

ENVIRONMENTAL  
PROTECTION

95 MAR -2 PM 1:47



**Chevron**

February 28, 1995

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

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

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

**Re: Chevron Service Station #9-2506**  
**2630 Broadway, Oakland, CA**

Dear Ms. Eberle:

Enclosed is the quarterly Ground Water Sampling report dated February 10, 1995, prepared by our consultant Sierra Environmental Services for the above referenced site. Ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline and BTEX. Dissolved concentrations of these constituents observed during this sampling event are consistent with historical results. Depth to ground water was measured at approximately 2.8 to 10.3 feet below grade and the direction of flow is to the west-northwest.

Enclosed for your review are copies of available historic Sanborn maps for the area. These were reviewed to assist in determining the prior use of the site and surrounding areas to determine if hydrocarbons observed in B-9 may have originated off-site. As the maps indicate, prior uses of the site include a hospital and an automobile dealership. Historic uses of adjacent properties to the south of the site along Broadway include automobile sales and repair. No conclusive information could be gathered from a review of these maps, however it is apparent that other potential sources do exist in the area.

Thank your for your letter of January 11, 1995 approving the discontinuance of sampling monitor wells B-2 and B-4. Chevron will continue to monitor and sample all other wells at this site and report findings on a quarterly basis for three additional quarters to establish a baseline trend of ground water gradient, flow direction, and dissolved hydrocarbon concentrations.

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

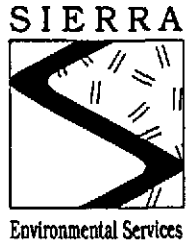
Enclosure

cc: Mr. S.A. Willer

File: 9-2506 QM6

ENVIRONMENTAL  
PROTECTION

February 10, 1995  
95 MAR 2 PM 1:47



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

Re: Chevron Service Station #9-2506  
2630 Broadway  
Oakland, California  
SES Project #1-364-04

Dear Mr. Miller:

This report presents the results of the quarterly ground water sampling for the fourth quarter of 1994 at Chevron Service Station #9-2506, located at 2630 Broadway in Oakland, California. Twelve wells, B-1 through B-12, were sampled (Figure 1).

On December 28, 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 December 28, 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 Martinez, 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.



Sincerely,  
Sierra Environmental Services

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

Richard E. (Rick) Hilton  
Staff Environmental Scientist

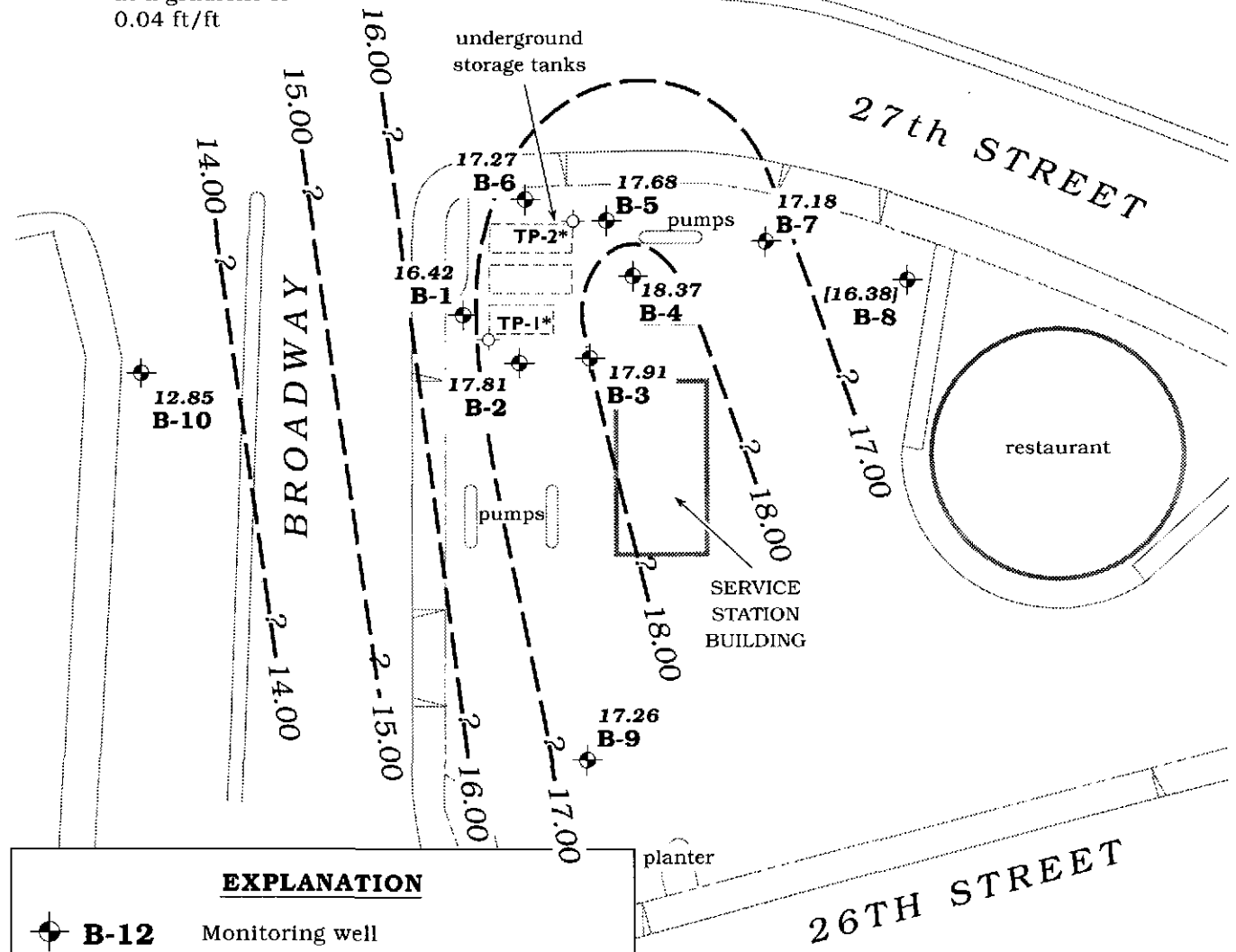
A handwritten signature in black ink, appearing to read "Chris J. Bramer".  
Chris J. Bramer  
Professional Engineer #C48846

