#### Richard W. Ely Registered Geologist #4137 2138 Green Hill Rd. Sebastopol, CA 95472 707-824-4836



August 7, 2001

Mr. Don Hwang Alameda County Health Care Services Agency 1131 Harbor Bay Parkway Alameda, CA 94502-8577

Groundwater Monitoring Report Salle's Paint & Body Shop 1049 9th Avenue Oakland, CA 94606

Dear Mr. Hwang:

Mr. Richard Ely, Registered Geologist, has been retained by Mr. Dick Cochran to prepare this Groundwater Monitoring Report for a former waste-oil underground storage tank (UST) located at Salle's Paint & Body Shop, 1049 9<sup>th</sup> Avenue, California (site) (Figure 1). The Alameda County Health Care Services Agency (ACHCSA) requested this investigation, which provides the results of the second of four proposed quarterly monitoring events that the site.

#### BACKGROUND

The site is owned by C&C Property Management Trust, and has been occupied by Salle's Paint & Body Shop since approximately 1981. With the exception of a small parking area on the west, the site is entirely occupied by a large building that fronts on the sidewalks on the east and north and the property line on the south.

#### **UST Removal Activities**

Walker's Hydraulics Inc. of Concord, California removed a 280-gallon UST for waste oil from the site on July 20, 1994. Barney Chan of the ACHCSA witnessed the removal. The UST was located beneath the sidewalk on the 9th Avenue side of the building. Touchstone Developments of San Francisco, California observed the tank removal and collected two soil samples from the excavation, and a four-fold composite-sample from the spoil pile. The field activities and analytical results were presented in an Underground Storage Tank Removal Report dated August 3, 1994.

#### September 2000 Monitoring Well Installations

On September 8, 2000, three soil borings were constructed and converted into monitoring wells to assess the groundwater gradient and the impact to the shallow ground water. The soil borings were drilled to approximately 20 feet depth. Figure 2 shows the locations of wells.

The wells were screened to monitor the first water-bearing zone encountered. Fifteen feet of well screen was used in the wells, with approximately 4.8-ft of blank casing on top. The wells were constructed with flush-threaded, 2-inch diameter Schedule 40 PVC blank casing with 0.010-inch factory-milled screen size. Number #2/12 RMC sand was used in the annular space around the well screen to approximately one foot above the top of the screen. One foot of bentonite pellets was used to separate the sand from the sanitary surface seal (grout).

#### WELL SAMPLING

Water level measurements were made in all wells using an electronic water level meter and noted on the sampling form (Appendix A). Well MW-1 was sampled by Environmental Sampling Services on May 31, 2001. Wells MW-2 and MW-3 were not sampled because they have been non-detect for all analytes.

Prior to sampling, well MW-1 was checked for the presence of free-phase hydrocarbons using an interface probe, clear bailer, or tape with product detection paste. The well was purged of a minimum of five well-casing volumes of water using a pre-cleaned sampling pump. Temperature, pH and electrical conductivity were measured at least three times during purging. Purging continued until these parameters had stabilized (i.e., changes in temperature, pH or conductivity did not exceed ±0.5 F, 0.1 or 5 percent, respectively).

The purge water was stored temporarily on-site in DOT 17H 55-gallon drums pending analytic results. The drums were labeled with the date, contents, and the field personnel initials, and telephone number.

Groundwater samples were collected from the well with new disposable PVC bailers. For the sample to be analyzed for Halogenated Volatile Organic Compounds (HVOCs), a bottom-emptying device was used to minimize loss of volatile components. The samples were labeled to include sample ID, date, preservative, and the field technician's initials. The samples were placed in polyethylene bags and in a chilled ice chest for transport under chain-of-custody to the laboratory.

#### Laboratory Analysis

Analytical Sciences, of Petaluma, California, a state-certified laboratory analyzed the samples using methods approved by the California Regional Water Quality Control Board (CRWQCB) and the Environmental Protection Agency (EPA). The laboratory analyzed the water samples for TPHg (EPA Method 8015 Modified); TPHd (EPA Method 8015 Modified); BTEX compounds and methyl-tert-butyl-ether (MTBE) (EPA Method 8020); and HVOCs (EPA Method 8010).

Analyses for Oil & Grease (EPA Method 418.1) and Semi-Volatile Organic Compounds (EPA Method 8270) were discontinued because these methods had yielded non-detect results in the previous sampling event. Don Hwang of the ACHCSA, in a letter dated February 13, 2001, approved the discontinuation of these analyses.

