

ENVIRONMENTAL
PROTECTION
95 MAR 21 AM 8:07



Chevron

March 20, 1995

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

Mr. Scott Seery
Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

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

Dear Mr. Seery:

Enclosed is the Quarterly Ground Water Sampling report dated March 1, 1995, prepared by our consultant Sierra Environmental Services for the above referenced site. Monitor wells MW-5, MW-6, and MW-7 were sampled for total petroleum hydrocarbons as gasoline (TPH-G) and BTEX. Depth to ground water measurements were collected from wells MW-1, MW-5, MW-6, and MW-7. This work was performed pursuant to our agreement as documented in your November 16, 1994 letter.

Concentrations of these constituents were below method detection limits in all wells sampled with the exception of low concentrations present in monitor well C-6. Concentrations detected in MW-6 this quarter are all below MCL's for drinking water. Depth to ground water was measured at approximately 6.7 to 7.3 feet below grade and the direction of flow is to the west-southwest.

These data appear to be consistent with historical information collected at the site. It is our opinion, based on this data and information contained in the Petition for Case Closure dated December 1, 1993, prepared by Geraghty and Miller, that case closure is warranted. I thank you in advance for a timely response to our request for case closure.

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 black ink, appearing to read "Mark A. Miller".

Mark A. Miller
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Kevin Graves, RWQCB - S.F. Bay Area
Ms. B.C. Owen

Mr. Darryl Snow, Geraghty & Miller - Richmond

Page 2
March 20, 1995
Former SS#9-5630

Mr. Lawrence E. Cogan
Ware & Freidenrich
400 Hamilton Avenue
Palo Alto, CA 94301

Mr. Michael Meniktas
Meniktas & Associates
3440 Lakeshore Avenue, Suite 206
Oakland, CA 94610

File: 9-5630 QM2



March 1, 1995

Mark Miller
Chevron USA Products Company
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

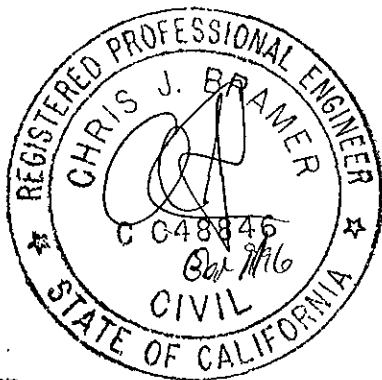
Dear Mr. Miller:

This report presents the results of the quarterly ground water sampling for the first quarter of 1995 at former Chevron Service Station #9-5630, located at 997 Grant Avenue in San Lorenzo, California. Three wells, C-5, C-6, and C-7, were sampled (Figure 1).

On February 1, 1995, 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 February 1, 1995 in accordance with SES Standard Operating Procedure - Ground Water Sampling (attached). All analyses were performed by Sequoia Analytical Laboratory of Redwood City, California. Field water sampling data forms for this event are included. 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.



Sincerely,
Sierra Environmental Services

A handwritten signature in black ink, appearing to read "Richard E. Hilton".

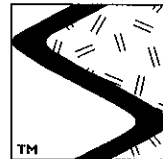
Richard E. (Rick) Hilton
Staff Environmental Scientist

A handwritten signature in black ink, appearing to read "Chris J. Bramer".

