



October 1, 2003

Alameda County  
OCT 15 2003  
Environmental Health

REPORT  
of  
SOIL AND GROUNDWATER ASSESSMENT  
ASE JOB NO. 3927  
at  
15954-15960 East 14<sup>th</sup> Street  
San Leandro, California

20921

Submitted by:  
AQUA SCIENCE ENGINEERS, INC.  
208 West El Pintado  
Danville, CA 94526  
(925) 820-9391

## **1.0 INTRODUCTION**

This report presents the methods and findings of Aqua Science Engineers, Inc. (ASE)'s soil and groundwater assessment at the property located at 15954-15960 East 14<sup>th</sup> Street in San Leandro, California (Figure 1). The site assessment activities were initiated by Mr. Sukhdev Kapur, a prospective buyer of the property, prior to purchasing the property.

## **2.0 BACKGROUND INFORMATION**

The subject site is a 1.2-acre parcel with two land uses. No. 15954 is a single-family dwelling, with a second garage and dwelling unit. No. 15960 is an automotive repair shop that formerly included use of the site's rear area as a 100-car automotive wrecking yard. Both land uses date from about the early 1940s, with the wrecking yard active from the 1940s to about 1990.

Two 250-gallon gasoline underground storage tanks (USTs) and vent pipes were removed from the site in 1992. One groundwater monitoring well was subsequently installed, and the UST case was closed in November 1994. The monitoring well still remains in place and the UST's former product lines and fuel dispenser island were not removed.

## **3.0 SCOPE OF WORK (SOW)**

Based on the site history, ASE's scope of work was to:

- 1) Obtain an Alameda County Public Works Agency drilling permit.
- 2) Using a Geoprobe drill rig, drill three soil borings to groundwater in the rear yard area of the property and collect soil and groundwater samples for analysis.
- 3) Analyze one soil and one groundwater sample from each boring at a CAL-DHS certified analytical laboratory for total petroleum hydrocarbons as gasoline (TPH-G) by EPA Method 8015, total petroleum hydrocarbons as diesel (TPH-D) and motor oil (TPH-MO) by EPA Method 8015, and volatile organic compounds (VOCs) by EPA Method 8260B. The soil samples will also be analyzed for CAM 17 metals by EPA Method 6010. The soil sample selected for analyses will be based on field observations. Any soil samples collected in what appears to be contaminated soil (odors or staining) will be selected for

analyses. The other soil samples not chosen for analyses will be sealed and placed on HOLD at the laboratory for possible future analyses, as necessary.

- 4) Backfill the borings with neat cement.
- 5) Collect a groundwater sample from the existing groundwater monitoring well. Analyze the water sample for TPH-G by EPA Method 8015M and benzene, toluene, ethylbenzene, and total xylenes (collectively known as BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8021B.
- 6) Using a hand-auger, screen the soil within the former pump island dispenser cut-outs. Note the condition of soil (odors or staining) to a depth of 4-feet. No samples are proposed for this task.
- 7) Prepare a report detailing the methods and findings of this assessment.

Details of the assessment are presented below.

#### **4.0 DRILL SOIL BORINGS AND COLLECT SAMPLES**

##### 4.1 Permit Preparation

Prior to drilling, ASE obtained a drilling permit from the ACPWA. ASE also contacted Underground Service Alert (USA) have underground utility lines located.

##### 4.2 Drilling and Soil Sample Collection

On September 12, 2003, Vironex, Inc. of San Leandro, California drilled soil borings BH-A through BH-C at the site using a Geoprobe hydraulic sampling rig (Figure 2). Boring BH-A was located in an area with the heaviest surface oil staining and the driveway drainage. The other two borings were located in areas of distressed vegetation. The drilling was directed by ASE associate geologist Damian Hriciga.

Undisturbed soil samples were collected continuously as drilling progressed for lithologic and hydrogeologic description and for possible chemical analysis. The samples were collected by driving a sampler lined with acetate tubes using hydraulic direct push methods. Selective soil samples were immediately cut, sealed with Teflon tape and plastic end

caps, labeled and chilled with ice for transport to McCampbell Analytical, Inc. of Pacheco, California (CA DHS ELAP #1644) under chain of custody.

Soil from the remaining tubes was described by the site geologist using the Unified Soil Classification System (USCS) and was screened for volatile compounds using a photoionization detector (PID). The soil was screened by emptying soil from one of the sample tubes into a plastic bag. The bag was then sealed and placed in the sun for approximately 10 minutes. After the VOCs were allowed to volatilize, the PID measured the vapor in the bag through a small hole punched in the bag. PID readings are used as a screening tool only, since the procedures are not as rigorous as those used in the laboratory. The PID readings are shown on the boring logs presented in Appendix A.

#### 4.3 Groundwater Sample Collection

A temporary PVC well casing was driven into place in borings BH-A through BH-C for the collection of groundwater samples. Groundwater samples were removed from the borings with pre-cleaned bailers. The groundwater samples to be analyzed for volatile compounds were contained in 40-ml volatile organic analysis (VOA) vials, preserved with hydrochloric acid, and sealed without headspace. The samples to be analyzed for non-volatile compounds were contained in 1-liter amber glass containers. The samples were labeled and chilled with ice for transport to McCampbell Analytical under chain of custody.

#### 4.4 Decontamination and Borehole Backfilling

Drilling equipment was cleaned with a TSP solution between sampling intervals and between borings to prevent potential cross-contamination. Following collection of the soil and groundwater samples, each boring was backfilled with neat cement to the ground surface.

#### 4.5 Subsurface Lithology and Hydrogeology

Sediments encountered during drilling consisted predominantly of low permeability clay and/or sandy clay to the total depth explored of 16-feet below ground surface (bgs). Groundwater was encountered at depths ranging from 8 to 12-feet bgs, and rose to between 5 and 7-feet bgs in the open borings indicating that groundwater is under artesian head. Boring logs are presented as Appendix A.

## **5.0 BORINGS THROUGH FORMER DISPENSER LOCATION**

On September 12, 2003, ASE associate geologist Damian Hriciga drilled borings HA-1 and HA-2 through the former dispenser locations using a hand-auger. These borings were drilled to a depth of 4-feet bgs. The purpose of these borings was to determine whether there were any obvious indications of soil contamination in these locations. There were no obvious indications of contamination based on odors, PID readings, or visual indications such as staining.

## **6.0 MONITORING WELL SAMPLING**

On September 12, 2003, ASE associate geologist Damian Hriciga collected groundwater samples from the site monitoring well for analysis. No free-floating hydrocarbons or sheen was present on the surface of groundwater in the well. Prior to sampling, the well was purged of three well casing volumes of groundwater. The pH, temperature and conductivity of the purge water were monitored during evacuation, and samples were not collected until these parameters stabilized. Samples were collected from the well using a pre-cleaned polyethylene bailer. The groundwater samples were decanted from the bailer into 40-ml volatile organic analysis (VOA) vials, preserved with hydrochloric acid, sealed without headspace, labeled, and stored on ice for transport to McCampbell Analytical under chain of custody.

## **7.0 ANALYTICAL RESULTS FOR SOIL**

The soil sample collected from 1-foot bgs from each boring was analyzed by McCampbell Analytical for TPH-G by EPA Method 5030/8015, TPH-D and TPH-MO by modified EPA Method 8015, VOCs by EPA Method 8260B, and CAM 17 metals by EPA Methods 6010A and 7471. The analytical results are tabulated in Table One, and the certified analytical report and chain of custody forms are included in Appendix B.

The only compound detected in any of the soil samples at concentrations exceeding environmental screening levels (ESLs) for residential soil in areas where groundwater is a current or potential source of drinking water was cadmium. These ESLs are presented in the "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) dated July 2003. However, given the highest cadmium concentration at the site

being 3.1 parts per million (ppm), it is probable that these concentrations are related to natural background concentrations, which can be as high as 3.5 ppm in the San Francisco Bay Area. Further evidence that these concentrations are related to background are that the concentrations are relatively consistent throughout the site and no other metals were detected at concentrations exceeding ESLs.

