

June 26, 1996



**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  
Fax (510) 842-8252

Mr. Ravi Arulananthum  
San Francisco Bay RWQCB - Oakland Office

Subject: Chevron Facility 1001067  
Semi-Annual Groundwater Monitoring Report  
dated June 3, 1995  
Prepared by Gettler-Ryan Inc.

Mr. Arulananthum:

Attached is a copy of the report for the First Semi-Annual Groundwater Sampling Event of 1996. Groundwater results remain consistent with those last reported. Please call if you have any questions about this report. My phone number is (510) 842-9655.

A handwritten signature in cursive script, appearing to read "R. J. Cochran".

R. J. (Bob) Cochran  
Project Manager

rjco: (1001067)

cc: Ms. Susan Hugo - Alameda County Health Agency

95 JUL - 1 PM 4: 48  
ENVIRONMENTAL  
PROTECTION



# GETTLER-RYAN INC.

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June 3, 1996

Job #5161.80

Mr. Robert Cochran  
Chevron USA Products Company  
P.O. Box 5004  
San Ramon, CA 94583

Re: Former Chevron Asphalt Plant and Terminal #1001067  
Powell @ Landregan Street  
Emeryville, California

Dear Mr. Cochran:

This report documents the semi-annual groundwater sampling event performed by Gettler-Ryan Inc. (G-R). On April 26, 1996, field personnel were on-site to monitor and sample seven wells (MW-2A, MW-7, MW-13, MW-15, MW-17, MW-18, and MW-19A) at the Former Chevron Asphalt Plant and Terminal located at Powell at Landregan Street in Emeryville, California. Wells MW-1, MW-3, MW-8, MW-9, MW-10, MW-11, MW-12, and MW-16 were either not located or inaccessible due to construction activities.

Static groundwater levels were measured on April 26, 1996. All wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any of the wells. Static water level data and groundwater elevations are presented in Table 1. A potentiometric map is included as Figure 1.

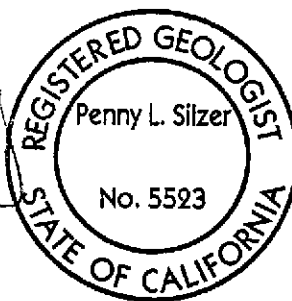
Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets for this event are also attached. The samples were analyzed by NEI/GTEL Environmental Laboratories, Inc. Analytical results are presented in Tables 1 and 2. The chain of custody document and laboratory analytical reports are enclosed.

Thank you for allowing Gettler-Ryan to provide environmental services to Chevron. Please call if you have any questions or comments regarding this report.

Sincerely,

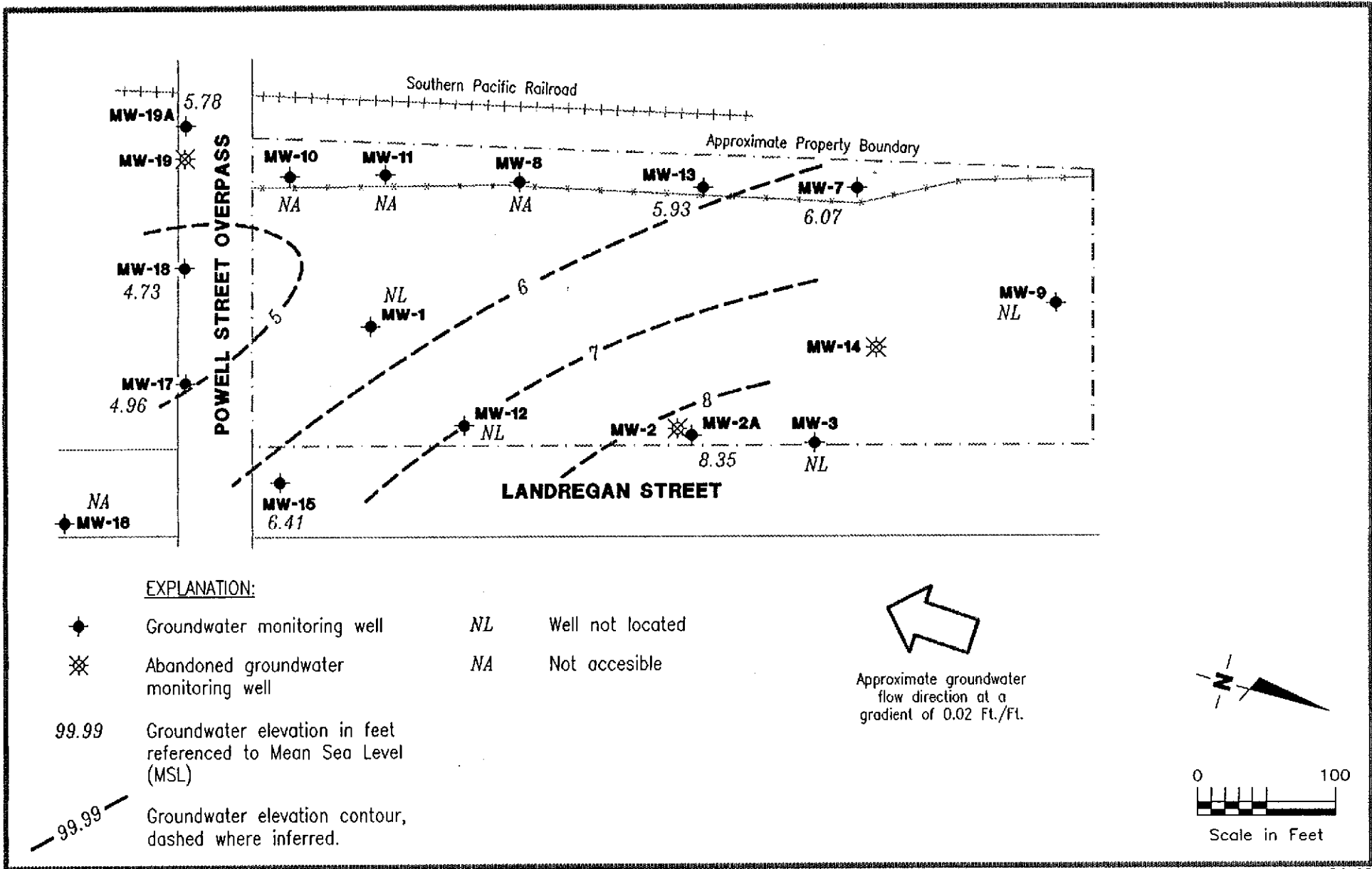
*Deanna L. Harding*  
Deanna L. Harding  
Project Coordinator

*Penny L. Silzer*  
Penny L. Silzer  
Senior Geologist, R.G. No. 5523



DLH/PLS/dlh  
5161.QML

Figure 1: Potentiometric Map  
Table 1: Water Level Data and Groundwater Analytical Results  
Table 2: Analytical Results for Groundwater - Halogenated Volatile Organic Compounds  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets  
Chain of Custody Document and Laboratory Analytical Reports



**Gettler - Ryan Inc.**

6747 Sierra Ct., Suite J (510) 551-7555  
Dublin, CA 94568

**POTENTIOMETRIC MAP**  
Former Chevron Asphalt Plant  
and Terminal No. 1001067  
Emeryville, California

FIGURE

**1**

JOB NUMBER  
5161

REVIEWED BY  
*[Signature]*

DATE  
April 26, 1996

REVISED DATE



Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California

Well ID/ TOC (ft) <sup>1</sup>	Date	DTW (ft)	GWE <sup>1</sup> (msl)	Product Thickness <sup>2</sup> (ft)	Analytical Method	TPH(G) <-----ppb----->	B	T	E	X	MTBE
MW-1/ 10.67	4/26/85	---	---	---	---	---	99	---	---	6.0	---
	9/11/87	---	---	---	---	---	63	---	---	---	---
	7/7/88	---	---	---	---	<100	55	---	---	---	---
	4/13/89	3.72	6.95	---	---	---	---	---	---	---	---
	4/14/89	---	---	---	8260	<5,000	34	<5.0	<5.0	<10	---
	7/31/89	5.72	4.95	0	8260	7,000	57	1.2	<0.2	1.6	---
	12/8/89	4.80	5.87	0	8015/8020	---	26	0.4	0.9	2.0	---
	3/21/90	4.74	5.93	0	8015/8020	3,500	120	9.0	3.0	3.0	---
	6/19/90	4.75	5.92	0	8015/8020	2,700	100	<0.3	<0.3	7.0	---
	9/20/90	5.07	5.60	---	---	---	---	---	---	---	---
	9/21/90	---	---	---	8015/8020	2,200	120	2.0	2.0	0.79	---
	12/28/90	4.91	5.76	0	8015/8020	720	44	2.0	<0.5	9.0	---
	5/10/91	5.30	5.37	0	8015/8020	530	47	2.0	0.5	8.0	---
	8/8/91	5.85	4.82	0	8015/8020	1,400	37	8.3	3.7	12	---
	11/27/91	5.13	5.54	0	8015/8020	840	16	7.1	4.5	11	---
	1/29/92	4.82	5.85	0	8015/8020	350	18	9.3	3.7	7.7	---
	3/26/92	4.32	6.35	0	8015/8020	420 <sup>11</sup>	19	2.2	1.2	4.0	---
	7/23/92	5.42	5.25	0	8015/8020	4,000 <sup>12</sup>	50	82	40	160	---
	10/28/92	5.56	5.11	0	8015/8020	980	36	6.7	3.0	10	---
	5/4/93	6.30	4.37	0	8015/8020	650	9.4	2.4	1.2	4.5	---
	1/5/94 <sup>10</sup>	---	---	---	---	---	---	---	---	---	---
MW-2/ 13.78	4/26/85	---	---	---	---	---	<10	---	---	---	---
	9/11/87	---	---	---	---	---	---	---	---	---	---
	7/7/88	---	---	---	---	<100	<5.0	---	---	---	---
	4/13/89	2.62	11.16	---	---	---	---	---	---	---	---
	4/14/89*	---	---	---	8260	<100	<0.2	<0.2	<0.2	<0.4	---
	7/31/89	4.63	9.15	0	8260	<100	<0.2	<1.0	<0.2	<0.4	---
	12/8/89	5.98	7.80	0	8015/8020	---	<0.3	<0.3	<0.3	<0.6	---
	3/21/90	5.85	7.93	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	6/19/90	5.95	7.83	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	9/20/90	6.86	6.92	---	---	---	---	---	---	---	---
	9/21/90	---	---	---	8015/8020	<50	<1.5	<1.5	<1.5	<4.5	---
	12/28/90	6.34	7.44	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	5/10/91	5.96	7.82	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	8/8/91	7.66	6.12	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	11/27/91	8.04	5.74	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	1/29/92	6.01	7.77	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---



Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California (continued)

Well ID/ TOC (ft) <sup>1</sup>	Date	DTW (ft)	GWE <sup>1</sup> (msl)	Product Thickness <sup>2</sup> (ft)	Analytic Method	TPH(G) <----->	ppb					MTBE
							B	T	E	X		
MW-2 (cont)	3/26/92	6.10	7.68	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---	
	7/23/92	7.39	6.39	0	8015/8020	<50	<0.5	<0.5	<0.5	0.8	---	
	10/28/92	7.51	6.27	0	8015/8020	55	1.3	6.9	1.1	5.1	---	
	5/4/93 <sup>8</sup>	---	---	---	---	---	---	---	---	---	---	
	1/5/94 <sup>10</sup>	---	---	---	---	---	---	---	---	---	---	
	10/24/94	Dry	---	---	---	---	---	---	---	---	---	
	4/19/95	2.51	11.28 <sup>14</sup>	0.01	---	---	---	---	---	---	---	
	11/6/95	Abandoned	---	---	---	---	---	---	---	---	---	
MW-2A 12.45	11/6/95	4.51	7.94	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/26/96	4.10	8.35	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
MW-3/ 11.73	4/26/85	---	---	---	---	---	<10	---	---	---	---	
	9/11/87	---	---	---	---	---	<0.5	---	---	---	---	
	7/7/88	---	---	---	---	<100	<5.0	---	---	---	---	
	4/13/89	2.34	9.39	---	---	---	---	---	---	---	---	
	4/14/89*	---	---	---	8260	<100	<0.2	<0.2	<0.2	<0.4	---	
	7/31/89	4.79	6.94	0	8260	<100	<0.2	<1.0	<0.2	<0.4	---	
	12/8/89	3.03	8.70	0	8015/8020	---	<0.3	<0.3	<0.3	<0.6	---	
	3/21/90	2.55	9.18	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---	
	6/19/90	2.76	8.97	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---	
	9/20/90	4.43	7.30	---	---	---	---	---	---	---	---	
	9/21/90	---	---	---	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---	
	12/28/90	3.67	8.06	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---	
	5/10/91	2.83	8.90	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---	
	8/8/91	5.09	6.64	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---	
	11/27/91	5.37	6.36	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---	
	1/29/92	3.46	8.27	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---	
	3/26/92	2.10	9.63	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---	
	7/23/92	4.60	7.13	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---	
	10/28/92	5.07	6.66	0	8015/8020	92	1.8	12	2.0	10	---	
	5/4/93 <sup>8</sup>	---	---	---	---	---	---	---	---	---	---	
1/5/94 <sup>10</sup>	---	---	---	---	---	---	---	---	---	---		
MW-4	4/26/85	---	---	---	---	3,100	<10	---	---	---	---	
	9/11/87	---	---	---	---	---	<0.5	---	---	---	---	
	7/7/88	---	---	---	---	<100	<5.0	---	---	---	---	



Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California (continued)

Well ID/ TOC (ft) <sup>1</sup>	Date	DTW (ft)	GWE <sup>1</sup> (msl)	Product Thickness <sup>2</sup> (ft)	Analytic Method	TPH(G) <-----ppb----->	B	T	E	X	MTBE
MW-4	4/13/89 <sup>3</sup>	2.12	---	---	---	---	---	---	---	---	---
(cont)	4/14/89 <sup>4*</sup>	---	---	---	8260	380 <sup>13</sup>	<0.5	<1.0	<1.0	<1.0	---
MW-5	4/26/85	---	---	---	---	1,600	<100	---	---	---	---
	9/11/87	---	---	---	---	---	<10	---	---	---	---
	7/7/88	---	---	---	---	<100	<5.0	---	---	---	---
	4/13/89 <sup>3</sup>	2.79	---	---	---	---	---	---	---	---	---
	4/14/89 <sup>4*</sup>	---	---	---	8260	4,300 <sup>13</sup>	<0.5	<1.0	<1.0	<1.0	---
MW-6	4/26/85	---	---	---	---	580	<100	---	---	---	---
	9/11/87	---	---	---	---	---	<10	---	---	---	---
	7/7/88	---	---	---	---	8,000	<5.0	---	---	---	---
	4/13/89 <sup>3</sup>	1.90	---	---	---	---	---	---	---	---	---
	4/14/89 <sup>4*</sup>	---	---	---	8260	3,300 <sup>13</sup>	<0.5	<1.0	<1.0	<1.0	---
MW-7/ 10.47	4/26/85	---	---	---	---	700	ND	---	---	---	---
	9/11/87	---	---	---	---	---	<10	---	---	---	---
	7/7/88	---	---	---	---	17,000	<5.0	---	---	---	---
	4/13/89	1.90	8.57	---	---	---	---	---	---	---	---
	4/14/89 <sup>*</sup>	---	---	---	8260	<50	<0.5	<1.0	<1.0	<1.0	---
	7/31/89	4.24	6.23	---	8260	160 <sup>13</sup>	<0.1	<0.5	<0.1	<0.2	---
	7/31/89	---	---	---	8260	100 <sup>13</sup>	<0.1	<0.5	<0.1	<0.2	---
	12/8/89	2.65	7.82	0	8015/8020	---	<0.3	<0.3	<0.3	<0.6	---
	3/21/90	2.76	7.71	0	8015/8020	<50	<0.3	<0.3	<0.3	0.6	---
	6/19/90	3.24	7.23	0	8015/8020	<50	<0.3	<0.3	<0.3	0.6	---
	9/20/90	4.57	5.90	---	---	---	---	---	---	---	---
	9/21/90	---	---	---	8015/8020	<50	1.5	<0.3	<0.3	<0.6	---
	12/28/90	3.12	7.35	0	8015/8020	<50	0.7	<0.5	<0.5	0.7	---
	5/10/91	3.53	6.94	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	8/8/91	4.64	5.83	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	11/27/91	3.66	6.81	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	1/29/92	3.24	7.23	0	8015/8020	<50	<0.5	<0.5	<0.5	0.9	---
	3/26/92	2.61	7.86	0	8015/8020	<50	<0.5	<0.5	<0.5	0.9	---
	7/23/92	4.19	6.28	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	10/28/92	4.39	6.08	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	5/4/93 <sup>*</sup>	---	---	---	---	---	---	---	---	---	---



Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California (continued)

Well ID/ TOC (ft) <sup>1</sup>	Date	DTW (ft)	GWE <sup>1</sup> (msl)	Product Thickness <sup>2</sup> (ft)	Analytic Method	TPH(G) ←-----ppb----->	B	T	E	X	MTBE
MW-7	1/5/94 <sup>10</sup>	---	---	---	---	---	---	---	---	---	---
(cont)	5/13/94	4.41	6.06	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	10/24/94	5.03	5.44	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	4/19/95	4.53	5.94	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	11/6/95	5.11	5.36	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	4/26/96	4.40	6.07	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5.0
MW-8/ 10.46	4/26/85	---	---	---	---	---	ND	---	---	---	---
	9/11/87	---	---	---	---	---	<10	---	---	---	---
	7/7/88	---	---	---	---	20,000	<5.0	---	---	---	---
	4/13/89	2.80	7.66	---	---	---	---	---	---	---	---
	4/14/89*	---	---	---	8260	<50	<0.5	<1.0	<1.0	<1.0	<3,000
	7/31/89	5.70	4.76	0	8260	<50	<0.1	<0.5	<0.1	<0.2	---
	12/8/89	4.13	6.33	0	8015/8020	---	<0.3	<0.3	<0.3	<0.6	---
	3/21/90	4.07	6.39	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	6/19/90	4.25	6.21	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	9/20/90	4.99	5.47	---	---	---	---	---	---	---	---
	9/21/90	---	---	---	8015/8020	<50	6.0	<0.3	<0.3	<0.6	---
	12/28/90	4.39	6.07	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	5/10/91	4.13	6.33	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	8/8/91	5.53	4.93	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	11/27/91	4.59	5.87	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	1/29/92	5.30	5.16	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	3/26/92	3.59	6.87	0	8015/8020	<50	<0.5	<0.5	<0.5	0.7	---
	7/23/92	5.06	5.40	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	10/28/92 <sup>2</sup>	---	---	---	---	---	---	---	---	---	---
	5/4/93 <sup>3</sup>	---	---	---	---	---	---	---	---	---	---
	1/5/94 <sup>4</sup>	---	---	---	---	---	---	---	---	---	---
	5/13/94	5.59	4.87	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	10/24/94 <sup>7</sup>	---	---	---	---	---	---	---	---	---	---
	4/19/95 <sup>4</sup>	---	---	---	---	---	---	---	---	---	---
	11/6/95	Inaccessible	---	---	---	---	---	---	---	---	---
	4/26/96	Inaccessible	---	---	---	---	---	---	---	---	---
MW-9	4/26/85	---	---	---	---	---	---	---	---	---	---
	9/11/87	---	---	---	---	---	---	---	---	---	---
	7/7/88	---	---	---	---	400	---	---	---	---	---
	5/10/91 <sup>1</sup>	---	---	---	---	---	---	---	---	---	---



Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California (continued)

Well ID/ TOC (ft) <sup>1</sup>	Date	DTW (ft)	GWE <sup>1</sup> (msl)	Product Thickness <sup>2</sup> (ft)	Analytic Method	TPH(G) <-----ppb----->	B	T	E	X	MTBE
MW-10/ 10.82	7/7/88	---	---	---	---	---	<5.0	---	---	---	---
	4/14/89*	---	---	---	8260	<50	<0.5	<1.0	<1.0	<1.0	---
	7/31/89	---	---	---	8260	<50	<0.1	<0.5	<0.1	<0.2	---
	12/8/89	---	---	---	8015/8020	---	<0.3	<0.3	<0.3	<0.6	---
	3/21/90	4.60	6.22	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	6/19/90	4.89	5.93	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	9/20/90	5.77	5.05	---	---	---	---	---	---	---	---
	9/21/90	---	---	---	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	12/28/90	4.99	5.83	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	5/10/91	5.80	5.02	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	8/8/91	5.86	4.96	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	11/27/91	5.39	5.43	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	1/29/92	5.44	5.38	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	3/26/92	4.96	5.86	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	7/23/92	5.80	5.02	0	8015/8020	<50	<0.5	1.8	0.5	1.9	---
	10/28/92	6.06	4.76	0	8015/8020	<50	0.6	0.7	<0.5	1.2	---
	5/4/93 <sup>3</sup>	---	---	---	---	---	---	---	---	---	---
	1/5/94	5.92	4.90	0	8015/8020	<50	<0.5	<0.5	<0.5	0.6	---
	5/13/94	5.09	5.73	0	8015/8020	140	<0.5	<0.5	<0.5	1.3	---
	10/24/94	6.24	4.58	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	4/19/95	5.26	5.56	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	11/6/95	6.25	4.57	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	4/26/96	Inaccessible		---	---	---	---	---	---	---	---
MW-11/ 11.38	7/7/88	---	---	---	---	---	<5.0	---	---	---	---
	4/14/89	---	---	---	8260	<50	<0.5	<1.0	<1.0	<1.0	<3,000
	7/31/89	---	---	---	8260	<100	<0.2	<0.2	<0.2	<0.2	---
	12/8/89	---	---	---	8015/8020	---	<0.3	<0.3	<0.3	<0.6	---
	3/21/90	4.82	6.56	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	6/19/90	5.14	6.24	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	9/20/90	6.11	5.27	---	---	---	---	---	---	---	---
	9/21/90	---	---	---	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	12/28/90	5.16	6.22	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	5/10/91	7.83	3.55	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	8/8/91	6.32	5.06	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	11/27/91	5.67	5.71	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	1/29/92	5.83	5.55	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---





Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California (continued)

Well ID/ TOC (ft) <sup>1</sup>	Date	DTW (ft)	GWE <sup>1</sup> (msl)	Product Thickness <sup>2</sup> (ft)	Analytic Method	TPH(G) <-----ppb----->	B	T	E	X	MTBE
MW-11 (cont)	3/26/92	4.09	7.29	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	7/23/92	6.19	5.19	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	10/28/92	6.51	4.87	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	5/4/93 <sup>e</sup>	---	---	---	---	---	---	---	---	---	---
	1/5/94 <sup>e</sup>	---	---	---	---	---	---	---	---	---	---
	5/13/94	5.67	5.71	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	10/24/94	6.79	4.59	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	4/19/95	5.69	5.69	0	8015/8020	58 <sup>15</sup>	0.6	<0.5	<0.5	0.5	---
	11/6/95	Inaccessible	---	---	---	---	---	---	---	---	---
	4/26/96	Inaccessible	---	---	---	---	---	---	---	---	---
MW-12/ 13.03	7/7/88	---	---	---	---	<100	<5.0	---	---	---	---
	4/14/89*	---	---	---	8260	<50	<0.5	<1.0	<1.0	<1.0	---
	7/31/89	---	---	---	8260	<100	<0.1	<0.5	<0.1	<0.2	---
	12/8/89	---	---	---	8015/8020	---	<0.3	<0.3	<0.3	<0.6	---
	3/21/90	6.76	6.27	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.3	---
	6/19/90	6.62	6.41	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.3	---
	9/20/90	5.00	8.03	---	---	---	---	---	---	---	---
	9/21/90	---	---	---	8015/8020	<50	<0.3	<0.3	<0.3	<0.3	---
	12/28/90	6.62	6.41	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	5/10/91	6.48	6.55	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	8/8/91	8.01	5.02	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	11/27/91	7.95	5.08	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	1/29/92	7.68	5.35	0	8015/8020	<50	<0.5	<0.5	<0.5	1.0	---
3/26/92	6.60	6.43	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---	
7/23/92 <sup>e</sup>	---	---	---	---	---	---	---	---	---	---	
MW-13/ 11.15	3/21/90	4.08	7.07	0	8015/8020	480	<0.3	<0.3	1.0	5.0	---
	6/19/90	4.34	6.81	0	8015/8020	180	<0.3	<0.3	0.8	3.0	---
	9/20/90	5.31	5.84	0	8015/8020	150	<0.3	<0.3	<0.3	0.54	---
	12/28/90	4.79	6.36	0	8015/8020	160	<0.5	<0.5	<0.5	1.0	---
	5/10/91	4.20	6.95	0	8015/8020	110	<0.5	<0.5	<0.5	2.0	---
	8/8/91	5.13	6.02	0	8015/8020	220 <sup>a</sup>	<0.5	<0.5	<0.5	1.8	---
	11/27/91	4.72	6.43	0	8015/8020	70	<0.5	<0.5	<0.5	1.2	---
	1/29/92	4.69	6.46	0	8015/8020	150	<0.5	<0.5	3.1	7.1	---
	3/26/92	4.04	7.11	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	7/23/92	5.12	6.03	0	8015/8020	190	<0.5	<0.5	<0.5	2.1	---



Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California (continued)

