

HAZ MAT

SH DEC 13 11 08 AM '94



December 9, 1994

**Chevron U.S.A. Products Company**  
6001 Bollinger Canyon Rd., Bldg. L  
P.O. Box 5004  
San Ramon, CA 94583-0804

**Site Assessment & Remediation Group**  
Phone (510) 842-9500

Ms. Juliet Shin  
Alameda County Health Care Services  
Department of Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**Re: Former Chevron Service Station #9-0100**  
**2428 Central Avenue, Alameda, CA**

Dear Ms. Shin:

Enclosed is the Quarterly Ground Water Sampling report dated November 1, 1994, 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 (TPH-G) and BTEX. Dissolved concentrations of hydrocarbons observed in the monitor wells during the past quarter are consistent with previous observations at the site. Depth to ground water was measured at approximately 8.9 to 9.8 feet below grade and the direction of flow is to the northwest.

Chevron will monitor and sample all wells at this site for two additional quarters to develop a baseline trend of hydrocarbon concentrations in ground water. At the conclusion of one year of monitoring and sampling, we will evaluate appropriate next actions.

If you have any questions or comments, please do not hesitate to contact me at (510) 842-8134.

Sincerely,  
CHEVRON U.S.A. PRODUCTS COMPANY

A handwritten signature in cursive script, appearing to read "Mark A. Miller".

Mark A. Miller  
Site Assessment and Remediation Engineer

Enclosure

cc: Ms. B.C. Owen

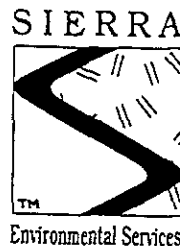
Mr. Robert Stahl  
Stahl-Wooldridge Investment Properties  
2428 Central Avenue  
Alameda, CA 94501

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December 9, 1994  
Former SS#9-0100

Mr. Carl A. Pendleton  
Vice President  
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Assets Group #1415  
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P.O. Box 37000  
San Francisco, CA 94137

Kent W. Peters, Asset Manager  
Bank of America, NT & SA  
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333 South Beaudry Avenue, 21st Floor  
Los Angeles, CA 90017

File: 9-0100 QM2



November 1, 1994

Mark Miller  
Chevron USA Products Company  
P.O. Box 5004  
San Ramon, CA 94583

Re: Former Chevron Service Station #9-0100  
2428 Central Avenue  
Alameda, California  
SES Project #1-381-04

Dear Mr. Miller:

This report presents the results of the quarterly ground water sampling at Chevron Service Station #9-0100, located at 2428 Central Avenue in Alameda, California. Three wells, MW-1, MW-2 and MW-3 were sampled (Figure 1).

On September 26, 1994, 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 and ground water elevation contours are included on Figure 1.

The ground water samples were collected on September 26, 1994 in accordance with SES Standard Operating Procedure - Ground Water Sampling (attached). The field water sampling forms for this event are included. All analyses were performed by Superior Precision Analytical, Inc. of San Francisco, California. Analytic results for ground water are presented in Table 1. The chain of custody document and laboratory analytic reports are attached. 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.

*12/13/94  
The detection limits were too high, based on foam in samples. Mr. Brower thinks it due to detergent in their pump equipment.  
- JS.*



Sincerely,  
Sierra Environmental Services

*L. Chernyak*

Luda Chernyak  
Staff Technician

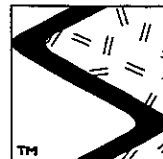
Chris J. Bramer  
Professional Engineer #C48846

*Contact: Rick Hilton at Sierra*

LAC/CJB/lmo  
38104QM.NO4

cc: Sheldon Nelson, CRTC

- Attachments
- Figure
- Table
- SES Standard Operating Procedure
- Field Water Sampling Forms
- Chain of Custody Document and Laboratory Analytic Reports