## **8.0 ANALYTICAL RESULTS FOR GROUNDWATER**

The groundwater samples collected from the borings were analyzed by McCampbell Analytical for TPH-G by EPA Method 5030/8015, TPH-D and TPH-MO by modified EPA Method 8015, and VOCs by EPA Method 8260B. The groundwater samples collected from the monitoring well were analyzed by McCampbell Analytical for TPH-G by EPA Method 5030/8015 and BTEX and MTBE by EPA Method 8021B. The analytical results are tabulated in Table Two, and the certified analytical report and chain of custody forms are included in Appendix B.

The groundwater samples collected from all three borings contained TPH-MO at concentrations exceeding the ESLs for sites where groundwater is a current or potential source of drinking water. The TPH-D concentration in the groundwater sample collected from boring BH-C and MTBE concentration in the water sample collected from the monitoring well also exceeded ESLs for sites where groundwater is a current or potential source of drinking water. The TPH-MO concentrations in groundwater samples collected from borings BH-B and BH-C also exceeded ESLs for sites where groundwater is not a current or potential source of drinking water.

## **9.0 CONCLUSIONS**

Although the groundwater samples collected from the borings and monitoring wells contained TPH-MO, TPH-D and/or MTBE at concentrations exceeding ESLs, these concentrations are still considered relatively low. Since it is unlikely that groundwater is used in the site vicinity for drinking water, these concentrations should not present a significant threat to human health, and it is unlikely that remediation will be required. Cadmium was also detected in soil at concentrations exceeding ESLs for residential soil; however, it is likely that the cadmium is related to natural background concentrations and not contamination. It is ASE's understanding that the proposed residential development will have no exposed soil at the site. If there is no exposed soil at the site,

then there should be no risk to future residences at the site and no remediation should be required.

## **10.0 RECOMMENDATIONS**

Although the TPH-MO, TPH-D and MTBE concentrations detected are relatively low, some of the concentrations exceed ESLs. The cadmium concentrations in soil also exceeded the ESLs for residential soil, although the cadmium may be related to natural background concentrations and may not be related to contamination. It is unknown whether the regulatory agencies will have any concern related to these concentrations at this time. A copy of this report should be mailed to the following agency along with a letter requesting regulatory guidance:

Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Room 250  
Alameda, CA 94502

## **11.0 REPORT LIMITATIONS**

The results presented in this report represent conditions at the time of the soil and groundwater sampling, at the specific locations where the samples were collected, and for the specific parameters analyzed by the laboratory.

This report does not fully characterize the site for contamination resulting from unknown sources or for parameters not analyzed by the laboratory. All of the laboratory work cited in this report was prepared under the direction of an independent state certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

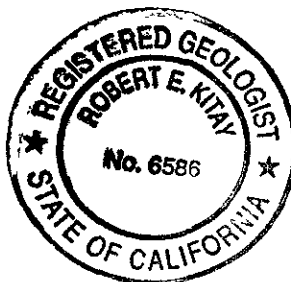
Aqua Science Engineers appreciates the opportunity to provide environmental consulting services for this project. Should you have any questions or comments, please feel free to call us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.



Robert E. Kitay, R.G., R.E.A.  
Senior Geologist



Attachments: Figures 1 and 2  
Tables One and Two  
Appendices A and B

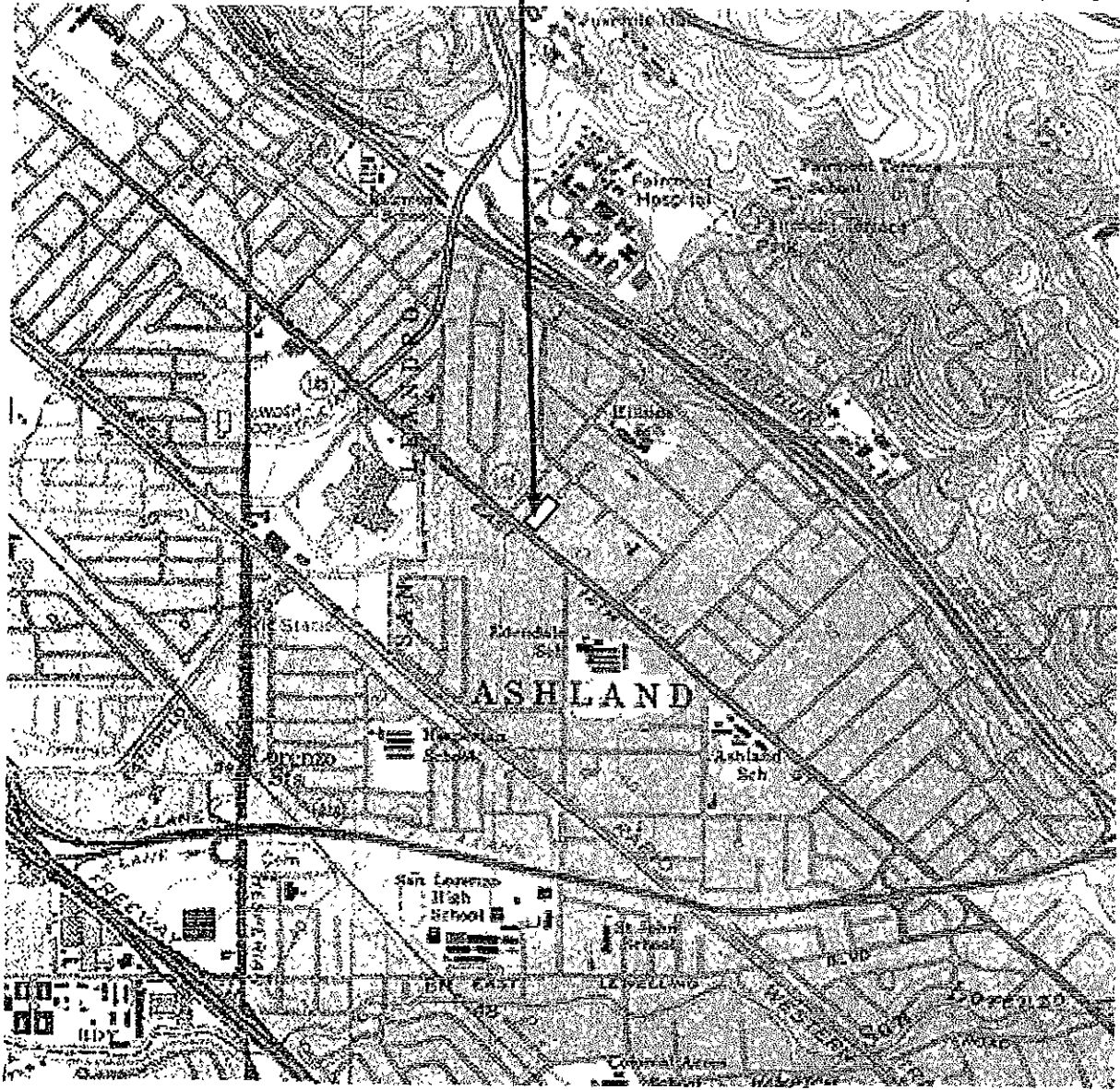


**FIGURES**

# SUBJECT SITE

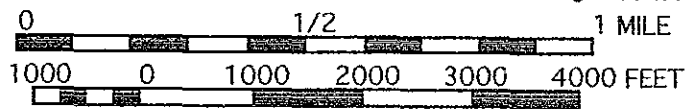
37°42'51", 122°08'13"

37°42'51", 122°05'56"



37°41'01", 122°08'13"

37°41'01", 122°05'56"



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PHASE I ENVIRONMENTAL SITE ASSESSMENT  
15954-15960 E. 14th Street  
San Leandro, CA