Well ID/ TOC (ft) <sup>1</sup>	Date	DTW (ft)	GWE <sup>1</sup> (msl)	Product Thickness <sup>2</sup> (ft)	Analytic Method	TPH(G)	ppb				
							B	T	E	X	MTBE
MW-13 (cont)	10/28/92	5.30	5.85	0	8015/8020	190	<0.5	<0.5	<0.5	2.0	---
	5/4/93 <sup>9</sup>	---	---	---	---	---	---	---	---	---	---
	1/5/94 <sup>8</sup>	---	---	---	---	---	---	---	---	---	---
	5/13/94	5.28	5.87	0	8015/8020	220	<0.5	1.2	<0.5	1.7	---
	10/24/94	6.04	5.11	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	4/19/95	5.37	5.78	0	8015/8020	140 <sup>13</sup>	<0.5	<0.5	<0.5	1.2	---
	11/6/95	6.13	5.02	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	4/26/96	5.22	5.93	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5.0
MW-14/ 9.78	3/21/90	0.91	8.87	0	8015/8020	170	<0.3	<0.3	<0.4	2.0	---
	6/19/90	1.03	8.75	0	8015/8020	77	<0.3	<0.3	<0.3	<0.6	---
	9/20/90	2.53	7.25	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	12/28/90	1.61	8.17	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	5/10/91	1.22	8.56	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	8/8/91	2.45	7.33	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	11/27/91	2.59	7.19	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	1/29/92	1.10	8.68	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	3/26/92	0.74	9.04	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	7/23/92	2.30	7.48	0	8015/8020	<50	0.6	<0.5	<0.5	0.8	---
	10/28/92	2.76	7.02	0	8015/8020	56	0.7	4.0	0.8	3.8	---
	5/4/93 <sup>9</sup>	---	---	---	---	---	---	---	---	---	---
	MW-15/ 11.01	3/21/90	4.72	6.29	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6
6/19/90		4.78	6.23	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
9/20/90		4.98	6.03	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
12/28/90		4.84	6.17	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
5/10/91		4.58	6.43	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
8/8/91		5.03	5.98	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
11/27/91		5.88	5.13	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
1/29/92		4.82	6.19	0	8015/8020	<50	1.9	2.6	0.8	2.6	---
3/26/92		4.35	6.66	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
7/23/92		5.04	5.97	0	8015/8020	<50	<0.5	<0.5	<0.5	0.5	---
10/28/92		5.17	5.84	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
5/4/93 <sup>9</sup>		---	---	---	---	---	---	---	---	---	---
1/5/94 <sup>10</sup>		---	---	---	---	---	---	---	---	---	---
5/13/94		4.50	6.51	0	8015/8020	110	<0.5	0.7	<0.5	2.0	---
10/24/94		5.17	5.84	0	8015/8020	<50	2.3	1.1	<0.5	<0.5	---



Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California (continued)

Well ID/ TOC (ft) <sup>1</sup>	Date	DTW (ft)	GWE <sup>1</sup> (msl)	Product Thickness <sup>2</sup> (ft)	Analytic Method	TPH(G) ←-----ppb----->	B	T	E	X	MTBE
MW-15 (cont)	4/19/95	4.77	6.24	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	—
	11/6/95	5.28	5.73	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	4/26/96	4.60	6.41	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5.0
MW-16/ 11.11	3/21/90	5.84	5.27	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	—
	6/19/90	5.90	5.21	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	—
	9/20/90	6.36	4.75	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	—
	12/28/90	5.98	5.13	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	5/10/91	5.89	5.22	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	8/8/91	6.28	4.83	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	11/27/91	5.62	5.49	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	1/29/92	5.88	5.23	0	8015/8020	65	3.6	6.2	1.9	6.6	---
	3/26/92	5.56	5.55	0	8015/8020	270 <sup>s</sup>	21	27	9.5	41	---
	7/23/92	6.29	4.82	0	8015/8020	<50	<0.5	<0.5	<0.5	0.7	---
	10/28/92	6.29	4.82	0	8015/8020	<50	0.9	1.4	<0.5	1.1	---
	5/4/93	5.75	5.36	0	8015/8020	51	<0.5	1.0	0.6	1.7	---
	1/5/94 <sup>10</sup>	---	---	---	---	---	---	---	---	---	---
MW-17/ 10.41	3/21/90	5.61	4.80	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	6/19/90	---	---	---	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	9/20/90	6.02	4.39	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	12/28/90	5.73	4.68	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	5/10/91	5.65	4.76	0	8015/8020	<50	<0.5	<0.5	<0.5	0.8	---
	8/8/91	5.94	4.47	0	8015/8020	82	1.9	2.5	0.9	5.4	---
	11/27/91	6.00	4.41	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	1/29/92	5.61	4.80	0	8015/8020	<50	<0.5	0.9	<0.5	0.5	---
	3/26/92	5.31	5.10	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	7/23/92	5.97	4.44	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	10/28/92	5.96	4.45	0	8015/8020	78	1.0	7.1	1.4	6.5	---
	5/4/93	7.53	2.88	0	8015/8020	60	0.8	1.7	1.1	3.0	---
	1/5/94	5.50	4.91	0	8015/8020	<50	<0.5	0.7	<0.5	<0.5	---
	5/13/94	5.17	5.24	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	10/24/94	6.08	4.33	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	4/19/95	5.48	4.93	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	11/6/95	6.00	4.41	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5.0
4/26/96	5.45	4.96	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5.0	



Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California (continued)

Well ID/ TOC (ft) <sup>1</sup>	Date	DTW (ft)	GWE <sup>1</sup> (msl)	Product Thickness <sup>2</sup> (ft)	Analytic Method	TPH(G) ←-----ppb----->	B	T	E	X	MTBE
MW-18/ 9.80											
	3/21/90	5.15	4.65	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	6/19/90	5.19	4.61	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	9/20/90	5.54	4.26	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	12/28/90	5.26	4.54	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	5/10/91	5.18	4.62	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	8/8/91	5.45	4.35	0	8015/8020	52	<0.5	<0.5	<0.5	<0.5	---
	11/27/91	5.24	4.56	0	8015/8020	<50	0.6	1.5	0.6	2.1	---
	1/29/92	5.12	4.68	0	8015/8020	67	3.7	5.2	1.5	5.0	---
	3/26/92	4.84	4.96	0	8015/8020	80 <sup>3</sup>	<0.5	<0.5	<0.5	0.8	---
	7/23/92	5.49	4.31	0	8015/8020	50 <sup>3</sup>	1.3	2.1	0.5	3.0	---
	10/28/92	5.47	4.33	0	8015/8020	54	<0.5	1.3	<0.5	1.1	---
	5/4/93	5.07	4.73	0	8015/8020	<50	<0.5	<0.5	<0.5	<1.5	---
	1/5/94	5.05	4.75	0	8015/8020	<50	<0.5	0.5	<0.5	0.6	---
	5/13/94	4.76	5.04	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	10/24/94	5.65	4.15	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	4/19/95	5.10	4.70	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	11/6/95	5.57	4.23	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	4/26/96	5.07	4.73	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5.0
MW-19/ 8.45											
	3/21/90	5.00	3.45	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	6/19/90	5.06	3.39	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	9/20/90	5.25	3.20	0	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	12/28/90	5.07	3.38	0	8015/8020	66	<0.5	<0.5	<0.5	<0.5	---
	5/10/91	5.02	3.43	0	8015/8020	60 <sup>4</sup>	<0.5	<0.5	<0.5	<0.5	---
	8/8/91	5.17	3.28	0	8015/8020	58	<0.5	<0.5	<0.5	<0.5	---
	11/27/91	5.06	3.39	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	1/29/92	4.93	3.52	0	8015/8020	<50	1.7	2.6	0.7	2.1	---
	3/26/92	4.79	3.66	0	8015/8020	80 <sup>3</sup>	<0.5	<0.5	<0.5	<0.5	---
	7/23/92	5.22	3.23	0	8015/8020	70 <sup>3</sup>	0.6	0.5	<0.5	1.5	---
	10/28/92	5.16	3.29	0	8015/8020	170	4.3	28	5.1	24	---
	5/4/93	4.93	3.52	0	8015/8020	120	2.0	4.7	2.8	8.1	---
	1/5/94	4.91	3.54	0	8015/8020	<50	2.0	1.4	1.7	2.5	---
	5/13/94	4.18	4.27	0	8015/8020	<50	<0.5	0.9	<0.5	<0.5	---
	10/24/94	4.85	3.60	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	4/19/95	4.20	4.25	0	8015/8020	270 <sup>15</sup>	<0.5	<0.5	<0.5	<0.5	---
	11/6/95	Abandoned	---	---	---	---	---	---	---	---	---



Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California (continued)

Well ID/ TOC (ft) <sup>1</sup>	Date	DTW (ft)	GWE <sup>1</sup> (msl)	Product Thickness <sup>2</sup> (ft)	Analytic Method	TPH(G) <-----ppb----->	B	T	E	X	MTBE
MW-19A											
9.96	11/6/95	4.85	5.11	0	8015/8020	420	<0.5	<0.5	<0.5	<0.5	<5.0
	4/26/96	4.18	5.78	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5.0
Trip Blank	4/14/89	---	---	---	8260	<50	<0.5	<1.0	<1.0	<1.0	---
AA	7/31/89	---	---	---	8260	<50	<0.1	<0.5	<0.5	<0.2	---
	12/8/89	---	---	---	8015/8020	---	<0.3	<0.3	<0.3	<0.6	---
	3/21/90	---	---	---	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	3/26/90	---	---	---	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	6/19/90	---	---	---	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	9/21/90	---	---	---	8015/8020	<50	<0.3	<0.3	<0.3	<0.6	---
	12/28/90	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.6	---
	5/10/91	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	8/8/91	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	11/27/91	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	1/29/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	3/26/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
TB-LB	7/23/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	10/28/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	5/4/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<1.5	---
	1/5/94	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	5/13/94	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	10/24/94	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	4/19/95	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	11/6/95	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	4/26/96	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	<5.0
Bailer Blank											
BB	5/10/91	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	8/8/91	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	11/27/91	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	1/29/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	3/26/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	7/23/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	10/28/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	5/4/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<1.5	---
	1/5/94	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
	5/13/94	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---



Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California  
(continued)

EXPLANATION:

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

ANALYTICAL METHODS:

EPA Method 8260 for TPH(G) & BTEX  
EPA Method 8015/8030 for TPH(G)  
EPA Method 8020 for BTEX \* & MTBE

NOTES:

Water level elevation data and laboratory analytic results prior to April 19, 1995 were compiled from the quarterly groundwater monitoring reports prepared for Chevron by Sierra Environmental Services.

\* Sample was analyzed for O&G (EPA Method 8260) and was <3,000 ppm.

NOTES (continued):

- <sup>1</sup> Top of casing elevations shown prior to 3/21/90 were surveyed to an arbitrary datum point set at 100 feet. The GWEs shown for dates prior to 3/21/90 were corrected using new TOC elevations which were surveyed to a USGS benchmark (relative to mean sea level) in April 1990.
- <sup>2</sup> Product thickness measurements on and after May 10, 1991 were made using an MMC flexi-dip interface probe. Product thickness information prior to May 10, 1991 was not available for inclusion in this report.
- <sup>3</sup> Well construction details for this well is not available for inclusion in this report.
- <sup>4</sup> Monitoring well was destroyed during soil excavation in 1989.
- <sup>5</sup> Well MW-9 was not measured after 5/10/91 because it could not be located. Previous water level data was not available for inclusion in this report.
- <sup>6</sup> Well MW-12 could not be located after building demolition.
- <sup>7</sup> Well was obstructed.
- <sup>8</sup> Monitoring well obstructed due to on-site construction activities.
- <sup>9</sup> Monitoring well abandoned on March 10, 1993 by Soils Exploration Services of Benicia, California.
- <sup>10</sup> Well covered with asphalt during construction activities.
- <sup>11</sup> Does not match a typical gasoline pattern.
- <sup>12</sup> Gasoline range concentration reported. Chromatogram shows only a single peak in the gasoline range.
- <sup>13</sup> TPH was reported as Diesel #2.
- <sup>14</sup> GWE was corrected for the presence of separate-phase hydrocarbons using:  $GWE = [(TOC-DTW) + (Prod\ Thickness)(0.8)]$ . 0.8 is the assumed specific gravity of separate-phase hydrocarbons.
- <sup>15</sup> Laboratory report indicates that hydrocarbons were found in the range of gasoline, but do not resemble a gasoline fingerprint.



