



Chevron U.S.A. Inc.

2410 Camino Ramon, San Ramon, California • Phone (510) 842-9500
Mail Address PO Box 5004, San Ramon, CA 94583-0804

BE

91 OCT -7 11:12:04

Marketing Department

October 2, 1991

Ms. Pamela Evans
Alameda County Health Care Services Agency
80 Swan Way, Room 200
Oakland, CA 94621

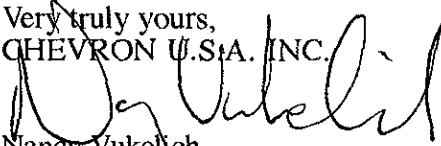
**Re: Former Chevron Service Station #9-5630
997 Grant Avenue, San Lorenzo**

Dear Ms. Evans:

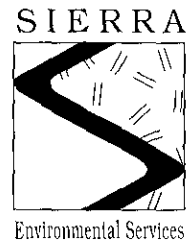
Enclosed we are forwarding the Quarterly Ground Water Sampling Report dated September 23, 1991, prepared by our consultant Sierra Environmental Services for the above referenced site. As indicated in the report, ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline and BTEX. Benzene was detected in monitor wells C-2 and C-3 only at concentrations of 1.3 and 150 ppb, respectively. Monitor well C-4 was destroyed to allow for the previous soils remediation activity. Depth to ground water was measured at approximately 11 to 13-feet below grade, and the direction of flow is to the north-northeast.

Chevron will continue to sample this site and report findings on a quarterly basis. At completion of one (1) year of sampling, an evaluation will be conducted of the groundwater data and appropriate next actions recommended.

If you have any questions or comments, please do not hesitate to contact me at (510) 842-9581.

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

Nancy Vukelich
Environmental Engineer

cc: Mr. Eddie So, RWQCB-Bay Area
Ms. B.C. Owen
File (9-5630Q1)



September 23, 1991

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

Re: Former Chevron Service Station #9-5630
997 Grant Avenue
San Lorenzo, California
SES Project #1-206-04

Dear Ms. Vukelich:

This report presents the results of the quarterly ground water sampling at Former Chevron Service Station #9-5630, located at 997 Grant Avenue, San Lorenzo, California (Figure 1, Appendix A). Three wells, C-1 through C-3, were sampled (Figure 2, Appendix A).

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

The ground water samples were collected on September 6, 1991 in accordance with SES Standard Operating Procedure - Ground Water Sampling (Appendix C). All analyses were performed by Superior Precision Analytical, Inc. of Martinez, California. Analytic results for ground water are presented in Table 2 (Appendix B). The chain of custody document 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 Jeanne Wahler if you have any questions.