## VICINITY MAP

DRAWN BY: RW

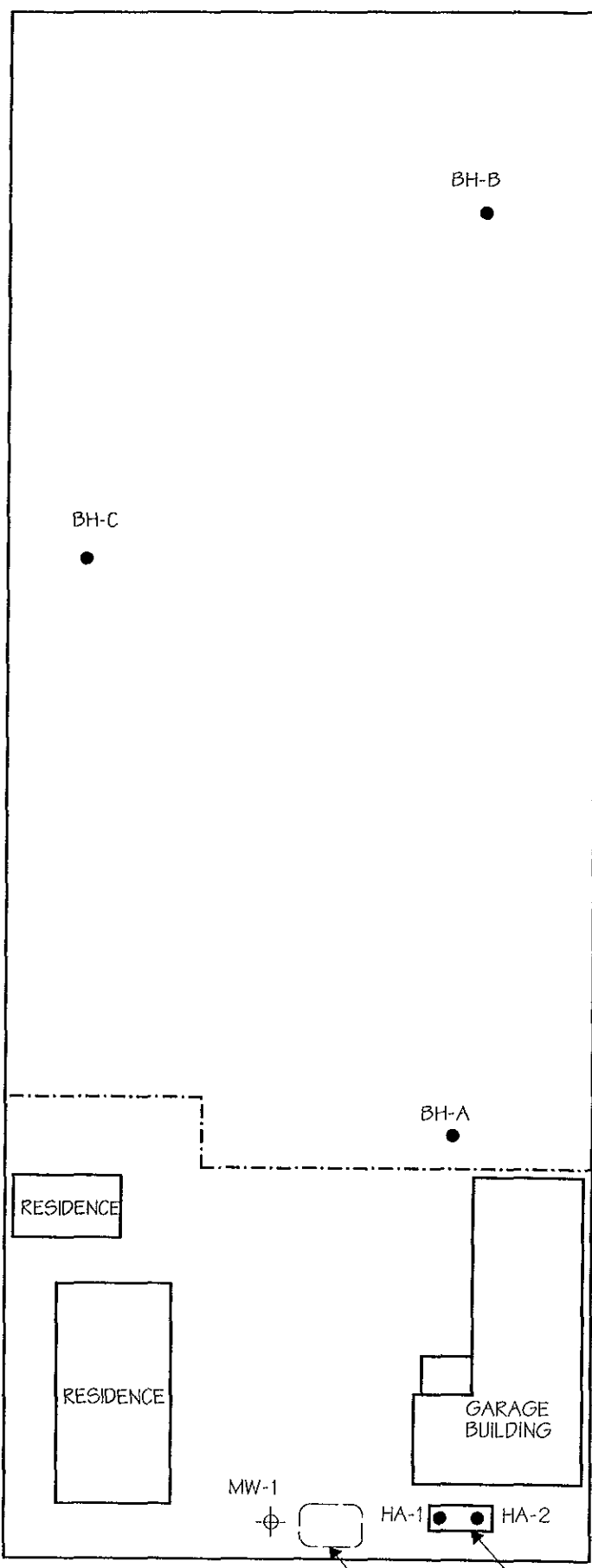
08/18/03

ASE JOB NO. 3917

FIGURE NO.1



NORTH  
SCALE 1" = 40'



### LEGEND

- HAND AUGER OR BORING LOCATION
- ⊕ MONITORING WELL
- · - · - CHAIN LINK FENCE

### MONITORING WELL AND SOIL BORING LOCATION MAP

15954 - 15960 E. 14TH ST.  
SAN LEANDRO, CA

AQUA SCIENCE ENGINEERS

Figure 2

**TABLES**

**TABLE ONE**  
 Summary of Analyses of Soil Samples  
 15954-15960 East 14th Street, San Leandro, CA  
 All results are in parts per million (ppm)

COMPOUND	BH-A - 1'	BH-B - 1'	BH-C - 1'	RESIDENTIAL ESL
<u>CAM 17 Metals</u>				
Antimony	< 1.0	< 1.0	< 1.0	6.3
Arsenic	4.7	3.4	3.4	5.5
Barium	133	183	187	750
Beryllium	0.4	0.5	0.5	4.0
Cadmium	3.1	2.4	2.4	1.7
Chromium	55.4	38.5	38.8	58
Cobalt	12.2	10.7	11	40
Copper	30	25.6	24.4	230
Lead	54	11.9	11.2	200
Mercury	< 0.03	< 0.03	< 0.03	2.5
Molybdenum	< 1.0	< 1.0	< 1.0	40
Nickel	52	43.2	44.8	150
Selenium	< 0.5	< 0.5	< 0.5	10
Silver	< 0.8	< 0.8	< 0.8	20
Thallium	< 1.0	< 1.0	< 1.0	1
Vanadium	40	31.5	34.4	110
Zinc	69	48	47.2	600
<u>Volatile Organic Compounds (VOCs)</u>				
All VOCs	< 0.005 - < 0.05	< 0.005 - < 0.05	< 0.005 - < 0.05	VARIES
<u>Total Petroleum Hydrocarbons</u>				
Gasoline	< 1.0	< 1.0	< 1.0	100
Diesel	< 5.0	< 1.0	< 1.0	100
Motor Oil	46	< 5.0	< 5.0	100

Notes:

1. Non-detectable concentration noted by the less than sign (<) followed by the detection limit.
2. ESL is the environmental screening level for areas where groundwater is a current or potential source of drinking water as documented in the SF Bay RWQCB document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater", Interim Final, July 2003.

## TABLE TWO

Summary of Analyses of Groundwater Samples  
15954-15960 East 14th Street, San Leandro, CA  
All results are in parts per billion (ppb)

COMPOUND	BH-A	BH-B	BH-C	MW-1	RESIDENTIAL ESL
<u>Volatile Organic Compounds (VOCs)</u>					
Benzene	< 0.5	< 0.5	< 0.5	< 0.5	1.0
Toluene	< 0.5	< 0.5	< 0.5	< 0.5	40
Ethyl Benzene	< 0.5	< 0.5	< 0.5	< 0.5	30
Xylenes	< 0.5	< 0.5	< 0.5	< 0.5	13
MTBE	1.1	< 0.5	< 0.5	28	5
All VOCs	< 0.5 - < 5.0	< 0.5 - < 5.0	< 0.5 - < 5.0	NA	VARIES
<u>Total Petroleum Hydrocarbons</u>					
Gasoline	< 50	< 50	< 50	< 50	100
Diesel	84	100	130	NA	100
Motor Oil	460	720	700	NA	100

Notes:

1. Non-detectable concentration noted by the less than sign (<) followed by the detection limit.
2. ESL is the environmental screening level for areas where groundwater is a current or potential source of drinking water as documented in the SF Bay RWQCB document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater", Interim Final, July 2003.

# **APPENDIX A**

Boring Logs


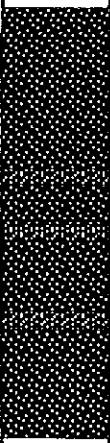
**SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS** BORING: BH-A

Project Name: Kapur Project Location: 15954 - 15960 E 14th St, San Leandro, CA Page 1 of 1

Driller: Vironex Type of Rig: Geoprobe Size of Drill: 2.0" Diameter

Logged By: Damian Hriciga Date Drilled: September 12, 2003 Checked By: Robert E. Kitay, R.G.