Table 2. Analytical Results for Groundwater - Halogenated Volatile Organic Compounds - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California

Well ID	Date Sampled	Analytic Lab	Analytic Method	1,1-	1,2-	t-1,2-	c-1,2-	1,1-	1,1,1-	TCE	PCE	CF	VC	Other HVOCs
				DCE	DCE	DCE	DCE	DCA	TCA					
				←-----ppb----->										
MW-1	4/14/89	CCAS	8010	<5.0	--	19	720	<5.0	<5.0	11	<5.0	<20	340	ND <sup>1</sup>
	7/31/89	CCAS	8010	6.8	--	54	2,600	2.7	7.2	57	<0.2	<1.0	760	ND <sup>2</sup>
	12/8/89	GTEL	8010	4.3	2,700	--	--	1.7	1.4	59	<0.5	<0.5	520	--
	3/21/90	GTEL	8010	7.1	7,000	--	--	2.1	1.1	130	<0.5	<0.5	1,100	--
	6/19/90	GTEL	8010	12	6,100	--	--	3.1	<0.5	81	<0.5	<0.5	1,200	--
	9/21/90	GTEL	8010	1.8	2,400	--	--	2.2	1.7	60	<0.5	<0.5	1,100	ND <sup>3</sup>
	12/28/90	SAL	8010	2.0	--	28	1,500	1.0	0.6	15	<0.5	<0.5	510	ND <sup>4</sup>
	5/10/91	SAL	8010	10	--	69	5,500	2.0	<0.5	280	<0.5	<0.5	1,800	ND <sup>5</sup>
	8/8/91	SAL	8010	2.9	--	45	2,300	1.5	<0.5	110	<0.5	<0.5	<1.0	ND <sup>6</sup>
	11/27/91	SPA	8010	<25	--	<25	5,900	<25	<25	<25	<25	<25	540	ND <sup>20</sup>
	1/29/92	SPA	8010	<25	--	26	1,900	<25	<25	<25	<25	<25	320	ND <sup>20</sup>
	3/26/92	SPA	8010	<50	--	<50	1,500	<50	<50	<50	<50	<50	260	ND <sup>21</sup>
	7/23/92	SPA	8010	<50	--	<50	2,300	<50	<50	<50	<50	<50	170	ND <sup>21</sup>
	10/28/92	SPA	8010	4.2	--	30	1,600	3.6	<0.5	16	<0.5	<0.5	810	ND
	5/4/93	SPA	8010	1.0	--	16	670	0.5	<0.5	9.2	<0.5	<0.5	110	ND <sup>18</sup>
	1/5/94 <sup>24</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/13/94 <sup>27</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--
	MW-2	4/14/89	CCAS	8010	<0.2	<0.2	--	--	<0.2	<0.2	<0.2	<0.2	<1.0	<0.2
7/31/89		CCAS	8010	<0.2	<0.2	--	--	<0.4	0.5	<0.2	<0.2	<1.0	<0.2	--
12/8/89		GTEL	8010	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
3/21/90		GTEL	8010	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
6/19/90		GTEL	8010	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
9/21/90		GTEL	8010	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
12/28/90		SAL	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
5/10/91		SAL	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
8/8/91		SAL	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
11/27/91		SPA	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
1/29/92		SPA	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
3/26/92		SPA	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
7/23/92		SPA	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND <sup>18</sup>
10/28/92		SPA	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
5/4/93 <sup>24</sup>		--	--	--	--	--	--	--	--	--	--	--	--	--
1/5/94 <sup>24</sup>		--	--	--	--	--	--	--	--	--	--	--	--	--
5/13/94 <sup>28</sup>		--	--	--	--	--	--	--	--	--	--	--	--	--
10/24/94 <sup>30</sup>		--	--	--	--	--	--	--	--	--	--	--	--	--
11/6/95	Abandoned	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2A	11/6/95	GTEL	8010	<1.0	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND
	4/26/96	GTEL	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.8	ND <sup>36</sup>



Table 2. Analytical Results for Groundwater - Halogenated Volatile Organic Compounds - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California

Well ID	Date Sampled	Analytic Lab	Analytic Method	1,1-	1,2-	t-1,2-	c-1,2-	1,1-	1,1,1-	TCE	PCE	CF	VC	Other HVOCs
				DCE	DCE	DCE	DCE	DCA	TCA					
				←-----ppb----->										
MW-3	4/14/89	CCAS	8010	<0.2	<0.2	---	---	<0.2	<0.2	<0.2	<0.2	<1.0	<0.2	---
	7/31/89	CCAS	8010	<0.2	<0.2	---	---	<0.4	0.5	<0.2	<0.2	<1.0	<0.2	---
	12/8/89	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	3/21/90	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	6/19/90	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	9/21/90	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	12/28/90	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	5/10/91	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	8/8/91	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	11/27/91	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	1/29/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	3/26/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	7/23/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND <sup>18</sup>
	10/28/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	5/4/93 <sup>24</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---
	1/5/94 <sup>24</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---
5/13/94 <sup>27</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---	
MW-4	4/14/89 <sup>7</sup>	CCAS	8010	<1.0	<1.0	---	---	2.0	<1.0	<1.0	<1.0	<2.0	<1.0	---
MW-5	4/14/89 <sup>7</sup>	CCAS	8010	<1.0	<1.0	---	---	2.0	<1.0	<1.0	<1.0	<2.0	<1.0	---
MW-6	4/14/89 <sup>7</sup>	CCAS	8010	<1.0	<1.0	---	---	2.0	<1.0	<1.0	<1.0	<2.0	<1.0	---
MW-7 (D)	4/14/89	CCAS	8010	<1.0	<1.0	---	---	1.0	1.0	<1.0	<1.0	<2.0	<1.0	---
	7/31/89	CCAS	8010	<0.1	0.3	---	---	0.3	4.5	<0.1	<0.1	<0.5	<0.1	ND <sup>8</sup>
	7/31/89	GTEL	8010	<0.1	0.4	---	---	0.2	2.6	<0.1	<0.1	<0.5	<0.1	ND <sup>8</sup>
	12/8/89	GTEL	8010	<0.2	<0.5	---	---	<0.5	0.67	<0.5	<0.5	<0.5	<1.0	---
	3/21/90	GTEL	8010	<0.2	<0.5	---	---	<0.5	1.4	<0.5	<0.5	<0.5	<1.0	---
	6/19/90	GTEL	8010	<0.2	<0.5	---	---	<0.5	0.67	<0.5	<0.5	<0.5	<1.0	---
	9/21/90	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	12/28/90	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<1.0	---
	5/10/91	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	8/8/91	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	11/27/91	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	1/29/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	3/26/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	7/23/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND <sup>18</sup>
	10/28/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	5/4/93 <sup>24</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---





Table 2. Analytical Results for Groundwater - Halogenated Volatile Organic Compounds - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California

Well ID	Date Sampled	Analytic Lab	Analytic Method	1,1-DCE	1,2-DCE	t-1,2-DCE	c-1,2-DCE	1,1-DCA	1,1,1-TCA	TCE	PCE	CF	VC	Other HVOCs
MW-7 (cont)	1/5/94 <sup>24</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---
	5/13/94	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND <sup>29</sup>
	10/24/94	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND <sup>29</sup>
	4/19/95	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND <sup>15</sup>
	11/6/95	GTEL	8010	<1.0	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND
	4/26/96	GTEL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.8
MW-8	4/14/89	CCAS	8010	<1.0	<1.0	---	---	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	---
	7/31/89	CCAS	8010	<0.1	---	0.6	1.9	1.7	1.7	0.4	<0.1	<0.5	1.2	ND
	12/8/89	GTEL	8010	<0.2	0.53	---	---	<0.5	0.84	<0.5	<0.5	<0.5	<1.0	---
	3/21/90	GTEL	8010	<0.2	0.96	---	---	<0.5	0.72	<0.5	<0.5	<0.5	<1.0	---
	6/19/90	GTEL	8010	<0.2	0.59	---	---	<0.5	0.67	<0.5	<0.5	<0.5	<1.0	---
	9/21/90	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	12/28/90	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	2.0	<0.5	<0.5	<0.5	<1.0	---
	5/10/91	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	8/8/91	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	11/27/91	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	1/29/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	3/26/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	7/23/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND <sup>18</sup>
	10/28/92 <sup>23</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---
	5/4/93 <sup>24</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---
	1/5/94 <sup>24</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---
	5/13/94	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND <sup>29</sup>
	10/24/94 <sup>28</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---
	4/19/95 <sup>28</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/6/95	Inaccessible	---	---	---	---	---	---	---	---	---	---	---	---
4/26/96	Inaccessible	---	---	---	---	---	---	---	---	---	---	---	---	
MW-9	5/10/91 <sup>9</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-10	4/14/89	CCAS	8010	<1.0	15	---	---	2.0	<1.0	5.0	<1.0	<2.0	<1.0	---
	7/31/89	CCAS	8010	0.7	---	6.3	27	2.9	<0.1	5.3	<0.1	<0.5	<0.1	ND
	12/8/89	GTEL	8010	<0.2	24	---	---	3.1	<0.5	4.9	<0.5	0.6	<1.0	---
	3/21/90	GTEL	8010	0.7	30	---	---	2.5	<0.5	3.5	<0.5	<0.5	<1.0	---
	6/19/90	GTEL	8010	0.3	33	---	---	2.6	<0.5	6.3	<0.5	<0.5	<1.0	---
	9/21/90	GTEL	8010	<0.2	32	---	---	5.0	<0.5	5.9	<0.5	<0.5	<1.0	---
	12/28/90	SAL	8010	<0.5	---	6.0	19	2.0	<0.5	5.0	<0.5	<0.5	<1.0	---
	5/10/91	SAL	8010	0.6	---	7.0	24	2.0	<0.5	6.0	<0.5	<0.5	<1.0	ND



Table 2. Analytical Results for Groundwater - Halogenated Volatile Organic Compounds - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California

Well ID	Date Sampled	Analytic Lab	Analytic Method	1,1-DCE	1,2-DCE	t-1,2-DCE	c-1,2-DCE	1,1-DCA	1,1,1-TCA	TCE	PCE	CF	VC	Other HVOCs	
															←-----ppb-----→
MW-10 (cont)	8/8/91	SAL	8010	<0.5	---	7.0	33	3.1	<0.5	6.2	<0.5	<0.5	<1.0	ND	
	11/27/91	SPA	8010	<0.5	---	6.8	100	<0.5	<0.5	8.5	<0.5	<0.5	<1.0	ND	
	1/29/92	SPA	8010	<0.5	---	9.1	30	2.8	<0.5	7.4	<0.5	<0.5	<1.0	ND	
	3/26/92	SPA	8010	0.7	---	9.2	29	2.5	<0.5	6.8	<0.5	<0.5	<1.0	ND	
	7/23/92	SPA	8010	<0.5	---	6.1	21	1.5	<0.5	4.7	<0.5	<0.5	<0.5	ND <sup>18</sup>	
	10/28/92	SPA	8010	<0.5	---	4.3	16	2.1	<0.5	4.1	<0.5	<0.5	<1.0	ND	
	5/4/93 <sup>24</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---	
	1/5/94	SPA	8010	<0.5	---	1.3	5.2	0.5	1.0	0.8	<0.5	<0.5	<1.0	ND <sup>18</sup>	
	5/13/94	SPA	8010	<0.5	---	12	31	2.7	<0.5	4.8	<0.5	<0.5	<0.5	ND <sup>29</sup>	
	10/24/94 <sup>33</sup>	SPA	8010	<10	---	13	44	<10	<10	<10	<10	<10	<10	ND <sup>31,33</sup>	
	4/19/95	SPA	8010	0.7	---	14	36	<0.5	<0.5	9.2	<0.5	<0.5	<0.5	ND <sup>18</sup>	
	11/6/95	GTEL	8010	1.0	---	19	41	1.4	<1.0	14	<1.0	<1.0	<1.0	ND	
	4/26/96	Inaccessible	---	---	---	---	---	---	---	---	---	---	---	---	
	MW-11	4/14/89	CCAS	8010	<1.0	120	---	---	<1.0	<1.0	4.0	<1.0	<2.0	10	---
		7/31/89	CCAS	8010	0.9	---	40	110	2.2	1.4	2.9	<0.2	<0.2	<0.2	ND
12/8/89		GTEL	8010	0.5	120	---	---	2.1	1.2	4.1	<0.5	<0.5	2.4	---	
3/21/90		GTEL	8010	1.3	150	---	---	1.2	1.7	3.5	<0.5	<0.5	4.3	ND <sup>10</sup>	
6/19/90		GTEL	8010	0.068	140	---	---	1.3	<0.5	5.0	<0.5	<0.5	1.0	---	
9/21/90		GTEL	8010	<0.2	100	---	---	1.1	<0.5	3.8	<0.5	<0.5	<1.0	---	
12/28/90		SAL	8010	<0.5	---	23	43	0.9	0.7	3.0	<0.5	<0.5	<1.0	---	
5/10/91		SAL	8010	0.9	---	44	110	0.5	<0.5	5.0	<0.5	<0.5	<1.0	ND	
8/8/91		SAL	8010	<0.5	---	29	77	0.9	<0.5	2.4	<0.5	<0.5	<1.0	ND	
11/27/91		SPA	8010	<0.5	---	34	240	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND	
1/29/92		SPA	8010	<5.0	---	33	91	<5.0	<5.0	<5.0	<5.0	<5.0	<10	ND	
3/26/92		SPA	8010	<2.5	---	21	51	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	ND	
7/23/92		SPA	8010	<0.5	---	18	46	0.6	<0.5	1.4	<0.5	<0.5	<0.5	ND <sup>18</sup>	
10/28/92		SPA	8010	0.5	---	36	80	<0.5	<0.5	4.6	<0.5	<0.5	<1.0	ND	
5/4/93 <sup>24</sup>		---	---	---	---	---	---	---	---	---	---	---	---	---	
1/5/94 <sup>24</sup>		---	---	---	---	---	---	---	---	---	---	---	---	---	
5/13/94		SPA	8010	<0.5	---	62	82	<0.5	<0.5	7.9	<0.5	<0.5	1.7	ND <sup>29</sup>	
10/24/94 <sup>33</sup>		SPA	8010	<10	---	28	75	<10	<10	<10	<10	<10	<10	ND <sup>31,33</sup>	
4/19/95		SPA	8010	<0.5	---	18	39	<0.5	<0.5	6.5	<0.5	1.0	<0.5	ND <sup>34</sup>	
11/6/95	Inaccessible	---	---	---	---	---	---	---	---	---	---	---	---		
4/26/96	Inaccessible	---	---	---	---	---	---	---	---	---	---	---	---		
MW-12	4/14/89	CCAS	8010	<1.0	1.0	---	---	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	---	
	7/31/89	CCAS	8010	<0.1	1.7	---	---	<0.1	<0.1	0.8	<0.1	<0.5	<0.1	ND	
	12/8/89	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---	
	3/21/90	GTEL	8010	<0.2	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---	



