



**Chevron U.S.A. Products Company**

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

*Copy from original County file JMS 11/16/95*

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October 6, 1992

Ms. Juliet Shin  
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. Shin:

Enclosed we are forwarding the Quarterly Ground Water Sampling Report dated October 1, 1992, 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. All samples reported non-detectable concentrations of these constituents with the exception of monitor well C-3 which reported Xylene only at a concentration of .9 ppb. In addition, the bailer blank contained .4 ppb of xylenes which could have altered the results. Depth to ground water was measured at approximately 9.5 to 11.7-feet below grade, and the direction of flow is to the west.

A work plan is currently being prepared proposing to install an additional monitor well off-site down-gradient of the residuals that remain in the sidewall sample collected on the western property boundary. This well will assess if the ground water off-site has been impacted. This work plan will be forwarded to your office no later than October 30, 1992, for your review and formal concurrence.

Chevron will continue to sample this site and report findings on a quarterly basis.

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. PRODUCTS COMPANY

  
Nancy Vukelich  
Site Assessment and Remediation Engineer

cc: Mr. Rich Hielt, RWQCB-Bay Area  
Ms. B.C. Owen  
File (9-5630Q5)

Ms. Beth Castleberry  
Ware & Freidenrich  
400 Hamilton Avenue  
Palo Alto, CA 94301-1825



October 1, 1992

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 in San Lorenzo, California (Figure 1, Appendix A). Three wells, C-1, C-2 and C-3, were sampled (Figure 2, Appendix A).

On September 2, 1992, SES personnel visited the site. Water level measurements were collected in all site wells and all wells were checked for the presence of free-phase hydrocarbons. 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 2, 1992 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 laboratory 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

*Carol Eaton*  
Carol Eaton  
Staff Environmental Scientist

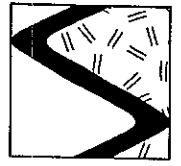
*Chris J. Bramer*  
Chris J. Bramer  
Professional Engineer #C48846