#### Disposal of Wastewater

Water from equipment decontamination and well sampling was stored in DOT 17-H 55-gallon drums. The water will be disposed of in accordance with State and local regulations.

#### HYDROGEOLOGY

The site is situated at an elevation of 18-feet (ft) above Mean Sea Level in an area of apartment buildings and small businesses. The Oakland Inner Harbor (part of San Francisco Bay) lies 1100 feet to the south. Late Pleistocene age alluvial fan deposits of the Temescal Formation underlie the site. These materials have moderate permeability and consist primarily of interfingering lenses of clayey gravel, sandy silty clay, and sand-silt-clay mixtures.

On May 31 2001 the depth to static groundwater ranged from 9.83 to 10.91 ft (Table 1). The water table gradient and flow direction were 0.031 ft/ft and S24°E, respectively (Figure 3).

#### ANALYTICAL RESULTS

Laboratory analytical data sheets are included in Appendix B. No MTBE (Method 8020) or chlorinated solvents (Method 8010) were detected in the groundwater samples from MW-1 (Table 2).

In monitoring well MW-1, positive detections were reported for TPH-diesel (70  $\mu$ g/l), TPH-gasoline (380  $\mu$ g/l), benzene (1.0  $\mu$ g/l), toluene (4.5  $\mu$ g/l), ethyl benzene (3.5  $\mu$ g/l), and xylenes (9.8  $\mu$ g/l). The laboratory reported the diesel-range compounds to be the high-boiling components of gasoline.

#### DISCUSSION

After three monitoring episodes, TPH-gasoline, weathered gasoline, and BTEX compounds are the principal contaminants detected to date at the site. Probably some gasoline was disposed of in the waste-oil tank along with oil, and grease. Because gasoline-range compounds and BTEX are more mobile than oil, they have been detected in the monitoring well

#### RECOMMENDATIONS

One more sampling round should be conducted at the site. Following this round, if the concentrations of contaminants remain low, the site should be considered for closure.

#### **SCHEDULE**

The next groundwater-monitoring event will take place in September 2001.

Sincerely,

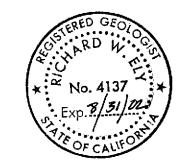
Richard W. Ely RG #4137

Rund W. Sly

2138 Green Hill Rd.

Sebastopol, CA 95472

707-824-4836



The following Figures, Tables and Appendixes are attached:

Figure 1 Site Location Map

Figure 2 Groundwater Elevation Map

Table 1. Excavation Soil Sample Analytical Results

Table 2. Groundwater Elevations

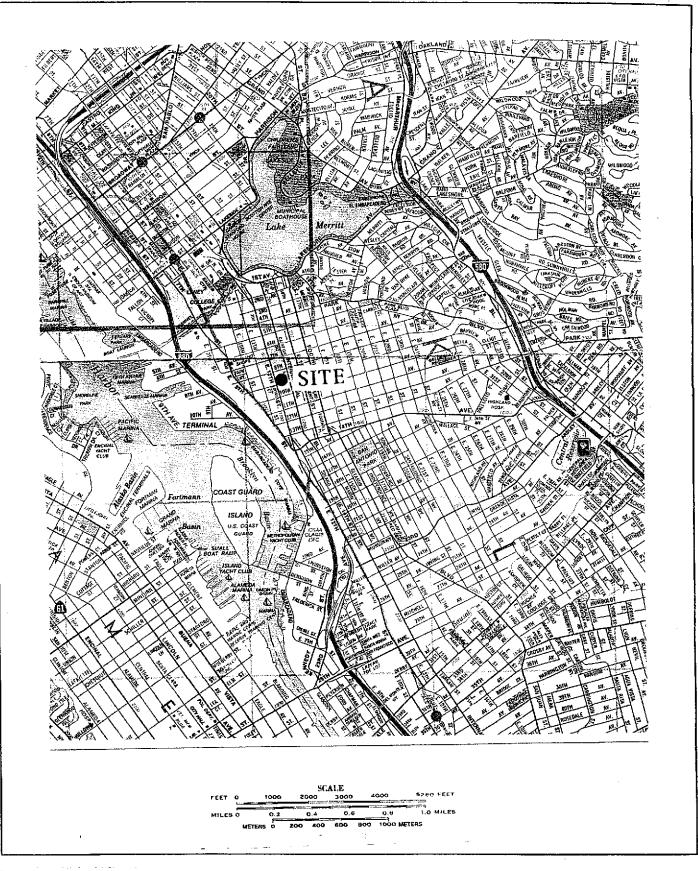
Table 3. Monitoring Well Soil Sample Analytical Results