Table 2. Analytical Results for Groundwater - Halogenated Volatile Organic Compounds - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California

Well ID	Date Sampled	Analytic Lab	Analytic Method	1,1-	1,2-	t-1,2-	c-1,2-	1,1-	1,1,1-	TCE	PCE	CF	VC	Other HVOCs
				DCE	DCE	DCE	DCE	DCA	TCA					
				←-----ppb-----→										
MW-12 (cont)	6/19/90	GTEL	8010	<0.2	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	9/21/90	GTEL	8010	<0.2	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	12/28/90	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	5/10/91	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	8/8/91	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<1.0	ND
	11/27/91	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	1/29/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	3/26/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	7/23/92 <sup>22</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---
	MW-13	3/21/90	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0
6/19/90		GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
9/20/90		GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
12/28/90		SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
5/10/91		SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND <sup>11</sup>
8/8/91		SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
11/27/91		SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
1/29/92		SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
3/26/92		SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
7/23/92		SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND <sup>18</sup>
10/28/92		SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
5/4/93 <sup>24</sup>		---	---	---	---	---	---	---	---	---	---	---	---	---
1/5/94 <sup>24</sup>		---	---	---	---	---	---	---	---	---	---	---	---	---
5/13/94		SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND <sup>29</sup>
10/24/94		SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND <sup>29</sup>
4/19/95	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND <sup>15</sup>	
11/6/95	GTEL	8010	<1.0	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND	
4/26/96	GTEL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.8	ND <sup>36</sup>	
MW-14	3/21/90	GTEL	8010	<2.0	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	6/19/90	GTEL	8010	<2.0	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	9/20/90	GTEL	8010	<2.0	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	12/28/90	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	5/10/91	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	8/8/91	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	11/27/91	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	1/29/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	3/26/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	7/23/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND <sup>18</sup>



Table 2. Analytical Results for Groundwater - Halogenated Volatile Organic Compounds - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California

Well ID	Date Sampled	Analytic Lab	Analytic Method	1,1-	1,2-	t-1,2-	c-1,2-	1,1-	1,1,1-	TCE	PCE	CF	VC	Other HVOCs
				DCE	DCE	DCE	DCE	DCA	TCA					
				←-----ppb----->										
MW-14 (cont)	10/28/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	5/4/93 <sup>25</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-15	3/21/90	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	6/19/90	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	9/20/90	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	12/28/90	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	5/10/91	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND <sup>12</sup>
	8/8/91	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	11/27/91	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	1/29/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	3/26/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	7/23/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND <sup>18</sup>
	10/28/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	5/4/93 <sup>24</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---
	1/5/94 <sup>24</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---
	5/13/94	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND <sup>29</sup>
	10/24/94	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	3.1	<0.5	3.8	<0.5	ND <sup>29</sup>
4/19/95	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND <sup>18</sup>	
11/6/95	GTEL	8010	<1.0	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND	
4/26/96	GTEL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.8	ND <sup>36</sup>	
MW-16	3/21/90	GTEL	8010	<0.2	0.8	---	---	<0.5	<0.5	27	8.0	2.0	<1.0	---
	6/19/90	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	35	7.0	2.0	<1.0	---
	9/20/90	GTEL	8010	<0.2	0.9	---	---	<0.5	<0.5	49	15	4.1	<1.0	---
	12/28/90	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	29	18	4.0	<1.0	ND <sup>13</sup>
	5/10/91	SAL	8010	<0.5	---	<0.5	0.5	<0.5	<0.5	32	10	4.0	<1.0	ND
	8/8/91	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	35	13	1.9	<1.0	ND
	11/27/91	SPA	8010	<0.5	---	<0.5	1.3	<0.5	<0.5	47	12	1.8	<1.0	ND <sup>15</sup>
	1/29/92	SPA	8010	<0.5	---	<0.5	0.9	<0.5	<0.5	31	11	1.8	<1.0	ND
	3/26/92	SPA	8010	<0.8	---	<0.8	<0.8	<0.8	<0.8	24	8.5	1.7	<1.7	ND <sup>19</sup>
	7/23/92	SPA	8010	<0.5	---	<0.5	0.9	<0.5	<0.5	37	12	1.0	<0.5	ND <sup>18</sup>
	10/28/92	SPA	8010	<0.5	---	<0.5	1.7	<0.5	<0.5	39	14	1.1	<1.0	ND
	5/4/93	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	32	10	1.1	<1	ND <sup>18</sup>
	1/5/94 <sup>24</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---
5/13/94 <sup>27</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---	
MW-17	3/21/90	GTEL	8010	<0.2	5.2	---	---	0.7	1.3	32	11	1.1	<1.0	---
	6/19/90	GTEL	8010	<0.2	3.1	---	---	<0.5	1.0	38	13	1.2	<1.0	---
	9/20/90	GTEL	8010	<0.2	2.4	---	---	<0.5	1.4	44	16	2.8	<1.0	---



Table 2. Analytical Results for Groundwater - Halogenated Volatile Organic Compounds - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California

Well ID	Date Sampled	Analytic Lab	Analytic Method	1,1-	1,2-	t-1,2-	c-1,2-	1,1-	1,1,1-	TCE	PCE	CF	VC	Other HVOCs
				DCE	DCE	DCE	DCE	DCA	TCA					
				←-----ppb----->										
MW-17 (cont)	12/28/90	SAL	8010	<0.5	---	<0.5	2.0	<0.5	0.6	34	15	2.0	<1.0	---
	5/10/91	SAL	8010	<0.5	---	<0.5	3.0	<0.5	0.6	37	14	1.0	<1.0	ND
	8/8/91	SAL	8010	<0.5	---	<0.5	2.5	<0.5	<0.5	69	15	0.9	<1.0	ND
	11/27/91	SPA	8010	<0.5	---	<0.5	13	<0.5	<0.5	59	14	2.4	<1.0	ND
	1/29/92	SPA	8010	<0.5	---	<0.5	2.9	<0.5	0.8	35	15	1.1	<1.0	ND
	3/26/92	SPA	8010	<0.5	---	<0.5	1.5	<0.5	0.7	41	12	0.6	<1.0	ND
	7/23/92	SPA	8010	<0.5	---	<0.5	1.1	<0.5	<0.5	31	14	0.8	<0.5	ND <sup>18</sup>
	10/28/92	SPA	8010	<0.5	---	<0.5	1.6	<0.5	<0.5	42	11	0.8	<1.0	ND
	5/4/93	SPA	8010	<0.5	---	<0.5	1.1	<0.5	<0.5	26	12	0.6	<1.0	ND <sup>18</sup>
	1/5/94	SPA	8010	<0.5	---	<0.5	1.1	<0.5	<0.5	25	13	0.8	<1.0	ND <sup>18</sup>
	5/13/94	SPA	8010	<0.5	---	<0.5	1.0	<0.5	0.6	23	13	<0.5	<0.5	ND <sup>29</sup>
	10/24/94	SPA	8010	<0.5	---	<0.5	1.4	<0.5	<0.5	26	13	<0.5	<0.5	ND <sup>29</sup>
	4/19/95	SPA	8010	<0.5	---	<0.5	0.9	<0.5	1.1	21	12	1.2	<0.5	ND <sup>18</sup>
	11/6/95	GTEL	8010	<1.0	---	<1.0	1.1	<1.0	<1.0	29	13	<1.0	<1.0	ND
	4/26/96	GTEL	8010	<0.5	---	<0.5	0.8	<0.5	1.2	24	11	0.6	<0.8	ND <sup>36</sup>
MW-18	3/21/90	GTEL	8010	<0.2	1.7	---	---	<0.5	2.4	33	20	0.9	<1.0	---
	6/19/90	GTEL	8010	<0.2	2.7	---	---	<0.5	0.9	63	20	0.73	<1.0	---
	9/20/90	GTEL	8010	<0.2	3.3	---	---	<0.5	1.6	76	25	1.7	<1.0	---
	12/28/90	SAL	8010	<0.5	---	<0.5	2.0	<0.5	0.8	44	21	1.0	<1.0	---
	5/10/91	SAL	8010	<0.5	---	<0.5	2.0	<0.5	0.7	47	20	2.0	<1.0	ND
	8/8/91	SAL	8010	<0.5	---	<0.5	2.0	<0.5	0.7	32	25	1.0	<1.0	ND
	11/27/91	SPA	8010	<0.5	---	<0.5	3.6	<0.5	0.5	60	18	1.5	<1.0	ND
	1/29/92	SPA	8010	<5.0	---	<5.0	<5.0	<5.0	<5.0	67	17	<5.0	<10	ND
	3/26/92	SPA	8010	<1.2	---	<1.2	6.4	<1.2	<1.2	130	19	1.7	<2.5	ND
	7/23/92	SPA	8010	<0.5	---	<0.5	3.0	<0.5	0.5	67	19	0.8	<0.5	ND <sup>18</sup>
	10/28/92	SPA	8010	<0.5	---	<0.5	1.1	<0.5	<0.5	52	14	0.8	<1.0	ND
	5/4/93	SPA	8010	<0.5	---	<0.5	1.9	<0.5	0.7	48	18	2.5	<1.0	ND <sup>26</sup>
	1/5/94	SPA	8010	<0.5	---	<0.5	4.0	<0.5	0.8	94	17	1.0	<1.0	ND <sup>18</sup>
	5/13/94	SPA	8010	<0.5	---	<0.5	0.8	<0.5	0.8	16	15	0.8	<0.5	ND <sup>29</sup>
	10/27/94	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	22	15	1.2	<0.5	ND <sup>29</sup>
4/19/95	SPA	8010	<0.5	---	<0.5	2.2	<0.5	1.3	46	14	1.1	<0.5	ND <sup>31</sup>	
11/6/95	GTEL	8010	<1.0	---	<1.0	1.8	<1.0	1.2	45	18	<1.0	<1.0	ND	
4/26/96	GTEL	8010	<0.5	---	0.9	2.8	<0.5	3.0	31	17	0.6	<0.8	ND <sup>36</sup>	
MW-19	3/21/90	GTEL	8010	<0.2	10	---	---	<0.5	2.5	41	53	3.2	<1.0	---
	6/19/90	GTEL	8010	<0.2	13	---	---	<0.5	1.5	46	47	2.8	<1.0	---
	9/20/90	GTEL	8010	<0.2	5.8	---	---	<0.5	2.5	39	32	3.1	<1.0	---
	12/28/90	SAL	8010	<0.5	---	0.8	22	<0.5	1.0	40	44	3.0	<1.0	---
	5/10/91	SAL	8010	<0.5	---	2.0	12	<0.5	1.0	47	47	3.0	<1.0	ND



Table 2. Analytical Results for Groundwater - Halogenated Volatile Organic Compounds - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California

Well ID	Date Sampled	Analytic Lab	Analytic Method	1,1-	1,2-	t-1,2-	c-1,2-	1,1-	1,1,1-	TCE	PCE	CF	VC	Other HVOCs
				DCE	DCE	DCE	DCE	DCA	TCA					
MW-19	8/8/91	SAL	8010	<0.5	---	1.1	4.8	<0.5	1.1	41	35	2.8	<1.0	ND
(cont)	11/27/91	SPA	8010	<0.5	---	1.9	29	<0.5	0.9	59	31	2.7	<1.0	ND
	1/29/92	SPA	8010	<5.0	---	<5.0	8.9	<5.0	<5.0	51	44	3.0	<10	ND
	3/26/92	SPA	8010	<1.2	---	1.7	23	<1.2	1.5	68	130	1.4	<2.5	ND <sup>17</sup>
	7/23/92	SPA	8010	1.1	---	1.4	5.6	<0.5	1.0	61	38	3.3	<0.5	ND <sup>18</sup>
	10/28/92	SPA	8010	<0.5	---	0.9	5.3	<0.5	1.1	46	24	2.2	<1.0	ND
	5/4/93	SPA	8010	<0.5	---	2.5	8.7	0.5	1.1	69	32	3.9	<1.0	ND <sup>18</sup>
	1/5/94	SPA	8010	<0.5	---	1.7	1.7	<0.5	16	49	46	<0.5	<1.0	ND <sup>18</sup>
	5/13/94	SPA	8010	<0.5	---	1.8	22	<0.5	0.7	40	58	<0.5	<0.5	ND <sup>29</sup>
	10/24/94 <sup>33</sup>	SPA	8010	<50	---	110	54	<50	<50	98	300	<50	<50	ND <sup>22,33</sup>
	4/19/95	SPA	8010	<0.5	---	<0.5	65	<0.5	<0.5	130	670	<0.5	<0.5	ND <sup>18</sup>
	11/6/95	Abandoned	---	---	---	---	---	---	---	---	---	---	---	---
MW-19A	11/6/95	GTEL	8010	1.0	---	<1.0	110	<1.0	<1.0	160	1,500	<1.0	<1.0	ND
	4/26/96	GTEL	8010	<5.0	---	<5.0	140	<5.0	<5.0	200	990	<5.0	<8.0	ND <sup>37</sup>
Trip Blank AA	4/14/89	CCAS	8010	<1.0	<0.5	---	---	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	---
	7/31/89	CCAS	8010	<0.1	<0.5	---	---	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	---
	12/8/89	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	3/21/90	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	3/26/90	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	6/19/90	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	9/21/90	GTEL	8010	<0.2	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	12/28/90	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	---
	5/10/91	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	8/8/91	SAL	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND <sup>14</sup>
	11/27/91	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND <sup>16</sup>
	1/29/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	3/26/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	7/23/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND <sup>18</sup>
	10/28/92	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	5/4/93	SPA	8010	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND <sup>18</sup>
	11/6/95	GTEL	8010	<1.0	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND



Table 2. Analytical Results for Groundwater - Halogenated Volatile Organic Compounds - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California

Well ID	Date Sampled	Analytic Lab	Analytic Method	←-----ppb----->										
				1,1-DCE	1,2-DCE	t-1,2-DCE	c-1,2-DCE	1,1-DCA	1,1,1-TCA	TCE	PCE	CF	VC	Other HVOCs
Bailer Blank														
BB	5/10/91	SAL	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	8/8/91	SAL	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	11/27/91	SPA	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND <sup>66</sup>
	1/29/92	SPA	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	3/26/92	SPA	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	7/23/92	SPA	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND <sup>18</sup>
	10/28/92	SPA	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
	5/4/93	SPA	8010	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND <sup>18</sup>



Table 2. Analytical Results for Groundwater - Halogenated Volatile Organic Compounds - Former Chevron Asphalt Plant & Terminal #1001067, Emeryville, California (continued)

EXPLANATION:

1,1-DCE = 1,1-Dichloroethene  
1,2-DCE = 1,2-Dichloroethene  
t-1,2-DCE = trans-1,2-Dichloroethene  
c-1,2-DCE = cis-1,2-Dichloroethene  
1,1-DCA = 1,1-Dichloroethane  
1,1,1-TCA = 1,1,1-Trichloroethane  
TCE = Trichloroethene  
PCE = Tetrachloroethene  
CF = Chloroform  
VC = Vinyl Chloride  
Other HVOCs = Other Halogenated Volatile Organic Compounds  
ppb = Parts per billion  
--- = Not analyzed/not applicable  
ND = Not detected at detection limits of 0.5 to 1 ppb  
D = Duplicate analysis

ANALYTICAL METHOD:

VOC = EPA Method 8010 for Volatile Organic Compounds

ANALYTICAL LABORATORIES:

CCAS = Coast to Coast Analytical Services of San Luis Obispo, California  
GTEL = Groundwater Technologies Environmental Laboratory of Concord, California  
SAL = Superior Analytical Laboratory of Martinez and San Francisco, California  
SPA = Superior Precision Analytical, Inc. of Martinez and San Francisco, California

NOTES:

Analytical results prior to April 19, 1995 were compiled from the quarterly groundwater monitoring reports prepared for Chevron by Sierra Environmental Services.

- <sup>1</sup> 6 ppb 1,2-dichloropropane detected; other HVOCs not detected.
- <sup>2</sup> 0.6 ppb 1,2-dichloroethane detected; other HVOCs not detected.
- <sup>3</sup> 63 ppb chloromethane and 0.6 ppb methylene chloride detected; other HVOCs not detected; sample contained 1,250 ppb total dissolved solids.

NOTES: (continued)

- <sup>4</sup> 0.9 ppb trans-1,3-dichloropropane detected; other HVOCs not detected; sample contained 810 ppb total dissolved solids.
- <sup>5</sup> 0.9 ppb trichlorofluoromethane and 1 ppb trans-1,3-dichloropropane detected; other HVOCs not detected.
- <sup>6</sup> 11 ppb trans-1,3-dichloropropane detected; other HVOCs not detected.
- <sup>7</sup> Monitoring well was destroyed during excavation in 1989.
- <sup>8</sup> 0.1 ppb 1,2-dichlorobenzene detected; other HVOCs not detected.
- <sup>9</sup> Well MW-9 was not sampled after 5/10/91 because it could not be located. Previous analytic data were not available for inclusion in this report.
- <sup>10</sup> 1.8 ppb 1,2-dichloroethane detected; other HVOCs not detected
- <sup>11</sup> 3 ppb 1,1,2,2-tetrachloroethane detected; other HVOCs not detected.
- <sup>12</sup> 0.9 ppb 1,2-dichlorobenzene detected; other HVOCs not detected.
- <sup>13</sup> 0.5 ppb 1,2-dichloroethane detected; other HVOCs not detected.
- <sup>14</sup> 3.1 ppb 1,2-dichlorobenzene detected; other HVOCs not detected.
- <sup>15</sup> 0.9 ppb 1,2-dichloroethane detected; other HVOCs not detected.
- <sup>16</sup> Trace concentrations of trihalomethane compounds detected in bailer blank.
- <sup>17</sup> 1,1,2,2-Tetrachloroethane detected at 1.8 ppb; other HVOCs not detected at detection limits of 1.2 to 2.5 ppb.
- <sup>18</sup> Other HVOCs not detected at detection limit of 0.5 ppb.
- <sup>19</sup> Other HVOCs not detected at detection limits ranging from 0.8 to 1.7 ppb.
- <sup>20</sup> Other HVOCs not detected at detection limits of 25 ppb.
- <sup>21</sup> Other HVOCs not detected at detection limits of 50 ppb.
- <sup>22</sup> Well MW-12 could not be located after building demolition.
- <sup>23</sup> Well MW-8 was obstructed, therefore ground water samples could not be taken.
- <sup>24</sup> Monitoring well obstructed due to on-site construction activities.
- <sup>25</sup> Monitoring well abandoned on March 10, 1993 by Soils Exploration Services of Benicia, California.
- <sup>26</sup> Dichloromethane detected at 6.2 ppb; other HVOCs not detected at detection limits of 0.5 ppb.
- <sup>27</sup> Well paved over as a result of on-site construction activities.
- <sup>28</sup> Well obstructed.
- <sup>29</sup> Other HVOCs not detected at detection limits of 0.5 to 1.0 ppb.
- <sup>30</sup> Well was dry.
- <sup>31</sup> Other HVOCs not detected at detection limits of 10 to 20 ppb.
- <sup>32</sup> Other HVOCs not detected at detection limits of 50 to 100 ppb.
- <sup>33</sup> Detection limits raised due to sample dilution.
- <sup>34</sup> Chloromethane was detected at 2.4 ppb. Other HVOCs not detected at detection limits of 0.5 ppb.
- <sup>35</sup> Chloromethane was detected at 0.6 ppb. Other HVOCs not detected at detection limits of 0.5 ppb.
- <sup>36</sup> Other HVOC's not detected at detection limits of 0.5 to 5.0.
- <sup>37</sup> Other HVOC's not detected at detection limits of to 5.0 to 50.





## STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using a MMC flexi-dip interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using Chevron-designated disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron USA Products Company, the purge water and decontamination water generated during sampling activities is transported by IWM to McKittrick Waste Management located in McKittrick, California.



WELL SAMPLING FIELD DATA SHEET

SAMPLER G. Sanchez DATE 4-26-96  
 ADDRESS Powell @ Landrean JOB # 5161.85  
 CITY Emergyville SS# 1001067

Well ID MW-2A Well Condition OK  
 Well Location Description \_\_\_\_\_

Well Diameter 2 in Hydrocarbon Thickness 0

Total Depth 12.0 ft

Depth to Liquid 4.10 ft

Volume	2" = 0.17	6" = 1.50	12" = 5.80
Factor	3" = 0.38		
(VF)	4" = 0.66		

# of casing Volume 7.90 x 0.17 x (VF) 1.3 #Estimated 9.0 gal.

Purge Equipment Stack Pump Sampling Equipment Disposable Bailer  
 Purge Volume \_\_\_\_\_

Did well dewater no If yes, Time \_\_\_\_\_ Volume \_\_\_\_\_

Starting Time 1041 Purging Flow Rate \_\_\_\_\_ gpm.

Sampling Time 1055

Time	pH	Conductivity	Temperature	Volume
<u>1046</u>	<u>6.59</u>	<u>1601</u>	<u>20.3</u>	<u>1.3</u> <u>↓</u>
<u>1050</u>	<u>6.65</u>	<u>1625</u>	<u>19.7</u>	<u>2.6</u> <u>↓</u>
<u>1055</u>	<u>6.67</u>	<u>1628</u>	<u>19.7</u>	<u>4.0</u> <u>↓</u>

Weather Conditions sunny  
 Water Color: clear Odor: none  
 Sediment Description none

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
<u>MW-2A</u>	<u>3X40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEL</u>	<u>Gen BTEX w/MPHE</u>
	<u>3X40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEJ</u>	<u>8010</u>

Comments \_\_\_\_\_



WELL SAMPLING FIELD DATA SHEET

SAMPLER G. Sanchez DATE 4-26-96  
 ADDRESS Powell @ Landregan JOB # 5161.35  
 CITY Emergyville SS# 1001067

Well ID MW-7 Well Condition OK

Well Location Description \_\_\_\_\_

Well Diameter 3 in Hydrocarbon Thickness 6

Total Depth 14.0 ft

Depth to Liquid 4.40 ft

Volume	2" = 0.17	6" = 1.50	12" = 5.80
Factor	3" = 0.38		
(VF)	4" = 0.66		

# of casing Volume 9.60 x .78 x (VF) 3.6 # Estimated 10.9 gal.

Purge Equipment Bailer Stack Pump Sampling Equipment Disposable Bailer

Did well dewater yes If yes, Time 9:48 Volume 7.2 gal

Starting Time 9:40 Purging Flow Rate \_\_\_\_\_ gpm.

Sampling Time 1235

Time	pH	Conductivity	Temperature	Volume
<u>9:44</u>	<u>6.43</u>	<u>794</u>	<u>20.1</u>	<u>3.6 gal</u>
<u>9:48</u>	<u>6.41</u>	<u>811</u>	<u>20.8</u>	<u>7.2 gal</u>
<u>1235</u>		<u>868</u>	<u>20.6</u>	<u>8.0 gal</u>

Weather Conditions sunny

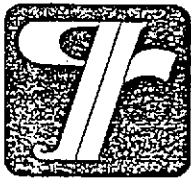
Water Color: light brown Odor: none

Sediment Description none

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
<u>MW-7</u>	<u>3X40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEL</u>	<u>Gen BTEX w/PAHs</u>
	<u>3X40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEJ</u>	<u>8010</u>

Comments \_\_\_\_\_



WELL SAMPLING FIELD DATA SHEET

SAMPLER G. Sanchez DATE 4-25-96  
 ADDRESS Powell @ Landrean JOB # 5161-85  
 CITY Emergyville SS# 1001067

Well ID MW-8 Well Condition \_\_\_\_\_

Well Location Description \_\_\_\_\_  
 Well Diameter \_\_\_\_\_ in Hydrocarbon Thickness \_\_\_\_\_

Total Depth \_\_\_\_\_ ft  
 Depth to Liquid \_\_\_\_\_ ft

Volume	2" = 0.17	6" = 1.50	12" = 5.80
Factor	3" = 0.38		
(VF)	4" = 0.66		

# of casing Volume \_\_\_\_\_ x \_\_\_\_\_ x(VF) #Estimated \_\_\_\_\_ gal.  
 Purge Equipment Stack Pump Sampling Equipment Disposable Bailer

Did well dewater \_\_\_\_\_ If yes, Time \_\_\_\_\_ Volume \_\_\_\_\_

Starting Time \_\_\_\_\_ Purging Flow Rate \_\_\_\_\_ gpm.  
 Sampling Time \_\_\_\_\_

Time	pH	Conductivity	Temperature	Volume
<u>NA</u> under storage container				

Weather Conditions \_\_\_\_\_  
 Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Sediment Description \_\_\_\_\_

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
<u>MW-</u>	<u>3x40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEL</u>	<u>Gen BTEX w/PAHs</u>
	<u>3x40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEL</u>	<u>8010</u>

Comments \_\_\_\_\_



WELL SAMPLING FIELD DATA SHEET

SAMPLER G. Sanchez DATE 4-25-96  
 ADDRESS Powell @ Landregan JOB # 5161.85  
 CITY Emeryville SS# 1001067

Well ID MW-10 Well Condition \_\_\_\_\_  
 Well Location Description \_\_\_\_\_

Well Diameter \_\_\_\_\_ in Hydrocarbon Thickness  
 Total Depth 20-0 ft  
 Depth to Liquid \_\_\_\_\_ ft

Volume	2" = 0.17	6" = 1.50	12" = 5.80
Factor	3" = 0.38		
(VF)	4" = 0.66		

# of casing Volume \_\_\_\_\_ x \_\_\_\_\_ x(VF) #Estimated \_\_\_\_\_ gal.  
 'purge Volume

Purge Equipment Stack Pump Sampling Equipment Disposable Bailer  
 Did well dewater \_\_\_\_\_ If yes, Time \_\_\_\_\_ Volume \_\_\_\_\_

Starting Time \_\_\_\_\_ Purging Flow Rate \_\_\_\_\_ gpm.  
 Sampling Time \_\_\_\_\_

Time	pH	Conductivity	Temperature	Volume
<u>N/A Big pile of</u>				
<u>Rebar on top of well</u>				

Weather Conditions \_\_\_\_\_  
 Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Sediment Description \_\_\_\_\_

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
<u>MW-</u>	<u>3x40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEL</u>	<u>Gen BTEX w/MPDE</u>
	<u>3x40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEJ</u>	<u>8010</u>

Comments \_\_\_\_\_



WELL SAMPLING FIELD DATA SHEET

SAMPLER G. Sanchez DATE 4-25-96  
 ADDRESS Powell @ Landrean JOB # 5161.85  
 CITY Emergyville SS# 1001067

Well ID MW-11 Well Condition \_\_\_\_\_

Well Location Description \_\_\_\_\_

Well Diameter \_\_\_\_\_ in Hydrocarbon Thickness \_\_\_\_\_

Total Depth \_\_\_\_\_ ft

Depth to Liquid \_\_\_\_\_ ft

Volume	2" = 0.17	6" = 1.50	12" = 5.80
Factor	3" = 0.38		
(VF)	4" = 0.66		

# of casing Volume \_\_\_\_\_ x \_\_\_\_\_ x(VF) #Estimated \_\_\_\_\_ gal.

Purge Equipment Stack Pump Sampling Equipment Disposable Bailor

Did well dewater \_\_\_\_\_ If yes, Time \_\_\_\_\_ Volume \_\_\_\_\_

Starting Time \_\_\_\_\_ Purging Flow Rate \_\_\_\_\_ gpm.