REH/CJB/lmo  
36404QM.FE5

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

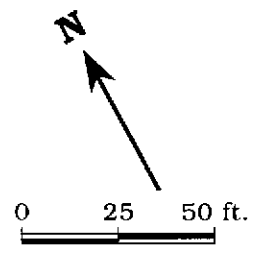


Approximate ground water flow direction at a gradient of 0.04 ft/ft



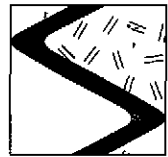
**EXPLANATION**

- B-12 Monitoring well
- TP-2 Tank backfill well
- \* Top-of-casing elevation not available
- 16.14 Ground water elevation, in feet
- [17.64] Ground water elevation not used in contouring
- 18.00 Ground water elevation contour, dashed where inferred, queried where uncertain



Base map after IT Enviroscience and RESNA

Figure 1. Monitoring Well Locations and Ground Water Elevation Contour Map - December 28, 1994 - Chevron Service Station #9-2506, 2630 Broadway, Oakland, California

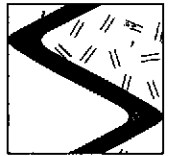


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Table 1. Water Level Data and Ground Water Analytic Results - Chevron Service Station #9-2506, 2630 Broadway, Oakland, California

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G)      B      T      E      X				
						←-----ppb----->				
B-1/ 23.00 <sup>1</sup>	3/18/82	7.81	15.19	0	---	---	---	---	---	---
	3/25/82	8.67	14.33	0	---	---	---	---	---	---
	5/21/82	9.30	13.70	0	---	---	---	---	---	---
	5/26/82	10.18	12.82	0	---	---	---	---	---	---
	6/24/82	9.92	13.08	0	---	---	---	---	---	---
	9/9/93	9.90	13.10	0	8015/8020	8,800 <sup>2</sup>	240	280	<2.5	<7.5
	12/2/93	9.10	13.90	0	8015/8020	1,100	100	7.9	3.4	3.9
	3/17/94	9.41	13.59	0	8015/8020	1,600	370	13	13	26
	6/10/94	9.89	13.11	0	8015/8020	1,400	270	24	18	78
	9/15/94	11.24	11.76	0	8015/8020	4,100	740	<5	270	300
25.67 <sup>3</sup>	<b>12/28/94</b>	<b>9.25</b>	<b>16.42</b>	<b>0</b>	<b>8015/8020</b>	<b>1,200</b>	<b>200</b>	<b>32</b>	<b>37</b>	<b>79</b>
B-2/ 22.28 <sup>1</sup>	3/18/82	3.83	18.45	0	---	---	---	---	---	---
	3/25/82	5.79	16.49	0	---	---	---	---	---	---
	5/21/82	4.85	17.43	0	---	---	---	---	---	---
	5/26/82	8.53	13.75	0	---	---	---	---	---	---
	6/24/82	8.40	13.88	0	---	---	---	---	---	---
	9/9/93	6.46	15.82	0	8015/8020	4,700	470	630	180	590
	12/2/93	5.41	16.87	0	8015/8020	2,200	59	27	110	350
	3/17/94	7.44	14.84	0	8015/8020	1,800	52	33	97	320
	6/10/94	8.15	14.13	0	8015/8020	1,200	37	48	20	93
	9/15/94	10.00	12.28	0	8015/8020	4,900	710	12	340	450
25.13 <sup>3</sup>	<b>12/28/94</b>	<b>7.32</b>	<b>17.81</b>	<b>0</b>	<b>8015/8020</b>	<b>2,600</b>	<b>63</b>	<b>49</b>	<b>56</b>	<b>370</b>
B-3/ 21.78 <sup>1</sup>	3/18/82	5.65	16.13	0	---	---	---	---	---	---
	3/25/82	5.75	16.03	0	---	---	---	---	---	---
	5/21/82	5.58	16.20	0	---	---	---	---	---	---
	5/26/82	7.99	13.79	0	---	---	---	---	---	---
	6/24/82	7.68	14.10	0	---	---	---	---	---	---
	9/9/93	5.99	15.79	0	8015/8020	7,800	500	760	180	720
	12/2/93	5.70	16.08	0	8015/8020	9,800	790	870	380	1,500
	3/17/94	6.50	15.28	0	8015/8020	2,400	88	55	74	270
	6/10/94	7.23	14.55	0	8015/8020	2,300	110	95	84	240
	9/15/94	9.16	12.62	0	8015/8020	5,000	670	9.3	340	410

