

STID
3725



Industrial Compliance

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STID⁹²¹¹¹⁷⁻⁸
3725^{SP} 5th St. + Kirkham
3748^{SP} 5th Av. + 7th St.

March 6, 1992

Mr. Dennis Byrne
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, California 94621

**Subject: First Quarter 1992 Groundwater Monitoring Report
Southern Pacific Transportation Company
~~5th and Kirkham Streets, Oakland, California~~
Oakland, California
IC Project No. 05032**

Dear Mr. Byrne:

Industrial Compliance (IC), on behalf of Southern Pacific Transportation Company (SPTCo), is submitting the first quarter 1992 groundwater monitoring report for the SPTCo property located at 5th and Kirkham Streets in Oakland, California (see Figure 1). Work was performed in accordance with the guidelines presented in the Alameda County Health Care Services Agency (ACHCSA) letter dated June 21, 1991, requiring groundwater monitoring at this site. Previous work at this site is described in IC's report dated March 1, 1991 (report entitled: *Phase II Environmental Site Assessment, Southern Pacific Transportation Company, 5th and Kirkham Streets, Oakland, California*). Quarterly groundwater sampling of these wells began in the third quarter of 1991.

Groundwater Sampling

There are currently four wells onsite (MW-1, MW-3, MW-4 and MW-6). Well locations are shown on Figure 2. Wells MW-1, MW-3 and MW-4 were installed adjacent to former underground storage tank (UST) locations. The monitoring well MW-6 is an upgradient well not associated with the UST's, and was therefore not included in the quarterly sampling.

Groundwater samples were collected on February 7, 1992. Prior to sampling, groundwater elevations were measured with an electronic water level probe to calculate saturated well volumes. This data is included in the Purge Characterization and Sample Logs presented as Appendix A. Approximately 3 well volumes were purged from each well using a submersible pump, which was decontaminated by steam-cleaning onsite prior to initial use and between each well. During purging, the groundwater parameters; pH, temperature, and electrical

gradient
not
determined

Dedicated to solving your environmental problems.

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Alameda County Health Care Services Agency (05032)
Mr. Dennis Byrne
Page 2

conductivity, were measured at approximately every well volume. The groundwater parameter data is presented in the Purge Characterization and Sample Logs presented as Appendix A.

Samples were collected with disposable polyethylene bailers and transferred into laboratory supplied containers. Samples were analyzed for Total Petroleum Hydrocarbons (TPH)-Gasoline and benzene, toluene, ethylbenzene, and xylenes (BTEX) using Method P/T-GBX-Triregional, and TPH-Diesel using Method TPH-D-Triregional. Analytical results are summarized in Table 1.

Analytical Results

Results of analyses of samples from MW-1 and MW-4 indicate TPH and BTEX were not present at concentrations at or above the method detection limits. The results of analyses on samples collected from MW-3 indicated 1200 $\mu\text{g/L}$ TPH diesel and 0.71 $\mu\text{g/l}$ benzene. TPH gasoline, toluene, ethylbenzene, and xylenes were not detected above the method detection limits in the sample collected from MW-3. Laboratory reports are attached as Appendix B.

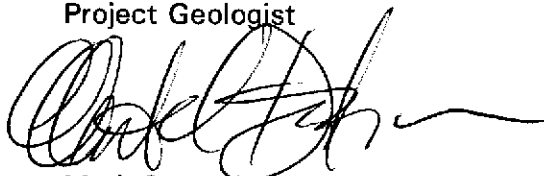
The next quarterly sampling event is currently scheduled for April, 1992.

If you have any questions concerning this report, please contact Mr. Walter Floyd at (916) 369-8971.