<b>WATER AND WELL DATA</b>		Total Depth of Well Completed: NA
Depth of Water First Encountered: 8'		Well Screen Type and Diameter: NA
Static Depth of Water in Well: 7'		Well Screen Slot Size: NA
Total Depth of Boring: 12'		Type and Size of Soil Sampler: 2.0" I.D. Macro Sampler

Depth in Feet	BORING DETAIL	Description	SOIL/ROCK SAMPLE DATA					Depth in Feet	DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.
			Interval	Blow Counts	OVM (ppmv)	Water Level	Graphic Log		
0	 Portland Cement			0			0	CLAY (CH); dark brown; stiff; damp; 100% clay; high plasticity; very low estimated K; no odor olive gray below 4'	
1.9				1.9			5	Sandy CLAY (CH); olive gray; medium stiff; moist; 60% clay; 40% fine sand; high plasticity; very low estimated K; no odor	
0				0			10	CLAY (CH); olive gray; stiff; damp; 100% clay; high plasticity; very low estimated K; no odor	
							10	Sandy CLAY (CH); dark brown; medium stiff; moist; 60% clay; 40% fine sand; high plasticity; low estimated K; no odor	
							15	CLAY (CH); dark brown; stiff; damp; 100% clay; high plasticity; very low estimated K; no odor	
							15	Sandy CLAY (CH); dark brown; medium stiff; moist; 60% clay; 40% fine sand; non-plastic; medium estimated K; no odor	
							20		
							25		
							30		
							30		
							30		

End of Boring @12'




**SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS** BORING: BH-B

Project Name: Kapur Project Location: 15954 - 15960 E 14th St, San Leandro, CA Page 1 of 1

Driller: Vironex Type of Rig: Geoprobe Size of Drill: 2.0" Diameter

Logged By: Damian Hriciga Date Drilled: September 12, 2003 Checked By: Robert E. Kitay, R.G.

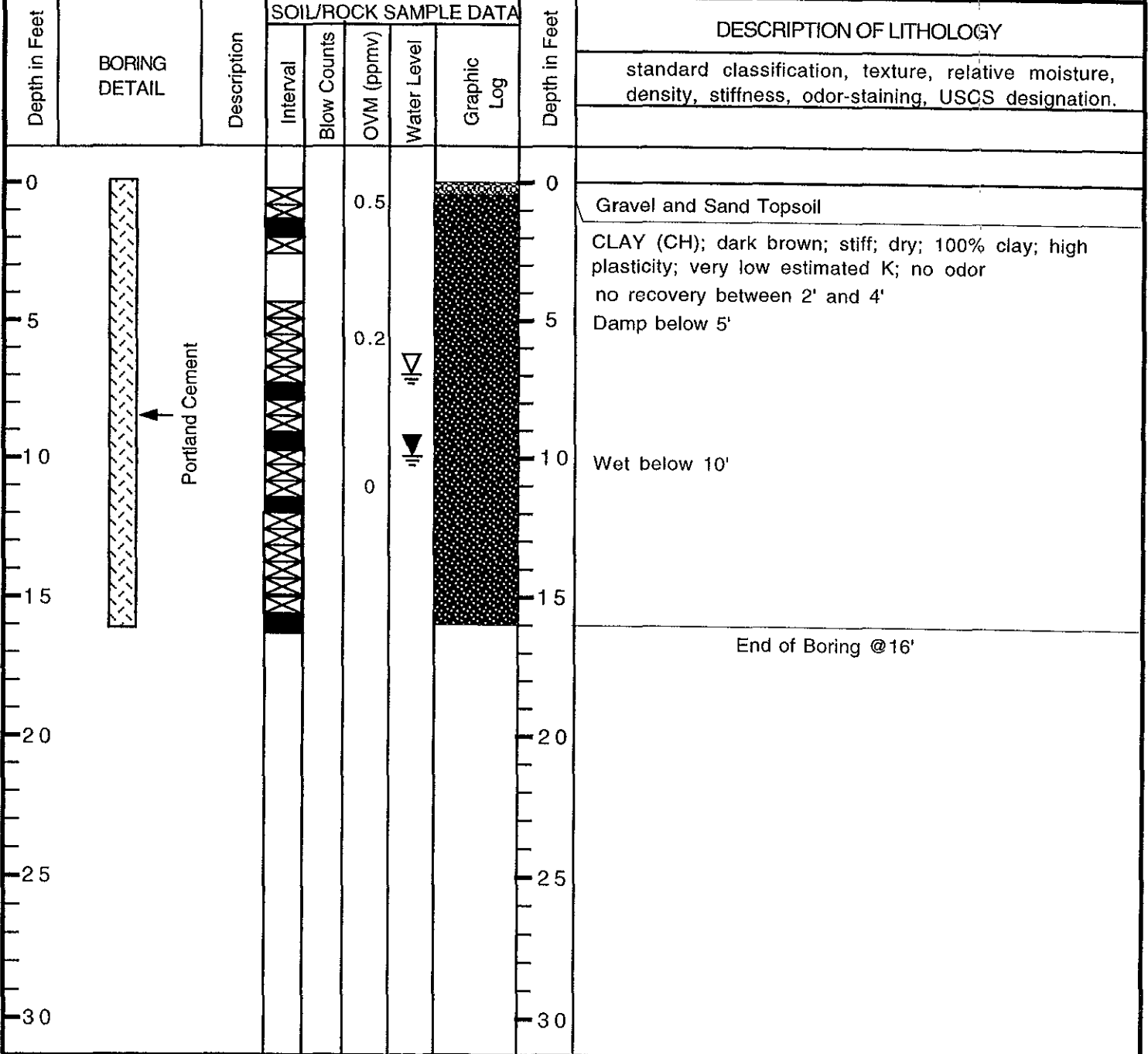
<b>WATER AND WELL DATA</b>	Total Depth of Well Completed: NA
Depth of Water First Encountered: 12'	Well Screen Type and Diameter: NA
Static Depth of Water in Well: 5'	Well Screen Slot Size: NA
Total Depth of Boring: 12'	Type and Size of Soil Sampler: 2.0" I.D. Macro Sampler

Depth in Feet	BORING DETAIL	Description	SOIL/ROCK SAMPLE DATA					Depth in Feet	DESCRIPTION OF LITHOLOGY
			Interval	Blow Counts	OVM (ppmv)	Water Level	Graphic Log		standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.
0	 <p>Portland Cement</p>			0.5	▽	0.5	0	0	Gravel and Sand Topsoil
5				0.2	▽	0.2	5	5	CLAY (CH); dark brown; stiff; damp; 100% clay; high plasticity; very low estimated K; no odor
10				0	▽	0	10	10	End of Boring @12'
15							15	15	
20							20	20	
25							25	25	
30							30	30	

<b>SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS</b>	<b>BORING: BH-C</b>
---	---------------------

Project Name: Kapur Property	Project Location: 15954 - 15960 E 14th St, San Leandro, CA	Page 1 of 1
Driller: Vironex	Type of Rig: Geoprobe	Size of Drill: 2.0" Diameter
Logged By: Damian Hriciga	Date Drilled: September 12, 2003	Checked By: Robert E. Kitay, R.G.

<b>WATER AND WELL DATA</b>	Total Depth of Well Completed: NA
Depth of Water First Encountered: 10'	Well Screen Type and Diameter: NA
Static Depth of Water in Well: 7'	Well Screen Slot Size: NA
Total Depth of Boring: 16'	Type and Size of Soil Sampler: 2.0" I.D. Macro Sampler



## **APPENDIX B**

Analytical Report and Chain of Custody Forms  
For Soil and Groundwater Samples



McC Campbell Analytical Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
Telephone · 925-798-1620 Fax 925-798-1622  
<http://www.mcccampbell.com> E-mail [man@mcccampbell.com](mailto:man@mcccampbell.com)

Aqua Science Engineers, Inc. 208 West El Pintado Road Danville, CA 94526	Client Project ID: #3917; KAPUR	Date Sampled: 09/12/03
		Date Received: 09/15/03
	Client Contact: Ian T. Reed	Date Reported: 09/22/03
	Client P.O.:	Date Completed: 09/22/03

WorkOrder: 0309256

September 22, 2003

Dear Ian:

Enclosed are:

- 1). the results of 7 analyzed samples from your #3917; KAPUR 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



**McC Campbell 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

Aqua Science Engineers, Inc.  208 West El Pintado Road  Danville, CA 94526	Client Project ID: #3917; KAPUR	Date Sampled: 09/12/03-09/16/03
		Date Received: 09/15/03
	Client Contact: Ian T. Reed	Date Extracted: 09/15/03
	Client P.O.:	Date Analyzed: 09/16/03

**Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline\***

Extraction method: SW5030B

Analytical methods: 8015Cm

Work Order: 0309256


Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
001A	BH-A 1'	S	ND	1	84.4
006A	BH-B 1'	S	ND	1	92.9
011A	BH-C 1'	S	ND	1	98.0
016A	BH-A	W	ND,i	1	98.0
017A	BH-B	W	ND,i	1	102
018A	BH-C	W	ND,i	1	97.5

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	1.0	mg/Kg

\* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell 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 (stoddard solvent / mineral spirit?), f) one to a few isolated non-target peaks present, g) strongly aged gasoline or diesel range compounds are significant, h) lighter than water immiscible sheen/product is present, i) liquid sample that contains greater than ~2 vol % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas) m) no recognizable pattern

 Angela Rydelius, Lab Manager



McC Campbell Analytical Inc.

