



Chevron U.S.A. Inc.
 2410 Camino Ramon, San Ramon, California • Phone (415) 842-9500
 Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

Marketing Department

July 16, 1991

ACHD

RFF

Ms. Susan Hugo
 Alameda County Environmental Health
 80 Swan Way, Room 200
 Oakland, CA 94621

01

JUL 18 1991

Re: Chevron Service Station #9-3864
 5101 Telegraph Ave.
 Oakland, California

Dear Ms. Hugo:

Enclosed we are forwarding the Quarterly Groundwater Sampling Report dated July 3, 1991, conducted by our consultant Sierra Environmental Services at the above referenced site. As indicated in the report, groundwater samples collected were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) and BTEX. Benzene was detected at concentrations ranging from 1 to 340 ppb. These concentrations are significantly higher than the previous concentrations reported. Depth to groundwater was measured at approximately 15-feet below grade, and the direction of flow is to the west.

All improvements, including the underground storage tanks and associated piping, are scheduled for removal in August, 1991. At this time, the material adjacent to the tanks and lines will be examined for evidence of adsorbed hydrocarbons. Samples will be collected and analyzed as prescribed in the Tri-Regional Guidelines - Section II Routine Tank Removal Investigations.

If you have any questions or comments please do not hesitate to contact Nancy Vukelich at (415) 842-9581.

Very truly yours,
 CHEVRON U.S.A. INC.

 Nancy Vukelich
 Environmental Engineer

Enclosure

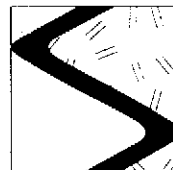
cc: ✓ Mr. Lester Feldman, RWQCB-Bay Area
 Mr. W.T. Scudder
 File (#9-3864Q1 Listing)

Mr. Paul Eveloff
 80 E. Sir Francis Drake Blvd.
 Larkspur, CA 94939

changes:
 1. MXGW : 6400 ppb TPHG

comment:

- Benz. - 340ppb in C-2
- Both Benz & TPHG increasing
- ~~UGT~~ UGT & pipes are scheduled to REMOVED in 8/91 for further investigation.



JUL 3 1991

July 3, 1991

Nancy Vukelich
Chevron USA
P.O. Box 5004
San Ramon, CA 94583

Re: Chevron S.S. #9-3864
5101 Telegraph Avenue
Oakland, California
SES Project #1-203-04

Dear Ms. Vukelich:

This report presents the results of the quarterly water sampling at Chevron S.S. #9-3864, located at 5101 Telegraph Avenue in Oakland, California (Figure 1, Appendix A). Ground water samples from four wells, C-1 through C-4, were collected (Figure 2, Appendix A).

On June 6, 1991, SES personnel visited the site. Free phase hydrocarbons were not present in any of the site wells. Water level data is shown in Table 1 (Appendix B) and a ground water elevation contour map is included as Figure 2 (Appendix A).

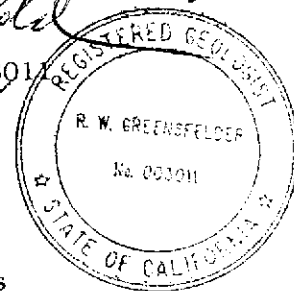
The water samples were collected on June 6, 1991 in accordance with SES Standard Operating Procedure - Ground Water Sampling (Appendix C). All analyses were performed by Superior Analytical Laboratory of Martinez, California. Analytic results for ground water are presented in Table 2 (Appendix B). Chain of custody documents and analytic reports are included in Appendix D. SES is not responsible for laboratory omissions or errors.

Thank you for allowing us to provide services to Chevron. Please call if you have any questions.