Sincerely,



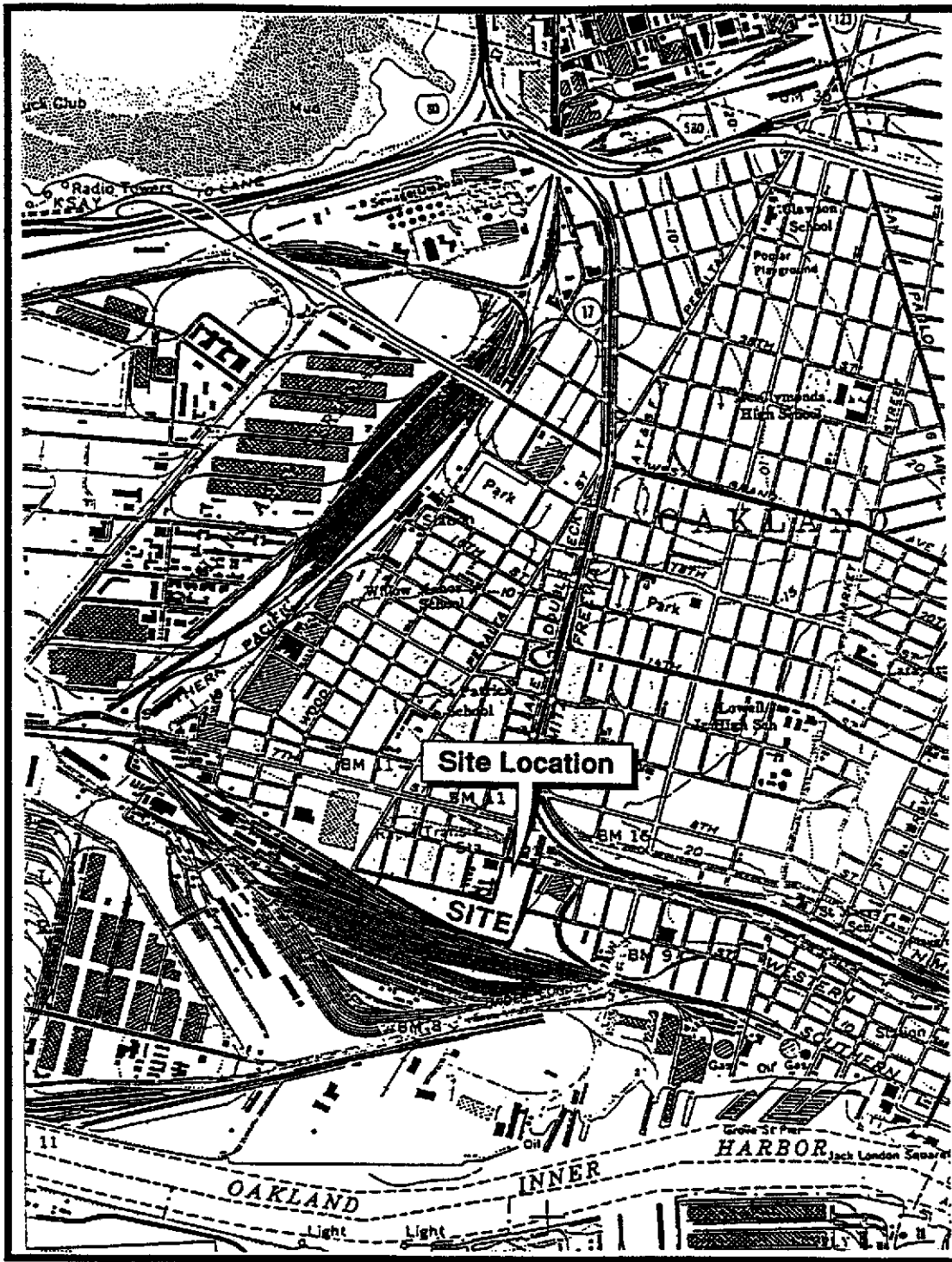
Walter D. Floyd
Project Geologist



Mark S. Dockum, C.E.G.
Project Manager

Attachment

cc: Mr. Lester Feldman
Mr. Rafat Shahid



Approx. Scale in Miles
 0 1/2

Reference:
 USGS 7.5 Minute Series Topographic Map
 Oakland California



SP ENVIRONMENTAL SYSTEMS, INC.