SIERRA

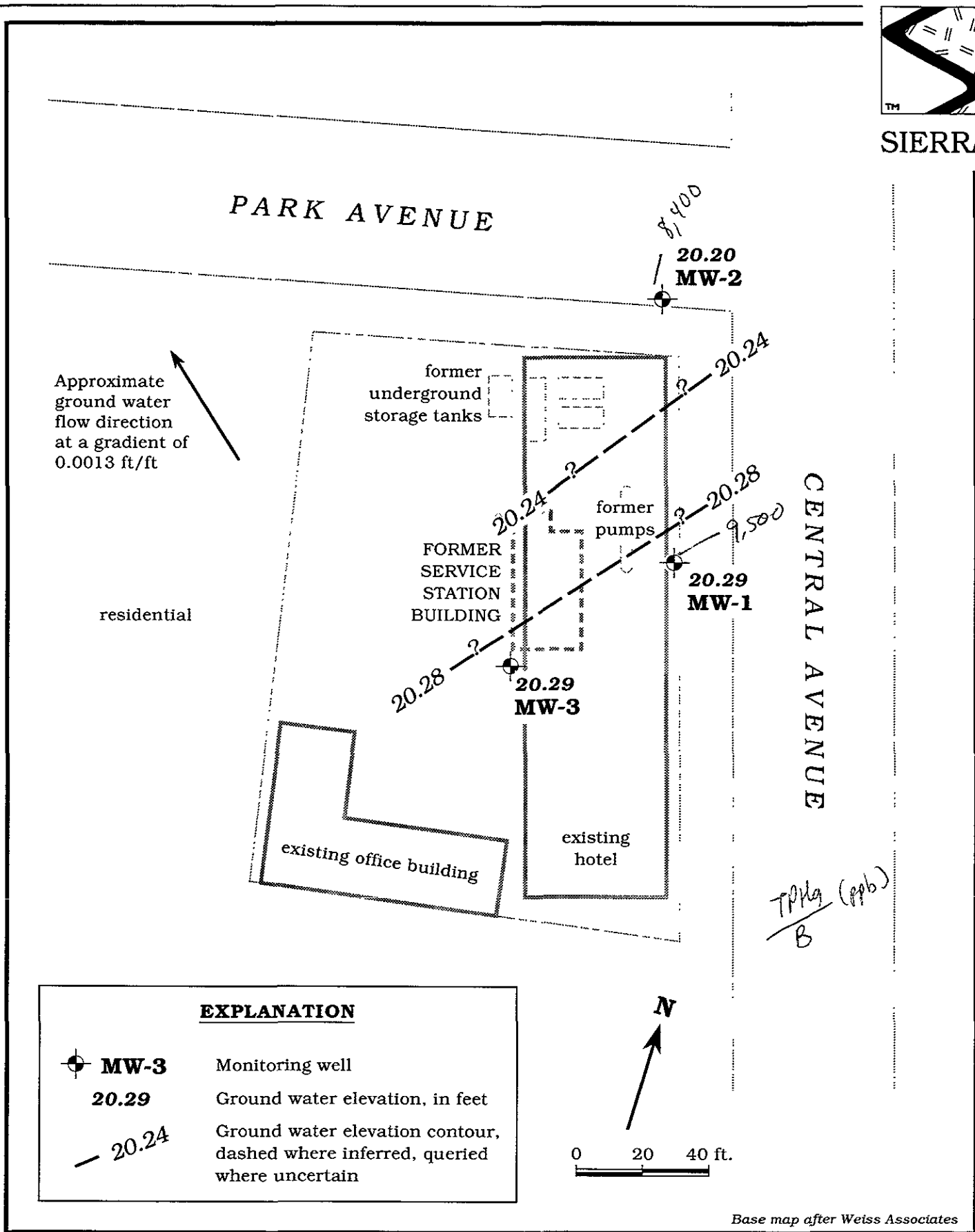


Figure 1. Monitoring Well Locations and Ground Water Elevation Contour Map - September 26, 1994 - Former Chevron Service Station #9-0100, 2428 Central Avenue, Alameda, California



Table 1. Water Level Data and Ground Water Analytic Results - Former Chevron Service Station #9-0100, 2428 Central Avenue, Alameda, California