Chris J. Bramer
Professional Engineer #C48846

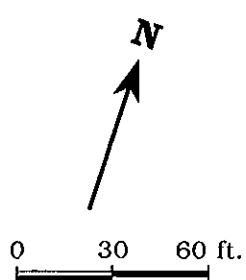
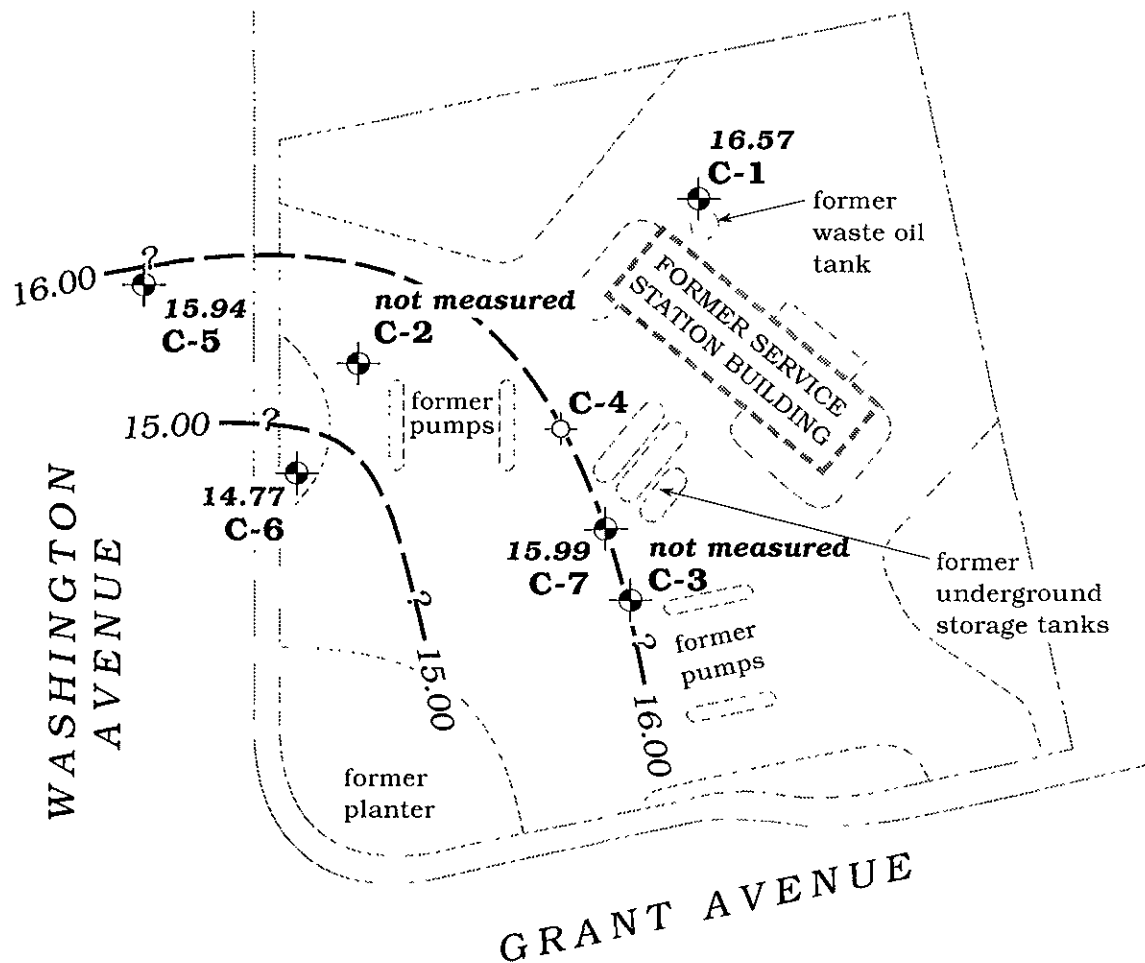
REH/CJB/wmc
20604QM.MA5

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



SIERRA

Approximate ground water flow direction at a gradient of 0.012-0.017 ft/ft



EXPLANATION	
	C-7 Monitoring well
	C-4 Destroyed well
15.99	Ground water elevation, in feet
	16.00 Ground water elevation contour, dashed where inferred, queried where uncertain

Figure 1. Monitoring Well Locations and Ground Water Elevation Contour Map - February 1, 1995 - Former Chevron Service Station #9-5630, 997 Grant Avenue, San Lorenzo, California



Table 1. Water Level Data and Ground Water Analytic Results - Former Chevron Service Station #9-5630, 997 Grant Avenue, San Lorenzo, California