**SITE LOCATION MAP
 SOUTHERN PACIFIC TRANSPORTATION CO.
 5TH & KIRKHAM STREETS PROPERTY
 OAKLAND, CALIFORNIA**

**FIGURE:
 1**

**SCALE:
 as shown**

PROJECT NO: 05032

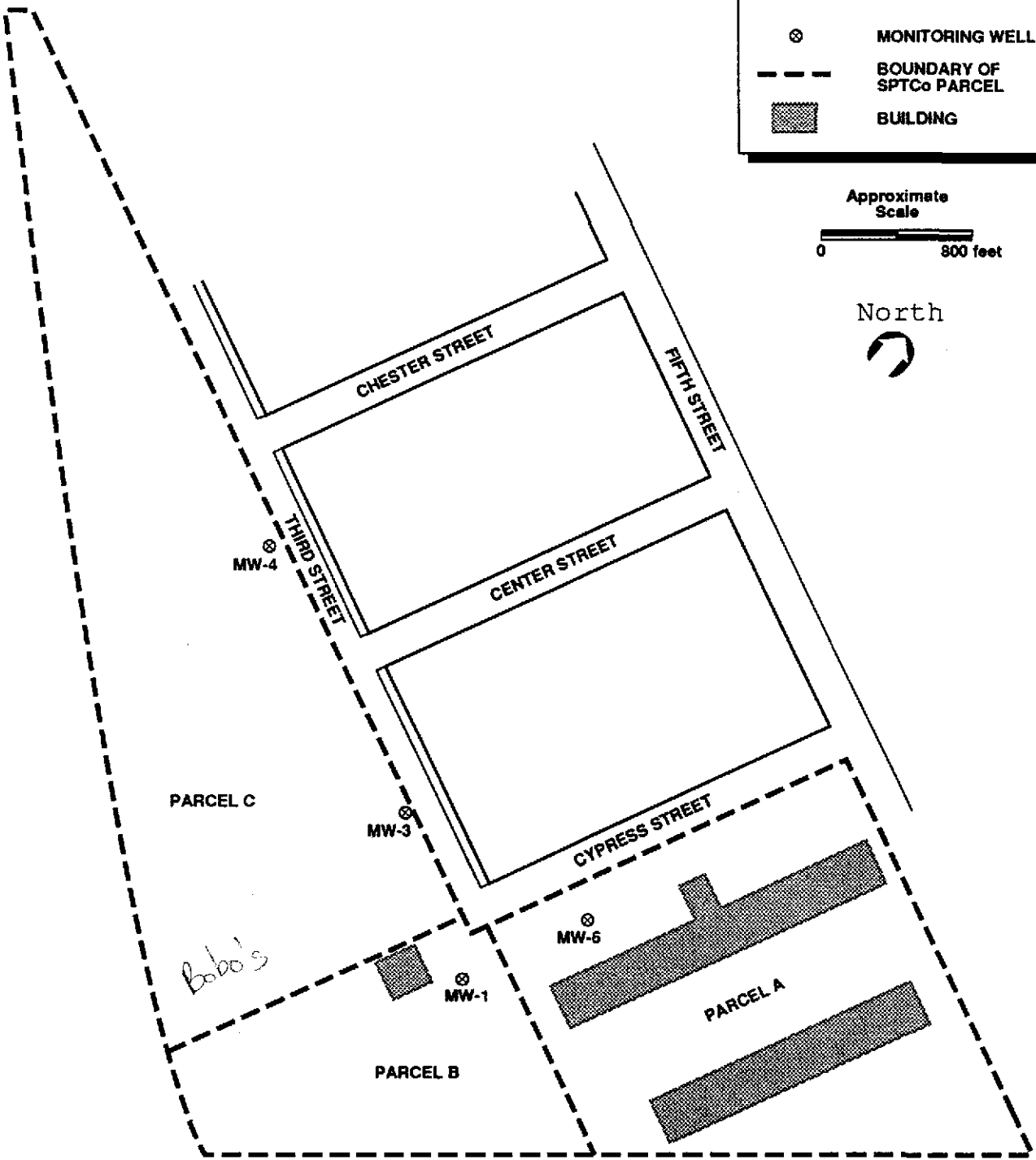
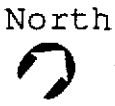
DATE: 11/14/91

DRAWN BY: PD

CHECKED BY: WF

LEGEND

- ⊗ MONITORING WELL
- - - BOUNDARY OF SPTCo PARCEL
- ▒ BUILDING



Industrial Compliance
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PROJECT NO: 05032	DATE: 03/06/92
DRAWN BY: PD	CHECKED BY: WF

**LOCATION OF MONITORING WELLS
SOUTHERN PACIFIC TRANSPORTATION CO.
5TH & KIRKHAM PROPERTY
OAKLAND, CALIFORNIA**

FIGURE:
2

SCALE:
as shown

Table 1
First Quarter 1992 Groundwater Monitoring Report
Southern Pacific Transportation Company
5th & Kirkham Streets
Oakland, California
Samples Collected February 1992
IC Project No. 05032