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

Aqua Science Engineers, Inc.  
208 West El Pintado Road  
Danville, CA 94526

Client Project ID: #3917; KAPUR

Date Sampled: 09/12/03

Date Received: 09/15/03

Client Contact: Ian T. Reed

Date Extracted: 09/16/03

Client P.O.:

Date Analyzed: 09/16/03

**Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE\***

Extraction method: SW5030B

Analytical methods: SW8021B/8015Cm

Work Order: 0309256

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
019A	MW-1	W	ND	28	ND	ND	ND	ND	1	107
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	50	0.5	0.5	0.5	0.5	1	µg/L
		S	NA	NA	NA	NA	NA	NA	1	mg/Kg

\* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L

# cluttered chromatogram; sample peak coclutes with surrogate peak

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell 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 (stoddard solvent / mineral spirit?), f) one to a few isolated non-target peaks present, g) strongly aged gasoline or diesel range compounds are significant, h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas) m) no recognizable pattern

Angela Rydelius, Lab Manager



Aqua Science Engineers, Inc. 208 West El Pintado Road Danville, CA 94526	Client Project ID: #3917; KAPUR	Date Sampled: 09/12/03-09/16/03
		Date Received: 09/15/03
	Client Contact: Ian T. Reed	Date Extracted: 09/15/03
	Client P.O.:	Date Analyzed: 09/16/03-09/22/03

**Diesel (C10-23) and Oil (C18+) Range Extractable Hydrocarbons as Diesel and Motor Oil\***

Extraction method: SW3550C Analytical methods SW8015C Work Order: 0309256

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	DF	% SS
0309256-001A	BH-A 1'	S	ND<5.0,g	46	5	100
0309256-006A	BH-B 1'	S	ND	ND	1	90.3
0309256-011A	BH-C 1'	S	ND	ND	1	98.2
0309256-016A	BH-A	W	84,g,i	460	1	98.5
0309256-017A	BH-B	W	100,g,i	720	1	103
0309256-018A	BH-C	W	130,g,i	700	1	100

Reporting Limit for DF =1, ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	1.0	5.0	mg/Kg

\* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

# cluttered chromatogram resulting in coeluted surrogate and sample peaks, or, surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant, no recognizable pattern; c) aged diesel? is significant), d) gasoline range compounds are significant, e) unknown medium boiling point pattern that does not appear to be derived from diesel, f) one to a few isolated peaks present, g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present, i) liquid sample that contains greater than -2 vol. % sediment, k) kerosene/kerosene range, l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit



Aqua Science Engineers, Inc.  208 West El Pintado Road  Danville, CA 94526	Client Project ID: #3917; KAPUR	Date Sampled: 09/12/03-09/16/03
		Date Received: 09/15/03
	Client Contact: Ian T. Reed	Date Extracted: 09/15/03
	Client P.O.:	Date Analyzed: 09/15/03-09/18/03

**Volatiles Organics by P&T and GC/MS (Basic Target List)\***

Extraction Method: SW5030B

Analytical Method SW8260B

Work Order: 0309256

Lab ID	0309256-001A
Client ID	BH-A 1'
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
2-Butanone (MEK)	ND	1.0	10	Bromomethane	ND	1.0	5.0
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	5.0
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	50	Isopropylbenzene	ND	1.0	5.0
4-Isopropyl toluene	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

**Surrogate Recoveries (%)**

%SS1:	85.8	%SS2:	104
%SS3:	83.2		

**Comments:**

\* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L

ND means not detected above the reporting limit, N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol % sediment; j) sample diluted due to high organic content.





Aqua Science Engineers, Inc.  208 West El Pintado Road  Danville, CA 94526	Client Project ID: #3917; KAPUR	Date Sampled: 09/12/03-09/16/03
		Date Received: 09/15/03
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	Client P.O.:	Date Analyzed: 09/15/03-09/18/03

**Volatiles Organics by P&T and GC/MS (Basic Target List)\***

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0309256

Lab ID	0309256-006A
Client ID	BH-B 1'
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	50
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
2-Butanone (MEK)	ND	1.0	10	Bromomethane	ND	1.0	5.0
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	5.0
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	50	Isopropylbenzene	ND	1.0	5.0
4-Isopropyl toluene	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

**Surrogate Recoveries (%)**

%SS1:	84.2	%SS2:	104
%SS3:	84.8		

Comments:  
 \* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L  
 ND means not detected above the reporting limit, N/A means analyte not applicable to this analysis  
 # surrogate diluted out of range or surrogate coelutes with another peak  
 h) lighter than water immiscible sheen/product is present, i) liquid sample that contains greater than ~2 vol. % sediment, j) sample diluted due to high organic content



Aqua Science Engineers, Inc. 208 West El Pintado Road Danville, CA 94526	Client Project ID: #3917; KAPUR	Date Sampled: 09/12/03-09/16/03
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	Client Contact: Ian T. Reed	Date Extracted: 09/15/03
	Client P.O.:	Date Analyzed: 09/15/03-09/18/03

## Volatiles Organics by P&amp;T and GC/MS (Basic Target List)\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0309256

Lab ID		0309256-011A					
Client ID		BH-C 1'					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
2-Butanone (MEK)	ND	1.0	10	Bromomethane	ND	1.0	5.0
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	5.0
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	50	Isopropylbenzene	ND	1.0	5.0
4-Isopropyl toluene	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

## Surrogate Recoveries (%)

%SS1	83.2	%SS2	99.4
%SS3	83.3		

## Comments

\* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak

h) lighter than water immiscible sheen/product is present, i) liquid sample that contains greater than ~2 vol % sediment, j) sample diluted due to high organic content



Aqua Science Engineers, Inc.  208 West El Pintado Road  Danville, CA 94526	Client Project ID: #3917; KAPUR	Date Sampled: 09/12/03-09/16/03
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	Client Contact: Ian T. Reed	Date Extracted: 09/15/03-09/18/03
	Client P.O.:	Date Analyzed: 09/15/03-09/18/03

**Volatiles Organics by P&T and GC/MS (Basic Target List)\***

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0309256

Lab ID	0309256-016B
Client ID	BH-A
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	0.5
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	5.0	Isopropylbenzene	ND	1.0	0.5
4-Isopropyl toluene	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	1.1	1.0	0.5
Methylene chloride	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

**Surrogate Recoveries (%)**

%SS1	103	%SS2:	100
%SS3	93.8		

Comments: i  
 \* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L  
 ND means not detected above the reporting limit, N/A means analyte not applicable to this analysis.  
 # surrogate diluted out of range or surrogate coelutes with another peak  
 h) lighter than water immiscible sheen/product is present, i) liquid sample that contains greater than ~2 vol % sediment; j) sample diluted due to high organic content



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	Client Contact: Ian T. Reed	Date Extracted: 09/15/03-09/18/03
	Client P.O.:	Date Analyzed: 09/15/03-09/18/03

**Volatiles Organics by P&T and GC/MS (Basic Target List)\***

Extraction Method: SW5030B

Analytical Method SW8260B

Work Order: 0309256

Lab ID	0309256-017B
Client ID	BH-B
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	0.5
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	5.0	Isopropylbenzene	ND	1.0	0.5
4-Isopropyl toluene	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

**Surrogate Recoveries (%)**

%SS1:	97.6	%SS2:	99.9
%SS3:	90.9		

Comments: i

\* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol % sediment, j) sample diluted due to high organic content





Aqua Science Engineers, Inc.