*will be suspended*

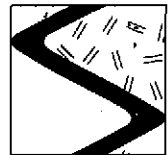


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Table 1. Water Level Data and Ground Water Analytic Results - Chevron Service Station #9-2506, 2630 Broadway, Oakland, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G)	B	T	E	X
B-3 (cont) 24.35 <sup>3</sup>	<b>12/28/94</b>	<b>6.44</b>	<b>17.91</b>	<b>0</b>	<b>8015/8020</b>	<b>4,100</b>	<b>650</b>	<b>34</b>	<b>320</b>	<b>440</b>
B-4/ 21.35 <sup>1</sup>	3/18/82	4.65	16.70	0	---	---	---	---	---	---
	3/25/82	5.08	16.27	0	---	---	---	---	---	---
	5/21/82	---	---	2.5	---	---	---	---	---	---
	5/26/82	9.21	12.14	---	---	---	---	---	---	---
	6/24/82	8.22	13.13	0.5	---	---	---	---	---	---
	9/9/93	6.09	15.26	0	8015/8020	88,000	3,200	16,000	2,000	9,500
	12/2/93	5.54	15.81	0	8015/8020	110,000	3,600	25,000	2,800	15,000
	3/17/94	6.00	15.35	0	8015/8020	60,000	1,400	16,000	1,800	8,900
	6/10/94	6.87	14.48	0	8015/8020	25,000	770	880	190	1,100
	9/15/94	8.74	12.61	0	8015/8020	3,300	800	8.0	300	350
24.11 <sup>3</sup>	<b>12/28/94</b>	<b>5.74</b>	<b>18.37</b>	<b>0</b>	<b>8015/8020</b>	<b>17,000</b>	<b>400</b>	<b>4,000</b>	<b>630</b>	<b>2,900</b>
B-5/ 21.53 <sup>1</sup>	3/18/82	5.13	16.40	0	---	---	---	---	---	---
	3/25/82	5.27	16.26	0	---	---	---	---	---	---
	5/21/82	4.40	17.13	0	---	---	---	---	---	---
	5/26/82	7.55	13.98	0	---	---	---	---	---	---
	6/24/82	7.27	14.26	0	---	---	---	---	---	---
	9/9/93	6.45	15.08	0	8015/8020	110,000	1,800	1,800	6,300	25,000
	12/2/93	5.13	16.40	0	8015/8020	81,000	4,400	3,800	6,700	28,000
	3/17/94	6.55	14.98	0	8015/8020	38,000	2,100	3,100	1,800	9,100
	6/10/94	7.34	14.19	0	8015/8020	110,000	5,100	7,000	5,400	27,000
	9/15/94	6.34	15.19	0	8015/8020	2,700	770	15	240	320
24.23 <sup>3</sup>	<b>12/28/94</b>	<b>6.55</b>	<b>17.68</b>	<b>0</b>	<b>8015/8020</b>	<b>94,000</b>	<b>4,600</b>	<b>10,000</b>	<b>4,400</b>	<b>19,000</b>
B-6/ 22.03 <sup>1</sup>	3/18/82	7.56	14.47	0	---	---	---	---	---	---
	3/25/82	6.08	15.95	0	---	---	---	---	---	---
	5/21/82	4.85	17.18	0	---	---	---	---	---	---
	5/26/82	8.31	13.72	0	---	---	---	---	---	---
	6/24/82	8.03	14.00	0	---	---	---	---	---	---
	9/9/93	8.12	13.91	0	8015/8020	6,800 <sup>2</sup>	<0.5	<0.5	<0.5	<1.5
	12/2/93	7.06	14.97	0	8015/8020	320	29	<0.5	<0.5	<0.5
	3/17/94	7.57	14.46	0	8015/8020	570	130	6.2	4.7	14

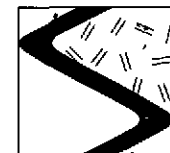
*will be suspended*



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Table 1. Water Level Data and Ground Water Analytic Results - Chevron Service Station #9-2506, 2630 Broadway, Oakland, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G) ←-----	B	T ppb	E	X ----->
B-6	6/10/94	8.21	13.82	0	8015/8020	1,500	100	81	51	240
(cont)	9/15/94	9.94	12.09	0	8015/8020	6,400	900	24	490	620
24.72 <sup>3</sup>	<b>12/28/94</b>	<b>7.45</b>	<b>17.27</b>	<b>0</b>	<b>8015/8020</b>	<b>350</b>	<b>110</b>	<b>4.4</b>	<b>3.7</b>	<b>14</b>
B-7/ 19.54 <sup>1</sup>	3/18/82	4.08	15.46	0	---	---	---	---	---	---
	3/25/82	4.00	15.54	0	---	---	---	---	---	---
	5/21/82	3.00	16.54	0	---	---	---	---	---	---
	5/26/82	4.96	14.58	0	---	---	---	---	---	---
	6/24/82	4.90	14.64	0	---	---	---	---	---	---
	9/9/93	6.54	13.00	0	8015/8020	230	1.3	2.3	0.6	2.1
	12/2/93	6.20	13.34	0	8015/8020	190	4.7	<0.5	1.1	1.9
	3/17/94	5.19	14.35	0	8015/8020	320	15	3.3	1.0	3.0
	6/10/94	5.97	13.57	0	8015/8020	210	6.1	5.7	2.3	5.8
	9/15/94	7.78	11.76	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
22.22 <sup>3</sup>	<b>12/28/94</b>	<b>5.04</b>	<b>17.18</b>	<b>0</b>	<b>8015/8020</b>	<b>520</b>	<b>17</b>	<b>4.8</b>	<b>2.5</b>	<b>2.1</b>
B-8/ 18.49 <sup>1</sup>	3/18/82	4.27	14.22	0	---	---	---	---	---	---
	3/25/82	4.06	14.43	0	---	---	---	---	---	---
	5/21/82	4.86	13.63	0	---	---	---	---	---	---
	5/26/82	4.96	13.53	0	---	---	---	---	---	---
	6/24/82	4.87	13.62	0	---	---	---	---	---	---
	9/9/93	5.20	13.29	0	8015/8020	<50	3.4	<0.5	<0.5	<1.5
	12/2/93	5.31	13.18	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	3/17/94	4.87	13.62	0	8015/8020	<50	1.7	0.5	<0.5	0.6
	6/10/94	5.63	12.86	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	9/15/94	7.10	11.39	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
21.01 <sup>3</sup>	<b>12/28/94</b>	<b>4.63</b>	<b>16.38</b>	<b>0</b>	<b>8015/8020</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>
B-9 <sup>4</sup>	8/4/94	11.53	14.08	---	8015/8020	650	4.4	2.4	6.3	14
	11/2/94	9.42	16.19	---	8015/8020	---	---	---	---	---
25.61 <sup>3</sup>	<b>12/28/94</b>	<b>8.35</b>	<b>17.26</b>	<b>0</b>	<b>8015/8020</b>	<b>2,400</b>	<b>290</b>	<b>8.4</b>	<b>90</b>	<b>36</b>
B-10 <sup>4</sup>	8/4/94	10.95	12.20	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	11/2/94	11.19	11.96	---	8015/8020	---	---	---	---	---
23.15 <sup>3</sup>	<b>12/28/94</b>	<b>10.30</b>	<b>12.85</b>	<b>0</b>	<b>8015/8020</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>