Well ^a	Sample I.D.	TPH-Gasoline ^b range ($\mu\text{g/L}$)	TPH-Diesel ^c range ($\mu\text{g/L}$)	BTEX ^d ($\mu\text{g/L}$)
MW-1	21666	ND	ND	ND
MW-3	21663	ND	1200	0.71 (Benzene) ND (TEX)
MW-4	21660	ND	ND	ND
Detection Limit	--	50	50	0.50

- Notes:**
- a** See Figure 2 for approximate well locations.
 - b** TPH-Gasoline Total Petroleum Hydrocarbons as gasoline analyzed using Method P/T-GBX-Triregional.
 - c** TPH-Diesel Total Petroleum Hydrocarbons as diesel analyzed using Method TPH-D-Triregional.
 - d** BTEX Benzene, Toluene, Ethylbenzene, Xylenes analyzed using Method P/T-GBX-Triregional.
- ND** Not detected above method detection limit
- $\mu\text{g/l}$ Micrograms per liter

APPENDIX A

PURGE CHARACTERIZATION AND SAMPLE LOGS

APPENDIX B
ANALYTICAL LABORATORY REPORTS



February 28, 1992
Lab ID: 062713

Walt Floyd
S.P. Environmental
9719 Lincoln Village Dr.
Suite 310
Sacramento, CA 95827

Dear Mr. Floyd:

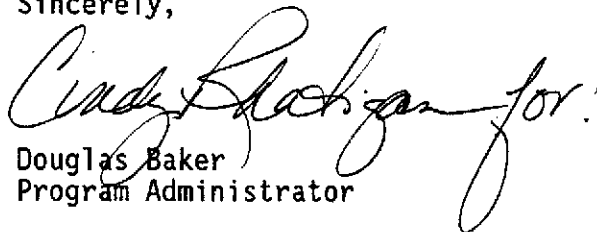
Enclosed is the report for the three aqueous samples for your Bobo Project, #05032, which were received at Enseco Cal Lab on 8 February 1992.

The report consists of the following sections:

- I Sample Description
- II Analysis Request
- III Quality Control Report
- IV Analysis Results

If you have any questions, please feel free to call.

Sincerely,

A handwritten signature in cursive script, appearing to read "Cindy Richardson for:", written over the typed name and title.

Douglas Baker
Program Administrator

mbw

I Sample Description

See the attached Sample Description Information.

The samples were received under chain-of-custody.

II Analysis Request

The following analytical tests were requested.

<u>Lab ID</u>	<u>Analysis Description</u>
062713-1 through 3	Total Petroleum Hydrocarbons (Gasoline) & BTEX Total Petroleum Hydrocarbons (Triregional)

III Quality Control

- A. Project Specific QC. No project specific QC (i.e., spikes and/or duplicates) was requested.
- B. Method Blank Results. A method blank is a laboratory-generated sample which assesses the degree to which laboratory operations and procedures cause false-positive analytical results for your samples.

No target parameters were detected in the method blanks associated with your samples at the reporting limit levels noted on the attached Method Blank Report.

- C. Laboratory Control Samples - The LCS Program

Duplicate Control Samples. A DCS is a well-characterized matrix (blank water, sand or celite) which is spiked with certain target parameters and analyzed at approximately 10% of the sample load in order to establish method-specific control limits. The DCS results associated with your samples are on the attached Duplicate Control Sample Report.

Accuracy is measured by Percent Recovery as in:

$$\% \text{ recovery} = \frac{(\text{measured concentration})}{(\text{actual concentration})} \times 100$$

Precision is measured using duplicate tests by Relative Percent Difference (RPD) as in:

$$\text{RPD} = \frac{(\% \text{ recovery test 1} - \% \text{ recovery test 2})}{(\% \text{ recovery test 1} + \% \text{ recovery test 2})/2} \times 100$$

Control limits for accuracy (percent recovery) are based on the average, historical percent recovery ± 3 standard deviation units. Control limits for precision (relative percent difference) range from 0 (identical duplicate DCS results) to the average, historical relative percent difference + 3 standard deviation units. In cases where there is not enough historical data, EPA limits or advisory limits are set, with the approval of the Quality Assurance department.

IV Analysis Results

Test methods may include minor modifications of published EPA Methods such as reporting limits or parameter lists. Reporting limits are adjusted to reflect dilution of the sample, when appropriate. Solid and waste samples are reported on an "as received" basis; i.e., no correction is made for moisture content, unless the method requires or the client requests that such correction be made.