Sincerely,
Sierra Environmental Services

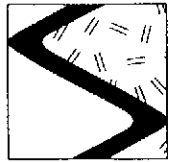
Andrew S. Rodgers
Andrew S. Rodgers
Project Geologist

Roger Greensfelder
Roger Greensfelder
Registered Geologist #00301

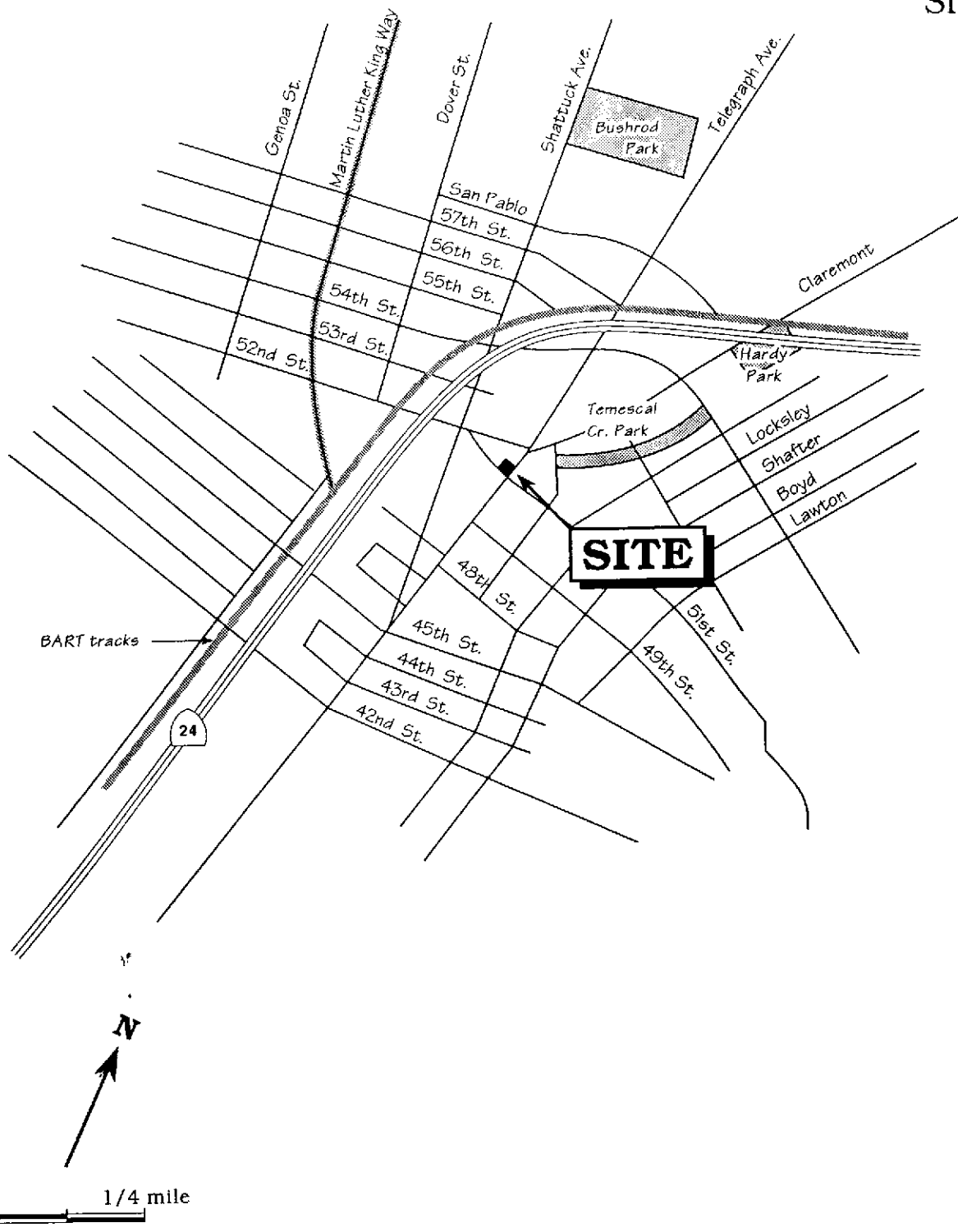


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Appendices A - Figures
B - Tables
C - SES Standard Operating Procedure
D - Chain of Custody Documents and Laboratory Analytic Reports