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G) B T E X				
						←-----ppb-----→				
MW-1/ 29.23	3/10/94	6.79	22.44	0	8015/8020 <sup>1,2</sup>	7,400	120	120	33	72
	6/21/94	7.74	21.49	0	8015/8020	5,300	140	60	21	43
	9/26/94	8.94	20.29	0	8015/8020	9,500	<250	<250	<250	<250
MW-2/ 29.18	3/10/94	6.94	22.24	0	8015/8020 <sup>2,3</sup>	6,400	<5	64	58	17
	6/21/94	7.89	21.29	0	8015/8020	1,800	23	12	6.9	32
	9/26/94	8.98	20.20	0	8015/8020	8,400	<100	<100	<100	<100
MW-3/ 30.09	3/10/94	7.30	22.79	0	8015/8020 <sup>2,4</sup>	<50	<0.5	<0.5	<0.5	<0.5
	6/21/94	8.53	21.56	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	9/26/94	9.80	20.29	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
Trip Blank	3/10/94	---	---	---	8015/8020	<50	<0.5	0.7	<0.5	<0.5
TB-LB	6/21/94	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	9/26/94	---	---	---	8015/8020					

EXPLANATION:

DTW = Depth to water  
 TOC = Top of casing elevation  
 GWE = Ground water elevation  
 msl = Measurements referenced relative to mean sea level  
 TPPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline  
 TPH(D) = Total Petroleum Hydrocarbons as Diesel  
 B = Benzene  
 T = Toluene  
 E = Ethylbenzene  
 X = Xylenes  
 EDB = Ethylene Dibromide  
 ppb = Parts per billion  
 --- = Not analyzed/Not applicable

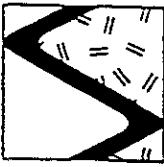
ANALYTIC METHODS:

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

NOTES:

March 10, 1994 water level data and groundwater analytic results were compiled from the Subsurface Investigation Report prepared for Chevron by Weiss Associates, April 13, 1994.

- \* Product thickness was measured on and after June 21, 1994 with a MMC Flexi-Dip interface probe.
- <sup>1</sup> TPH(D) was also analyzed and detected at 840 ppb. However, chromatogram does not match typical diesel pattern.
- <sup>2</sup> Organic lead and EDB were also analyzed but not detected at detection limits of 4 and 0.02 ppb, respectively.
- <sup>3</sup> TPH(D) was also analyzed and detected at 920 ppb. However, chromatogram does not match typical diesel pattern.
- <sup>4</sup> TPH(D) was also analyzed but not detected at detection limits of 50 ppb.
- <sup>5</sup> Detection limits raised due to the dilution required by a high amount of foaming in the sample.



SIERRA

## 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 three 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 taken to Chevron's Richmond Refinery for disposal.

Ground water samples are collected from the wells with Chevron designated disposable 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  $4^{\circ}\text{C}$ ) 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 accompanies each sampling set, or 5% trip blanks are included for sets of greater than 20 samples. The trip blank is analyzed for some or all of the same compounds as the ground water samples.



### WATER SAMPLING DATA

Job Name Alameda Job Number 1-381-04 Sampler      
 Well Number MW-1 Date 9/26/94 Well Diameter      
 Sample Point Location/Description ON CENTRAL Well Depth (spec.) 25  
 Depth to Water (static) 8.94 Well Depth (sounded)      
 Initial height of water in casing 16.06 Volume 2.62 gallons  
 Volume to be purged 7.85 gallons  
 Purged With D.B. Sampled With D.B.  
 Pumped or Bailed Dry?     Yes  No  Time     After     gallons  
 Water level at sampling     Percent Recovery    

**Formulas/Conversions**  
 $r$  = well radius in ft  
 $h$  = ht of water col. in ft  
 vol. in cyl. =  $\pi r^2 h$   
 7.48 gal/ft<sup>3</sup>  
 $V_{2"}$  casing = 0.163 gal/ft  
 $V_{3"}$  casing = 0.367 gal/ft  
 $V_{4"}$  casing = 0.653 gal/ft  
 $V_{4.5"}$  casing = 0.826 gal/ft  
 $V_{6"}$  casing = 1.47 gal/ft  
 $V_{8"}$  casing = 2.61 gal/ft

### CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1215	1227	3	3	7.86	66.2	310	
	1	2	5	7.65	66.0	290	
		3	8	7.49	65.8	310	

**SAMPLES COLLECTED** Time 1230 Total volume purged (gal.) 8  
 Water color CLOUDY Odor MODERATE  
 Description of sediments or material in sample: DARK GREY  
 Additional Comments: Well PARTIALLY OBSTRUCTED BY LEAVES & FARBAGE  
DUE TO NO lid OR 3-Piece.

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MW-1	3	1	NA	HCL	✓	SPH	09/27/94

**Container Type Codes:** 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size);  
 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size);  
 5 = Other \_\_\_\_\_; 6 = Other \_\_\_\_\_



### WATER SAMPLING DATA

Job Name ALAMEDA Job Number 1-381-04 Sampler JK  
 Well Number MU-2 Date 9/26/94 Well Diameter 2"  
 Sample Point Location/Description ON PARK STREET Well Depth (spec.) 25  
 Depth to Water (static) 8.98 Well Depth (sounded) —  
 Initial height of water in casing 16.02 Volume 2.61 gallons  
 Volume to be purged 7.83 gallons  
 Purged With D.B Sampled With D.B  
 Pumped or Bailed Dry? Yes  No Time — After — gallons  
 Water level at sampling — Percent Recovery —

**Formulas/Conversions**  
 $r$  = well radius in ft  
 $h$  = ht of water col. in ft  
 vol. in cyl. =  $\pi r^2 h$   
 $7.48 \text{ gal/ft}^3$   
 $V_{2.5}'' \text{ casing} = 0.163 \text{ gal/ft}$   
 $V_{3}'' \text{ casing} = 0.367 \text{ gal/ft}$   
 $V_{4}'' \text{ casing} = 0.653 \text{ gal/ft}$   
 $V_{4.5}'' \text{ casing} = 0.826 \text{ gal/ft}$   
 $V_{6}'' \text{ casing} = 1.47 \text{ gal/ft}$   
 $V_{8}'' \text{ casing} = 2.61 \text{ gal/ft}$

### CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1149	1208	3	3	6.42	70.4	1000	
	1	2	5	6.57	70.2	960	
		3	8	6.69	6.94	960	

**SAMPLES COLLECTED** Time 1211 Total volume purged (gal.) 8  
 Water color Grey (cloudy) Odor rotting veg. & sulfur  
 Description of sediments or material in sample: GREY  
 Additional Comments: —

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MU-2	3	1	N/A	HCL	Y	SPT	0/1500K

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size);  
 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size);  
 5 = Other \_\_\_\_\_; 6 = Other \_\_\_\_\_





### WATER SAMPLING DATA

Job Name AAMEDA Job Number 1-381-04 Sampler MS  
 Well Number MW-3 Date 9/26/94 Well Diameter 2"  
 Sample Point Location/Description in PKY. LOT. Well Depth (spec.) 25.  
 Depth to Water (static) 9.50 Well Depth (sounded)         
 Initial height of water in casing 15.2 Volume 2.48 gallons  
 Volume to be purged 7.43 gallons  
 Purged With D. IS. Sampled With D. IS.  
 Pumped or Bailed Dry?    Yes  No Time        After        gallons  
 Water level at sampling        Percent Recovery       

**Formulas/Conversions**  
 $r$  = well radius in ft  
 $h$  = ht of water col. in ft  
 vol. in cyl. =  $\pi r^2 h$   
 $7.48 \text{ gal/ft}^3$   
 $V_{2"} \text{ casing} = 0.163 \text{ gal/ft}$   
 $V_{3"} \text{ casing} = 0.367 \text{ gal/ft}$   
 $V_{4"} \text{ casing} = 0.653 \text{ gal/ft}$   
 $V_{4.5"} \text{ casing} = 0.826 \text{ gal/ft}$   
 $V_{6"} \text{ casing} = 1.47 \text{ gal/ft}$   
 $V_{8"} \text{ casing} = 2.61 \text{ gal/ft}$

### CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1130	1142	3	3	6.42	70.1	360	
	1	2	5	6.42	68.9	390	
		3	8	6.74	68.4	390	

**SAMPLES COLLECTED** Time 1145 Total volume purged (gal.) 8  
 Water color BROWN (cloudy) Odor none  
 Description of sediments or material in sample: light brown  
 Additional Comments:       

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MW-3	3	1	N/A	HCL	Y	SPT	9/27/94

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size);  
 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size);  
 5 = Other \_\_\_\_\_; 6 = Other \_\_\_\_\_

Fax copy of Lab Report and COC to Chevron Contact:  Yes  No

30773

Chain-of-Custody-Record

Chevron U.S.A. Inc.  
P.O. BOX 5004  
San Ramon, CA 94583  
FAX (415)842-9591

Chevron Facility Number 9-0100  
Facility Address 2428 CENTRAL AVE. ALAMEDA  
Consultant Project Number 1-381-04  
Consultant Name SIERRA ENVIRONMENTAL SERVICES  
Address P.O. BOX 2546 MARTINEZ, CA 94553  
Project Contact (Name) ED MORALES  
(Phone) 370-1280 (Fax Number) 370-7959

Chevron Contact (Name) MARK MILLER  
(Phone) 842-8134  
Laboratory Name SUPERIOR ANALYTICAL  
Laboratory Release Number 109440  
Samples Collected by (Name) DAVID BICARDSLEY  
Collection Date 9-26-94  
Signature [Signature]

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water C = Chert/soil	Type C = 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 Hydrocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (1040 or AA)		
TB		2	U	G		HCl	Y										
MW1		3	↓	↓	12:30	↓	↓										
MW2		3	↓	↓	12:11	↓	↓										
MW3		3	↓	↓	11:45	↓	↓										

Please initial: FT  
 Samples stored in ice Hand carried to lab  
 Appropriate containers ✓  
 Samples preserved ✓  
 VOA's without flammability ✓  
 Comments 11 VOAS

Relinquished By (Signature) <u>[Signature]</u>	Organization <u>SES</u>	Date/Time <u>16:15</u>	Received By (Signature) _____	Organization _____	Date/Time _____	Turn Around Time (Circle Choice) <input type="checkbox"/> 24 Hrs. <input type="checkbox"/> 48 Hrs. <input type="checkbox"/> 5 Days <input type="checkbox"/> 10 Days <input checked="" type="checkbox"/> As Contracted <u>9/26</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>F Taniguchi</u>	Organization _____	Date/Time <u>9-26-94 16:15</u>	



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

Sierra Environmental  
Attn: ED MORALES

Project 1-381-04  
Reported 10/10/94

## TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
30773- 1	TB-LB	09/26/94	09/30/94 Water
30773- 2	MW1	09/26/94	09/30/94 Water
30773- 3	MW2	09/26/94	09/30/94 Water
30773- 4	MW3	09/26/94	09/30/94 Water.

## RESULTS OF ANALYSIS

Laboratory Number: 30773- 1 30773- 2\* 30773- 3\* 30773- 4

Gasoline:	ND<50	9500	8400	ND<50
Benzene:	ND<0.5	ND<250	ND<100	ND<0.5
Toluene:	ND<0.5	ND<250	ND<100	ND<0.5
Ethyl Benzene:	ND<0.5	ND<250	ND<100	ND<0.5
Total Xylenes:	ND<0.5	ND<250	ND<100	ND<0.5
Concentration:	ug/L	ug/L	ug/L	ug/L

\* Detection limits raised due to the dilution required by a high amount of foaming in the sample.

Afsaneh - Contact



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: 30773

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	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	78/77	1%	56-117
Benzene:	113/92	20%	59-149
Toluene:	118/95	22%	59-149
Ethyl Benzene:	120/97	21%	59-149
Total Xylenes:	123/100	21%	59-149

*Michael R. Vernon*

Certified Laboratory Chemist