Table 4. Groundwater Sample Analytical Results

Appendix A Well Sampling Data Sheets

Appendix B Laboratory Analytical Data Sheets

cc: Dick Cochran

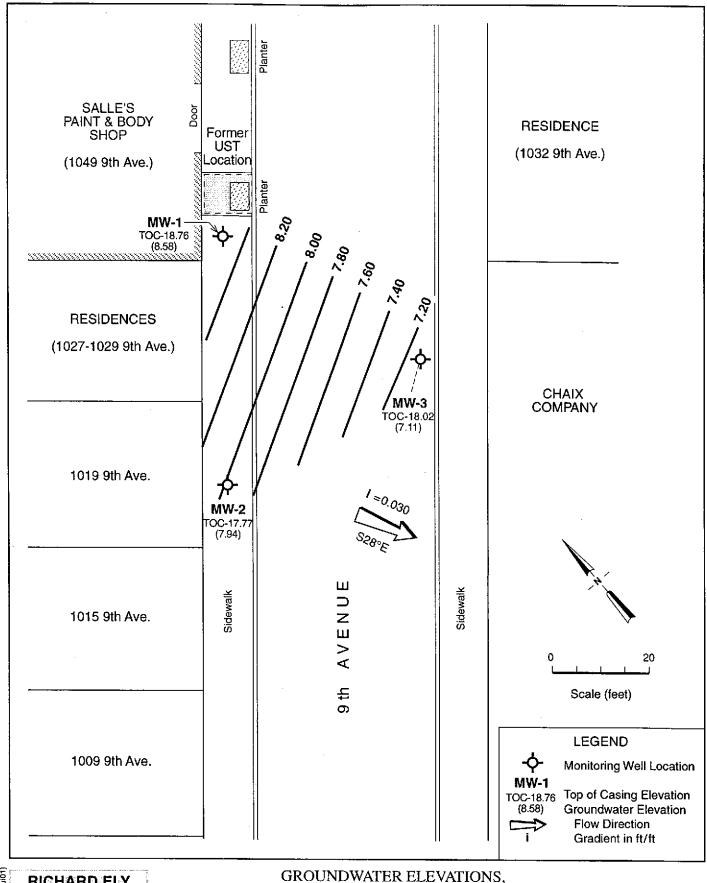


RICHARD ELY plegisteried geologist

LOCATION MAP 1049 9th Avenue Oakland, California FIGURE

1

JOB NUMBER TRACE 165 REVIEWED BY R. Ely December 1999 REVISED DATE



RICHARD ELY REGISTERED GEOLOGIST

GROUNDWATER ELEVATIONS,

31 May 2001

1049 9th Avenue Oakland, California FIGURE

2

JOB REFERENCE Salle's Paint & Body Shop REVIEWED BY DATE REVISED DATE Richard Ely July 2001 April 2001

TABLE 1
GROUNDWATER ELEVATIONS
SALLE'S PAINT & BODY SHOP,
1049 9<sup>TH</sup> AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	Top of Casing Elevation*	Depth to Groundwater	Groundwater Elevation*	Gradient
	09/29/00		11.35	7.41	0.033/\$30°E
MW-1	03/05/01	18.76	9,35	9.41	0.019/ <b>S77</b> °W
	05/31/01		10.18	8.58	0.031/S24°E
			<del></del>		· · · · · ·
	09/29/00		10.92	6.85	0.033/S30°E
MW-2	03/05/01	17.77	9.13	8.64	0.019/S77°W
	05/31/01		9.83	7.94	0.031/S24°E
	т.	<del></del>	Y	,	
	09/29/00		12.09	5.93	0.033/S30°E
MW-3	03/05/01	18.02	8.54	9.48	0.019/\$77°W
	05/31/01		10.91	7.11	0.031/S24°E