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Table 1. Water Level Data and Ground Water Analytic Results - Chevron Service Station #9-2506, 2630 Broadway, Oakland, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G)	-----ppb----->			
							B	T	E	X
B-11 <sup>4</sup>	8/4/94	10.39	14.84	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	11/2/94	11.50	13.73	---	8015/8020	---	---	---	---	---
25.23 <sup>3</sup>	<b>12/28/94</b>	<b>9.09</b>	<b>16.14</b>	<b>0</b>	<b>8015/8020</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>
B-12 <sup>4</sup>	8/4/94	6.41	13.99	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	11/2/94	8.75	11.65	---	8015/8020	---	---	---	---	---
20.40 <sup>3</sup>	<b>12/28/94</b>	<b>2.76</b>	<b>17.64</b>	<b>0</b>	<b>8015/8020</b>	<b>74</b>	<b>1.0</b>	<b>2.6</b>	<b>1.3</b>	<b>4.4</b>
TP-1/ ---	9/9/93	7.33	---	0	8015/8020	8,500	770	890	120	590
TP-2/ ---	9/9/93	6.18	---	0	8015/8020	13,000	2,400	3,200	380	1,900
Trip-Lab Blank										
TB-LB	9/9/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<1.5
	12/2/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	3/17/94	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	6/10/94	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	9/15/94	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	<b>12/28/94</b>	---	---	---	<b>8015/8020</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>
Bailer Blank										
BB	9/9/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<1.5
	12/2/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	3/17/94	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	0.6



Table 1. Water Level Data and Ground Water Analytic Results - Chevron Service Station #9-2506, 2630 Broadway, Oakland, California (continued)

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  
B = Benzene  
T = Toluene  
E = Ethylbenzene  
X = Xylenes  
ppb = Parts per billion  
--- = Not analyzed/Not applicable

NOTES:

Water level data prior to September 9, 1993, compiled from IT Enviroscience Progress Report, prepared for Chevron, August 2, 1982.

- \* Product thickness was measured on and after September 9, 1993, with an MMC flexi-dip interface probe.
- <sup>1</sup> Top of casing elevations were compiled from IT Enviroscience Program Report, August 2, 1982. TOC for MW-1 was assumed to be 23 feet MSL.
- <sup>2</sup> Laboratory indicates a non-typical gasoline pattern.
- <sup>3</sup> Wells were resurveyed. Top of casing elevations were compiled from RESNA Subsurface Investigation Report, October 19, 1994.
- <sup>4</sup> Water level and analytic data prior to 12/28/94 from RESNA Subsurface Investigation Report, October 19, 1994.

ANALYTIC METHODS:

8015 = EPA Method 8015/5030 for TPPH(G)  
8020 = EPA Method 8020 for BTEX





## **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.

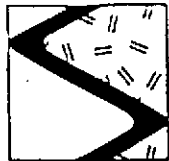
Prior to sampling, each well is purged of a minimum of three well casing volumes of water using a steam-cleaned PVC bailer, or a pre-cleaned pump. Temperature, pH and electrical conductivity are measured at least three times during purging. Purging is continued until these parameters have stabilized (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.



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### WATER SAMPLING DATA

Job Name 263D Broadway OAC

Job Number 1-364-04

Sampler \_\_\_\_\_

Well Number TB/LB

Date 12/28/94

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 Pump Sampled With Dip Bailer

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  
 $vol. in cyl. = \pi r^2 h$   
 $7.48 gal/ft^3$   
 $V_{2"} casing = 0.163 gal/ft$   
 $V_{3"} casing = 0.367 gal/ft$   
 $V_{4"} casing = 0.653 gal/ft$   
 $V_{5"} casing = 0.826 gal/ft$   
 $V_{6"} casing = 1.47 gal/ft$   
 $V_{8"} casing = 2.61 gal/ft$

### CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm

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	SPA	G-137CA

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 2630 Broadway DAC Job Number 1-364-04  
 Well Number B-1 Date 12/28/94  
 Sample Point Location/Description DW side of site  
 Depth to Water (static) 9.25 Well Depth (sounded) \_\_\_\_\_  
 Initial height of water in casing 19.75 Volume 3.21 gallons  
 Volume to be purged \_\_\_\_\_ 9.61 gallons  
 Purged With Pump Sampled With Drop Boiler  
 Pumped or Bailed Dry?  Yes  No Time 1355 After 8 gallons  
 Water level at sampling \_\_\_\_\_ Percent Recovery \_\_\_\_\_

Sampler \_\_\_\_\_  
 Well Diameter 2"  
 Well Depth (spec.) 29

**Formulas/Conversions**  
 $r$  = well radius in ft  
 $h$  = ht of water col. in ft  
 $vol. in cyl. = \pi r^2 h$   
 $7.48 gal/ft^3$   
 $V_{1'} casing = 0.163 gal/ft$   
 $V_{2'} casing = 0.367 gal/ft$   
 $V_{3'} casing = 0.653 gal/ft$   
 $V_{4.5'} casing = 0.826 gal/ft$   
 $V_{6'} casing = 1.47 gal/ft$   
 $V_{8'} casing = 2.61 gal/ft$

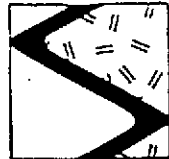
### CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1350	1352	4	4	8.2	63.2	700	
	1356	3	7	7.9	64.3	780	
		3	10				

SAMPLES COLLECTED Time 1405 Total volume purged (gal.) 8  
 Water color clear Odor mild Hydrocarbon  
 Description of sediments or material in sample: light, T.O.  
 Additional Comments: \_\_\_\_\_

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
<u>B-1</u>	<u>2</u>	<u>1</u>	<u>-</u>	<u>HCl</u>	<u>Y</u>	<u>SPA</u>	<u>G-1137GA</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 \_\_\_\_\_



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### WATER SAMPLING DATA

Job Name 2630 Broadway OAC

Job Number i-364-04

Well Number B-2

Date 12/28/94

Sample Point Location/Description NW side of site

Sampler \_\_\_\_\_

Well Diameter 2"

Depth to Water (static) 7.32

Well Depth (sounded) \_\_\_\_\_

Well Depth (spec.) 17

Initial height of water in casing 9.68

Volume 1.57 gallons

Volume to be purged \_\_\_\_\_

4.7 gallons

Purged With Pump

Sampled With Dip Bailer

Pumped or Bailed Dry?  Yes  No

Time 1413 After 2 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<sub>1</sub> casing = 0.163 gal/ft