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G) B T E X O&G					
						-----ppb----->					
C-1/ 24.08 ¹	12/5/90	12.44	11.64	0	8015/8020/503E	<50	<0.5	<0.5	<0.5	<0.5	<5,000
23.88 ²	9/6/91	13.20	10.68	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	12/4/91	11.71	12.17	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	4/2/92	9.43	14.45	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5,000
	6/3/92	10.14	13.74	0	8015/8020	<50	1.4	1.5	0.6	3.0	---
	9/2/92	11.79	12.09	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	12/1/92	11.78	12.10	0	8015/8020	<50	0.6	3.5	0.7	3.4	---
	3/23/93	7.94	15.94	0	8015/8020	<u>200</u>	<u>13</u>	<u>8.7</u>	<0.5	<u>10</u>	---
	6/15/93	9.39	14.49	0	8015/8020	<u>74</u>	<u>1.4</u>	<u>5.2</u>	<u>1.6</u>	<u>11</u>	---
	9/7/93	10.72	13.16	0	8015/8020	<50	<0.5	<0.5	<0.5	<1.5	---
	11/30/94	9.08	14.80	0	---	---	---	---	---	---	---
	2/1/95	7.31	16.57	0	---	---	---	---	---	---	---
C-2/ 22.69 ¹	12/5/90	11.30	11.39	0	8015/8020	<50	0.7	<0.5	<0.5	0.5	---
21.54 ²	9/6/91	11.00	10.54	0	8015/8020	<50	1.3	0.6	0.7	1.5	---
	12/4/91	9.38	12.16	0	---	---	---	---	---	---	---
	4/2/92	7.33	14.21	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	6/3/92	8.99	12.55	0	8015/8020	<u>180</u>	<u>12</u>	<u>13</u>	<u>7.9</u>	<u>21</u>	---
	9/2/92	9.59	11.95	0	8015/8020	<u>630</u>	<u>14</u>	<u>30</u>	<u>18</u>	<u>54</u>	---
	12/1/92	9.58	11.96	0	8015/8020	<u>1,000</u>	<u>47</u>	<u>83</u>	<u>51</u>	<u>150</u>	---
	3/23/93	6.30	15.24	0	8015/8020	<u>80</u>	<u>5.0</u>	<u>7.9</u>	<u>6.0</u>	<u>18</u>	---
	6/15/93	7.27	14.27	0	8015/8020	<u>220</u>	<u>9.0</u>	<u>16</u>	<u>12</u>	<u>37</u>	---
	9/7/93	8.55	12.99	0	8025/8020	<u>200</u>	<u>13</u>	<u>21</u>	<u>15</u>	<u>43</u>	---
C-3/ 23.45 ¹	12/5/90	11.75	11.70	0	8015/8020	<50	1	0.7	<0.5	<0.5	---
22.40 ²	9/6/91	11.62	10.78	0	8015/8020	1,100	150	0.6	51	1.9	---
	12/4/91	10.14	12.26	0	8015/8020	89	<0.5	<0.5	0.7	0.6	---
	4/2/92	8.07	14.33	0	8015/8020	60	2.1	1.3	1.1	3.2	---
	6/3/92	8.63	13.77	0	8015/8020	<u>7,600</u>	<u>94</u>	<u>86</u>	<u>26</u>	<u>89</u>	---
	9/2/92	10.30	12.10	0	8015/8020	<50	<0.5	<0.5	<0.5	0.9	---
	12/1/92	10.24	12.16	0	8015/8020	<u>54</u>	<u>0.8</u>	<u>5.7</u>	<u>1.1</u>	<u>5.9</u>	---
	3/23/93	6.83	15.57	0	8015/8020	<50	<u>1.1</u>	<u>1.4</u>	<0.5	<u>1.7</u>	---
	6/15/93	7.95	14.45	0	8015/8020	<u>67</u>	<u>1.3</u>	<u>3.9</u>	<u>1.1</u>	<u>7.8</u>	---
	9/7/93 ⁵	---	---	0	---	---	---	---	---	---	---

Well screening property?

Screened from 15 to 17 to 27 to 29' bgs.