Results are on the attached data sheets.

SAMPLE DESCRIPTION INFORMATION
for
SP Environmental

Lab ID	Client ID	Matrix	Sampled Date	Time	Received Date
062713-0001-SA	21660	AQUEOUS	07 FEB 92	09:55	07 FEB 92
062713-0002-SA	21663	AQUEOUS	07 FEB 92	11:20	07 FEB 92
062713-0003-SA	21666	AQUEOUS	07 FEB 92	11:55	07 FEB 92

QC LOT ASSIGNMENT REPORT
Hydrocarbon Work Cell

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
062713-0001-SA	AQUEOUS	TPH-BTEX-A	11 FEB 92-20A	13 FEB 92-20A
062713-0002-SA	AQUEOUS	TPH-BTEX-A	11 FEB 92-20A	13 FEB 92-20A
062713-0003-SA	AQUEOUS	TPH-BTEX-A	11 FEB 92-20A	13 FEB 92-20A

METHOD BLANK REPORT
Hydrocarbon Work Cell

Analyte	Result	Units	Reporting Limit
Test: TPH-G-BTEX-TR-A			
Matrix: AQUEOUS			
QC Lot: 11 FEB 92-20A QC Run: 13 FEB 92-20A			
Benzene	ND	ug/L	0.50
Toluene	ND	ug/L	0.50
Ethylbenzene	ND	ug/L	0.50
Xylenes (total)	ND	ug/L	0.50
Gasoline	ND	ug/L	50
Unknown hydrocarbon	ND	ug/L	50

DUPLICATE CONTROL SAMPLE REPORT
Hydrocarbon Work Cell

Analyte	Concentration Spiked	Concentration Measured		AVG	Accuracy Average(%)		Precision (RPD)	
		DCS1	DCS2		DCS	Limits	DCS	Limit
Category: TPH-BTEX-A								
Matrix: AQUEOUS								
QC Lot: 11 FEB 92-20A								
Concentration Units: ug/L								
Benzene	5.00	4.54	4.70	4.62	92	78-116	3.5	9
Toluene	5.00	4.59	4.71	4.65	93	78-113	2.6	10
Gasoline	1000	1060	1040	1050	105	76-125	1.9	15

Calculations are performed before rounding to avoid round-off errors in calculated results.

QC LOT ASSIGNMENT REPORT
Hydrocarbon Work Cell

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
062713-0001-SA	AQUEOUS	TPH-D-TR-A	11 FEB 92-A	11 FEB 92-A
062713-0002-SA	AQUEOUS	TPH-D-TR-A	11 FEB 92-A	11 FEB 92-A
062713-0003-SA	AQUEOUS	TPH-D-TR-A	11 FEB 92-A	11 FEB 92-A

METHOD BLANK REPORT
Hydrocarbon Work Cell

Analyte	Result	Units	Reporting Limit
Test: TPH-D-TR-A			
Matrix: AQUEOUS			
QC Lot: 11 FEB 92-A QC Run: 11 FEB 92-A			
Diesel Fuel	ND	ug/L	50
Unknown hydrocarbon	ND	ug/L	50

DUPLICATE CONTROL SAMPLE REPORT
 Hydrocarbon Work Cell

Analyte	Concentration Spiked	Concentration Measured		AVG	Accuracy Average(%)		Precision (RPD)		
		DCS1	DCS2		DCS	Limits	DCS	Limit	
Category: TPH-D-TR-A Matrix: AQUEOUS QC Lot: 11 FEB 92-A Concentration Units: ug/L									
Diesel Fuel	300	304	261	282	94	34-147	15	28	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Total Petroleum Hydrocarbons (Gasoline) and BTEX



Method P/T-GBX-TRIREGIONAL

Client Name: SP Environmental
Client ID: 21660 - MW-4
Lab ID: 062713-0001-SA
Matrix: AQUEOUS
Authorized: 08 FEB 92

Sampled: 07 FEB 92
Prepared: NA

Received: 07 FEB 92
Analyzed: 13 FEB 92

Parameter	Result	Units	Reporting Limit
Benzene	ND	ug/L	0.50
Toluene	ND	ug/L	0.50
Ethylbenzene	ND	ug/L	0.50
Xylenes (total)	ND	ug/L	0.50
Gasoline	ND	ug/L	50
Unknown hydrocarbon	ND	ug/L	50

ND = Not detected
NA = Not applicable

Reported By: Pat Trinidad

Approved By: Lisa Stafford

The cover letter is an integral part of this report.