V<sub>2</sub> casing = 0.367 gal/ft

V<sub>3</sub> casing = 0.653 gal/ft

V<sub>4</sub> casing = 0.826 gal/ft

V<sub>5</sub> casing = 1.47 gal/ft

V<sub>6</sub> 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
1411		1	1	7.7	60.5	750	
		2	3				
		2	5				

SAMPLES COLLECTED Time 1422

Total volume purged (gal.) 2

Water color Clear

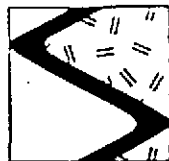
Odor Hydrocarbon

Description of sediments or material in sample: light tan, black, organic

Additional Comments: # 10 HCl due to effluence

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-2	2	1	-	HCl	Y	SPA	G-11379A

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 \_\_\_\_\_



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### WATER SAMPLING DATA

Job Name 2630 Broadway, OAK Job Number 1-364-04  
 Well Number B-3 Date 12/28/94  
 Sample Point Location/Description nw. side of site  
 Depth to Water (static) 6.44 Well Depth (sounded) \_\_\_\_\_  
 Initial height of water in casing 10.56 Volume 1.72 gallons  
 Volume to be purged 5.16 gallons  
 Purged With Pump Sampled With Dip Bailer  
 Pumped or Bailed Dry?  Yes  No Time 1432 After 2 gallons  
 Water level at sampling \_\_\_\_\_ Percent Recovery \_\_\_\_\_

Sampler \_\_\_\_\_  
 Well Diameter 2"  
 Well Depth (spec.) 17

**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<sub>1</sub>~~ casing = 0.163 gal/ft  
 V<sub>2</sub> casing = 0.367 gal/ft  
 V<sub>3</sub> casing = 0.653 gal/ft  
 V<sub>4</sub> casing = 0.826 gal/ft  
 V<sub>5</sub> casing = 1.47 gal/ft  
 V<sub>6</sub> 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
1429	1432	2	2	7.9	60.0	840	
		2	4				
		2	6				

SAMPLES COLLECTED Time 1442 Total volume purged (gal.) (2)  
 Water color clear Odor mild hydrocarbon  
 Description of sediments or material in sample: mod. Tan, black  
 Additional Comments: 4 NO HCl due to effervescence

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-3	2	1	-	<del>HCl</del>	Y	SPA	G-1379A

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 2630 Broadway, OAK Job Number 1-364-04  
 Well Number B-4 Date 12/28/94  
 Sample Point Location/Description N side of site  
 Depth to Water (static) 5.74 Well Depth (sounded) \_\_\_\_\_  
 Initial height of water in casing 10.26 Volume 1.67 gallons  
 Volume to be purged \_\_\_\_\_ 5.01 gallons  
 Purged With Pump Sampled With Drip Bailer  
 Pumped or Bailed Dry?  Yes  No Time 1336 After 3 gallons  
 Water level at sampling \_\_\_\_\_ Percent Recovery \_\_\_\_\_

Sampler C-L  
 Well Diameter 2"  
 Well Depth (spec.) 16

**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
1332	1334	2	2	8.0	65.2	690	
		2	4				
		2	6				

SAMPLES COLLECTED Time 1342 Total volume purged (gal.) 3  
 Water color clear Odor \_\_\_\_\_  
 Description of sediments or material in sample: light, TAN  
 Additional Comments: \_\_\_\_\_

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-4	2	1	-	HCl	Y	SPA	(2/13/94)

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 2630 Broadway OAC Job Number 1-364-04  
 Well Number B-S Date 12/28/94  
 Sample Point Location/Description N side of site  
 Depth to Water (static) 6.55 Well Depth (sounded) \_\_\_\_\_  
 Initial height of water in casing 11.45 Volume 1.86 gallons  
 Volume to be purged \_\_\_\_\_ 5.59 gallons  
 Purged With Pump Sampled With Drip Bailer  
 Pumped or Bailed Dry? Yes  No Time \_\_\_\_\_ After \_\_\_\_\_ gallons  
 Water level at sampling \_\_\_\_\_ Percent Recovery \_\_\_\_\_

Sampler \_\_\_\_\_  
 Well Diameter 2"  
 Well Depth (spec.) 18'

**Formulas/Conversions**  
 $r$  = well radius in ft  
 $h$  = ht of water col. in ft  
 vol. in cyl. =  $\pi r^2 h$   
 $7.48 \text{ gal/ft}^3$   
 $V_{2"} \text{ casing} = 0.163 \text{ gal/ft}$   
 $V_{3"} \text{ casing} = 0.357 \text{ gal/ft}$   
 $V_{4"} \text{ casing} = 0.653 \text{ gal/ft}$   
 $V_{5"} \text{ casing} = 0.826 \text{ gal/ft}$   
 $V_{6"} \text{ casing} = 1.47 \text{ gal/ft}$   
 $V_{8"} \text{ casing} = 2.61 \text{ gal/ft}$

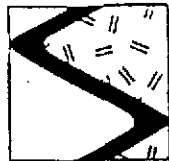
### CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1311	1312	2	2	8.0	58.6	730	
	1313	2	4	8.0	60.8	820	
	1315	2	6	8.0	63.4	860	

SAMPLES COLLECTED Time 1322 Total volume purged (gal.) 6  
 Water color clear Odor mild Hydrocarbon  
 Description of sediments or material in sample: light TAN  
 Additional Comments: \* NO HCl due to effervescence

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-S	2	1	-	<del>HCl</del>	Y	SPA	6-13791

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 \_\_\_\_\_



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### WATER SAMPLING DATA

Job Name 2630 Broadway OAK Job Number 1-364-04  
 Well Number B-6 Date 12/28/94  
 Sample Point Location/Description 12 W corner of site  
 Depth to Water (static) 7.45 Well Depth (sounded) \_\_\_\_\_  
 Initial height of water in casing 12.55 Volume 2.04 gallons  
 Volume to be purged 6.1 gallons  
 Purged With Pump Sampled With Drip Boiler  
 Pumped or Bailed Dry?  Yes  No Time 1452 After 3.5 gallons  
 Water level at sampling \_\_\_\_\_ Percent Recovery \_\_\_\_\_

