

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

April 25, 2001

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

MAY 01 2001

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 9th 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

The wells were sampled by Environmental Sampling Services on March 5, 2001. Prior to sampling, each well was checked for the presence of free-phase hydrocarbons using an interface probe, clear bailer, or tape with product detection paste. Water level measurements were made using an electronic water level meter and noted on the sampling form (Appendix A).

Prior to sampling, each 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 wells with new disposable PVC bailers. For samples 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 March 5, 2001 the depth to static groundwater ranged from 8.54 to 9.35 ft (Table 1). The water table gradient and flow direction were 0.019 ft/ft and S77°W, respectively (Figure 3).

ANALYTICAL RESULTS

Laboratory analytical data sheets are included in Appendix B. No MTBE (Method 8020) or HVOCs (Method 8010) were detected in the groundwater samples (Table 2).

In monitoring well MW-1, positive detections were reported for TPH-diesel (170 µg/l), TPH-gasoline (300 µg/l), benzene (1.7 µg/l), toluene (2.1 µg/l), ethyl benzene (1.4 µg/l), and xylenes (2.6 µg/l). The laboratory reported the TPH-diesel to be weathered gasoline.

No positive detections were reported from wells MW-2 and MW-3. For this sampling event, Well MW-3 was located down gradient from the former UST location. Well MW-2 was located down gradient during the previous event.

RECOMMENDATIONS

Because relatively low concentrations of fuel hydrocarbons and HVOCs have been detected in MW-1, and no compounds have been detected in soil or groundwater samples from wells MW-2 and MW-3, we recommend discontinuation of analyses of water samples from wells MW-2 and MW-3.

SCHEDULE

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

Sincerely,

Richard W. Ely

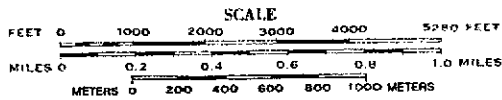
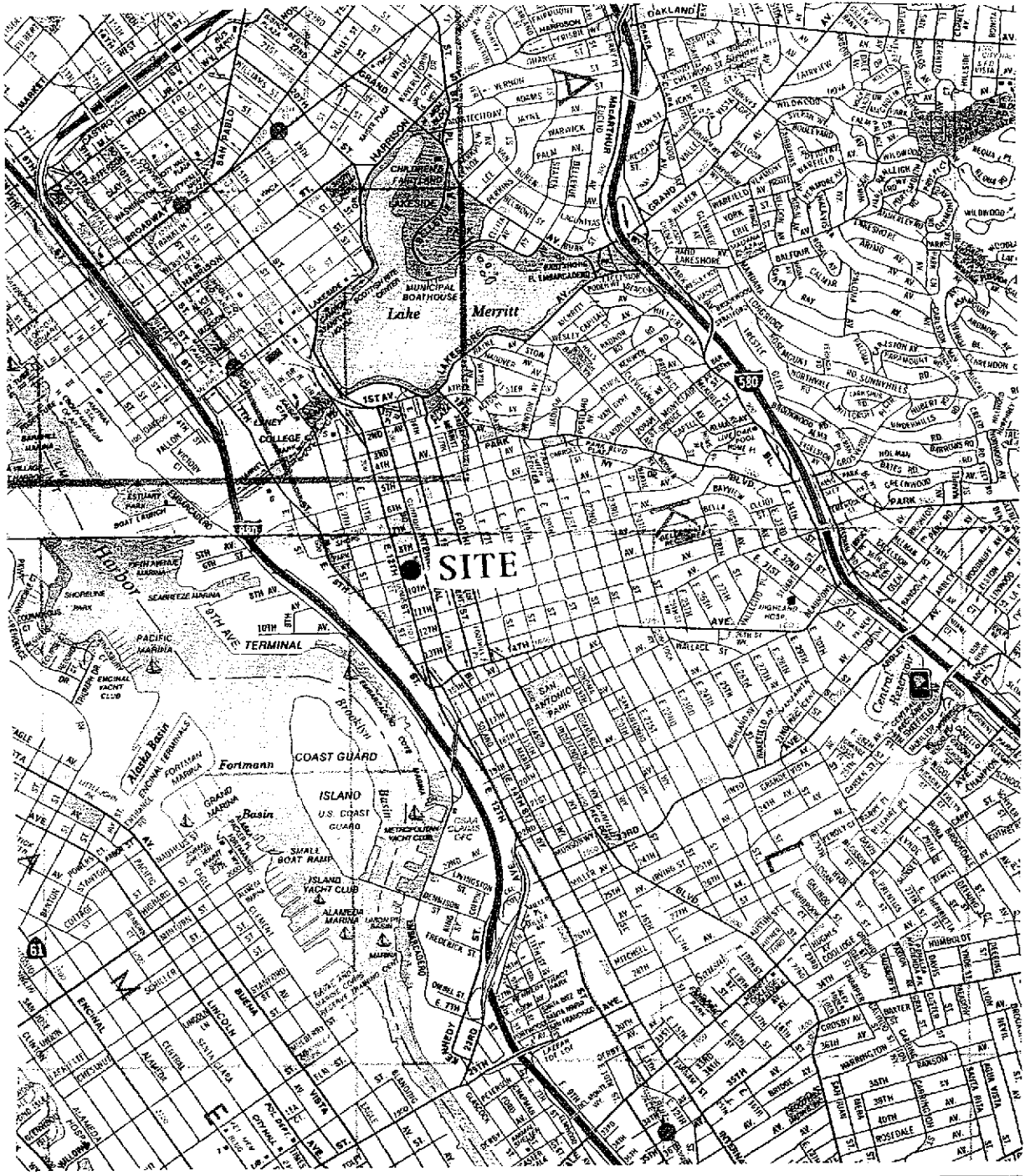
Richard W. Ely RG #4137
2138 Green Hill Rd.
Sebastopol, CA 95472
707-824-4836