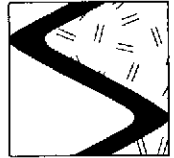


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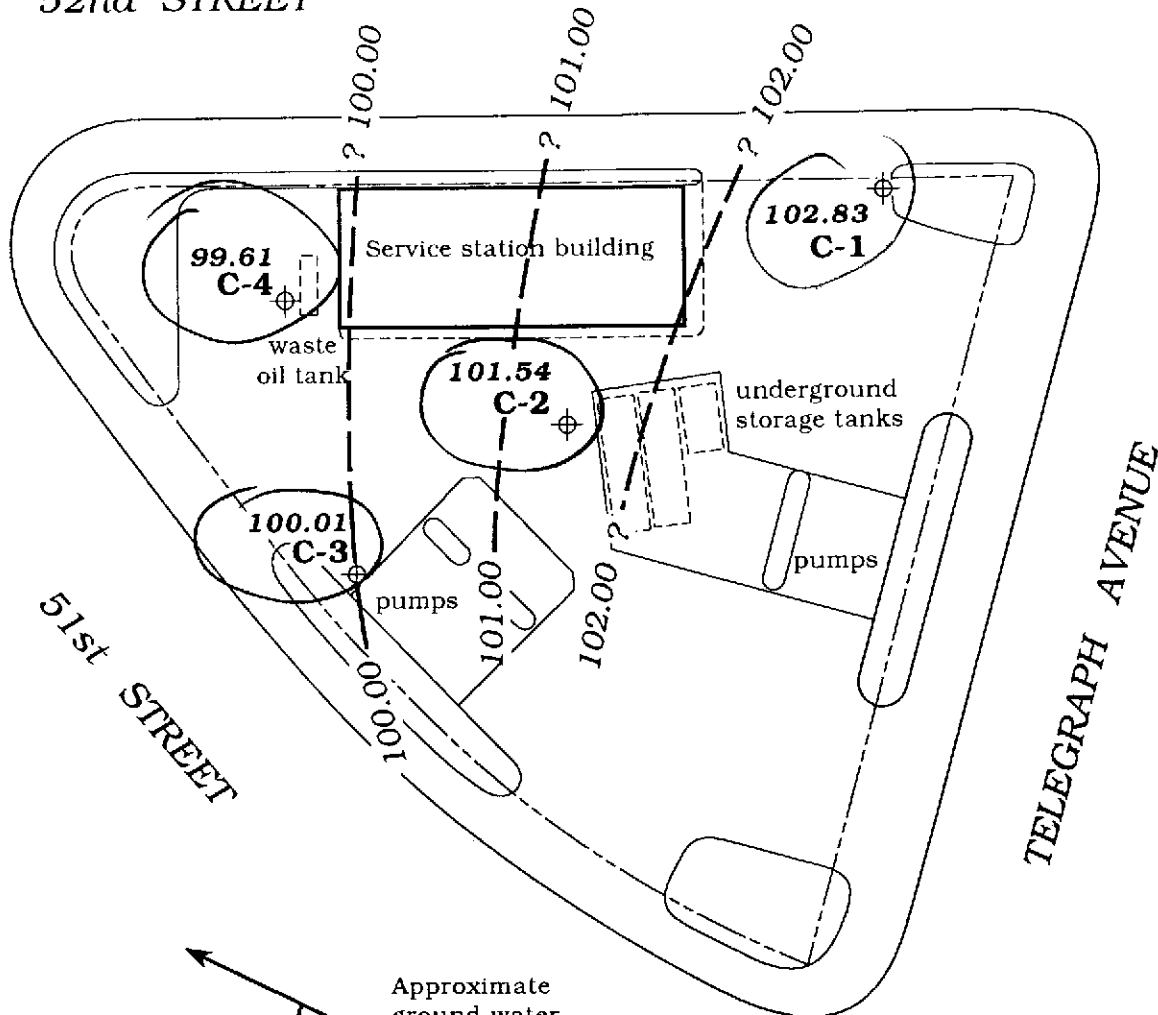
Base map ref: California Automobile Association (AAA)

Figure 1. Site Location Map - Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California

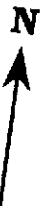


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52nd STREET



Approximate ground water flow direction



0 20 40 ft.