Sampler \_\_\_\_\_  
 Well Diameter 2"  
 Well Depth (spec.) 20

**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<sub>1</sub> casing = 0.163 gal/ft  
 V<sub>2</sub> casing = 0.367 gal/ft  
 V<sub>3</sub> casing = 0.653 gal/ft  
 V<sub>4</sub> casing = 0.826 gal/ft  
 V<sub>5</sub> casing = 1.47 gal/ft  
 V<sub>6</sub> 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
1449	1450	2	2	8.1	66.3	830	
		2.5	4.5				
		2.5	7				

SAMPLES COLLECTED Time 1458 Total volume purged (gal.) (3.5)  
 Water color clear Odor hydrocarbon  
 Description of sediments or material in sample: very light TAN  
 Additional Comments: \* NO HCl clue to effervesence

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-6	2	1	-	HCl ✓	Y	SPA	G-113791

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 2630 Broadway OAK Job Number 1-364-04  
 Well Number B-7 Date 12/28/94  
 Sample Point Location/Description W. of B-7  
 Depth to Water (static) 5.04 Well Depth (sounded) \_\_\_\_\_  
 Initial height of water in casing 14.96 Volume 2.43 gallons  
 Volume to be purged \_\_\_\_\_ 7.31 gallons  
 Purged With Pump Sampled With Drop Boiler  
 Pumped or Bailed Dry?  Yes  No Time 1222 After 4.5 gallons  
 Water level at sampling \_\_\_\_\_ Percent Recovery \_\_\_\_\_

Sampler T.2  
 Well Diameter 2"  
 Well Depth (spec.) 20

**Formulas/Conversions**  
 $r$  = well radius in ft  
 $h$  = ht of water col. in ft  
 vol. in cyl. =  $\pi r^2 h$   
 $7.48 \text{ gal/ft}^3$   
 $V_{2.5} \text{ casing} = 0.163 \text{ gal/ft}$   
 $V_{3.0} \text{ casing} = 0.367 \text{ gal/ft}$   
 $V_{3.5} \text{ casing} = 0.653 \text{ gal/ft}$   
 $V_{4.0} \text{ casing} = 0.826 \text{ gal/ft}$   
 $V_{4.5} \text{ casing} = 1.47 \text{ gal/ft}$   
 $V_{5.0} \text{ casing} = 2.61 \text{ gal/ft}$

### CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1218	1220	3	3	7.7	60.9	610	
		2.5	5.5				
		2.5	8				

SAMPLES COLLECTED Time 1228 Total volume purged (gal.) (4.5)  
 Water color Clear Odor \_\_\_\_\_  
 Description of sediments or material in sample: light tan  
 Additional Comments: no HCl due to effervescence

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-7	2	1	-	<del>HCl</del>	Y	SAA	G-137EX

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 2630 Broadway OAC Job Number 1-364-04 Sampler T.L.  
 Well Number B-8 Date 12/28/94 Well Diameter 2"  
 Sample Point Location/Description NE side gate Well Depth (spec.) 18'  
 Depth to Water (static) 4.63 Well Depth (sounded) \_\_\_\_\_  
 Initial height of water in casing 13.37 Volume 2.17 gallons  
 Volume to be purged \_\_\_\_\_ 6.5 gallons  
 Purged With Pump Sampled With Drip Bailer  
 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. =  $\pi r^2 h$   
 $7.48 \text{ gal/ft}^3$   
 $V_{2.5} \text{ casing} = 0.163 \text{ gal/ft}$   
 $V_{3.0} \text{ casing} = 0.367 \text{ gal/ft}$   
 $V_{3.5} \text{ casing} = 0.653 \text{ gal/ft}$   
 $V_{4.0} \text{ casing} = 0.826 \text{ gal/ft}$   
 $V_{4.5} \text{ casing} = 1.47 \text{ gal/ft}$   
 $V_{5.0} \text{ casing} = 2.61 \text{ gal/ft}$

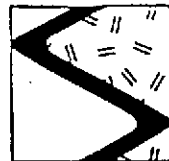
### CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp. (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1151	1152	2	2	7.9	50.8	140	
	1154	2.5	4.5	7.8	54.2	580	
	1156	2.5	7	7.9	57.0	760	

SAMPLES COLLECTED Time 1210 Total volume purged (gal.) 5  
 Water color clear Odor \_\_\_\_\_  
 Description of sediments or material in sample: light TAN  
 Additional Comments: \* NO HCl due to reference

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-8	2	1	-	HCl-X	Y	SPA	G-11379A

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 \_\_\_\_\_



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### WATER SAMPLING DATA

Job Name 2630 Broadway OAK

Job Number 1-364-04

Sampler T. L

Well Number B-9

Date 12/28/94

Well Diameter 2"

Sample Point Location/Description SW side of site

Well Depth (spec.) 19

Depth to Water (static) 8.35

Well Depth (sounded) \_\_\_\_\_

Initial height of water in casing 10.65

Volume 1.73 gallons

Volume to be purged \_\_\_\_\_

5.2 gallons

Purged With Pump

Sampled With Drip Bailer

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. =  $\pi r^2 h$   
 $7.48 \text{ gal/ft}^3$   
 $V_{1/2} \text{ casing} = 0.163 \text{ gal/ft}$   
 $V_{1/4} \text{ casing} = 0.367 \text{ gal/ft}$   
 $V_{3/8} \text{ casing} = 0.653 \text{ gal/ft}$   
 $V_{1/2} \text{ casing} = 0.826 \text{ gal/ft}$   
 $V_{3/4} \text{ casing} = 1.47 \text{ gal/ft}$   
 $V_{1} \text{ casing} = 2.61 \text{ gal/ft}$

### CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1250	1251	2	2	7.8	58.9	1000	
	1252	2	4	8.0	61.6	1070	
	1253	2	6	8.1	61.8	1240	
						5	