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
REGISTERED GEOLOGIST

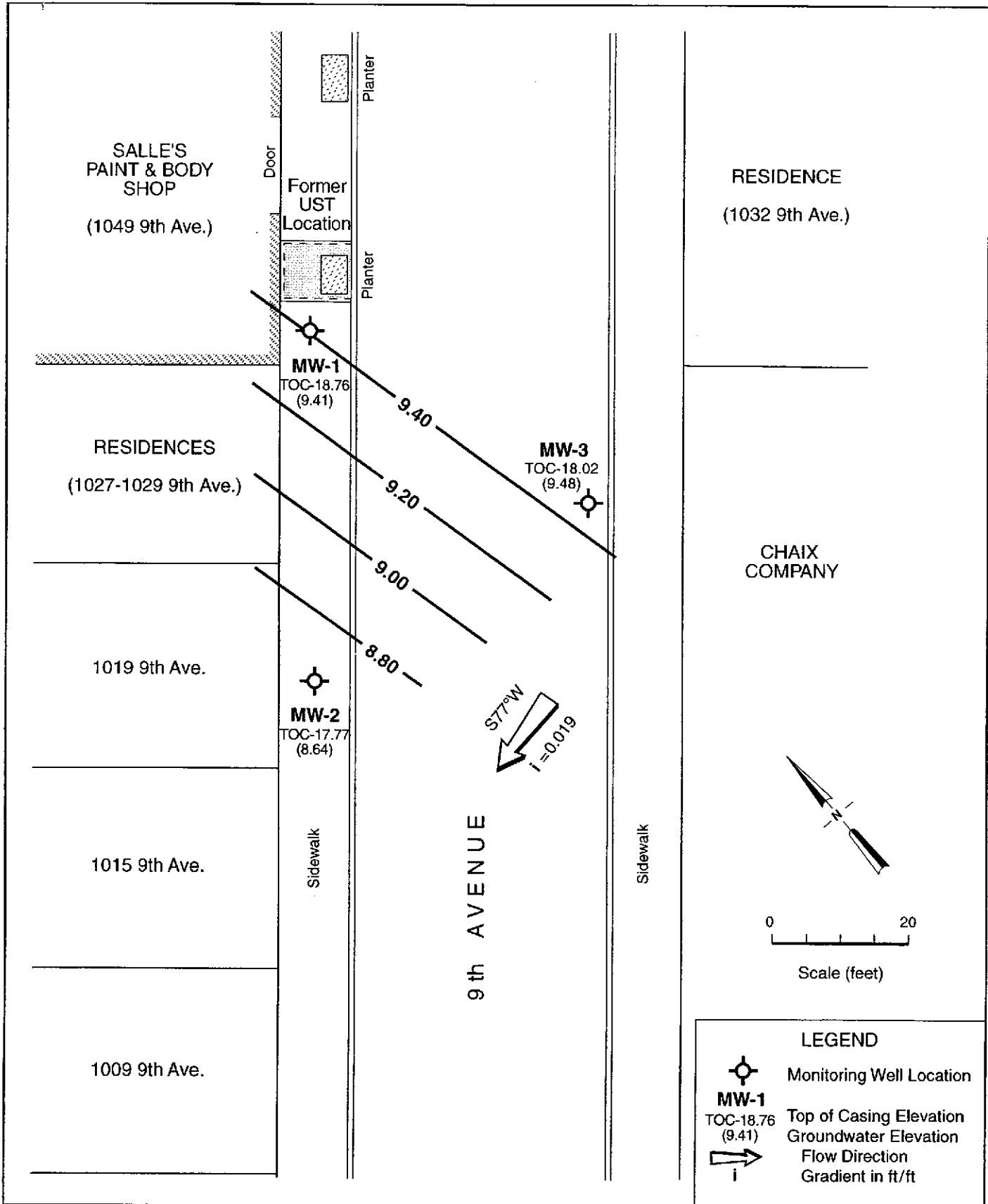
LOCATION MAP
1049 9th Avenue
Oakland, California