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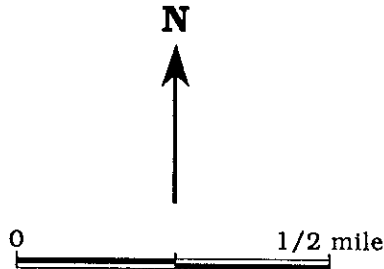
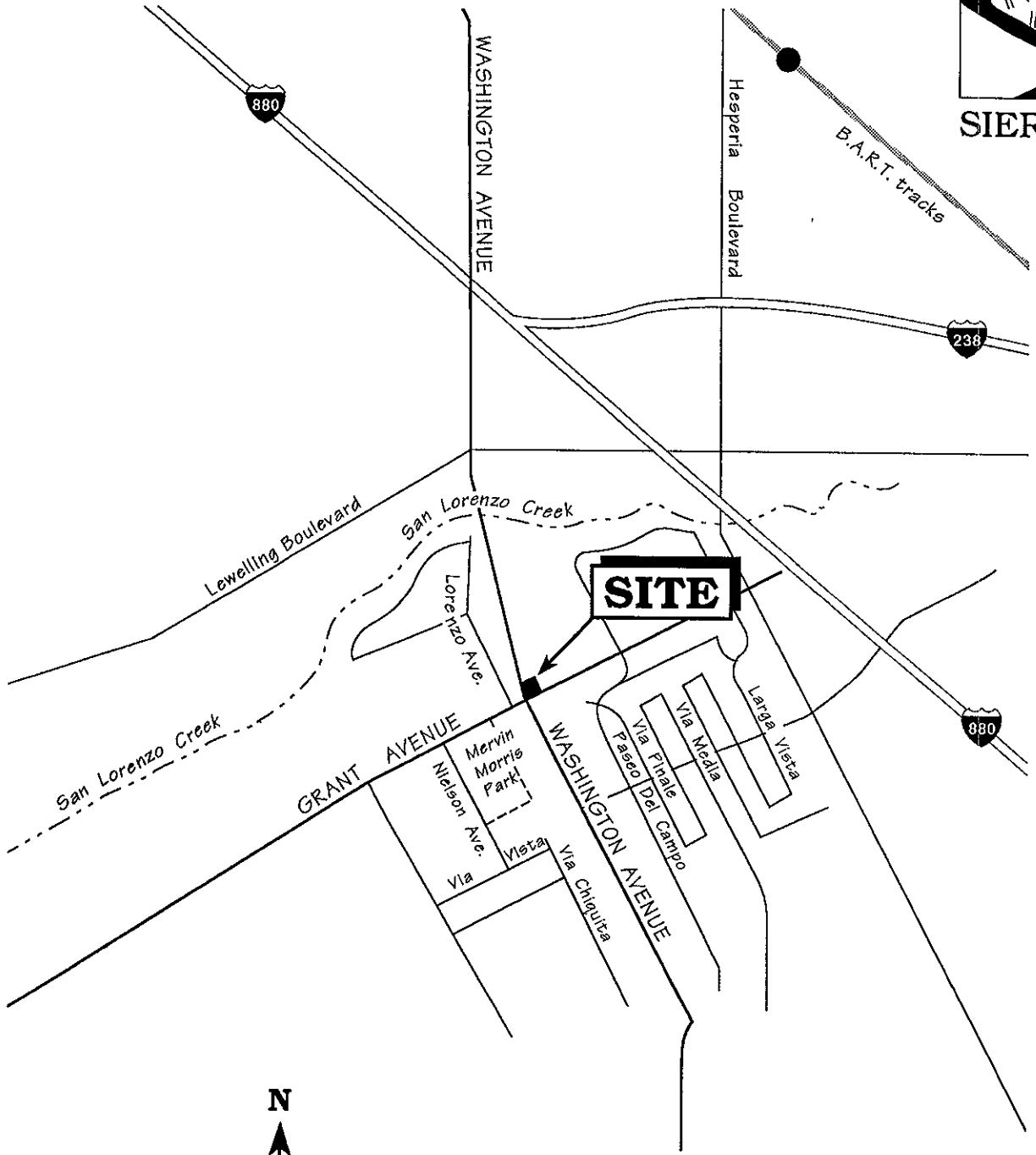
- Appendices
- A - Figures
- B - Tables
- C - SES Standard Operating Procedure
- D - Chain of Custody Document and Laboratory Analytic Reports



**APPENDIX A**  
**FIGURES**



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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