SAMPLES COLLECTED Time 1300

Total volume purged (gal.) 6

Water color clear

Odor \_\_\_\_\_

Description of sediments or material in sample: light, TAN

Additional Comments: \_\_\_\_\_

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-9	2	1	-	HCl	Y	SPA	6/13/94

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 2630 Broadway GAC Job Number J-364-04  
 Well Number B-10 Date 12/28/94  
 Sample Point Location/Description W. side of Broadway  
 Depth to Water (static) 10.30 Well Depth (sounded) \_\_\_\_\_  
 Initial height of water in casing 8.7 Volume 1.41 gallons  
 Volume to be purged \_\_\_\_\_ 4.25 gallons  
 Purged With Pump Sampled With Dip Bailer  
 Pumped or Bailed Dry?  Yes  No Time \_\_\_\_\_ After \_\_\_\_\_ gallons  
 Water level at sampling \_\_\_\_\_ Percent Recovery \_\_\_\_\_

Sampler T.L.  
 Well Diameter 2"  
 Well Depth (spec.) 19

**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>  
 $V_{2"} \text{ casing} = 0.163 \text{ gal/ft}$   
 $V_{2.5"} \text{ casing} = 0.357 \text{ gal/ft}$   
 $V_{3"} \text{ casing} = 0.653 \text{ gal/ft}$   
 $V_{3.5"} \text{ casing} = 0.826 \text{ gal/ft}$   
 $V_{4"} \text{ casing} = 1.47 \text{ gal/ft}$   
 $V_{4.5"} \text{ casing} = 2.61 \text{ gal/ft}$

#### CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1117	1119	1	1	7.983	96.9	~830	790
	1120	2	3	7.981	59.3	~810	790
	1121	2	5	8.2	61.4	750	

SAMPLES COLLECTED Time 1130 Total volume purged (gal.) 5  
 Water color clear Odor \_\_\_\_\_  
 Description of sediments or material in sample: mul. TAU  
 Additional Comments: \_\_\_\_\_

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-10	2	1	-	HCl	Y	SFA	G-13791

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 2630 Broadway, OAK Job Number 1-364-04  
 Well Number B-11 Date 12/28/94  
 Sample Point Location/Description N side 27th St. Amos Green site  
 Depth to Water (static) 9.09 Well Depth (sounded) \_\_\_\_\_  
 Initial height of water in casing 9.91 Volume 1.61 gallons  
 Volume to be purged \_\_\_\_\_ 4.84 gallons  
 Purged With Pump Sampled With Dip Bailer  
 Pumped or Bailed Dry?  Yes  No Time \_\_\_\_\_ After \_\_\_\_\_ gallons  
 Water level at sampling \_\_\_\_\_ Percent Recovery \_\_\_\_\_

Sampler T.H.  
 Well Diameter 2"  
 Well Depth (spec.) 19

**Formulas/Conversions**  
 $r$  = well radius in ft  
 $h$  = ht of water col. in ft  
 vol. in cyl. =  $\pi r^2 h$   
 $7.48 \text{ gal/ft}^3$   
 $V_{2"} \text{ casing} = 0.163 \text{ gal/ft}$   
 $V_{3"} \text{ casing} = 0.357 \text{ gal/ft}$   
 $V_{4"} \text{ casing} = 0.653 \text{ gal/ft}$   
 $V_{4.5"} \text{ casing} = 0.826 \text{ gal/ft}$   
 $V_{6"} \text{ casing} = 1.47 \text{ gal/ft}$   
 $V_{8"} \text{ casing} = 2.61 \text{ gal/ft}$

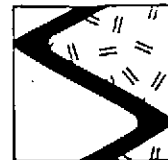
### CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1033	1034	1	1	7.5	63.9	380	
	1035	2	3	7.5	64.2	390	
	1037	2	5	7.6	64.1	410	

SAMPLES COLLECTED Time 1045 Total volume purged (gal.) 5  
 Water color clear Odor \_\_\_\_\_  
 Description of sediments or material in sample: heavy, brown  
 Additional Comments: \_\_\_\_\_

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
HA-B-11	2	1	-	HCl	Y	SPA	G-1/B/T/G/L

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

### WATER SAMPLING DATA

Job Name 2630 Broadway OAK Job Number 1-364-04 Sampler T.L  
 Well Number B-12 Date 12/28/94 Well Diameter 2"  
 Sample Point Location/Description N side 27th st., Area from site Well Depth (spec.) 18  
 Depth to Water (static) 2.76 Well Depth (sounded) \_\_\_\_\_  
 Initial height of water in casing 15.24 Volume 2.48 gallons  
 Volume to be purged \_\_\_\_\_ 7.45 gallons  
 Purged With Pump Sampled With Dip Bailer  
 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>  
 $V_{1.5}^*$  casing = 0.163 gal/ft  
 $V_2^*$  casing = 0.367 gal/ft  
 $V_3^*$  casing = 0.653 gal/ft  
 $V_{4.5}^*$  casing = 0.826 gal/ft  
 $V_6^*$  casing = 1.47 gal/ft  
 $V_{7.5}^*$  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
1011	1013	3	3	8.3	59.0	510	
	1014	2.5	5.5	7.9	60.4	490	
	1016	2.5	8	7.5	62.2	510	

SAMPLES COLLECTED Time 1020 Total volume purged (gal.) 8  
 Water color Clear Odor \_\_\_\_\_  
 Description of sediments or material in sample: light TAN  
 Additional Comments: \_\_\_\_\_

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-12	2	1	-	HCl	Y	SPA	G-1/BTA

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 \_\_\_\_\_

Chevron Facility Number 9-2506  
 Facility Address 2630 Broadway, OAKLAND  
 Consultant Project Number 1-364-04  
 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 SPA  
 Laboratory Release Number 8842480  
 Samples Collected by (Name) TIM LEWIS  
 Collection Date 12/28/94  
 Signature [Signature]