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

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G) ←-----	TOG	-----ppb-----				X
								B	T	E		
C-4/ 23.32 ¹	12/5/90 9/6/91 ³	11.85 ---	11.47 ---	0 ---	8015/8020 ---	<50 ---	4 ---	2 ---	0.7 ---	3 ---	---	
C-5/ 22.01 ⁴	2/16/93 3/23/93 6/15/93 9/7/93 11/30/94 2/1/95	6.64 6.60 8.10 9.40 7.76 6.07	15.37 15.41 13.91 12.61 14.25 15.94	0 0 0 0 --- 0	8015/8020 ⁸ 8015/8020 8015/8020 8015/8020 8015/8020 8015/8020	<50 <50 70 <50 <50 <50	<0.5 <1.5 0.7 <0.5 <0.5 <0.5	<0.5 0.9 1.7 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <1.5 2.8 <1.5 <0.5 <0.5	---	
C-6/ 21.42 ⁴	8/17/94 ⁶ 11/30/94 2/1/95	16.02 7.26 6.65	5.40 14.16 14.77	0 0 0	8015/8020 8015/8020 8015/8020	430 610 210	0.7 2.1 <0.5	2.7 0.57 <0.5	<0.5 30 <0.5	28 14 0.94	---	
C-7/ 23.21 ⁴	8/17/94 ⁶ 11/30/94 2/1/95	10.07 8.48 7.22	13.14 14.73 15.99	0 0 0	8015/8020 8015/8020 8015/8020	<50 <50 <50	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	---	
AA (Trip Blank)	12/5/90 9/6/91 12/4/91 4/2/92	--- --- --- ---	--- --- --- ---	--- --- --- ---	8015/8020 8015/8020 8015/8020 8015/8020	<50 <50 <50 <50	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	---	
TB-LB	6/3/92 9/2/92 12/1/92 3/23/93 6/15/93 9/7/93 11/30/94 2/1/95	--- --- --- --- --- --- --- ---	--- --- --- --- --- --- --- ---	--- --- --- --- --- --- --- ---	8015/8020 8015/8020 8015/8020 8015/8020 8015/8020 8015/8020 8015/8020 8015/8020	<50 <50 <50 <50 <50 <50 <50 <50	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <1.5 <1.5 <0.5 <0.5	---	
BB (Bailer Blank)	9/6/91 12/4/91 4/2/92	--- --- ---	--- --- ---	--- --- ---	8015/8020 8015/8020 8015/8020	<50 <50 <50	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	---	



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

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G) <-----ppb----->	TOG	B	T	E	X
BB	6/3/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	9/2/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	0.4	---
	12/1/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	3/23/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	6/15/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<1.5	---
	9/7/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<1.5	---

EXPLANATION:

TPPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline
 B = Benzene
 T = Toluene
 E = Ethylbenzene
 X = Xylenes
 O&G = Total Oil and Grease
 ppb = Parts per billion
 DTW = Depth to water
 TOC = Top of casing elevation
 GWE = Ground water elevation
 msl = Measurements referenced relative to mean sea level
 --- = Not applicable/not available

ANALYTIC METHODS:

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

NOTE:

- * SES product thicknesses were measured with an MMC flexi-dip interface probe.
- ¹ Well head elevations taken from the Preliminary Site Assessment/Well Installation Report prepared by GeoStrategies, Inc., dated February 8, 1991.
- ² 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.
- ³ Well was destroyed during tank removal and soil excavation operations.
- ⁴ Top of casing elevation compiled from the Groundwater Technology Inc., report prepared for Chevron.
- ⁵ Well not located by SES personnel.
- ⁶ Data compiled from the Groundwater Technology Inc. report of September, 1994, prepared for Chevron.
- ⁷ Well obstructed, therefore could not be sampled.
- ⁸ Analytic laboratory information for this event not available for inclusion in this report. Analytic methods used are assumed to be 8015/8020. Analytic data compiled from the Groundwater Technology Inc., report prepared for Chevron.