Sincerely,
Sierra Environmental Services

Argy Mena
Argy Mena
Staff Geologist

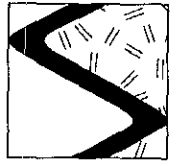
Robert L. Eddy
Robert Eddy
PE #22958

AM/RE:ly
20604QM.SE1

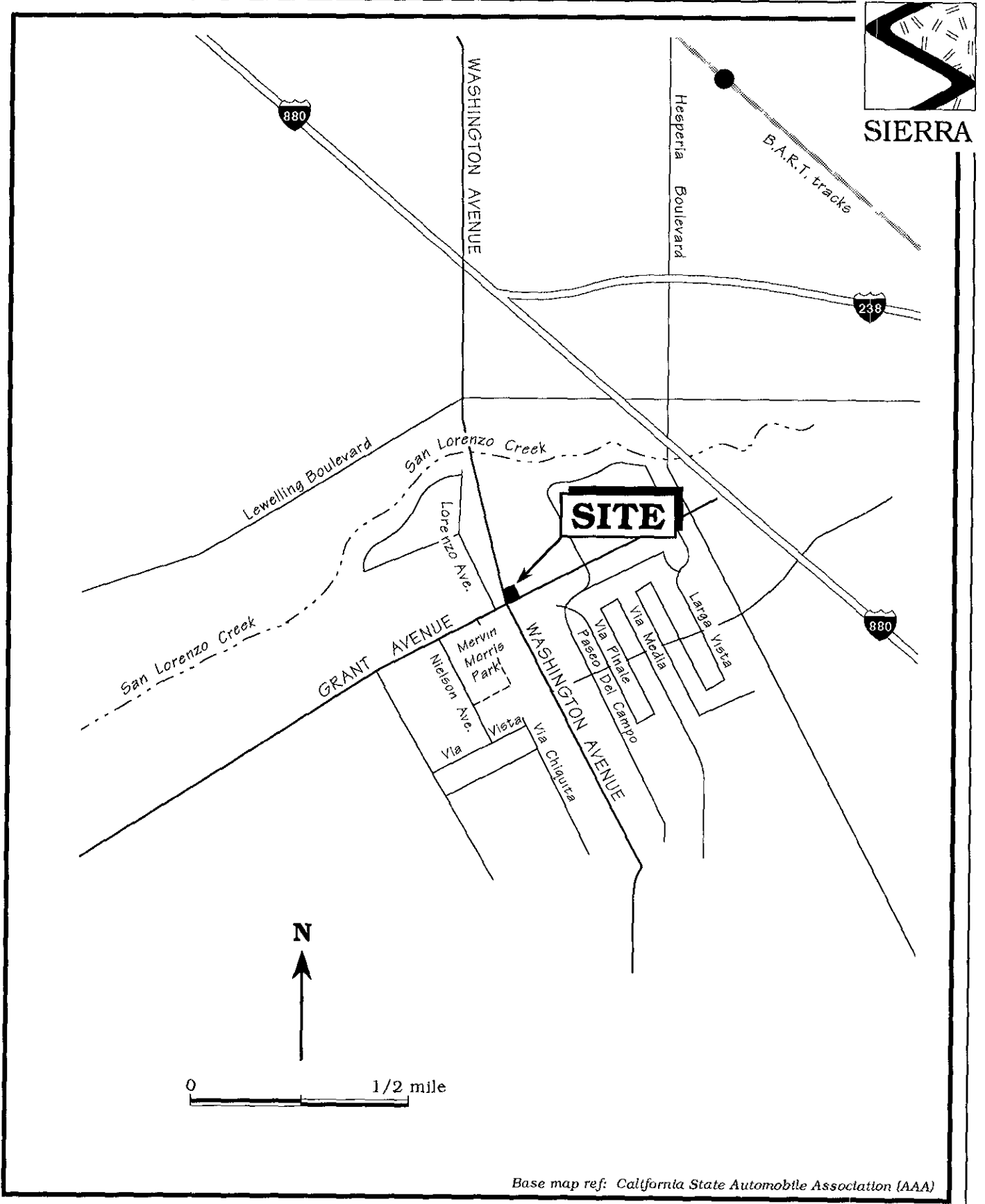
- Appendices A - Figures
- B - Tables
- C - SES Standard Operating Procedure
- D - Chain of Custody Document and Laboratory Analytic Reports