FIGURE






1

TRACE #165(RG/17 Dec-99)

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



LEGEND

-  Monitoring Well Location
- MW-1**
TOC-18.76
(9.41)  Top of Casing Elevation
-  Groundwater Elevation
-  Flow Direction
- i  Gradient in ft/ft

GROUNDWATER ELEVATIONS,
 05 March 2001
 1049 9th Avenue
 Oakland, California

FIGURE
 2

TRACE #235/RG/06Apr01

RICHARD ELY
 REGISTERED GEOLOGIST

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

TABLE 1**GROUNDWATER ELEVATIONS****SALLE'S PAINT & BODY SHOP,****1049 9TH AVENUE, OAKLAND, CALIFORNIA**

Well ID	Date	Top of Casing Elevation*	Depth to Groundwater	Groundwater Elevation*	Gradient
MW-1	09/29/00	18.76	11.35	7.41	0.033/S30°E
	03/05/01	18.76	9.35	9.41	0.019/S77°W
MW-2	09/29/00	17.77	10.92	6.85	0.033/S30°E
	03/05/01	17.77	9.13	8.64	0.019/S77°W
MW-3	09/29/00	18.02	12.09	5.93	0.033/S30°E
	03/05/01	18.02	8.54	9.48	0.019/S77°W

Note: * = Feet, Mean Sea Level

TABLE 2**GROUNDWATER SAMPLE ANALYTICAL RESULTS****SALLE'S PAINT & BODY SHOP, 1049 9TH AVENUE, OAKLAND, CALIFORNIA**

Sample ID	Date	Oil & Grease	TPH ¹ Diesel	TPH Gasoline	Benzene	Toluene	Ethyl Benzene	Xylenes	MtBE ²	Chloro-benzene ³	Semi-Volatile Organics ⁴
MW-1	09/29/00	ND ⁵ <100 ⁶	ND<100	280	1.4	ND<0.5	2.5	4.5	ND<2.5	1.1	ND
	03/05/01	NA ⁷	170 ⁸	300	1.7	2.1	1.4	2.6	ND<2.5	ND<0.5	NA
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 ($\mu\text{g/l}$)
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
CONCORD, CALIFORNIA
MARCH 2001**

ESS Personnel: Stephen Penman and Jacqueline Lee
Date of Activities: March 5, 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

Each monitoring well was purged using a new disposable PVC bailer. After removal of three casing volumes and stabilization of groundwater quality parameters, each monitoring well was sampled for: Halogenated Volatile Organic Compounds (HVOCs), Total Petroleum Hydrocarbon (TPH) as Gasoline/BTEX and MTBE (EPA Method 8015/8020) and TPH as Diesel and Oil & Grease.

