 2)$.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

TL QA/QC Officer



McC Campbell Analytical, Inc.

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

QC SUMMARY REPORT FOR SW8015C

Matrix: W

WorkOrder: 0403331

EPA Method: SW8015C		Extraction: SW3510C			BatchID: 10838		Spiked Sample ID: N/A			
	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	96.8	97.6	0.836	70	130
%SS:	N/A	2500	N/A	N/A	N/A	93.5	94.2	0.751	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

TL QA/QC Officer

McC Campbell Analytical, Inc.



110 Second Avenue South, #D7
 Pacheco, CA 94553-5560
 (925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0403331

Report to:
 Peter McIntyre
 All Environmental, Inc.
 2500 Camino Diablo, Ste. #200
 Walnut Creek, CA 94597

TEL: (925) 283-6000
 FAX: (925) 283-6121
 ProjectNo: #8311; Jay
 PO:

Bill to:
 Lesleigh Alderman
 All Environmental, Inc.
 2500 Camino Diablo, Ste. #200
 Walnut Creek, CA 94597

Requested TAT: 5 days
 Date Received: 3/19/04
 Date Printed: 3/19/04

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
0403331-002	SB-1 11'	Soil	3/19/04	<input type="checkbox"/>	A		A													
0403331-008	SB-2 18'	Soil	3/19/04	<input type="checkbox"/>	A		A													
0403331-009	SB-3 5'	Soil	3/19/04	<input type="checkbox"/>	A		A													
0403331-011	SB-4 5'	Soil	3/19/04	<input type="checkbox"/>	A		A													
0403331-013	SB-1 W	Water	3/19/04 10:00:00	<input type="checkbox"/>			A		B											
0403331-014	SB-2 W	Water	3/19/04 9:35:00 AM	<input type="checkbox"/>			A		B											

Test Legend:

1	G-MBTX_S	2	G-MBTX_W	3	TPH(D)_S	4	TPH(D)_W	5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