EXPLANATION

- ⊕ **C-3** Existing monitoring well
- 100.01** Ground water elevation
- 100.00 Ground water elevation contour, dashed where inferred, queried where uncertain

Base map after: GeoStrategies Inc.

Figure 2. Monitoring Well Location Map and Ground Water Elevation Contours - June 6, 1991 - Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California



Table 1. Water Level Data and Well Construction Details - Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California

Well ID	Date Measured	DTW (ft)	TOC (ft)	GWE (msl)	Product Thickness* (ft)	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval
						<-----feet below grade----->		
C-1	12/6/90	15.34	117.45	102.11	0	10 - 29.5	8 - 30	0 - 8
	6/6/91	14.62		102.83				
C-2	12/6/90	15.34	116.16	100.82	0	10 - 29.5	8 - 30	0 - 8
	6/6/91	14.62		101.54				
C-3	12/6/90	16.86	115.70	98.84	0	10 - 29.5	8 - 30	0 - 8
	6/6/91	15.69		100.01				
C-4	12/6/90	17.68	116.10	98.42	0	10 - 29.5	8 - 30	0 - 8
	6/6/91	16.49		99.61				

EXPLANATIONS:

DTW = Depth to water
 TOC = Top of casing elevation
 GWE = Ground water elevation
 msl = Measurements referenced relative to mean sea level

NOTES:

Depth to water measurements and top of casing elevations prior to June 6, 1991 were compiled from the January 17, 1991 Site Update Report prepared for this service station by GeoStrategies, Inc. of Hayward, California.

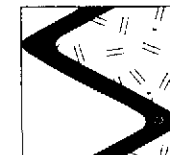
Well construction details were compiled from November 14 and 15, 1990 boring logs by GeoStrategies, Inc.

* Product thickness was measured by GeoStrategies, Inc. on December 6, 1990 with an electronic oil-water interface probe. SES product thickness measurements after 12/6/90 were made with an MMC flexi-dip interface probe.



Table 2. Analytic Results for Ground Water - Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California

Well ID	Date Sampled	Analytic Lab	Analytic Method	TPPH(G)	B	T	E	X
				←-----ppb----->				
C-1	12/6/90	SAL	8015/8020	1,900	17	11	3	21
	6/6/91	SAL	8015/8020	3,400	21	15	11	18
C-2	12/6/90	SAL	8015/8020	210	140	9	2	11
	6/6/91	SAL	8015/8020	4,800	340	23	19	23
C-3	12/6/90	SAL	8015/8020	210	2	<0.5	<0.5	1
	12/6/90 ¹	SAL	8015/8020	220	2	0.6	<0.5	2
	6/6/91	SAL	8015/8020	6,400	310	21	16	21
C-4	12/6/90	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	12/18/90 ²	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	6/6/91	SAL	8015/8020	<50	1.0	1.0	<0.5	0.7
AA (Trip Blank)	12/6/90	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	12/18/90 ³	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	6/6/91	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
BB (Bailer Blank)	6/6/91	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5



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Table 2. Analytic Results for Ground Water - Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California
(continued)

EXPLANATIONS:

TPPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
ppb = Parts per billion
--- = Not analyzed/not applicable

ANALYTIC METHODS:

8015 = EPA Method 8015 for TPPH(G)
8020 = EPA Method 8020 for BTEX

ANALYTIC LABORATORIES:

SAL = Superior Analytical Laboratory of Martinez and San Francisco, California.

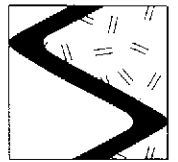
NOTES:

Ground water analytic data from December 6 and 18, 1990 was compiled from the January 17, 1991 Site Update Reports prepared for this service station by GeoStrategies, Inc. of Hayward, California.

¹ Duplicate sample.