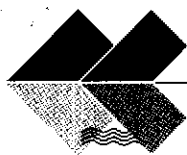
Sample Handling

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) and Oil & Grease samples were contained in two, non-preserved, 1-Liter amber glass containers.

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




**Environmental
Sampling Services**

QA/QC

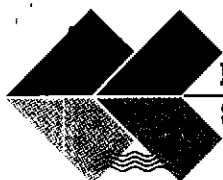
No QA/QC samples were requested for this project.

Comments

All derived groundwater and decontamination water were placed into existing 55-gallon drums.


Jacqueline Lee
President

Enclosure
Water Sample Log Sheets
Chain of Custody



**Environmental
Sampling Services**

WATER QUALITY SAMPLE LOG SHEET WELL IDENTIFICATION: MW-1 DATE: 3/5/01

Project Name: 1049 9th Avenue - Oakland Project Contact: Richard Ely

Weather: Gray Skies; scattered rain ~65°

Well Description: 2" 3" 4" 5" 6" Other: Well Type: PVC Stainless Steel Other:

Is Well Secured? (Yes) / No Bolt Size 1/2" Type of lock / Lock number: Dolphin

Observations / Comments:

Purge Method: Teflon PVC Disposable Bailer Centrifugal Pump GrundFos Redi-flow Pump Other:

Pump Lines: (NA) New / Cleaned / Dedicated Bailer Line: NA (New) / Cleaned / Dedicated

Method of Cleaning Pump: (NA) Alconox Liqui-nox Tap Water DI Rinse Other:

Method of Cleaning Bailer: (NA) Alconox Liqui-nox Tap Water DI Rinse Other:

Sampling Method: Disp. Teflon Bailer (Disp. PVC Bailer) GrundFos Redi-flow Pump Other:

pH Meter Serial No.: 217254 / 330089 Spec. Cond. Meter Serial No.: 96H0203AB / AE

Date/Time Calibrated: 3/5/01 9:10 (4 7) 10 @ 25°C Spec. Cond. Meter Calibration: Self Test Other:

Method to Measure Water Level: Solinst Serial No.: 21752 P.I.D. Reading: NA ppm @ Well Head

Water Level at Start (DTW): 9.35 @ 14:67 Water Level Prior To Sampling: 13.15

TD = 19.59 - 9.35 (DTW) = 10.24 (ft. of water) x "K" = 1.6 (Gals./CV) x 3 (No. of CV) = 5.00 (Gals.)

"K" = 0.163(2" well) "K" = 0.653(4" well) "K" = 1.02(5" well) "K" = 1.46(6" well) "K" = 2.61(8" well)

FIELD WATER QUALITY PARAMETERS

Date	Time	Discharge (gallons)	pH	Temp. (°C)	Specific Conductance mS (uS)	Turbidity (NTU's)	Color	Comments
3/5/01	16:01	1.0	6.77	18.1	615	74.5	cloudy Lt. Brown	
	16:03	2.0	6.74	18.6	632	132	"	
	16:04	3.0	6.76	18.5	635	194	"	
	16:06	4.0	6.75	18.8	627	260	Lt. Brown	
	16:08	5.0	6.74	19.0	626	351	"	
	16:09	6.0	6.73	19.0	623	586	"	

Total Discharge: 6.0 gallons Casing Volumes Removed: 3.8

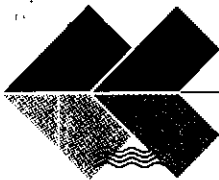
Method of disposal of discharged water: 55 Gallon Drum(s) Poly Tank Treatment System Other:

Date/Time Sampled: 3/5/01 @ 16:10 Analysis/No. of Bottles: TPHg, BTEX, MTBE & Halogenated VOC's (5 VOC's w/Hcl) and TPH Diesel/Oil & Grease (2-1 liter glass ambers N/P).