Note: \* = Feet, Mean Sea Level

TABLE 2

GROUNDWATER SAMPLE ANALYTICAL RESULTS

SALLE'S PAINT & BODY SHOP, 1049 9<sup>TH</sup> AVENUE, OAKLAND, CALIFORNIA

Sample ID	Date	Oil & Grease	TPH <sup>1</sup> Diesel	TPH Gasoline	Benzene	Toluene	Ethyl Benzene	Xylenes	MtBE <sup>2</sup>	Chloro- benzene <sup>3</sup>	Semi-Volatile Organics <sup>4</sup>
MW-1	09/29/00	ND <sup>5</sup> <100 <sup>6</sup>	ND<100	280	1.4	ND<0.5	2.5	4.5	ND<2.5	1.1	ND
1V1 VV - 1	03/05/01	NA <sup>7</sup>	1708	300	1.7	2.1	1.4	2.6	ND<2.5	ND<0.5	NA
	05/31/01	NA	70 <sup>7</sup>	380	1.0	4.5	3.5	9.8	ND<2.5	ND<0.5	NA
		L.,	<u></u>		<u> </u>						
MW-2	09/29/00	ND<100	ND<100	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.5	ND<2.5	ND<0.5	ND
	03/05/01	NA	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.5	ND<2.5	ND<0.5	NA
MW-3	09/29/00	ND<100	ND<100	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.5	ND<2.5	ND<0.5	ND
	03/05/01	NA	ND<50	ND<50	ND<0,5	ND<0.5	ND<0.5	ND<1.5	ND<2.5	ND<0.5	NA

#### Notes:

- 1. TPH = Total Petroleum Hydrocarbons
- 2. Methyl tert-Butyl Ether
- 3. Other EPA Method 8010 Compounds are ND
- 4. EPA method 8270
- 5. ND = Not Detected at or above the reporting limit
- 6. All results in micrograms per liter (μg/l)
- 7. NA = Not Analyzed
- 8. Laboratory reports this to be weathered gasoline

### **APPENDIX A**

## WATER QUALITY SAMPLE LOG SHEETS



# FIELD ACTIVITY REPORT QUARTERLY GROUNDWATER MONITORING 1049-9th AVENUE OAKLAND, CALIFORNIA MAY 2001

ESS Personnel: Stephen Penman and Casey Wheable

Date of Activities: May 31, 2001

#### Decontamination Procedures

All downhole equipment was cleaned with a solution of Liqui-Nox® laboratory-grade detergent and potable water, rinsed with potable water, followed by a final rinse with distilled water.

#### Field Equipment Calibration

All field measurements were performed in accordance with the instruments' calibration and operating procedures. Instrument calibrations were performed on a daily basis. Field measurements included pH, specific conductance, turbidity, and temperature.

#### Water Level Measurements

Water level measurements were performed with a Solinst® electrical water level indicator. All measurements were referenced to the surveyor's mark on the well casing.

#### Well Evacuation Procedures

One monitoring well (MW-1) was purged using a new disposable PVC bailer. After removal of three casing volumes and stabilization of groundwater quality parameters, the monitoring well was sampled for: Halogenated Volatile Organic Compounds (HVOCs-EPA Method 8010), Total Petroleum Hydrocarbon (TPH) as Gasoline/BTEX and MTBE (EPA Method 8015/8020) and TPH as Diesel (EPA Method 8015M).

#### Sample Handling

Analytical Sciences of Petaluma, California supplied all sample containers and performed required analyses. Analytical Sciences picked samples up the following day.

TPH (Gas)/BTEX, MTBE and HVOCs samples were contained in five 40-ml clear glass containers preserved with Hydrochloric Acid.

TPH (Diesel) samples were contained in one, non-preserved, 1-Liter amber glass container.



All samples were placed in bubblewrap protective material, sealed in Ziploc® bags and stored in a chilled ice chest for storage and shipment.

#### QA/QC

No QA/QC samples were requested for this project.

#### Comments

All derived groundwater and decontamination water were placed into a labeled 55-gallon drum. Approximately 10 gallons were generated during this sampling event.

Lacqueline Lee

President

Enclosure

Table 1: Summary of Groundwater Level Measurements

Water Sample Log Sheet

Chain of Custody



Quarterly Groundwater Level Measurements

Client: Richard Ely

Project Name: 1049-9th Avenue

Project Location: 1049-9th Avenue, Oakland, California

Date of Measurement: May 31, 2001

Well I.D.	Time of Measurement	Water Level (Ft.,TOC)
MW-1	9:43	10.18
MW-2	9:47	9.83
MW-3	9:49	10.91

Legend:

Ft., TOC = measured in feet, from top of well casing @ north rim



								7.	
WATER	QUALIT	Y SAMPLE L	OG SH	EET	WELL IDEN	TIFICATION	ON: MW-1	DATE: 5/31/01	
Project Na	ame: <u>104</u>	9 9th Avenue -	- Oaklan	<u>d</u>	Project Contac	ct: <u>Richar</u>	d Ely	, ,	
Weather:	SUNT	yè was -							
Well Des	cription: 🤇	2") 3" 4" 5"	6" Oth	er:	Well Type: P				
is Well Se	ecured?\\	es No Bolt	Size <u>/</u> z	<u>"</u>	Type of lock /	Lock nun	nber: <u>də</u>	ghin	
Observati	ions / Cor	nments:							
Purge Me	thod: Te	flon PVC Disp	osable E	ailer Cent	trifugal Pump	GrundFos	Redi-flow I	oump Other:	
Pump Lin	es:(NA)	New / Cleaned	/ Dedica	ated	Bailer Line: N	IA (New)	Cleaned / D	edicated	
Method o	f Cleaning	g Pump(NA)	Alconox	Liqui-nox	Tap Water D	I Rinse Ot	her:	· · · · · · · · · · · · · · · · · · ·	
Method of Cleaning Bailer NA Alconox Liqui-nox Tap Water DI Rinse Other:									
Sampling	Method:	Disp. Teflon I	Bailer 🕻	isp. PVC	Bailer GrundF	os Redi-f	low Pump	Other:	
					Spec. Cond. N			<del></del>	
					Spec.Cond. M				
Method to	n Measure	e Water Level:	Solinst	Serial No.	[554]	P.I.D. R	eading:	ppm @ Well Head	
					ter Level Prior				
TD - 10 F	io សាវ	3 (DTM) = 9 4	ft of	water) x "K"	= <b>1.53</b> (Gals /	(CV) x 3	(No. of C	V) = <b>4.6</b> (Gals.)	
"K"= (	) 163(2" w	$ \mathbf{K}  = 0.65$	3/4" well	) "K" = 1.	02(5" well) "K	" = 1.46(6"	( well) "k" =	= 2.61(8" well)	
	,,,,,,,,	5.05 T. 5.05			UALITY PARA				
					Specific				
Date	Time	Discharge	pH <sub>.</sub>	Temp.	Conductance		Color	Comments	
		(gallons)		(°C)	mS uS	(NTU's)			
5/31/01	9:59	1.0	6.57	21.2	694	53,1	cloudy		
1	10:04	2.0	6.58	20.9	659	67.3	Ti .		
	10:07	3.0	6.61	20.2	629	140-1	. 11		
	10:11	4.0	10101	19.7	612	241	11		
	10:15	5.0		19.7	597	329	•4		
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	,0.0	<u> </u>	F 0						
ļ			<del></del>			<del>                                     </del>		· · · · · · · · · · · · · · · · · · ·	
		_							
	-								
Total Dis	chorao:	<i>5.0</i> ga	llons		Casing Volum	nes Remo	ved 3.	27	
				55 Gallon	Drum(s) Pol	v Tank T	reatment S	ystem Other:	
Date/Tim	n Gampia	ad \$ 21 kg . A	10:18	Analysi	s/No. of Bottles	s TPHa E	BTEX. MTB	E & Halogenated VOC's	
AVOC'S	:w/Hci) a	nd TPH Diesel	/Oil & G	rease 64-1	liter glass amb	ers N/P).			
OA/OC	- 101) al	@ <del></del>	as an	Fauipmer	nt Blank Dupl	icate MS	/MSD Lat	Split Field Blank	
	QA/QC: as an Equipment Blank Duplicate MS/MSD Lab Split Field Blank Comments: as an Equipment Blank								
Sampled	C <b>ase</b> Bv∵√ <del>laek</del>	i Lee and Ster	hen Per	nman Sia	nature(s):	をして	·	_lanshall_	



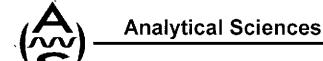
Analytical Sciences
P.O. Box 750336, Petaluma, CA 94975-0336
110 Liberty Street, Petaluma, CA 94952
(707) 769-3128
Fax (707) 769-8093