Rev 230787

Total Petroleum Hydrocarbons (Gasoline) and BTEX



Method P/T-GBX-TRIREGIONAL

Client Name: SP Environmental
Client ID: 21663 = MW-3
Lab ID: 062713-0002-SA
Matrix: AQUEOUS
Authorized: 08 FEB 92

Sampled: 07 FEB 92
Prepared: NA

Received: 07 FEB 92
Analyzed: 13 FEB 92

Parameter	Result	Units	Reporting Limit
Benzene	0.71	ug/L	0.50
Toluene	ND	ug/L	0.50
Ethylbenzene	ND	ug/L	0.50
Xylenes (total)	ND	ug/L	0.50
Gasoline	ND	ug/L	50
Unknown hydrocarbon	ND	ug/L	50

ND = Not detected
NA = Not applicable

Reported By: Pat Trinidad

Approved By: Lisa Stafford

The cover letter is an integral part of this report.

Rev 230787

Total Petroleum Hydrocarbons (Gasoline) and BTEX



Method P/T-GBX-TRIREGIONAL

Client Name: SP Environmental
Client ID: 21666 = MW-1
Lab ID: 062713-0003-SA
Matrix: AQUEOUS
Authorized: 08 FEB 92

Sampled: 07 FEB 92
Prepared: NA

Received: 07 FEB 92
Analyzed: 13 FEB 92

Parameter	Result	Units	Reporting Limit
Benzene	ND	ug/L	0.50
Toluene	ND	ug/L	0.50
Ethylbenzene	ND	ug/L	0.50
Xylenes (total)	ND	ug/L	0.50
Gasoline	ND	ug/L	50
Unknown hydrocarbon	ND	ug/L	50

ND = Not detected
NA = Not applicable

Reported By: Pat Trinidad

Approved By: Lisa Stafford

The cover letter is an integral part of this report.

Rev 230787

Total Petroleum Hydrocarbons by GC/FID (Triregional)



Method TPH-D-TRIREGIONAL

Client Name: SP Environmental
Client ID: 21660 = MW-4
Lab ID: 062713-0001-SA
Matrix: AQUEOUS
Authorized: 08 FEB 92

Sampled: 07 FEB 92
Prepared: 11 FEB 92

Received: 07 FEB 92
Analyzed: 17 FEB 92

Parameter	Result	Units	Reporting Limit
Diesel Fuel	ND	ug/L	50
Unknown hydrocarbon	ND	ug/L	50

ND = Not detected
NA = Not applicable

Reported By: Jon Edmondson

Approved By: Kirby Garrett

The cover letter is an integral part of this report.

Rev 230787

Total Petroleum Hydrocarbons by GC/FID (Triregional)



Method TPH-D-TRIREGIONAL

Client Name: SP Environmental
Client ID: 21663 = MW-3
Lab ID: 062713-0002-SA
Matrix: AQUEOUS
Authorized: 08 FEB 92

Sampled: 07 FEB 92
Prepared: 11 FEB 92

Received: 07 FEB 92
Analyzed: 17 FEB 92

Parameter	Result	Units	Reporting Limit	
Diesel Fuel	ND	ug/L	50	
Unknown hydrocarbon	1200	ug/L	50	1

Note 1 : The hydrocarbon pattern present in this sample represents an unknown mixture in the range of about C-10 to greater than C-30. Quantitation is based on a diesel reference between C-10 and C-24 only.

ND = Not detected
NA = Not applicable

Reported By: Jon Edmondson

Approved By: Kirby Garrett

The cover letter is an integral part of this report.

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Total Petroleum Hydrocarbons by GC/FID (Triregional)



Method TPH-D-TRIREGIONAL

Client Name: SP Environmental
Client ID: 21666 = MW-1
Lab ID: 062713-0003-SA
Matrix: AQUEOUS
Authorized: 08 FEB 92

Sampled: 07 FEB 92
Prepared: 11 FEB 92

Received: 07 FEB 92
Analyzed: 17 FEB 92

Parameter	Result	Units	Reporting Limit
Diesel Fuel	ND	ug/L	50
Unknown hydrocarbon	ND	ug/L	50

ND = Not detected
NA = Not applicable

Reported By: Jon Edmondson

Approved By: Kirby Garrett

The cover letter is an integral part of this report.
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