QA/QC: None @ as an Equipment Blank Duplicate MS/MSD Lab Split Field Blank

Comments:

Sampled By: Jacki Lee and Stephen Penman Signature(s):



**Environmental
Sampling Services**

WATER QUALITY SAMPLE LOG SHEET	WELL IDENTIFICATION: MW-2 DATE: 3/5/01
Project Name: <u>1049 9th Avenue - Oakland</u> Project Contact: <u>Richard Ely</u>	
Weather: <u>Gray overcast; scattered rain ~ 70°</u>	
Well Description: <u>2" 3" 4" 5" 6" Other:</u> Well Type: <u>(PVC)</u> Stainless Steel Other: _____	
Is Well Secured? <u>(Yes)</u> No Bolt Size <u>1/2"</u> Type of lock / Lock number: <u>Dolphin</u>	
Observations / Comments: _____	
Purge Method: Teflon <u>(PVC Disposable Bailer)</u> Centrifugal Pump GrundFos Redi-flow Pump Other: _____	
Pump Lines: <u>(NA)</u> New / Cleaned / Dedicated Bailer Line: NA <u>(New)</u> Cleaned / Dedicated	
Method of Cleaning Pump: <u>(NA)</u> Alconox Liqui-nox Tap Water DI Rinse Other: _____	
Method of Cleaning Bailer: <u>(NA)</u> Alconox Liqui-nox Tap Water DI Rinse Other: _____	
Sampling Method: Disp. Teflon Bailer <u>(Disp. PVC Bailer)</u> GrundFos Redi-flow Pump Other: _____	
pH Meter Serial No.: <u>(217254)</u> / 330089 Spec. Cond. Meter Serial No.: <u>(6H0203AB)</u> <u>(AE)</u>	
Date/Time Calibrated: <u>3/5 @ 9:10</u> <u>(7)</u> 10 @ 25°C Spec. Cond. Meter Calibration: <u>(Self Test)</u> Other: _____	
Method to Measure Water Level: Solinst Serial No.: <u>21752</u> P.I.D. Reading: _____ ppm @ Well Head	
Water Level at Start (DTW): <u>9.13 @ 14:56</u> Water Level Prior To Sampling: <u>13.87</u>	
TD = 20.17 - <u>9.13</u> (DTW) = <u>11.04</u> (ft. of water) x "K" = <u>1.79</u> (Gals./CV) x <u>3</u> (No. of CV) = <u>5.39</u> (Gals.)	
<u>"K" = 0.163(2" well)</u> "K" = 0.653(4" well) "K" = 1.02(5" well) "K" = 1.46(6" well) "k" = 2.61(8" well)	

FIELD WATER QUALITY PARAMETERS

Date	Time	Discharge (gallons)	pH	Temp. (°C)	Specific Conductance mS (µS)	Turbidity (NTU's)	Color	Comments
3/5/01	15:02	1.0	7.23	17.1	775	108	Cloud Lt. Brown	
	15:04	2.0	7.17	17.1	731	112	"	
	15:05	3.0	7.10	17.4	710	109	"	
	15:07	4.0	7.02	17.7	710	127	"	
	15:09	5.0	7.00	18.0	712	178	"	
↓	15:11	6.0	7.02	18	718	215	Light Brown	

Total Discharge: 6.0 gallons Casing Volumes Removed: 3.4

Method of disposal of discharged water: (55 Gallon Drum) Poly Tank Treatment System Other: _____

Date/Time Sampled: 3/5/01 @ 15:15 Analysis/No. of Bottles: TPHg, BTEX, MTBE & Halogenated VOC's (5 VOC's w/Hcl) and TPH Diesel/Oil & Grease (2-1 liter glass ambers N/P).

QA/QC: _____ @ _____ as an Equipment Blank Duplicate MS/MSD Lab Split Field Blank

Comments: _____

Sampled By: Jacki Lee and Stephen Penman Signature(s): [Signatures]



**Environmental
Sampling Services**

WATER QUALITY SAMPLE LOG SHEET WELL IDENTIFICATION: MW-3 DATE: 3/5/01

Project Name: 1049 9th Avenue - Oakland Project Contact: Richard Ely

Weather: Rainy and cool ~ 66°

Well Description: 2" 3" 4" 5" 6" Other: _____ Well Type: PVC Stainless Steel Other: _____