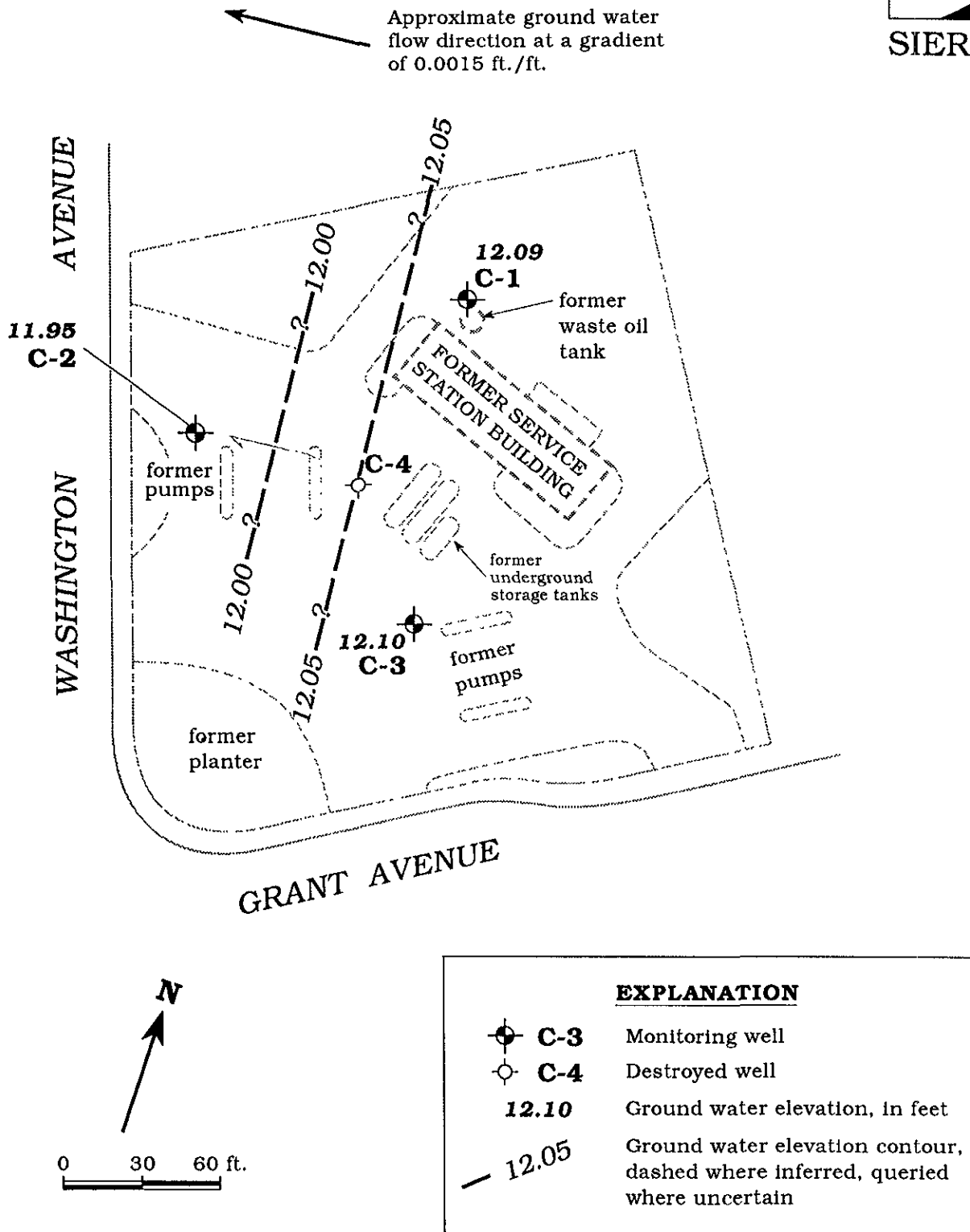
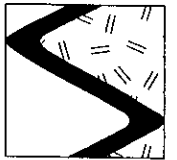
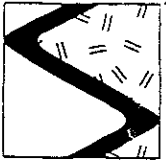


Figure 2. Monitoring Well Locations and Ground Water Elevation Contour Map - September 2, 1992 - Former Chevron Service Station #9-5630, 997 Grant Avenue, San Lorenzo, California



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**APPENDIX B**  
**TABLES**



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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	12.44	24.08 <sup>1</sup>	11.64	0	15 - 28	13 - 28	0 - 13
	9/6/91	13.20	23.88 <sup>2</sup>	10.68	0			
	12/4/91	11.71		12.17	0			
	4/2/92	9.43		14.45	0			
	6/3/92	10.14		13.74	0			
	<b>9/2/92</b>	<b>11.79</b>		<b>12.09</b>	<b>0</b>			
C-2	12/5/90	11.30	22.69 <sup>1</sup>	11.39	0	15 - 28	13 - 28	0 - 13
	9/6/91	11.00	21.54 <sup>2</sup>	10.54	0			
	12/4/91	9.38		12.16	0			
	4/2/92	7.33		14.21	0			
	6/3/92	8.99		12.55	0			
	<b>9/2/92</b>	<b>9.59</b>		<b>11.95</b>	<b>0</b>			
C-3	12/5/90	11.75	23.45 <sup>1</sup>	11.70	0	17 - 27	15 - 27	0 - 15
	9/6/91	11.62	22.40 <sup>2</sup>	10.78	0			
	12/4/91	10.14		12.26	0			
	4/2/92	8.07		14.33	0			
	6/3/92	8.63		13.77	0			
	<b>9/2/92</b>	<b>10.30</b>		<b>12.10</b>	<b>0</b>			
C-4	12/5/90	11.85	23.32 <sup>1</sup>	11.47	0	17 - 29	17 - 29	0 - 15
	9/6/91 <sup>3</sup>	---	---	---	---			
	12/4/91 <sup>3</sup>	---	---	---	---			