APPENDIX A
FIGURES



SIERRA

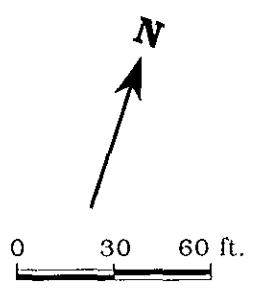
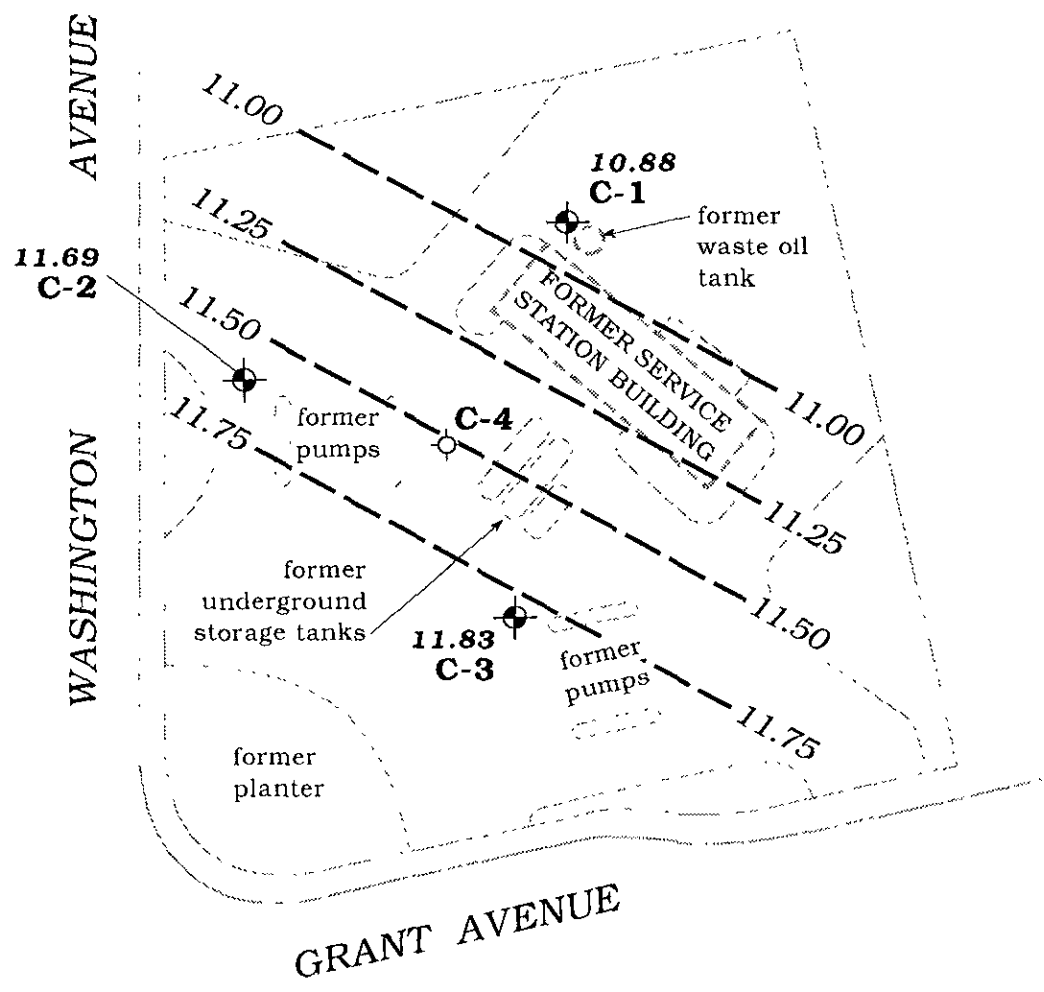


Base map ref: California State Automobile Association (AAA)

Figure 1. Site Location Map - Former Chevron Service Station #9-5630 - 997 Grant Avenue, San Lorenzo, California



Approximate
ground water
flow direction



EXPLANATION	
	C-3 Monitoring well
	C-4 Destroyed well
11.83	Ground water elevation
	11.50 Ground water elevation contour, dashed where inferred, queried where uncertain

Base map after GeoStrategies Inc.

Figure 2. Monitoring Well Locations and Ground Water Elevation Contour Map - September 6, 1991 - Former Chevron Service Station #9-5630, 997 Grant Avenue, San Lorenzo, California



APPENDIX B
TABLES



Table 1. Water Level Data and Well Construction Details - Former Chevron Service Station #9-5630, 997 Grant Avenue, San Lorenzo, California