Is Well Secured? Yes No Bolt Size 1/2" Type of lock / Lock number: Dolphin

Observations / Comments: _____

Purge Method: Teflon PVC Disposable Bailer Centrifugal Pump GrundFos Redi-flow Pump Other: _____

Pump Lines: NA New / Cleaned / Dedicated Bailer Line: NA New Cleaned / Dedicated

Method of Cleaning Pump: NA Alconox Liqui-nox Tap Water DI Rinse Other: _____

Method of Cleaning Bailer: NA Alconox Liqui-nox Tap Water DI Rinse Other: _____

Sampling Method: Disp. Teflon Bailer Disp. PVC Bailer GrundFos Redi-flow Pump Other: _____

pH Meter Serial No.: 217254 / 330089 Spec. Cond. Meter Serial No.: 96H0203AB / AE

Date/Time Calibrated: 3/5/0 9:10 4 7 10 @ 25°C Spec. Cond. Meter Calibration: Self Test Other: _____

Method to Measure Water Level: Solinst Serial No.: 21752 P.I.D. Reading: NA ppm @ Well Head

Water Level at Start (DTW): 8.54 @ 14:55 Water Level Prior To Sampling: 18.1

TD = 20.20 - 8.54 (DTW) = 11.66 (ft. of water) x "K" = 1.90 (Gals./CV) x 3 (No. of CV) = 5.70 (Gals.)
 "K" = 0.163(2" well) "K" = 0.653(4" well) "K" = 1.02(5" well) "K" = 1.46(6" well) "K" = 2.61(8" well)

FIELD WATER QUALITY PARAMETERS

Date	Time	Discharge (gallons)	pH	Temp. (°C)	Specific Conductance mS (uS)	Turbidity (NTU's)	Color	Comments
3/5/01	15:33	1.0	7.39	18.1	531	204	cloudy Lt. Brown	
	15:35	2.0	7.40	18.4	608	272	Lt. Brown	
	15:37	3.0	7.44	18.7	638	364	"	
	15:39	4.0	7.48	18.9	665	653	"	
	15:40	5.0	7.48	19.1	667	462	"	
	15:42	6.0	7.51	19.2	669	571	"	
			2					

Total Discharge: 6.0 gallons Casing Volumes Removed: 3.2

Method of disposal of discharged water: 55 Gallon Drums Poly Tank Treatment System Other: _____

Date/Time Sampled: 3/5/01 @ 15:45 Analysis/No. of Bottles: TPHg, BTEX, MTBE & Halogenated VOC's (5 VOC's w/Hcl) and TPH Diesel/Oil & Grease (2-1 liter glass ambers N/P).

QA/QC: _____ @ _____ as an Equipment Blank Duplicate MS/MSD Lab Split Field Blank

Comments: _____

Sampled By: Jacki Lee and Stephen Penman Signature(s): [Signatures]

APPENDIX B

LABORATORY ANALYTICAL DATA SHEETS



Report Date: March 23, 2001

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

LABORATORY REPORT

Project Name: 1049 9TH Avenue, Oakland, CA

Lab Project Number: 1030602

This 11 page report of analytical data has been reviewed and approved for release.

Mark A. Valentini, Ph.D.
Laboratory Director



TPH Gasoline in Water

Lab #	Sample ID	Analysis	Result (ug/L)	RDL (ug/L)
02421	Trip Blank	TPH/Gasoline	ND	50
		MTBE	ND	2.5
		Benzene	ND	0.5
		Toluene	ND	0.5
		Ethyl Benzene	ND	0.5
		Xylenes	ND	1.5

Date Sampled: 03/05/01 Date Analyzed: 03/12/01 QC Batch #: 1698
Date Received: 03/06/01 Method: EPA 5030/8015M/8020

Lab #	Sample ID	Analysis	Result (ug/L)	RDL (ug/L)
02422	MW-2	TPH/Gasoline	ND	50
		Benzene	ND	0.5
		Toluene	ND	0.5
		Ethyl Benzene	ND	0.5
		Xylenes	ND	1.5

Date Sampled: 03/05/01 Date Analyzed: 03/12/01 QC Batch #: 1698
Date Received: 03/06/01 Method: EPA 5030/8015M/8020