# CHAIN OF CUSTODY

	<b>)</b>	rax (10	, 100 a												OJECT		400				
		CLIENT	NFOR	MATIC	)N													104	9 4	th Aware - On	khod,
(	COMPANY NAME:	HARRIS &	LEE EN	IVIRONME	NTAL S	CIENCES						(	LIENT	's PR	OJECT	NUM	BER:		.,		
	ADDRESS:	P.O. Box	8369			<u> </u>		<b>-</b>			TURN	AROU	IND TII	ME (cl	reck o	ne)			C	OOLER TEMPERATUR	<b>E</b>
		SANTA RO	SA, CA	95407				_	Mol	BILE L	AB				_					°C	
	CONTACT:	RICHARD	ELY	<u> </u>				_	S	AME D	AY -	•		24	Hour	\$					
	PHONE#:	(707) 571	-8961	<del> </del>	<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>		•	_	44	B Hou	 RS			72	Hour	s			COC PAGEOF		
	Fax #:	(707) 571	-8688							5 DA	ys			N	IORMA	٠	<u> </u>				
								<u> </u>	<u> </u>									ᆜ.		1	
···········		·			T		<u> </u>	1	<del>,</del>		,	AN	ALYSI	<u> </u>					1		T
ITEM	CLIENT SAMPLE I	DATE SAMPLE	TIME	MATRIX	CONT.	PRESV. YES/NO	TPH/GAS/BTEX & MTBE EPA 8015M/8020	TPH CHESEL EPA 6016M	OXYGENATED FUEL ADOTIVES EPA \$280M	VOLATILE HYDROCARBONS EPA 8260	CHLOPINATED SOLVENTS EPA 8010	TRPH SM 5620F	SEMI-VOLATILE HYDROCARBONS EPA 8270	TOTAL LEAD	S LUFT METALS	CAM 17 WETALS	OIL & GREASE EPA 418.1M			COMMENTS	LAB SAMPLE
1	MV-I	5/31/01	10:12	water	6	YES	X	$\times$			$\boxtimes$									Petroleum Odoo	
2																					
3																					
4																					
5																					
6			1										<u> </u>								
7									ļ		[					<u> </u>				<u> </u>	
8												<u> </u>	<u> </u>	ļ	<u> </u>				Ь		<u> </u>
													<u> </u>			L					
10									1												
11																					Cu
12							V														
									SIGI	VATU	RES										· · · · ·
REL	INQUISHED BY:	4/-	U	_	5/21/	/ <sub>01</sub>	1	#'a'	_	·		0	ED BY I							5   31   0 ] DATE	2 : 29 Time

### APPENDIX B

# LABORATORY ANALYTICAL DATA SHEETS



June 25, 2001

Richard Ely Harris & Lee Environmental Sciences P.O. Box 8369 Santa Rosa, CA 95407

Dear Richard,

Enclosed you will find Analytical Sciences' final report 1053105 for your 1049 9<sup>th</sup> Avenue, Oakland project site. An invoice for this work has been sent to Richard Cochran per your request.

Should you or your client have any questions regarding this report please contact me at your convenience. We appreciate you selecting Analytical Sciences for this work and look forward to serving your analytical chemistry needs on projects in the future.

Sincerely,

Analytical Sciences

Mark A. Valentini



#### **TPH Gasoline in Water**

Lab#	Sample ID	Analysis	Result (ug/L)	RDL (ug/L)
03377	MW-1	TPH/Gasoline	380	50
		MTBE	ND	2.5
		Benzene	1.0	0.5
		Toluene	4.5	0.5
		Ethyl Benzene	3.5	0.5
		Xylenes	9.8	1.5

Date Sampled: _05/31/01	Date Analyzed:	06/04/01	QC Batch #: _1875
Date Received: 05/31/01	Method:	EPA 5030/8015M/8020	

#### **TPH Diesel in Water**

<b>Lab#</b> 03377	Sample ID MW-1	Analysis TPH/Diesel	Result (ug/L)	RDL (ug/L) 50	
Date Sampled: Date Received:	05/31/01 05/31/01	Date Extracted: 06/04/01  Date Analyzed: 06/05/01		879 PA 3510/8015M	

① The sample chromatogram does not exhibit a chromatographic pattern characteristic of diesel. Higher boiling point components of gasoline are present in the early boiling range for diesel.



#### **Chlorinated Solvents in Water**

Lab#	Sample ID	Compound Name	Result (ug/L)	RDŁ (ug/L)
03377	MW-1	dichlorodifluoromethane	ND	0.5
	18144-1	chloromethane	ND	0.5
		vinyl chloride	ND	0.5
		bromomethane	ND	0.5
		chloroethane	ND	0.5
		trichlorofluoromethane	ND	0.5
		1,1-dichloroethene	ND	0.5
		methylene chloride	ND	0.5
		trans-1,2-dichloroethene	ND	0.5
		1,1-dichloroethane	ND	0.5
		cis-1,2-dichloroethene	ND	0.5
		chloroform	ND	0.5
		1,1,1-trichloroethane	ND	0.5
		carbon tetrachloride	ND	0.5
		1,2-dichloroethane	ND	0.5
		trichloroethene	ND	0.5
		1,2-dichloropropane	ND	0.5
		bromodichloromethane	ND	0.5
		dibromomethane	ND	0.5
		trans-1,3-dichloropropene	ND	0.5
		1,1,2-trichloroethane	ND	0.5
		tetrachloroethene	ND	0.5
		dibromochloromethane	ND	0.5
		chlorobenzene	ND	0.5
		1,1,1,2-tetrachloroethane	ND	0.5
		bromoform	ND	0.5
		1,1,2,2-tetrachloroethane	ND	0.5
		1,2,3-trichloropropane	ND	0.5
		bromobenzene	ND	0.5
		chlorotoluene	ND	0.5
		1,3-dichlorobenzene	ND	0.5
		1,4-dichlorobenzene	ND	0.5
		1,2-dichlorobenzene	ND	0.5
Date Sample	ed: 05/31/01	Date Analyzed: 06/04/01	QC Batch #	t: 1878