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°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 997 Grant Ave, San Lorenzo Job Number 1-206-04 Sampler I.L.
 Well Number TB/LB Date 2/1/95 Well Diameter 2"
 Sample Point Location/Description _____ Well Depth (spec.) _____
 Depth to Water (static) _____ Well Depth (sounded) _____
 Initial height of water in casing _____ Volume _____ gallons
 Volume to be purged _____ gallons
 Purged With _____ Sampled With disp boiler
 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/ft³
 $V_{1.0}$ casing = 0.163 gal/ft
 $V_{1.5}$ casing = 0.367 gal/ft
 $V_{2.0}$ casing = 0.653 gal/ft
 $V_{2.5}$ casing = 0.826 gal/ft
 $V_{3.0}$ casing = 1.47 gal/ft
 $V_{3.5}$ 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

SAMPLES COLLECTED Time _____ Total volume purged (gal.) _____
 Water color _____ Odor _____
 Description of sediments or material in sample: _____
 Additional Comments: _____

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
TB/LB	2	1	—	HCl	Y	SFC	GMJEX

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 997 Grant Ave. San Lorenzo Job Number 1-206-04 Sampler T.L.
 Well Number ~~MW-5~~ G-5 Date 2/1/95 Well Diameter 2"
 Sample Point Location/Description In median on Washington Well Depth (spec.) 26
 Depth to Water (static) 6.07 Well Depth (sounded) _____
 Initial height of water in casing 1993 Volume 3.2 gallons
 Volume to be purged 9.7 gallons
 Purged With Pump Sampled With disp boiler
 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/ft³
 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
1124	1126	4	4	7.21	69.5	1470	
	1128	3	7	7.20	68.6	1390	
	1129	3	10	7.22	68.3	1310	

SAMPLES COLLECTED Time 1136 Total volume purged (gal.) 90
 Water color cloudy Odor none
 Description of sediments or material in sample: medi, TAU
 Additional Comments: * NO HCl

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
<u>MW-5</u>	<u>2</u>	<u>1</u>	<u>-</u>	<u>HCl *</u>	<u>Y</u>	<u>SEQ</u>	<u>GL/BJE</u>

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 997 Grant Ave. San Bruno Job Number 1-206-04
 Well Number C-6 Date 2/1/95
 Sample Point Location/Description W. Side of site.
 Depth to Water (static) 6.65 Well Depth (sounded) _____
 Initial height of water in casing 15.35 Volume 2.5 gallons
 Volume to be purged _____ 7.5 gallons
 Purged With Pump Sampled With disp boiler
 Pumped or Bailed Dry? Yes No Time 1239 After 5-5 gallons
 Water level at sampling _____ Percent Recovery _____

Sampler T.L.
 Well Diameter 2"
 Well Depth (spec.) 22

Formulas/Conversions
 r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft³
 $V_{2"} \text{ casing} = 0.163 \text{ gal/ft}$
 $V_{3"} \text{ casing} = 0.367 \text{ gal/ft}$
 $V_{4"} \text{ casing} = 0.653 \text{ gal/ft}$
 $V_{4.5"} \text{ casing} = 0.826 \text{ gal/ft}$
 $V_{6"} \text{ casing} = 1.47 \text{ gal/ft}$
 $V_{8"} \text{ casing} = 2.61 \text{ gal/ft}$

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1236	1238	3	3	7.24	65.1	1260	
	1239	2.5	5.5	7.30	66.3	1260	
		2.5	8				

SAMPLES COLLECTED Time 1244 Total volume purged (gal.) 5.5
 Water color slightly cloudy Odor none
 Description of sediments or material in sample: none
 Additional Comments: *NO HCl

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
C-6	2	1	—	HCL*	Y	SFA	G/BJEX

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 997 Grant Ave. San Bruno Job Number 1-206-04 Sampler T.L.
 Well Number 67 Date 2/1/95 Well Diameter 2"
 Sample Point Location/Description Center of site Well Depth (spec.) 22
 Depth to Water (static) 7.22 Well Depth (sounded) _____
 Initial height of water in casing 14.78 Volume 2.4 gallons
 Volume to be purged _____ 7.2 gallons
 Purged With pump Sampled With clip boiler
 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/ft³
 $V_{2"}$ 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
1212	1214	3	3	7.31	67.2	920	
	1216	2.5	5.5	7.32	66.8	1130	
	1217	2.5	8	7.34	68.1	1210	