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

Sample Number	Lab Sample Number	Number of Containers	Media S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iod (Yes or No)	Analyses To Be Performed											Note: Do Not Bill TB-LB Samples Remarks
								BTX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (4520)	Petroleum Hydrocarbons (8010)	Petroleum Aromatics (8020)	Petroleum Organics (8240)	Extensive Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or IIA)				
B3/LB		2	W	G	-	HCl	Y	X											Analytical of Shown ↓
B-12		2	W	G	1020	HCl	Y	X											
B-11		2	W	G	1045	HCl	Y	X											
B-10		2	W	G	1130	HCl	Y	X											
B-8		2	W	G	1210	NONE	Y	X		X	NO	HCl	DUE						
B-7		2	W	G	1228	NONE	Y	X		X	NO	EFFERENCE							
B-9		2	W	G	1300	HCl	Y	X			Please initial: <u>VL</u>								
B-5		2	W	G	1322	NONE	Y	X			Samples Stored in ice	yes	3-5°C						
B-4		2	W	G	1342	HCl	Y	X			Appropriate containers	yes							
B-1		2	W	G	1405	HCl	Y	X			Samples preserved	yes							
B-2		2	W	G	1422	NONE	Y	X			VOA: without headspace	NONE							
B-3		2	W	G	1442	NONE	Y	X			Comments:								
B-6		2	W	G	1458	NONE	Y	X											

Signified By (Signature) <u>[Signature]</u>	Organization <u>SER</u>	Date/Time <u>12/28 1650</u>	Received By (Signature) <u>[Signature]</u>	Organization _____	Date/Time _____	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days As Contracted <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">As Contracted</span>
Signified By (Signature) <u>[Signature]</u>	Organization _____	Date/Time _____	Received By (Signature) _____	Organization _____	Date/Time _____	
Signified By (Signature) <u>[Signature]</u>	Organization _____	Date/Time _____	Received For Laboratory By (Signature) <u>[Signature]</u>	Organization _____	Date/Time <u>12/28/94 454pm</u>	



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

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

Date: January 5, 1995

Attn: ED MORALES

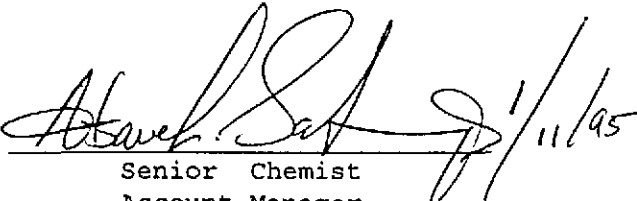
Laboratory Number : 80361

Project Number/Name : 1-364-04

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This report has been reviewed and  
approved for release.

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Senior Chemist  
Account Manager

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Certified Laboratories

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

1555 Burke St., Unit I  
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309 S. Cloverdale St., Suite B-24  
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(206) 763-2992 / fax (206) 763-8429





# Superior Precision Analytical, Inc.

Sierra Environmental Services  
Attn: ED MORALES

Project 1-364-04  
Reported on January 5, 1995

## TOTAL PETROLEUM HYDROCARBONS

LAB #	Sample ID	Sampled	Analyzed	Matrix
80361-01	TB-LB	12/28/94	01/03/95	Water
80361-02	B-12	12/28/94	01/03/95	Water
80361-03	B-11	12/28/94	01/04/95	Water
80361-04	B-10	12/28/94	01/03/95	Water
80361-05	B-8	12/28/94	01/03/95	Water
80361-06	B-7	12/28/94	01/03/95	Water
80361-07	B-9	12/28/94	01/03/95	Water
80361-08	B-5	12/28/94	01/04/95	Water
80361-09	B-4	12/28/94	01/04/95	Water
80361-10	B-1	12/28/94	01/04/95	Water

## RESULTS OF ANALYSIS

Laboratory Number:	80361-01	80361-02	80361-03	80361-04	80361-05
Gasoline_Range	ND<50	74	ND<50	ND<50	ND<50
Benzene	ND<0.5	1.0	ND<0.5	ND<0.5	ND<0.5
Toluene	ND<0.5	2.6	ND<0.5	ND<0.5	ND<0.5
Ethyl Benzene	ND<0.5	1.3	ND<0.5	ND<0.5	ND<0.5
Total Xylenes	ND<0.5	4.4	ND<0.5	ND<0.5	ND<0.5
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L
Laboratory Number:	80361-06	80361-07	80361-08	80361-09	80361-10
Gasoline_Range	520	2400	94000	17000	1200
Benzene	17	290	4600	400	200
Toluene	4.8	8.4	10000	4000	32
Ethyl Benzene	2.5	90	4400	630	37
Total Xylenes	2.1	36	19000	2900	79
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L



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A member of ESSCON Environmental Support Service Consortium

Sierra Environmental  
Attn: ED MORALES

Project 1-364-04  
Reported on January 5, 1995

## TOTAL PETROLEUM HYDROCARBONS

LAB #	Sample ID	Sampled	Analyzed	Matrix
80361-11	B-2	12/28/94	01/03/95	Water
80361-12	B-3	12/28/94	01/04/95	Water
80361-13	B-6	12/28/94	01/03/95	Water

## RESULTS OF ANALYSIS

Laboratory Number:	80361-11	80361-12	80361-13
Gasoline_Range	2600	4100	350
Benzene	63	650	110
Toluene	49	34	4.4
Ethyl Benzene	56	320	3.7
Total Xylenes	370	440	14
Concentration:	ug/L	ug/L	ug/L

### Central Laboratories

825 Arnold Dr., Suite 114  
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# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

## CERTIFICATE OF ANALYSIS

### TOTAL PETROLEUM HYDROCARBONS

QA/QC Information  
Laboratory Number: 80361

NA - Analysis NOT required  
ND - Not Detected above quantitation limit

Matrix: Water

Analyte	Spike Recovery	RPD	Control Limits
Gasoline_Range	84/82	2	65-135
Benzene	89/86	3	65-135
Toluene	98/93	5	65-135
Ethyl Benzene	99/95	4	65-135
Total Xylenes	103/97	6	65-135
Gasoline_Range	139/108	25	65-135
Benzene	245/215	13	65-135
Toluene	135/130	4	65-135
Ethyl Benzene	180/170	6	65-135
Total Xylenes	157/152	3	65-135

Senior Chemist  
Account Manager

Page 1 of 2  
Certificate Laboratories

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