Client Project ID: #3917; KAPUR

Date Sampled: 09/12/03-09/16/03

208 West El Pintado Road

Date Received: 09/15/03

Danville, CA 94526

Client Contact: Ian T. Reed

Date Extracted: 09/15/03-09/18/03

Client P.O.:

Date Analyzed: 09/15/03-09/18/03

**Volatiles Organics by P&T and GC/MS (Basic Target List)\***

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0309256

Lab ID

0309256-018B

Client ID

BH-C

Matrix

Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	0.5
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	5.0	Isopropylbenzene	ND	1.0	0.5
4-Isopropyl toluene	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

**Surrogate Recoveries (%)**

%SS1:	99.4	%SS2:	94.9
%SS3:	91.1		

**Comments: 1**

\* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L

ND means not detected above the reporting limit, N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak

h) lighter than water immiscible sheen/product is present, i) liquid sample that contains greater than ~2 vol % sediment; j) sample diluted due to high organic content



QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: S

WorkOrder: 0309256

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		BatchID: 8495		Spiked Sample ID: 0309212-003A				
	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) <sup>£</sup>	ND	0.60	95.5	91.7	4.02	95.7	98	2.42	70	130
MTBE	ND	0.10	96.4	93	3.63	91.1	97.3	6.65	70	130
Benzene	ND	0.10	96	94.5	1.59	94.1	99.8	5.97	70	130
Toluene	ND	0.10	94.6	93.1	1.60	93.1	98	5.13	70	130
Ethylbenzene	ND	0.10	98.8	96.9	1.95	97	102	5.18	70	130
Xylenes	ND	0.30	99.7	99	0.671	99.3	103	3.95	70	130
%SS:	107	100	121	106	12.9	118	125	5.52	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: 0309256

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		BatchID: 8522			Spiked Sample ID: 0309247-010A			
	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) <sup>£</sup>	ND	60	93.6	93.8	0.230	105	98.7	6.28	70	130
MTBE	ND	10	101	97.4	3.29	96	95	1.08	70	130
Benzene	ND	10	102	101	1.62	103	100	2.55	70	130
Toluene	ND	10	102	100	1.76	95.1	91.8	3.47	70	130
Ethylbenzene	ND	10	105	103	1.67	102	100	1.75	70	130
Xylenes	ND	30	107	107	0	95	91.3	3.94	70	130
%SS*	107	100	103	104	0.428	103	100	3.34	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  
 http://www.mcccampbell.com E-mail: main@mcccampbell.com

### QC SUMMARY REPORT FOR SW8015C

Matrix: S

WorkOrder: 0309256

EPA Method: SW8015C		Extraction: SW3550C			BatchID: 8521		Spiked Sample ID: 0309246-010B			
	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)	2.406	150	108	105	2.31	108	109	0.856	70	130
%SS:	97.6	100	104	104	0	116	117	1.42	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

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

\* 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





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 http://www.mccampbell.com E-mail: main@mccampbell.com

### QC SUMMARY REPORT FOR SW8015C

Matrix: W

WorkOrder: 0309256

EPA Method: SW8015C		Extraction: SW3510C			BatchID: 8519			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	115	114	0.702	70	130
%SS	N/A	100	N/A	N/A	N/A	107	107	0	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

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

\* 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.



### QC SUMMARY REPORT FOR SW8260B

Matrix: S

WorkOrder: 0309256

EPA Method: SW8260B		Extraction: SW5030B		BatchID: 8498		Spiked Sample ID: 0309218-004A				
	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/Kg	µg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Benzene	ND	50	100	97.3	2.82	107	108	1.33	70	130
Chlorobenzene	ND	50	98.9	98.3	0.654	108	110	1.74	70	130
1,1-Dichloroethene	ND	50	76.5	72.4	5.50	93.7	95.9	2.34	70	130
Methyl-t-butyl ether (MTBE)	ND	50	92.5	87.6	5.49	99.4	102	2.72	70	130
Toluene	5.919	50	88.8	87.9	0.956	106	108	2.11	70	130
Trichloroethene	ND	50	86	83.9	2.40	98.1	99.7	1.62	70	130
%SS1:	93.0	100	108	104	3.95	96.8	96	0.861	70	130
%SS2:	106	100	97.2	96.5	0.733	97	95.9	1.17	70	130
%SS3:	84.8	100	109	104	5.15	108	111	2.06	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

$$\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked}), \text{RPD} = 100 * (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) * 2$$

\* 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

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels



**QC SUMMARY REPORT FOR SW8260B**

Matrix: W

WorkOrder: 0309256

EPA Method: SW8260B		Extraction: SW5030B		BatchID: 8523			Spiked Sample ID: 0309248-001A			
	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Benzene	ND	10	98.7	101	2.34	98.9	98.8	0.0752	70	130
Chlorobenzene	ND	10	98.4	99	0.670	97.6	100	2.53	70	130
1,1-Dichloroethene	ND	10	77.1	77.4	0.418	79.2	77.7	1.83	70	130
Methyl-t-butyl ether (MTBE)	1.47	10	73.3	75.4	2.36	91.5	89.8	1.91	70	130
Toluene	ND	10	98.6	100	1.63	99.3	102	2.26	70	130
Trichloroethene	ND	10	84.3	84.4	0.121	86.4	86.5	0.0758	70	130
%SS1	106	100	105	104	0.650	113	109	3.67	70	130
%SS2	97.0	100	95.5	95.5	0	94.3	95.7	1.41	70	130
%SS3	104	100	104	103	1.14	103	104	0.888	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

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

basic

530 243.7234 2218 Railroad Avenue  
530 243 7494 Redding, California 96001

September 23, 2003

**Lab ID: 3090567**

SONIA VALLES  
MC CAMPBELL ANALYTICAL INC.  
110 SECOND AVE SOUTH, #D7  
PACHECO, CA 94553

RE: Metals Testing 0309256 #3917; KAPUR

Dear SONIA VALLES,


Enclosed are the analysis results for Work Order number 3090567. All analysis were performed under strict adherence to our established Quality Assurance Plan. Any abnormalities are listed in the qualifier section of this report.

If you have any questions regarding these results, please feel free to contact us at any time. We appreciate the opportunity to service your environmental testing needs.