Sampling Time \_\_\_\_\_

Time	pH	Conductivity	Temperature	Volume
<u>N/A Under Big Concrete Dividers</u>				

Weather Conditions \_\_\_\_\_

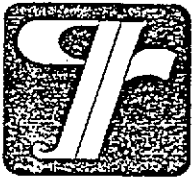
Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_

Sediment Description \_\_\_\_\_

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
<u>MW-</u>	<u>3 X 40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEL</u>	<u>Gen BTEX w/PAHs</u>
	<u>3 X 40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEJ</u>	<u>8010</u>

Comments \_\_\_\_\_



WELL SAMPLING FIELD DATA SHEET

SAMPLER G. Sanchez DATE 4-26-96  
 ADDRESS Powell @ Landrean JOB # 5161.85  
 CITY Emergyville SS# 1001067

Well ID MW-13 Well Condition OK

Well Location Description \_\_\_\_\_

Well Diameter 3 in Hydrocarbon Thickness 0

Total Depth 15-0 ft

Depth to Liquid 5.22 ft

Volume	2" = 0.17	6" = 1.50	12" = 5.80
Factor	3" = 0.38		
(VF)	4" = 0.66		

# of casing Volume 9.78 x .38 x(VF) 3.7 #Estimated 11.1 gal.

Purge Equipment Stack Pump Sampling Equipment Disposable Bailer

Did well dewater No If yes, Time \_\_\_\_\_ Volume \_\_\_\_\_

Starting Time 1019 Purging Flow Rate 2 gpm.

Sampling Time 1030

Time	pH	Conductivity	Temperature	Volume
<u>1021</u>	<u>6.76</u>	<u>1579</u>	<u>19.2</u>	<u>4</u>
<u>1023</u>	<u>6.78</u>	<u>1568</u>	<u>18.4</u>	<u>8</u>
<u>1025</u>	<u>6.81</u>	<u>1563</u>	<u>18.3</u>	<u>12</u>
<u>1030</u>	<u>6.81</u>	<u>1562</u>	<u>18.3</u>	<u>13</u>

Weather Conditions Sunny

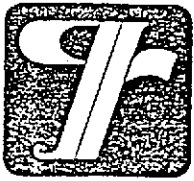
Water Color: Clear Odor: none

Sediment Description none

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
<u>MW-13</u>	<u>3X40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEL</u>	<u>Gen BTEX w/PAHs</u>
	<u>3X40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEL</u>	<u>8010</u>

Comments \_\_\_\_\_



WELL SAMPLING FIELD DATA SHEET

SAMPLER G. Sanchez DATE 4-26-96  
 ADDRESS Powell @ Landregan JOB # 5161.85  
 CITY Emergyville SS# 1001067

Well ID MW-15 Well Condition OK  
 Well Location Description \_\_\_\_\_

Well Diameter 4 in Hydrocarbon Thickness 0

Total Depth 7.00 ft

Depth to Liquid 4.60 ft

Volume	2" = 0.17	6" = 1.50	12" = 5.80
Factor	3" = 0.38		
(VF)	4" = 0.66		

3 # of casing Volume 240 x -66 x(VF) 1.6 #Estimated 4.8 gal.  
 Purge Equipment Bailer Sampling Equipment Disposable Bailer

Purge Equipment Stack Pump Sampling Equipment Disposable Bailer

Did well dewater Yes If yes, Time 1112 Volume 1.6 gal

Starting Time 1110 Purging Flow Rate \_\_\_\_\_ gpm.

Sampling Time 1258

Time	pH	Conductivity	Temperature	Volume
<u>1112</u>	<u>7.09</u>	<u>230</u>	<u>17.0</u>	<u>1.6 gal</u>
<u>1258</u>	<u>7.14</u>	<u>221</u>	<u>16.5</u>	<u>2.5 gal</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Weather Conditions Sunny  
 Water Color: grey Odor: none  
 Sediment Description none

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
<u>MW-15</u>	<u>3X40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEL</u>	<u>Gen BTEX w/MTBE</u>
	<u>3X40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEJ</u>	<u>8010</u>

Comments \_\_\_\_\_





WELL SAMPLING FIELD DATA SHEET

SAMPLER G. Sanchez DATE 4-26-96  
 ADDRESS Powell @ Landrean JOB # 5161.85  
 CITY Emergyville SS# 1001067

Well ID MW-17 Well Condition OK  
 Well Location Description \_\_\_\_\_

Well Diameter 2 in Hydrocarbon Thickness 0

Total Depth 120 ft

Depth to Liquid 5.45 ft

Volume	2" = 0.17	6" = 1.50	12" = 5.80
Factor	3" = 0.38		
(VF)	4" = 0.66		

3 # of casing Volume 6.55 x -17 x(VF) 1.1 #Estimated 7.3 gal.  
 Purge Volume

Purge Equipment Bailer Sampling Equipment Disposable Bailer  
~~Stack Pump~~

Did well dewater no If yes, Time \_\_\_\_\_ Volume \_\_\_\_\_

Starting Time 1133 Purging Flow Rate \_\_\_\_\_ gpm.  
 Sampling Time 1145

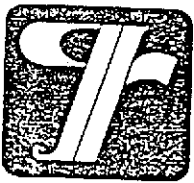
Time	pH	Conductivity	Temperature	Volume
<u>1137</u>	<u>6.31</u>	<u>431</u>	<u>16.8</u>	<u>1.1</u> gal
<u>1141</u>	<u>6.37</u>	<u>437</u>	<u>16.4</u>	<u>2.2</u> gal
<u>1145</u>	<u>6.39</u>	<u>440</u>	<u>16.3</u>	<u>3.3</u> gal
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Weather Conditions Sunny  
 Water Color: light brown Odor: none  
 Sediment Description none

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
<u>MW-17</u>	<u>3X40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEL</u>	<u>Gen BTEX w/MPLE</u>
	<u>3X40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEL</u>	<u>8010</u>

Comments \_\_\_\_\_



WELL SAMPLING FIELD DATA SHEET

SAMPLER G. Sanchez DATE 4-26-96  
 ADDRESS Powell @ Landregan JOB # 5161.85  
 CITY Emergyville SS# 1001067

Well ID MW-18 Well Condition OK  
 Well Location Description \_\_\_\_\_

Well Diameter 2 in

Total Depth 11.0 ft

Depth to Liquid 5.07 ft

Volume	2" = 0.17	6" = 1.50	12" = 5.80
Factor	3" = 0.38		
(VF)	4" = 0.66		
	<u>.17</u> x(VF)	<u>1.0</u>	#Estimated <u>3.0</u> gal.

3 # of casing Volume 5.93 x \_\_\_\_\_

Purge Equipment Stack Pump Sampling Equipment Disposable Bailer  
 Did well dewater No If yes, Time \_\_\_\_\_ Volume \_\_\_\_\_

Starting Time 1155 Purging Flow Rate \_\_\_\_\_ gpm.  
 Sampling Time 1201

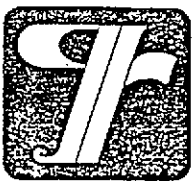
Time	pH	Conductivity	Temperature	Volume
<u>1157</u>	<u>6.23</u>	<u>465</u>	<u>16.3</u>	<u>1</u> <u>5gal</u>
<u>1159</u>	<u>6.27</u>	<u>467</u>	<u>16.1</u>	<u>2</u>
<u>1201</u>	<u>6.28</u>	<u>467</u>	<u>16.1</u>	<u>3</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Weather Conditions Sunny  
 Water Color: light brown Odor: none  
 Sediment Description none

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
<u>MW-18</u>	<u>3x40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEL</u>	<u>GM BTEX 4/MTBE</u>
	<u>3x40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEL</u>	<u>8010</u>

Comments \_\_\_\_\_  
 \_\_\_\_\_



### WELL SAMPLING FIELD DATA SHEET

SAMPLER G. Sanchez DATE 4-26-96  
 ADDRESS Powell @ Landrean JOB # 5161.85  
 CITY Emergyville SS# 1001067

Well ID MW-19A Well Condition O/C  
 Well Location Description \_\_\_\_\_

Well Diameter 2 in Hydrocarbon Thickness 0

Total Depth 15.0 ft

Depth to Liquid 4.18 ft

Volume	2" = 0.17	6" = 1.50	12" = 5.80
Factor	3" = 0.38		
(VF)	4" = 0.66		

3 # of casing Volume 10.82 x .17 x(VF) 1.8 #Estimated 5.5 gal.

Purge Equipment Bailer Stack Pump Sampling Equipment Disposable Bailer

Did well dewater NO If yes, Time \_\_\_\_\_ Volume \_\_\_\_\_

Starting Time 1215 Purging Flow Rate \_\_\_\_\_ gpm.

Sampling Time 1221

Time	pH	Conductivity	Temperature	Volume
<u>1217</u>	<u>6.65</u>	<u>333</u>	<u>15.9</u>	<u>2</u> gal
<u>1219</u>	<u>6.77</u>	<u>320</u>	<u>15.2</u>	<u>4</u> gal
<u>1221</u>	<u>6.85</u>	<u>319</u>	<u>15.6</u>	<u>6</u> gal

Weather Conditions sunny  
 Water Color: light brown Odor: none  
 Sediment Description none

### LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
<u>MW-19A</u>	<u>3X40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTEL</u>	<u>Gen BTEX w/MTBE</u>
	<u>3X40ml</u>	<u>Y</u>	<u>HCL</u>	<u>GTES</u>	<u>8010</u>

Comments \_\_\_\_\_

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

Chevron Facility Number 1001067  
Facility Address Powell @ Landrogan Emeryville  
Consultant Project Number 5161.85  
Consultant Name Gattler-Ryan  
Address 6747 Sierra Ct, Ste J, Dublin 94568  
Project Contact (Name) Deanna Harding  
(Phone) 551-7555 (Fax Number) 551-7888

Chevron Contact (Name) Bob Cochran  
(Phone) (510) 842-9651  
Laboratory Name GTEL  
Laboratory Release Number 3479440  
Samples Collected by (Name) Guadalupe Sanchez  
Collection Date 4-26-96  
Signature Guadalupe Sanchez

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed											Remarks				
								TPH Gas + BTEX w/MTBE (8016)	TPH Diesel (8015)	Oil and Grease (8820)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)								
TS-20	1	2	W	G	—	HCL	Yes	X															
MW-7	2	6			1235					X													
MW-13	3				1030																		
MW-2A	4				1055																		
MW-15	5				1258																		
MW-17	6				1145																		
MW-18	7				1201																		
MW-19A	8				1221																		

DO NOT BILL  
TB-LB ANALYSIS  
No Seals  
10C  
Remarks

106050703M

Relinquished By (Signature) <u>Guadalupe Sanchez</u>	Organization <u>G/R</u>	Date/Time <u>4-26-96 1530</u>	Received By (Signature) <u>John Weber</u>	Organization <u>NEI/GTEL</u>	Date/Time <u>4/26/96</u>	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Relinquished By (Signature) <u>John Weber</u>	Organization <u>NEI/GTEL</u>	Date/Time <u>4-26-96 1600</u>	Received By (Signature)	Organization	Date/Time	
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature) <u>David Smith</u>	Organization <u>2026512872</u>	Date/Time <u>4/25/96 8:00</u>	

COC-3.DWG/03 917.FCH



**Midwest Region**

4211 May Avenue  
Wichita, KS 67209  
(316) 945-2624  
(800) 633-7936  
(316) 945-0506 (FAX)

May 7, 1996

Deanna Harding  
GETTLER-RYAN  
6747 Sierra Ct.  
Suite J  
Dublin, CA 94568

GETTLER-RYAN INC.  
GENERAL CONTRACTORS

---

RE: GTEL Client ID:	GTR01CHV08
Login Number:	W6040577
Project ID (number):	5161.85
Project ID (name):	CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

---

Dear Deanna Harding:

Enclosed please find the analytical results for the samples received by GTEL Environmental Laboratories, Inc. on 04/27/96.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes. This report is to be reproduced only in full.

NEI/GTEL is certified by the Department of Health Service under Certification Number 1845.

If you have any questions regarding this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,  
GTEL Environmental Laboratories, Inc.