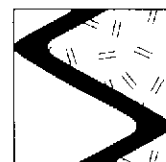
² C-4 was also analyzed for halogenated volatile organic compounds (HVOCs) by EPA Method 8010, and metals (Cd, Cr, Pb, Ni and Zn) by EPA-approved methods. Two ppb chloroform, 0.18 ppm chromium, 0.25 ppm nickel and 0.23 ppm zinc were detected. Other HVOCs, Cd and Pb were not detected.

³ The trip blank was also analyzed for HVOCs. HVOCs were not detected.



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APPENDIX C
SIERRA ENVIRONMENTAL SERVICES
STANDARD OPERATING PROCEDURE



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STANDARD OPERATING PROCEDURE GROUND WATER SAMPLING

The following describes sampling procedures used by SES field personnel to collect and handle ground water samples. Before samples are collected, careful consideration is given to the type of analysis to be performed so that precautions are taken to prevent loss of volatile components or contamination of the sample, and to preserve the sample for subsequent analysis. Wells will be sampled no less than 24 hours after well development. Collection methods specific to ground water sampling are presented below.

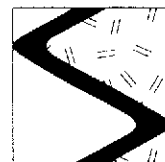
Prior to sampling, each well is checked for the presence of free-phase hydrocarbons using an MMC flexi-dip interface probe. Product thickness (measured to the nearest 0.01 ft) is noted on the sampling form. Water level measurements are also made using either a water level meter or the interface probe. The water level measurements are also noted on the sampling form.

Prior to sampling, each well is purged of a minimum of four well casing volumes of water using a steam-cleaned PVC bailer, or a pre-cleaned pump. Temperature, pH and electrical conductivity are measured at least three times during purging. Purging is continued until these parameters have stabilized (i.e., changes in temperature, pH or conductivity do not exceed $\pm 0.5^{\circ}\text{F}$, 0.1 or 5%, respectively).

log result ?

The purge water is stored temporarily on-site in 55-gallon Department of Transportation-approved drums pending analytic results. The drums are labeled with the date, contents, the SES field personnel initials and SES phone number.

Ground water samples are collected from the wells with steam-cleaned Teflon bailers. The water samples are decanted into the appropriate container for the analysis to be performed. Pre-preserved sample containers may be used or the analytic laboratory may add preservative to the sample upon arrival. Duplicate samples are collected from each well as a back-up sample and/or to provide quality control. The samples are labeled to include the project number, sample ID, date, preservative, and the field person's initials. The samples are placed in polyethylene bags and in an ice chest (maintained at 4°C with blue ice or ice) for transport under chain-of-custody to the laboratory.

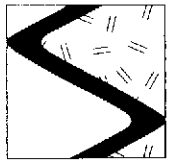


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The chain-of-custody form includes the project number, analysis requested, sample ID, date analysis and the SES field person's name. The form is signed and dated (with the transfer time) by each person who yields or receives the samples beginning with the field personnel and ending with the laboratory personnel.

A trip blank and bailer blank accompanies each sampling set, or 5% trip blanks and 5% bailer blanks are included for sets of greater than 20 samples. The bailer blank is prepared by pouring previously boiled water into a steam-cleaned Teflon bailer prior to sampling a well. The trip and bailer blanks are analyzed for some or all of the same compounds as the ground water samples.

GWTRSAMP.SOP



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APPENDIX D
CHAIN OF CUSTODY DOCUMENTS AND
LABORATORY ANALYTIC REPORTS

Revised FP

83275

Chain-of-Custody Record

Chevron U.S.A. Inc. P.O. Box 5004 San Ramon, CA 94583 FAX (415) 842-9591	Chevron Facility No. <u>9-3864</u> Facility Address <u>5101 Telegraph Ave. Oakland, Cal.</u> Consultant Project Number <u>1-203-04</u> Consultant Name <u>SIERRA ENVIRONMENTAL SERVICES</u> Address <u>P.O. Box 2546, Martinez, CA 94553</u> Project Contact (Name) <u>Andy Rodgers</u> (Phone) <u>(415) 370-1280</u> (FAX Number) <u>(415) 370-7959</u>	Chevron Contact (Name) <u>Nancy Vukelich</u> (Phone) <u>(415) 842-9581</u> Laboratory Name <u>SAB</u> Laboratory Release Number <u>4056670</u> Samples Collected by (Name) <u>Frank Drewes</u> Collection Date <u>6-6-91</u> Signature <u>Frank Drewes</u>
--	---	--