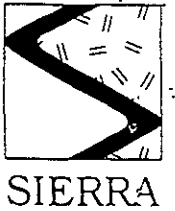


Table 1. Water Level Data and Well Construction Details - Former Chevron Service Station #9-5630, 997 Grant Avenue, San Lorenzo, California (continued)

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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.  
<sup>1</sup> Well head elevations taken from the Preliminary Site Assessment/Well Installation Report prepared by GeoStrategies, Inc., dated February 8, 1991.  
<sup>2</sup> Top of Casing elevations surveyed by Ron Miller, P.E. #15816, on April 2, 1992. Ground water elevations prior to this date, corrected using this survey data.  
<sup>3</sup> 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 Lab	Analytic Method	TPPH(G) -----ppb-----						O&G
				B	T	E	X			
C-1	12/5/90	SAL	8015/8020/503E	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5,000
	9/6/91	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---
	12/4/91	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---
	4/2/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5,000
	6/3/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---
	9/2/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---
C-2	12/5/90	SAL	8015/8020	<50	0.7	<0.5	<0.5	0.5	---	---
	9/6/91	SPA	8015/8020	<50	1.3	0.6	0.7	1.5	---	---
	12/4/91 <sup>2</sup>	---	---	---	---	---	---	---	---	---
	4/2/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---
	6/3/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---
	9/2/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---
C-3	12/5/90	SAL	8015/8020	<50	1	0.7	<0.5	<0.5	---	---
	9/6/91	SPA	8015/8020	1,100	150	0.6	51	1.9	---	---
	12/4/91	SPA	8015/8020	89	<0.5	<0.5	0.7	0.6	---	---
	4/2/92	SPA	8015/8020	60	2.1	1.3	1.1	3.2	---	---
	6/3/92	SPA	8015/8020	180	3.0	1.4	0.6	1.5	---	---
	9/2/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	0.9	---	---
C-4	12/5/90	SAL	8015/8020	<50	4	2	0.7	3	---	---
	9/6/91 <sup>1</sup>	---	---	---	---	---	---	---	---	---
AA (Trip Blank)	12/5/90	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---	---
	9/6/91	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---	---
	12/4/91	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---	---
	4/2/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---	---
	6/3/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---	---
	9/2/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---	---



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

Well ID	Date Sampled	Analytic Lab	Analytic Method	TPPH(G)	B	T	E	X	O&G
				-----ppb-----					
BB	9/6/91	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
(Bailer Blank)	12/4/91	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	4/2/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	6/3/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	9/2/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	0.4	---
DHS MCLs	---	---	---	NE	1	---	680	1,750	NE
DHS RALs	---	---	---	NE	---	100	---	---	NE

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 = Department of Health Services  
 MCLs = Maximum Contaminant Levels  
 RALs = Recommended Action Levels  
 NE = Not established  
 ppb = Parts per billion

ANALYTIC METHODS:

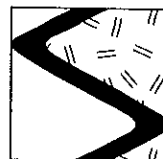
8015 = EPA Method 8015/5030 for TPH(G)  
 8020 = EPA Method 8020 for BTEX  
 503E = Standards Method Method 503E for O&G

ANALYTIC LABORATORY:

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

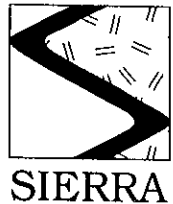
NOTE:

- <sup>1</sup> Well was destroyed during tank removal and soil excavation operations.
- <sup>2</sup> Well obstructed, therefore could not be sampled.



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**APPENDIX C**  
**SIERRA ENVIRONMENTAL SERVICES**  
**STANDARD OPERATING PROCEDURES**



## **SES STANDARD OPERATING PROCEDURE GROUND WATER SAMPLING - QUARTERLY MONITORING**

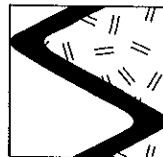
The following describes sampling procedures used by SES field personnel to collect and handle ground water samples. Before samples are collected, careful consideration is given to the type of analysis to be performed so that precautions are taken to prevent loss of volatile components or contamination 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 three well casing volumes of water using a steam-cleaned PVC bailer, or a pre-cleaned pump. Temperature, pH and electrical conductivity are measured during purging. Purging is continued until these parameters have stabilized for consecutive readings.