Lab #	Sample ID	Analysis	Result (ug/L)	RDL (ug/L)
02423	MW-3	TPH/Gasoline	ND	50
		Benzene	ND	0.5
		Toluene	ND	0.5
		Ethyl Benzene	ND	0.5
		Xylenes	ND	1.5

Date Sampled: 03/05/01 Date Analyzed: 03/12/01 QC Batch #: 1698
Date Received: 03/06/01 Method: EPA 5030/8015M/8020



Lab #	Sample ID	Analysis	Result (ug/L)	RDL (ug/L)
02424	MW-1	TPH/Gasoline	300	50
		Benzene	1.7	0.5
		Toluene	2.1	0.5
		Ethyl Benzene	1.4	0.5
		Xylenes	2.6	1.5

Date Sampled: 03/05/01 Date Analyzed: 03/13/01 QC Batch #: 1698
Date Received: 03/06/01 Method: EPA 5030/8015M/8020

TPH Diesel in Water

Lab #	Sample ID	Analysis	Result (ug/L)	RDL (ug/L)
02422	MW-2	TPH/Diesel	ND	50

Date Sampled: 03/05/01 Date Extracted: 03/13/01 QC Batch #: 1705
Date Received: 03/06/01 Date Analyzed: 03/13/01 Method: EPA 3510/8015M

Lab #	Sample ID	Analysis	Result (ug/L)	RDL (ug/L)
02423	MW-3	TPH/Diesel	ND	50

Date Sampled: 03/05/01 Date Extracted: 03/13/01 QC Batch #: 1705
Date Received: 03/06/01 Date Analyzed: 03/13/01 Method: EPA 3510/8015M

Lab #	Sample ID	Analysis	Result (ug/L)	RDL (ug/L)
02424	MW-1	TPH/Diesel	170 ①	50

Date Sampled: 03/05/01 Date Extracted: 03/13/01 QC Batch #: 1705
Date Received: 03/06/01 Date Analyzed: 03/13/01 Method: EPA 3510/8015M

- ① The sample chromatogram does not exhibit a characteristic pattern for diesel. Higher boiling point constituents of weathered gasoline are impacting the diesel analysis.



Chlorinated Solvents in Water

Lab #	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
02422	MW-2	dichlorodifluoromethane	ND	0.5
		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 Sampled: 03/05/01
Date Received: 03/06/01

Date Analyzed: 03/08/01
Method: EPA 5030/8010

QC Batch #: 1703



<u>Lab #</u>	<u>Sample ID</u>	<u>Compound Name</u>	<u>Result (ug/L)</u>	<u>RDL (ug/L)</u>
02423	MW-3	dichlorodifluoromethane	ND	0.5
		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 Sampled: <u>03/05/01</u>	Date Analyzed: <u>03/08/01</u>	QC Batch #: <u>1703</u>
Date Received: <u>03/06/01</u>	Method: <u>EPA 5030/8010</u>	



<u>Lab #</u>	<u>Sample ID</u>	<u>Compound Name</u>	<u>Result (ug/L)</u>	<u>RDL (ug/L)</u>
02424	MW-1	dichlorodifluoromethane	ND	0.5
		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 Sampled: 03/05/01
Date Received: 03/06/01

Date Analyzed: 03/08/01
Method: EPA 5030/8010

QC Batch #: 1703



LABORATORY QUALITY ASSURANCE REPORT

QC Batch #: 1698

Lab Project #: 1030602

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

<u>Sample ID</u>	<u>Compound</u>	<u>Result (ug/L)</u>	<u>Spike Level</u>	<u>% Recv.</u>
LCS	TPH/Gas		NS	
LCS	Benzene	8.89	11.7	76.0
LCS	Toluene	10.3	11.7	88.2
LCS	Ethyl Benzene	10.9	11.7	90.1
LCS	Xylenes	32.2	35.1	91.9

<u>Sample ID</u>	<u>Compound</u>	<u>Result (ug/L)</u>	<u>Spike Level</u>	<u>% Recv.</u>	<u>RPD</u>
LCSD	TPH/Gas		NS		
LCSD	Benzene	8.89	11.7	76.0	0.0
LCSD	Toluene	10.3	11.7	87.6	0.68
LCSD	Ethyl Benzene	10.5	11.7	89.8	0.28
LCSD	Xylenes	32.4	35.1	92.4	0.89