Sincerely,



For



James E. Hawley  
Laboratory Director

California ELAP Certification Number 1677

basic

530.243.7234 2218 Railroad Avenue  
530.243.7494 Redding, California 96001


Report To: MC CAMPBELL ANALYTICAL INC.  
110 SECOND AVE SOUTH, #D7  
PACHECO, CA 94553

Attention: SONIA VALLES  
Project: Metals Testing 0309256 #3917; KAPUR

Lab No: 3090567  
Reported: 09/23/03  
Phone: (925) 798-1620  
P.O. #

Metals - Solid

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
<b>0309256-001A BH-A 1' Soil (3090567-01) Sampled:09/16/03 09:36 Received:09/16/03 11:43</b>									
Antimony	mg/kg	ND		1.0	4.0	EPA 6010A	09/22/03	09/19/03	B3I0281
Arsenic	"	4.7		0.8	4.0	"	"	"	"
Barium	"	133		20.0	80.0	"	"	"	"
Beryllium	"	0.4	J	0.4	2.0	"	"	"	"
Cadmium	"	3.1		0.4	2.0	"	"	"	"
Chromium	"	55.4		0.2	2.0	"	"	"	"
Cobalt	"	12.2		2.0	10.0	"	"	"	"
Copper	"	30.0		0.2	1.0	"	"	"	"
Lead	"	54.0		0.5	2.5	"	"	"	"
Mercury	"	ND		0.03	0.3	EPA 7471	09/16/03	09/16/03	B3I0263
Molybdenum	"	ND		1.0	5.0	EPA 6010A	09/22/03	09/19/03	B3I0281
Nickel	"	52.0		0.5	2.0	"	"	"	"
Selenium	"	ND		0.5	2.0	"	"	"	"
Silver	"	ND		0.8	4.0	"	"	"	"
Thallium	"	ND		1.0	4.0	"	"	"	"
Vanadium	"	40.0		4.0	20.0	"	"	"	"
Zinc	"	69.0		2.0	10.0	"	"	"	"
<b>0309256-006A BH-B 1' Soil (3090567-02) Sampled:09/12/03 10:28 Received:09/16/03 11:43</b>									
Antimony	mg/kg	ND		1.0	4.0	EPA 6010A	09/22/03	09/19/03	B3I0281
Arsenic	"	3.4	J	0.8	4.0	"	"	"	"
Barium	"	183		20.0	80.0	"	"	"	"
Beryllium	"	0.5	J	0.4	2.0	"	"	"	"
Cadmium	"	2.4		0.4	2.0	"	"	"	"
Chromium	"	38.6		0.2	2.0	"	"	"	"
Cobalt	"	10.7		2.0	10.0	"	"	"	"
Copper	"	25.6		0.2	1.0	"	"	"	"
Lead	"	11.9		0.5	2.5	"	"	"	"
Mercury	"	ND		0.03	0.3	EPA 7471	09/16/03	09/16/03	B3I0263
Molybdenum	"	ND		1.0	5.0	EPA 6010A	09/22/03	09/19/03	B3I0281
Nickel	"	43.2		0.5	2.0	"	"	"	"
Selenium	"	ND		0.5	2.0	"	"	"	"
Silver	"	ND		0.8	4.0	"	"	"	"
Thallium	"	ND		1.0	4.0	"	"	"	"
Vanadium	"	31.6		4.0	20.0	"	"	"	"
Zinc	"	48.0		2.0	10.0	"	"	"	"
<b>0309256-011A BH-C 1' Soil (3090567-03) Sampled:09/12/03 11:11 Received:09/16/03 11:43</b>									
Antimony	mg/kg	ND		1.0	4.0	EPA 6010A	09/22/03	09/19/03	B3I0281
Arsenic	"	3.4	J	0.8	4.0	"	"	"	"
Barium	"	187		20.0	80.0	"	"	"	"
Beryllium	"	0.5	J	0.4	2.0	"	"	"	"
Cadmium	"	2.4		0.4	2.0	"	"	"	"
Chromium	"	38.8		0.2	2.0	"	"	"	"
Cobalt	"	11.0		2.0	10.0	"	"	"	"
Copper	"	24.4		0.2	1.0	"	"	"	"
Lead	"	11.2		0.5	2.5	"	"	"	"
Mercury	"	ND		0.03	0.3	EPA 7471	09/16/03	09/16/03	B3I0263
Molybdenum	"	ND		1.0	5.0	EPA 6010A	09/22/03	09/19/03	B3I0281
Nickel	"	44.8		0.5	2.0	"	"	"	"
Selenium	"	ND		0.5	2.0	"	"	"	"
Silver	"	ND		0.8	4.0	"	"	"	"
Thallium	"	ND		1.0	4.0	"	"	"	"
Vanadium	"	34.4		4.0	20.0	"	"	"	"

  
Approved By  
Basic Laboratory, Inc.  
California D.O.H.S. Cert #1677

basic

530 243 7234 2218 Railroad Avenue  
530.243.7494 Redding, California 96001

Report To: MC CAMPBELL ANALYTICAL INC.  
110 SECOND AVE SOUTH, #D7  
PACHECO, CA 94553

Lab No: 3090567  
Reported: 09/23/03  
Phone: (925) 798-1620  
P.O. #


Attention: SONIA VALLES  
Project: Metals Testing 0309256 #3917; KAPUR

Metals - Solid

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
0309256-011A BH-C 1' Soil	(3090567-03)	Sampled:09/12/03 11:11	Received:09/16/03 11:43						
Zinc	"	47.2		2.0	10.0	"	"	09/19/03	"

Notes and Definitions

- J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the detection limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- < Less than reporting limit
- ≤ Less than or equal to reporting limit
- > Greater than reporting limit
- ≥ Greater than or equal to reporting limit
- MDL Method Detection Limit
- RL/ML Minimum Level of Quantitation
- MCL/AL Maximum Contaminant Level/Action Level
- mg/kg Results reported as wet weight
- TTLIC Total Threshold Limit Concentration
- STLC Soluble Threshold Limit Concentration
- TCLP Toxicity Characteristic Leachate Procedure

  
Approved By

Basic Laboratory, Inc.  
California D.O.H.S. Cert #1677

**McC Campbell Analytical Inc.**

110 Second Avenue South, #D7  
 Pacheco CA 94553-5560  
 Phone (925) 798-1620  
 Fax (925) 798-1622

**CHAIN-OF-CUSTODY RECORD**

WorkOrder: 0309256

#3090567

Due 9-23-03

**Subcontractor:**

Basic Laboratory, Inc.  
 2218 Railroad Avenue  
 Redding, CA 96001

TEL: (530) 243-7234  
 FAX: (530) 243-7494  
 ProjectNo: #3917, KAPUR  
 Acct #:

Date Received: 9/15/03

Date Printed: 9/15/03

Sample ID	ClientSampID	Matrix	Collection Date	TAT	Requested Tests	
					0010C	
0309256-001A	BH-A 1'	Soil	9/16/03 9:36 00 AM	5D	1	
0309256-006A	BH-B 1'	Soil	9/12/03 10:28 00 AM	5D	1	#1
0309256-011A	BH-C 1'	Soil	9/12/03 11:11 00 AM	5D	1	2 3

Comments: PLEASE TEST FOR CAM-17 ON A 5D TAT.

Please fax results to Sonia Valles at 925-798-1622 upon completion.

Relinquished by: *[Signature]* Date/Time: 9/15/03  
 Relinquished by:

Received by: *[Signature]* Date/Time: 9-16-03 11:43  
 Received by: Rochelle M Knowlton 9-16-03 11:43

# McCampbell Analytical Inc.



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

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 0309256

**Client:**

Aqua Science Engineers, Inc.  
 208 West El Pintado Road  
 Danville, CA 94526

TEL: (925) 820-9391  
 FAX: (925) 837-4853  
 ProjectNo #3917, KAPUR  
 PO:

Date Received: 9/15/03  
 Date Printed: 9/15/03

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests			
					6010C	SW8015C	V8021B/8015C	SW8260B
0309256-001	BH-A 1'	Soil	9/16/03 9:36:00 AM	<input type="checkbox"/>	A	A	A	A
0309256-002	BH-A 4'	Soil	9/12/03 9:43:00 AM	<input checked="" type="checkbox"/>	A	A	A	A
0309256-003	BH-A 7.5'	Soil	9/12/03 9:41:00 AM	<input checked="" type="checkbox"/>	A	A	A	A
0309256-004	BH-A 11.5'	Soil	9/12/03 9:46:00 AM	<input checked="" type="checkbox"/>	A	A	A	A
0309256-005	BH-A 15.5'	Soil	9/12/03 9:57:00 AM	<input checked="" type="checkbox"/>	A	A	A	A
0309256-006	BH-B 1'	Soil	9/12/03 10:28:00 AM	<input type="checkbox"/>	A	A	A	A
0309256-007	BH-B 3.5'	Soil	9/12/03 10:26:00 AM	<input checked="" type="checkbox"/>	A	A	A	A
0309256-008	BH-B 6'	Soil	9/12/03 10:32:00 AM	<input checked="" type="checkbox"/>	A	A	A	A
0309256-009	BH-B 7.5'	Soil	9/12/03 10:30:00 AM	<input checked="" type="checkbox"/>	A	A	A	A
0309256-010	BH-B 11.5'	Soil	9/12/03 10:37:00 AM	<input checked="" type="checkbox"/>	A	A	A	A
0309256-011	BH-C 1'	Soil	9/12/03 11:11:00 AM	<input type="checkbox"/>	A	A	A	A
0309256-012	BH-C 7.5'	Soil	9/12/03 11:15:00 AM	<input checked="" type="checkbox"/>	A	A	A	A
0309256-013	BH-C 9.5'	Soil	9/12/03 11:25:00 AM	<input checked="" type="checkbox"/>	A	A	A	A
0309256-014	BH-C 11.5'	Soil	9/12/03 11:21:00 AM	<input checked="" type="checkbox"/>	A	A	A	A
0309256-015	BH-C 15.5'	Soil	9/12/03 11:35:00 AM	<input checked="" type="checkbox"/>	A	A	A	A
0309256-016	BH-A	Water	9/12/03 10:10:00 AM	<input type="checkbox"/>		A	A	B