SAMPLES COLLECTED Time 1:27 Total volume purged (gal.) 8
 Water color slightly cloudy Odor none
 Description of sediments or material in sample: none
 Additional Comments: * NO HCL

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
67	2	1	-	HCL	Y	SFC	G/B/JEX

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 _____



Sierra Environmental Services
P.O. Box 2546
Martinez CA 94553

Client Proj. ID: Chevron 9-5630, San Lorenzo
Sample Descript: TB/LB
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9502246-01

Sampled: 02/01/95
Received: 02/03/95
Analyzed: 02/07/95
Reported: 02/12/95

QC Batch Number: GC020795BTEX17A
Instrument ID: GCHP17

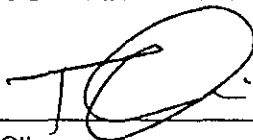
Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	95

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210



Todd Olive
Project Manager





Sierra Environmental Services	Client Proj. ID: Chevron 9-5630, San Lorenzo	Sampled: 02/01/95
P.O. Box 2546	Sample Descript: C-5	Received: 02/03/95
Martinez CA 94553	Matrix: LIQUID	
Attention: Ed Morales	Analysis Method: 8015Mod/8020	Analyzed: 02/07/95
	Lab Number: 9502246-02	Reported: 02/12/95

QC Batch Number: GC020795BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	99

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Todd Olive
Project Manager





Sierra Environmental Services	Client Proj. ID: Chevron 9-5630, San Lorenzo	Sampled: 02/01/95
P.O. Box 2546	Sample Descript: C-6	Received: 02/03/95
Martinez CA 94553	Matrix: LIQUID	
Attention: Ed Morales	Analysis Method: 8015Mod/8020	Analyzed: 02/07/95
	Lab Number: 9502246-03	Reported: 02/12/95

QC Batch Number: GC020795BTEX17A
Instrument ID: GCHP17


Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	210
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	0.94
Chromatogram Pattern: Weathered Gas		C7-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	84

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210



Todd Olive
Project Manager





Sierra Environmental Services	Client Proj. ID: Chevron 9-5630, San Lorenzo	Sampled: 02/01/95
P.O. Box 2546	Sample Descript: C-7	Received: 02/03/95
Martinez CA 94553	Matrix: LIQUID	
Attention: Ed Morales	Analysis Method: 8015Mod/8020	Analyzed: 02/07/95
	Lab Number: 9502246-04	Reported: 02/12/95

QC Batch Number: GC020795BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	91

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Todd Olive
Project Manager





Sequoia Analytical

680 Chesapeake Drive	Redwood City, CA 94063	(415) 364-9600	FAX (415) 364-9233
1900 Bates Avenue, Suite L	Concord, CA 94520	(510) 686-9600	FAX (510) 686-9689
819 Striker Avenue, Suite 8	Sacramento, CA 95834	(916) 921-9600	FAX (916) 921-0100

Sierra Environmental Services
P.O. Box 2546
Martinez, CA 94553
Attention: Ed Morales

Client Project ID: Chevron 9-5630, San Lorenzo
Matrix: Liquid

Work Order #: 9502246 -01 -04

Reported: Feb 13, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC020795BTEX17A	GC020795BTEX17A	GC020795BTEX17A	GC020795BTEX17A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	J.Minkel	J.Minkel	J.Minkel	J.Minkel
MS/MSD #:	G9501F00-01O	G9501F00-01O	G9501F00-01O	G9501F00-01O
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	2/7/95	2/7/95	2/7/95	2/7/95
Analyzed Date:	2/7/95	2/7/95	2/7/95	2/7/95
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
Result:	11	11	10	31
MS % Recovery:	110	110	100	103
Dup. Result:	10	10	10	31
MSD % Recov.:	100	100	100	103
RPD:	9.5	9.5	0.0	0.0
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:

Prepared Date:
Analyzed Date:
Instrument I.D.#:
Conc. Spiked:

LCS Result:
LCS % Recov.:

MS/MSD LCS Control Limits	71-133	72-128	72-130	71-120

Please Note:

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL


Todd Olive
Project Manager

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9502246.SSS <1>