### **LABORATORY QUALITY ASSURANCE REPORT**

QC Batch #: 1875

Lab Project #: 1053105

Sample ID	Compound	Result (ug/L)
MB	TPH/Gas	ND
MB	MTBE	ND
MB	Benzene	ND
MB	Toluene	ND
MB	Ethyl Benzene	ND
MB	Xylenes	ND

	Sample		Result	Spike	%
Sample #	ID	Compound	(ug/L)	Level	Recv.
03350	CMS	TPH/Gas		NS	
	CMS	Benzene	10.2	10.0	102
	CMS	Toluene	10.1	10.0	101
	CMS	Ethyl Benzene	10.0	10.0	100
	CMS	Xylenes	30.0	30.0	100

	Sample		Result	Spike	%	
Sample #	ID	Compound	(ug/L)	Level	Recv.	RPD
03350	CMSD	TPH/Gas		NS		
	CMSD	Benzene	10.2	10.0	102	0.10
	CMSD	Toluene	10.1	10.0	101	0.10
	CMSD	Ethyl Benzene	9.97	10.0	99.7	0.60
	CMSD	Xylenes	29.9	30.0	99.7	0.57

MB = Method Blank; LCS = Laboratory Control Sample; CMS = Client Matrix Spike; CMSD = Client Matrix Spike Duplicate NS = Not Spiked; OR = Over Calibration Range



QC Batch #: 1879

Lab Project #: 1053105

Sample		Result
ID	Compound	(ug/L)
MB	TPH/Diesel	ND

MB = Method Blank; LCS = Laboratory Control Sample; CMS = Client Matrix Spike; CMSD = Client Matrix Spike Duplicate NS = Not Spiked; OR = Over Calibration Range



QC Batch #: 1878

Lab Project #: 1053105

Sample ID	Compound Name	Result (ug/L)
MB	dichlorodifluoromethane	ND
	chloromethane	ND
	vinyl chloride	ND
	bromomethane	ND
	chloroethane	ND
	trichlorofluoromethane	ND
	1,1-dichloroethene	ND
	methylene chloride	ND
	trans-1,2-dichloroethene	ND
	1,1-dichloroethane	ND
	cis-1,2-dichloroethene	ND
	chloroform	ND
	1,1,1-trichloroethane	ND
	carbon tetrachloride	ND
	1,2-dichloroethane	ND
	trichloroethene	ND
	1,2-dichloropropane	ND
	bromodichloromethane	ND
	dibromomethane	ND
	trans-1,3-dichloropropene	ND
	1,1,2-trichloroethane	ND
	tetrachloroethene	ND
	dibromochloromethane	ND
	chlorobenzene	ND
	1,1,1,2-tetrachloroethane	ND
	bromoform	ND
	1,1,2,2-tetrachloroethane	ND
	1,2,3-trichloropropane	ND
	bromobenzene	ND
	chlorotoluene	ND
	1,3-dichlorobenzene	ND
	1,4-dichlorobenzene	ND
	1,2-dichlorobenzene	ND



Sample	Sample ID	Compound Name	Result (ug/L)	Spike Levei	% Recv.
03377	CMS	dichlorodifluoromethane	ND		
	00	chloromethane	ND		
		vinyl chloride	ND		
		bromomethane	ND		
		chloroethane	ND		
		trichlorofluoromethane	ND		
		1,1-dichloroethene	ND		
		methylene chloride	8.40	8.00	105
		trans-1,2-dichloroethene	ND		
		1,1-dichloroethane	ND		
		cis-1,2-dichloroethene	ND		
		chloroform	ND		
		1,1,1-trichloroethane	ND		
		carbon tetrachloride	ND		
		1,2-dichloroethane	7.50	8.00	93.8
		trichloroethene	8.33	8.00	104
		1,2-dichloropropane	ND		
		bromodichloromethane	ND		
		dibromomethane	ND		
		trans-1,3-dichloropropene	ND		
		1,1,2-trichloroethane	ND		
		tetrachloroethene	8.36	8.00	104
		dibromochloromethane	ND		
		chlorobenzene	ND		
		1,1,1,2-tetrachloroethane	ND		
		bromoform	ND		
		1,1,2,2-tetrachloroethane	ND		
		1,2,3-trichloropropane	ND		
		bromobenzene	ND		
		chlorotoluene	ND	_	
		1,3-dichlorobenzene	8.12	8.00	102
		1,4-dichlorobenzene	ND	_	
		1,2-dichlorobenzene	7.87	8.00	98.4