Prepared by: Sonia 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



**McC Campbell Analytical Inc.**

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



**CHAIN-OF-CUSTODY RECORD**

WorkOrder: 0309256

**Client:**

Aqua Science Engineers, Inc.  
 208 West El Pintado Road  
 Danville, CA 94526

TEL (925) 820-9391  
 FAX: (925) 837-4853  
 ProjectNo #3917; KAPUR  
 PO

Date Received: 9/15/03  
 Date Printed: 9/15/03

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests			
					6010C	SW8015C	V8021B/8015C	SW8260B
0309256-017	BH-B	Water	9/12/03 10:45 00 AM	<input type="checkbox"/>		A	A	B
0309256-018	BH-C	Water	9/12/03 11:40 00 AM	<input type="checkbox"/>		A	A	B
0309256-019	MW-1	Water	9/12/03 1:30 00 PM	<input type="checkbox"/>			A	

Prepared by: Sonia 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

Aqua Science Engineers, Inc.  
 208 W. El Pintado Road  
 Danville, CA 94526  
 (925) 820-9391  
 FAX (925) 837-4853

# Chain of Custody 0309256

SAMPLER (SIGNATURE)



PROJECT NAME KAPUR

PAGE 1 OF 2

ADDRESS 15-60 E 14TH ST, SAN CLEMENTE

JOB NO. 5917

## ANALYSIS REQUEST

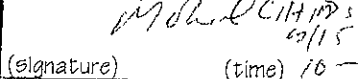
SPECIAL INSTRUCTIONS:

SAMPLE ID	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GAS / MTBE & BTEX (EPA 5050/8015-8020)	TPH-DIESEL (EPA 3510/8015)	TPH-DIESEL & MOTOR OIL (EPA 3510/8015)	PURGEABLE HALOCARBONS (EPA 601/8010)	VOLATILE ORGANICS (EPA 624/8240/8260)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	OIL & GREASE (EPA 5520)	LIGHT METALS (5) (EPA 6010+7000)	CAMEL METALS (EPA 6010+7000)	PCBS & PESTICIDES (EPA 608/8080)	ORGANOPHOSPHORUS PESTICIDES (EPA 8140 EPA 608/8080)	FUEL OXYGENATES (EPA 8260)	Pb (TOTAL or DISSOLVED) (EPA 6010)	TPH-G/BTEX/5 OXY'S (EPA 8260)	TPH-G/BTEX/7 OXY'S / LEAD SCAVENGERS/ 1,2-DCP (EPA 8260)	HOLD	TPH-G 9/15			
																						B1-A	9/12	936
B1-A	4/	943	S	1																				
B1-A	7.5'	941	S	1																				
B1-A	11.5'	946	S	1																				
B1-A	15.5'	957	S	1																				
B1-B	1'	1028	S	1	<del>X</del>		X		X				X											
B1-B	3.5'	1026	S	1																				
B1-B	<del>6.5'</del>	1032	S	1																				
B1-B	7.5'	1030	S	1																				
B1-B	11.5'	1037	S	1																				
RH-2	1'	1111	S	1	<del>X</del>		X		X				X											

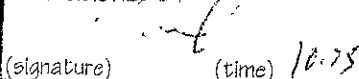
RELINQUISHED BY:

  
 (signature) (time)

RECEIVED BY:

  
 (signature) (time) 10 -

RELINQUISHED BY:

  
 (signature) (time) 10:25

RECEIVED BY LABORATORY:

  
 (signature) (time) 10:30

COMMENTS:

1,2-DCP = 1,2-dichloropropane

DAVID HARKILA 9/15/03  
 (printed name) (date)

(printed name) (date)

(printed name) (date)

Sonia Valles 9/15/03  
 (printed name) (date)

TURN AROUND TIME

STANDARD 24Hr 48Hr 72Hr

Company:

ASE

Company:

GOOD CONDITION   
 HEAD SPACE ABSENT   
 DECHLORINATED IN LAB   
 APPROPRIATE CONTAINERS   
 PRESERVED IN LAB

Company:

MA #

PRESERVATION VOAS O&G METALS OTHER

1 qua Science Engineers, Inc.  
 208 W. El Pintado Road  
 Danville, CA 94526  
 (925) 820-9391  
 FAX (925) 837-4853

# Chain of Custody

PAGE 2 OF 2

SAMPLER (SIGNATURE)

PROJECT NAME KAPR

JOB NO. 3417

ADDRESS 13760 Gil Heath St, San Leandro

## ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

SAMPLE ID	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-DIESEL (EPA 3510/8015)	TPH-DIESEL & MOTOR OIL (EPA 3510/8015)	PURGEABLE HALOCARBONS (EPA 601/8010)	VOLATILE ORGANICS (EPA 624/8240/8260)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	OIL & GREASE (EPA 5520)	LUFT METALS (5) (EPA 6010+7000)	Cadmium METALS (EPA 5010+7000)	PCBs & PESTICIDES (EPA 608/8080)	ORGANOPHOSPHORUS PESTICIDES (EPA 8140 EPA 608/8080)	FUEL OXYGENATES (EPA 8260)	Pb (TOTAL or DISSOLVED) (EPA 6010)	TPH-G/BTEX/5 OXY'S (EPA 8260)	TPH-G/BTEX/7 OXY'S / LEAD SCAVANGERS / 1,2-DCP (EPA 8260)				
																						BH-C 75'	9/12
BH-C 95'		1125	S	1																			
BH-C 115'		1121	S	1																			
BH-C 155'		1135	S	1																			
BH-A		1010	W	8			X		X														X
BH-B		1045	W	8			X		X														X
BH-C		1140	W	8			X		X														X
1700-1		1330	W	8	X																		X

+2  
+10  
+10  
+

TPH-G 10:30

RELINQUISHED BY

(signature) (time)

RECEIVED BY: 9/15

(signature) (time) Chies 10:00

RELINQUISHED BY:

(signature) (time)

RECEIVED BY LABORATORY:

(signature) (time) 10:30

COMMENTS:

1,2-DCP = 1,2-dichloropropane

(printed name) (date) 9/15/03

(printed name) (date)

(printed name) (date)

(printed name) (date) 9/15/03

TURN AROUND TIME

STANDARD 24hr 48hr 72hr  
OTHER

Company: ASC

Company:  ICE/IC  
 GOOD CONDITION  
 HEAD SPACE ABSENT  
 DECHLORINATED IN LAB

Company:  APPROPRIATE  
 CONTAINERS  
 PRESERVED IN LAB

Company: M.A.I.

PRESERVATION:  VOLS  ORG  MEMES  OTHER

**aqua science engineers**

17895 Skypark Circle, Suite E

Irvine, CA 92614

(949) 833-3667

**aqua science engineers**

208 W. El Pintado Road

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