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 #: 1705

Lab Project #: 1030602

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

<u>Sample ID</u>	<u>Compound</u>	<u>Result (ug/L)</u>	<u>Spike Level</u>	<u>% Recv.</u>
LCS	TPH/Diesel	3,260	2,730	120

<u>Sample ID</u>	<u>Compound</u>	<u>Result (ug/L)</u>	<u>Spike Level</u>	<u>% Recv.</u>	<u>RPD</u>
LCSD	TPH/Diesel	3,230	2,730	118	1.1

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 #: 1703

Lab Project #: 1030602

<u>Sample ID</u>	<u>Compound Name</u>	<u>Result (ug/L)</u>
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



<u>Sample</u>	<u>Sample ID</u>	<u>Compound Name</u>	<u>Result (ug/L)</u>	<u>Spike Level</u>	<u>% Recv.</u>
02422	CMS	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	6.76	8.00	84.4
		carbon tetrachloride	ND		
		1,2-dichloroethane	ND		
		trichloroethene	6.81	8.00	85.1
		1,2-dichloropropane	ND		
		bromodichloromethane	ND		
		dibromomethane	ND		
		trans-1,3-dichloropropene	ND		
		1,1,2-trichloroethane	7.32	8.00	91.5
		tetrachloroethene	7.03	8.00	87.9
		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	7.24	8.00	90.5
		1,4-dichlorobenzene	ND		
		1,2-dichlorobenzene	7.35	8.00	91.9



<u>Sample</u>	<u>Sample ID</u>	<u>Compound Name</u>	<u>Result (ug/L)</u>	<u>Spike Level</u>	<u>% Recv.</u>	<u>RPD</u>
02422	CMSD	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	6.44	8.00	80.5	4.8
		carbon tetrachloride	ND			
		1,2-dichloroethane	ND			
		trichloroethene	6.91	8.00	86.3	1.5
		1,2-dichloropropane	ND			
		bromodichloromethane	ND			
		dibromomethane	ND			
		trans-1,3-dichloropropene	ND			
		1,1,2-trichloroethane	7.20	8.00	90.0	0.14
		tetrachloroethene	7.11	8.00	88.9	1.1
		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	7.24	8.00	92.5	0.0
		1,4-dichlorobenzene	ND			
		1,2-dichlorobenzene	7.34	8.00	91.8	14

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

LAB PROJECT NUMBER: 1030602

CLIENT'S PROJECT NAME: 1049 9th Avenue - Oakland, CA

CLIENT'S PROJECT NUMBER: _____

COMPANY NAME: HARRIS & LEE ENVIRONMENTAL SCIENCES

ADDRESS: P.O. Box 8369
SANTA ROSA, CA 95407

CONTACT: RICHARD ELY

PHONE#: (707) 571-8961

FAX #: (707) 571-8688

MOBILE LAB _____

SAME DAY _____ 24 HOURS _____

48 HOURS _____ 72 HOURS _____

5 DAYS _____ NORMAL

COOLER TEMPERATURE

BLUE ICE °C

COC

PAGE 1 OF 1

ITEM	CLIENT SAMPLE I.D.	DATE SAMPLED	TIME	MATRIX	# CONT.	PRESV. YES/NO	TPH/GAS/BTEX & MTBE EPA 8015/8020	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	5 LUFT METALS	CAM 17 METALS	COMMENTS	LAB SAMPLE #
1	Trip Blank	3/5/01	15:00	water	1	yes	X											02421
2	MW-2	3/5/01	15:15	water	5	yes	X	X			X							02422
3	MW-3	3/5/01	15:45	water	5	yes	X	X			X							02423
4	MW-1	3/5/01	16:10	water	5	yes	X	X			X							02424
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

RELINQUISHED BY:

Richard Ely
 SIGNATURE

March 06, 2001 16:05
 DATE TIME

RECEIVED BY LABORATORY:

Shirley K. Anderson
 SIGNATURE

3/6/01 16:05
 DATE TIME