Sample	Sample ID	Compound Name	Result (ug/L)	Spike Level	% Recv.	RPD
03377	CMSD	dichlorodifluoromethane	ND ND			
****	ONIOD	chloromethane	ND			
		vinyl chloride	ND			
		bromomethane	ND			
		chloroethane	ND			
		trichlorofluoromethane	ND			
		1,1-dichloroethene	ND			
		methylene chloride	8.25	8.00	103	1.8
		trans-1,2-dichloroethene	ND			
		1,1-dichloroethane	ND			
		cis-1,2-dichloroethene	ND			
		chloroform	ND			
		1,1,1-trichloroethane	ND			
		carbon tetrachloride	ND			
		1,2-dichloroethane	7.59	8.00	94.9	1.2
		trichloroethene	7.80	8.00	97.5	6.6
		1,2-dichloropropane	ND			
		bromodichloromethane	ND			
		dibromomethane	ND			
		trans-1,3-dichloropropene	ND			
		1,1,2-trichloroethane	ND			
		tetrachloroethene	7.90	8.00	98.8	5.7
		dibromochloromethane	ND			
		chlorobenzene	ND			
		1,1,1,2-tetrachloroethane	ND			
		bromoform	ND			
		1,1,2,2-tetrachloroethane	ND			
		1,2,3-trichloropropane	ND			
		bromobenzene	ND			
		chlorotoluene	ND		_	_
		1,3-dichlorobenzene	7.69	8.00	96.1	5.4
		1,4-dichlorobenzene	ND	_	_	_
		1,2-dichlorobenzene	7.85	8.00	98.1	0.25

MB = Method Blank; LCS = Laboratory Control Sample; CMS = Client Matrix Spike; CMSD = Client Matrix Spike Duplicate NS = Not Spiked; OR = Over Calibration Range



Analytical Sciences
P.O. Box 750336, Petaluma, CA 94975-0336
110 Liberty Street, Petaluma, CA 94952 (707) 769-3128 Fax (707) 769-8093

# CHAIN OF CUSTODY

` <b>`</b>	Fax (707) 769-8093	1	LAB PROJECT NUMBER:	1049 9th Aware - Dakhad, CA
	HARRIS & LEE ENVIRONMENTAL SCIENCES		CLIENT'S PROJECT NUMBER:	10-14 7 Marke - Dafian, Cr
Address:	P.O. Box 8369	TURNAR	OCHE THE (NAME ON)	COOLER TEMPERATURE
	SANTA ROSA, CA 95407	MOBILE LAB		ICED °C
CONTACT:	RICHARD ELY	SAME DAY	24 Hours	
PHONE#:	(707) 571-8961	48 Hours	72 Hours	coc
FAX #:	(707) 571-8688	5 Days	NORMAL	PAGE 1 OF 1

							1	de de				AM	41.00		tse texa	nie , mar.	5,415			
ITEM	CLIENT SAMPLE ID.	DATE SAMPLED	TIME	MATRIX	# CONT.	PRESV. YES/NO	TPH/GAS/BTEX & MTBE EPA 8015M/8020	TPH DIESEL EPA 8015M	OXYGENATED FUEL ADDITIVES EPA 8260M	VOLATILE HYDROCARBONS EPA 8260	CHLORINATED SOLVENTS EPA 8010	TRPH SM 5520F	SEMI-VOLATILE HYDROCARBONS EPA 8270	TOTAL LEAD	6 LUFT METALS	CAM 17 METALS	OIL & GREASE EPA 418.1M		COMMENTS	LAB SAMPLE #
1	MW-I	5/31/01	10:12	water	6	yes	X	X			X								Petroleum Odor	03377
2						•														
3																				
4				ļ																
5																				
6																				
7																				
8									,											
9																				
10										-	:									
11																				cu
12							V													

RELINQUISHED BY:  RECEIVED BY LABORATORY:  5/31/01 14:29 Suinda Kadannas 5/31/	
3/21/A) 14/7 Y	
	01 2:29
SIGNATURE DATE DATE	TIME