Well ID	Date Measured	DTW (ft)	TOC (ft)	GWE (msl)	Product Thickness (ft)	Screen Interval <-----feet below grade----->	Sand Pack Interval	Bentonite/Grout Interval
C-1	12/5/90 9/6/91	12.44 13.20	24.08	11.64 10.88	0 0	15 - 28	13 - 28	0 - 13
C-2	12/5/90 9/6/91	11.30 11.00	22.69	11.39 11.69	0 0	15 - 28	13 - 28	0 - 13
C-3	12/5/90 9/6/91	11.75 11.62	23.45	11.70 11.83	0 0	17 - 27	15 - 27	0 - 15
C-4	12/5/90 9/6/91¹	11.85 ---	23.32 ---	11.47 ---	0 ---	17 - 29	17 - 29	0 - 15

EXPLANATION:

DTW = Depth to water
 TOC = Top of casing elevation
 GWE = Ground water elevation
 msl = Measurements referenced relative to mean sea level
 --- = Not applicable

NOTE:

SES product thicknesses were measured with an MMC flexi-dip interface probe.

¹ Well was destroyed during tank removal and soil excavation operations.



Table 2. Analytic Results for Ground Water - Former Chevron Service Station #9-5630, 997 Grant Avenue, San Lorenzo, California

Well ID	Date Sampled	Analytic Method	Analytic Lab	TPPH (G)	-----ppb-----					O&G
					B	T	E	X		
C-1	12/5/90	8015/8020/503E	SAL	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.000
	9/6/91	8015/8020	SPA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---
C-2	12/5/90	8015/8020	SAL	<50	0.7	<0.5	<0.5	0.5	---	
	9/6/91	8015/8020	SPA	<50	1.3	0.6	0.7	1.5	---	
C-3	12/5/90	8015/8020	SAL	<50	1	0.7	<0.5	<0.5	---	
	9/6/91	8015/8020	SPA	1,100	150	0.6	51	1.9	---	
C-4	12/5/90	8015/8020	SAL	<50	4	2	0.7	3	---	
	9/6/91¹	---	---	---	---	---	---	---	---	
AA (Trip Blank)	12/5/90	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---	
	9/6/91	8015/8020	SPA	<50	<0.5	<0.5	<0.5	<0.5	---	
BB (Bailer Blank)	9/6/91	8015/8020	SPA	<50	<0.5	<0.5	<0.5	<0.5	---	
DHS MCLs	---	---	---	NE	1	---	680	1,750	NE	
DHS RALs	---	---	---	NE	---	100	---	---	NE	



Table 2. Analytic Results for Ground Water - Former Chevron Service Station #9-5630, 997 Grant Avenue, San Lorenzo, California
(continued)

EXPLANATION:

TPPH (G) = Total Purgeable Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
O&G = Total Oil and Grease
--- = Not analyzed/Not applicable
DHS MCLs = Department of Health Services Maximum Contaminant Levels
DHS RALs = Department of Health Services Recommended Action Levels
NE = Not established
ppb = Parts per billion

ANALYTIC METHODS:

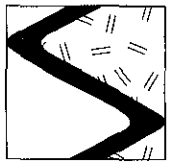
8015 = EPA Method 8015/5030 for TPPH (G)
8020 = EPA Method 8020 for BTEX
503E = Standards Method Method 503E for O&G

ANALYTIC LABORATORY:

SAL = Superior Analytical Laboratory of San Francisco,
California
SPA = Superior Precision Analytical, Inc. of Martinez,
California

NOTE:

¹ Well was destroyed during tank removal and soil excavation operations.



SIERRA

APPENDIX C
SIERRA ENVIRONMENTAL SERVICES
STANDARD OPERATING PROCEDURE



SES 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 foot) 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).

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.

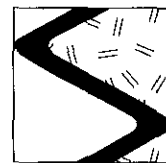
Ground water samples are collected from the wells with steam-cleaned Teflon bailers. The water samples are decanted into the appropriate container for the analysis to be performed. Pre-preserved sample containers may be used or the analytic laboratory may add preservative to the sample upon arrival. 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.