Sample No.	Number of Containers	Matrix S = Soil W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (yes or no)	ANALYSIS TO BE PERFORMED										Remarks	
							BTEX + TPH Gas (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Chlorinated Hydrocarbons (8010)	Non-Chlorinated Hydrocarbons (8020)	Total Lead (AA)	Metals: Cd, Cr, Zn, Ni (ICAP or AA)					
AA	3	W	-	1030	HCL	yes	✓											Please Analyze in this order Analyze ↓
BB	3	↓	↓	1035	↓	↓	✓											
L-4	3	↓	↓	1140	↓	↓	✓											
L-3	3	↓	↓	1205	↓	↓	✓											
L-2	3	↓	↓	1235	↓	↓	✓											
L-1	3	↓	↓	1250	↓	↓	✓											

Relinquished By (Signature) <u>Frank Drewes</u>	Organization <u>SES</u>	Date/Time <u>6/6/91 1510</u>	Received By (Signature) <u>[Signature]</u>	Organization	Date/Time	Turn Around Time (Circle One) 24 hours 48 hours 5 days 10 days <u>As Contracted</u>
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	
Relinquished By (Signature)	Organization	Date/Time	Received for Laboratory by (Signature) <u>[Signature]</u>	Organization	Date/Time <u>6/6/91 1510</u>	

SUPERIOR ANALYTICAL LABORATORIES, INC.

825 ARNOLD, STE. 114 • MARTINEZ, CALIFORNIA 94553 • (415) 229-1512

DOHS #319

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 83275
CLIENT: Sierra Environmental
CLIENT JOB NO.: 1-203-04

DATE RECEIVED: 06/06/91
DATE REPORTED: 06/13/91

Page 1 of 2

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
83275- 1	AA	06/06/91	06/12/91
83275- 2	BB	06/06/91	06/12/91
83275- 3	C-4	06/06/91	06/12/91
83275- 4	C-3	06/06/91	06/12/91
83275- 5	C-2	06/06/91	06/12/91
83275- 6	C-1	06/06/91	06/12/91

Laboratory Number:	83275	83275	83275	83275	83275
	1	2	3	4	5

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	ND<50	ND<50	6400	4800
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	ND<0.5	ND<0.5	1.0	310	340
TOLUENE:	ND<0.5	ND<0.5	1.0	21	23
ETHYL BENZENE:	ND<0.5	ND<0.5	ND<0.5	16	19
XYLENES:	ND<0.5	ND<0.5	0.7	21	23

Laboratory Number:	83275
	6

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)
OIL AND GREASE:	NA
TPH/GASOLINE RANGE:	3400
TPH/DIESEL RANGE:	NA
BENZENE:	21
TOLUENE:	15
ETHYL BENZENE:	11
XYLENES:	18

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SUPERIOR ANALYTICAL LABORATORIES, INC.

825 ARNOLD, STE. 114 • MARTINEZ, CALIFORNIA 94553 • (415) 229-1512

DOHS #319

C E R T I F I C A T E O F A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2
QA/QC INFORMATION
SET: 83275

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
ug/l = part per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 503E:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA-SW846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/l
Standard Reference: NA

EPA-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/l
Standard Reference: 03/28/91

SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/l
Standard Reference: 04/18/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	03/28/91	200 ng	98/95	4	70-130
Benzene	04/18/91	200 ng	93/95	2	70-130
Toluene	04/18/91	200 ng	98/100	2	70-130
Ethyl Benzene	04/18/91	200 ng	102/103	1	70-130
Total Xylene	04/18/91	200 ng	102/104	1	70-130

Richard Srna, Ph.D.

Laboratory Director

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↑ Not certified ?