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.

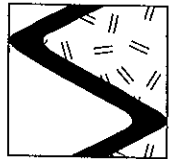
The chain of custody form includes the project number, analysis requested, sample ID, date analysis and the SES field person's name. The form is signed and dated (with the transfer time) by each person who yields or receives the samples beginning with the field personnel and ending with the laboratory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



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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.

GWS-QMP2.SOP



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**APPENDIX D**  
CHAIN OF CUSTODY DOCUMENT AND  
LABORATORY ANALYTIC REPORTS



# Superior Precision Analytical, Inc.

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

Sierra Environmental  
Attn: Chris Bramer

Project 1-206-04  
Reported 09/16/92

## TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
86607- 1	TB-LB	09/02/92	09/09/92 Water
86607- 2	BB	09/02/92	09/10/92 Water
86607- 3	C1	09/02/92	09/10/92 Water
86607- 4	C2	09/02/92	09/09/92 Water
86607- 5	C3	09/02/92	09/10/92 Water

## RESULTS OF ANALYSIS

Laboratory Number: 86607- 1    86607- 2    86607- 3    86607- 4    86607- 5

Gasoline:	ND<50	ND<50	ND<50	ND<50	ND<50
Benzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Toluene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Ethyl Benzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Xylenes:	ND<0.5	0.4	ND<0.5	ND<0.5	0.9
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L



# 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

### ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2  
QA/QC INFORMATION  
SET: 86607

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

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:  
Minimum Detection Limit in Water: 5000ug/L

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:  
Minimum Quantitation Limit for Diesel in Water: 50ug/L

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:  
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	200 ng	93/95	2%	70-130
Benzene:	200 ng	98/97	1%	70-130
Toluene:	200 ng	104/105	1%	70-130
Ethyl Benzene:	200 ng	105/106	1%	70-130
Xylenes:	200 ng	102/103	1%	70-130

Richard Srna, Ph.D.  
*Nancy A. Nelson*  
Laboratory Director



Chevron U.S.A. Inc. P.O. BOX 5004 San Ramon, CA 94583 FAX (415)842-9591	Chevron Facility Number <u>9-5630</u> Facility Address <u>997 Grant Ave San Lorenzo</u> Consultant Project Number <u>1-206-04</u> Consultant Name <u>Sierra Environmental Services</u> Address <u>PO Box 2546 Martinez CA</u> Project Contact (Name) <u>Chris Bramer</u> (Phone) <u>510-370-4280</u> (Fax Number) <u>510-370-7959</u>	Chevron Contact (Name) <u>Nancy Vukelich</u> (Phone) <u>842-9581</u> Laboratory Name <u>Superior Precision Analytical</u> Laboratory Release Number <u>4247210</u> Samples Collected by (Name) <u>Jim Green</u> Collection Date <u>9-2-92</u> Signature <u>Jim Green</u>
--	---	--

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed										Note: Do Not Bill TB-LB Samples
								BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)	Remarks		
TB-LB	1	3	W	G	9:30	HCL	Y	✓										analyze in order ↓
BB	2	↓	↓	↓	9:35	↓	↓	✓										
C-1	3	↓	↓	↓	10:44	↓	↓	✓										
C-2	4	↓	↓	↓	11:02	↓	↓	✓										
C-3	5	↓	↓	↓	11:38	↓	↓	✓										

Please initial:

Samples Stored in Ice.  BLO

Appropriate containers

Samples preserved

VOA's without headspace

Comments:

Relinquished By (Signature) <u>Jim Green</u>	Organization <u>SES</u>	Date/Time <u>9-2-92 1:35P</u>	Received By (Signature)	Organization	Date/Time	Turn Around Time (Circle Choice)  24 Hrs. 48 Hrs. 5 Days 10 Days <input checked="" type="radio"/> 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>Brent L. OL</u>	<u>SLZ</u>	Date/Time <u>9/2/92</u>	

COC-3.0/rev 03 8/7/90