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



SIERRA

APPENDIX D
CHAIN OF CUSTODY DOCUMENT AND
LABORATORY ANALYTIC REPORTS

83863

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>9-5630</u>	Chevron Contact (Name) <u>Nancy Vukelich</u>
	Facility Address <u>997 Grant Ave. San Lorenzo</u>	(Phone) <u>842-9591</u>
	Consultant Project Number <u>1-206-04</u>	Laboratory Name <u>Superior Precision Analytical, Inc.</u>
	Consultant Name <u>SIERRA ENVIRONMENTAL SERVICES</u>	Laboratory Release Number <u>5234890</u>
	Address <u>P.O. Box 2546, Martinez, CA 94553</u>	Samples Collected by (Name) <u>Gary Cross</u>
Project Contact (Name) <u>Jeanne Wahler</u>	Collection Date <u>9/6/91</u>	Signature <u>Gary Cross</u>
(Phone) <u>(415) 370-1280</u>		
(FAX Number) <u>(415) 370-7959</u>		

Laboratory Number	Sample Identification	# - size of Container(s)	Matrix S = Soil W = Water	A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (yes or no)	ANALYSIS TO BE PERFORMED										Remarks	
									BTEX + TPH Gas (602/8020 + 8015/5030)	TPH Diesel (8015/8550/3510)	Oil and Grease (Non-polar) (5520 B/E/F)	Halogenated Hydrocarbons (601/8010)	Volatile Organic Compounds (624/8240)	Total Lead (AA)	Metals: Cd, Cr, Ni, Pb, Zn (ICAP or AA)	Organic lead (DHS LUFT)				
1	AA	3	W		G	1000	HCL	Y	✓											Analyze in Order ↓
2	BB	↓	↓		↓	1330	↓	↓	✓											
3	C-1	↓	↓		↓	1320	↓	↓	✓											
4	1-2	↓	↓		↓	1315	↓	↓	✓											
5	C-3	↓	↓		↓	1300	↓	↓	✓											

Please Initial:

Samples Stored in ice. BAD

Appropriate containers BAD

Samples preserved BAD

VOA's without headspace BAD

Comments: _____

Relinquished By (Signature) <u>Gary Cross</u>	Organization <u>SES</u>	Date/Time <u>9/6/91 15:30</u>	Received By (Signature) _____	Organization _____	Date/Time _____	Turn Around Time (Circle One) 24 hours 48 hours 5 days 10 days As Contracted
Relinquished By (Signature) _____	Organization _____	Date/Time _____	Received By (Signature) _____	Organization _____	Date/Time _____	
Relinquished By (Signature) _____	Organization _____	Date/Time _____	Received for Laboratory by (Signature) <u>Tyler L. O'Connell Superior</u>		Date/Time <u>9/06/91 15:30</u>	



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

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

LABORATORY NO.: 83863
CLIENT: Sierra Environmental
CLIENT JOB NO.: 1-206-04

DATE RECEIVED: 09/06/91
DATE REPORTED: 09/13/91

Page 1 of 2

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
83863- 1	AA	09/06/91	09/13/91
83863- 2	BB	09/06/91	09/13/91
83863- 3	C-1	09/06/91	09/13/91
83863- 4	C-2	09/06/91	09/13/91
83863- 5	C-3	09/06/91	09/13/91

Laboratory Number:	83863 1	83863 2	83863 3	83863 4	83863 5
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ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	ND<50	ND<50	ND<50	1100
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	ND<0.5	ND<0.5	ND<0.5	1.3	150
TOLUENE:	ND<0.5	ND<0.5	ND<0.5	0.6	0.6
ETHYL BENZENE:	ND<0.5	ND<0.5	ND<0.5	0.7	51
XYLENES:	ND<0.5	ND<0.5	ND<0.5	1.5	1.9



CERTIFICATE OF ANALYSIS

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2
QA/QC INFORMATION
SET: 83863

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: 06/26/91

SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/l
Standard Reference: 07/08/91

Table with 6 columns: ANALYTE, REFERENCE, SPIKE LEVEL, MS/MSD RECOVERY, RPD, CONTROL LIMIT. Rows include Oil & Grease, Diesel, Gasoline, Benzene, Toluene, Ethyl Benzene, and Total Xylene.

Richard Srna, Ph.D.
Laboratory Director