*Justin Ward, Project Coordinator for*  
Terry R. Loucks  
Laboratory Director

ANALYTICAL RESULTS  
Volatile Organics

GTEL Client ID: GTR01CHV08  
 Login Number: W6040577  
 Project ID (number): 5161.85  
 Project ID (name): CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

Method: EPA 8020  
 Matrix: Aqueous

GTEL Sample Number	W6040577-01	W6040577-02	W6040577-03	W6040577-04
Client ID	TB-LB	MW-7	MW-13	MW-2A
Date Sampled		04/26/96	04/26/96	04/26/96
Date Analyzed	05/04/96	05/04/96	05/05/96	05/04/96
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting		Concentration:			
	Limit	Units				
MTBE	5.0	ug/L	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes (total)	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
BTEX (total)	--	ug/L	--	--	--	--
TPH as Gasoline	50	ug/L	< 50	< 50	< 50	< 50

Notes:

**Dilution Factor:**

Dilution factor indicates the adjustments made for sample dilution.

**EPA 8020:**

Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap and modified EPA Method 8015. Analyte list modified to include additional compounds. "Test Methods for Evaluating Solid Waste. Physical/Chemical Methods", SW-846, Third Edition including Update 1.

ANALYTICAL RESULTS  
Volatile Organics

GTEL Client ID: GTR01CHV08  
 Login Number: W6040577  
 Project ID (number): 5161.85  
 Project ID (name): CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

Method: EPA 8020  
 Matrix: Aqueous

GTEL Sample Number	W6040577-05	W6040577-06	W6040577-07	W6040577-08
Client ID	MW-15	MW-17	MW-18	MW-19A
Date Sampled	04/26/96	04/26/96	04/26/96	04/26/96
Date Analyzed	05/04/96	05/05/96	05/05/96	05/05/96
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting		Concentration:			
	Limit	Units				
MTBE	5.0	ug/L	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes (total)	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
BTEX (total)	--	ug/L	--	--	--	--
TPH as Gasoline	50	ug/L	< 50	< 50	< 50	< 50

**Notes:**

**Dilution Factor:**

Dilution factor indicates the adjustments made for sample dilution.

**EPA 8020:**

Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap and modified EPA Method 8015. Analyte list modified to include additional compounds. "Test Methods for Evaluating Solid Waste. Physical/Chemical Methods". SW-846. Third Edition including Update 1.

**W6040577-08:**

The TPH as Gasoline value was 180 ug/L which was attributed to the presence of a single non-target analyte.

GTEL Client ID: GTR01CHV08  
Login Number: W6040577  
Project ID (number): 5161.85  
Project ID (name): CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

QUALITY CONTROL RESULTS

Volatile Organics  
Method: EPA 8020  
Matrix: Aqueous

Surrogate Results

QC Batch No.	Reference	Sample ID	TFT
Method: EPA 8020	Acceptability Limits:		43-136%
050496GC10-1	BW05049610	Method Blank Water	103.
050496GC10-2	CV0504962010	Calibration Verifi	103.
050496GC10-6	DP04058801	Duplicate	108.
050496GC10-7	MS04059102	Matrix Spike	100.
--	04057701	TB-LB	97.3
--	04057702	MW-7	100.
--	04057703	MW-13	104.
--	04057704	MW-2A	105.
--	04057705	MW-15	100.
--	04057706	MW-17	105.
--	04057707	MW-18	107.
--	04057708	MW-19A	121.

Notes:

\*: Indicates values outside of acceptability limits. See Nonconformance Summary.



Project ID (Number): 5161.85  
Project ID (Name): Chevron SS #1001067  
Powell @ Landgren  
Emeryville, CA  
Work Order Number: W6-04-0577  
Date Reported: 05-07-96

METHOD BLANK REPORT

Volatile Organics in Water  
EPA Method 8020

Date of Analysis: 04-may-96 QC Batch No: 050496GC10-1

Analyte	Concentration, ug/L
MTBE	<5.0
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylene (total)	<0.5
TPH as Gasoline	<50

GTEL Client ID: GTR01CHV08

QUALITY CONTROL RESULTS

Login Number: W6040577

Volatile Organics

Project ID (number): 5161.85

Method: EPA 8020

Project ID (name): CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

Matrix: Aqueous

Calibration Verification Sample Summary

Analyte	Spike Amount	Check Sample Concentration	QC Percent Recovery	Acceptability Limits Recovery
EPA 8020	Units:ug/L	QC Batch:050496GC10-2		
Benzene	20.0	22.3	112	77-123%
Toluene	20.0	23.7	119	77.5-122.5%
Ethylbenzene	20.0	23.0	115	63-137%
Xylenes (Total)	60.0	61.8	103	85-115%
TPH as Gasoline	500	487	97.4	80-120%

Notes:

QC check source: Supelco #LA12389

GTEL Client ID: GTR01CHV08  
 Login Number: W6040577  
 Project ID (number): 5161.85  
 Project ID (name): CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

QUALITY CONTROL RESULTS

Volatile Organics  
 Method: EPA 8020  
 Matrix: Aqueous

Duplicate Sample Results

Analyte	Original Concentration	Duplicate Concentration	RPD, %	Acceptability Limits, %
EPA 8020	Units: ug/L	QC Batch: 050496GC10-6	GTEL Sample ID: W6040588-01	Client ID: Batch QC
MTBE	< 500	< 500	NA	20
Benzene	603	594	1.50	23.9
Toluene	422	416	1.43	27.2
Ethylbenzene	1150	1130	1.75	21.6
Xylenes (Total)	4230	4160	1.67	22.0
TPH as Gasoline	20500	20200	1.47	20

Notes:

NA - The concentration of the analyte is less than the reporting limit.

GTEL Client ID: GTR01CHV08                      QUALITY CONTROL RESULTS  
 Login Number: W6040577  
 Project ID (number): 5161.85  
 Project ID (name): CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

Volatile Organics  
 Method: EPA 8020  
 Matrix: Aqueous

Matrix Spike(MS) Results

GTEL Sample ID:W6040591-02		MS ID:MS04059102			
Analysis Date: 04-MAY-96		04-MAY-96			
Units: ug/L	Sample	Spike	MS	MS	Acceptability Limits
Analyte	Conc.	Added	Conc.	% Rec.	%Rec.
Benzene	< 0.5 (0.000)	20.0	19.6	98.0	67-110
Toluene	< 0.5 (0.000)	20.0	20.3	102.	68-115
Ethylbenzene	< 0.5 (0.000)	20.0	19.5	97.5	65-120
Xylenes (Total)	< 0.5 (0.000)	60.0	55.8	93.0	62-119

Notes:

Values in parentheses in the sample concentration column are used for % recovery calculations.

GTEL Client ID: GTR01CHV08  
Login Number: W6040577  
Project ID (number): 5161.85  
Project ID (name): CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

QUALITY CONTROL RESULTS

Volatile Organics  
Method: EPA 8020  
Matrix: Aqueous

Conformance/Non-Conformance Summary

(X = Requirements Met \* = See Comments -- = Not Required NA = Not Applicable)

Conformance Item	Volatile Organics	Semi-Volatile Organics	Inorganics (MT, WC)
GC/MS Tune	--	--	NA
Initial Calibration	--	--	--
Continuing Calibration	X	--	--
Surrogate Recovery	X	--	NA
Holding Time	X	--	--
Method Accuracy	X	--	--
Method Precision	X	--	--
Blank Contamination	X	--	--

Comments:

ANALYTICAL RESULTS  
Volatile Organics

GTEL Client ID: GTR01CHV08  
 Login Number: W6040577  
 Project ID (number): 5161.85  
 Project ID (name): CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

Method: EPA 8010  
 Matrix: Aqueous

GTEL Sample Number	W6040577-02	W6040577-03	W6040577-04	W6040577-05
Client ID	MW-7	MW-13	MW-2A	MW-15
Date Sampled	04/26/96	04/26/96	04/26/96	04/26/96
Date Analyzed	05/03/96	05/03/96	05/03/96	05/03/96
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting		Concentration:			
	Limit	Units				
Dichlorodifluoromethane	5.0	ug/L	< 5.0	< 5.0	< 5.0	< 5.0
Chloromethane	2.0	ug/L	< 2.0	< 2.0	< 2.0	< 2.0
Vinyl chloride	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8
Bromomethane	1.2	ug/L	< 1.2	< 1.2	< 1.2	< 1.2
Chloroethane	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8
Trichlorofluoromethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Methylene chloride	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8
trans-1,2-Dichloroethene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,2-Dichloroethene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1-Trichloroethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Carbon tetrachloride	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloropropane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
2-Chloroethylvinyl ether	1.0	ug/L	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	1.2	ug/L	< 1.2	< 1.2	< 1.2	< 1.2
1,1,2,2-Tetrachloroethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8
1,4-Dichlorobenzene	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8
1,2-Dichlorobenzene	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8

**Notes:**

**Dilution Factor:**

Dilution factor indicates the adjustments made for sample dilution.

**EPA 8010:**

"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including Update 1.

ANALYTICAL RESULTS  
Volatile Organics

GTEL Client ID: GTR01CHV08  
Login Number: W6040577  
Project ID (number): 5161.85  
Project ID (name): CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

Method: EPA 8010  
Matrix: Aqueous

GTEL Sample Number	W6040577-06	W6040577-07	W6040577-08	--
Client ID	MW-17	MW-18	MW-19A	--
Date Sampled	04/26/96	04/26/96	04/26/96	--
Date Analyzed	05/03/96	05/03/96	05/04/96	--
Dilution Factor	1.00	1.00	10.0	--

Analyte	Reporting		Concentration:			
	Limit	Units				
Dichlorodifluoromethane	5.0	ug/L	< 5.0	< 5.0	< 5.0	--
Chloromethane	2.0	ug/L	< 2.0	< 2.0	< 2.0	--
Vinyl chloride	0.8	ug/L	< 0.8	< 0.8	< 8.0	--
Bromomethane	1.2	ug/L	< 1.2	< 1.2	< 12.	--
Chloroethane	0.8	ug/L	< 0.8	< 0.8	< 8.0	--
Trichlorofluoromethane	0.5	ug/L	< 0.5	< 0.5	< 5.0	--
1,1-Dichloroethene	0.5	ug/L	< 0.5	< 0.5	< 5.0	--
Methylene chloride	0.8	ug/L	< 0.8	< 0.8	< 8.0	--
trans-1,2-Dichloroethene	0.5	ug/L	< 0.5	0.9	< 5.0	--
1,1-Dichloroethane	0.5	ug/L	< 0.5	< 0.5	< 5.0	--
cis-1,2-Dichloroethene	0.5	ug/L	0.8	2.8	140	--
Chloroform	0.5	ug/L	0.6	0.6	< 5.0	--
1,1,1-Trichloroethane	0.5	ug/L	1.2	3.0	< 5.0	--
Carbon tetrachloride	0.5	ug/L	< 0.5	< 0.5	< 5.0	--
1,2-Dichloroethane	0.5	ug/L	< 0.5	< 0.5	< 5.0	--
Trichloroethene	0.5	ug/L	24.	31.	200	--
1,2-Dichloropropane	0.5	ug/L	< 0.5	< 0.5	< 5.0	--
Bromodichloromethane	0.5	ug/L	< 0.5	< 0.5	< 5.0	--
2-Chloroethylvinyl ether	1.0	ug/L	< 1.0	< 1.0	< 10.	--
cis-1,3-Dichloropropene	0.5	ug/L	< 0.5	< 0.5	< 5.0	--
trans-1,3-Dichloropropene	0.5	ug/L	< 0.5	< 0.5	< 5.0	--
1,1,2-Trichloroethane	0.5	ug/L	< 0.5	< 0.5	< 5.0	--
Tetrachloroethene	0.5	ug/L	11.	17.	990	--
Dibromochloromethane	0.5	ug/L	< 0.5	< 0.5	< 5.0	--
Chlorobenzene	0.5	ug/L	< 0.5	< 0.5	< 5.0	--
Bromoform	1.2	ug/L	< 1.2	< 1.2	< 12.	--
1,1,2,2-Tetrachloroethane	0.5	ug/L	< 0.5	< 0.5	< 5.0	--
1,3-Dichlorobenzene	0.8	ug/L	< 0.8	< 0.8	< 8.0	--
1,4-Dichlorobenzene	0.8	ug/L	< 0.8	< 0.8	< 8.0	--
1,2-Dichlorobenzene	0.8	ug/L	< 0.8	< 0.8	< 8.0	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8010:

"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including Update 1.

GTEL Client ID: GTR01CHV08

QUALITY CONTROL RESULTS

Login Number: W6040577

Project ID (number): 5161.85

Project ID (name): CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

Volatile Organics  
Method: EPA 8010  
Matrix: Aqueous

Conformance/Non-Conformance Summary

(X = Requirements Met \* = See Comments -- = Not Required NA = Not Applicable)

Conformance Item	Volatile Organics	Semi-Volatile Organics	Inorganics (MT, WC)
GC/MS Tune	--	--	NA
Initial Calibration	--	--	--
Continuing Calibration	X	--	--
Surrogate Recovery	X	--	NA
Holding Time	X	--	--
Method Accuracy	*	--	--
Method Precision	X	--	--
Blank Contamination	X	--	--

Comments:



GTEL Client ID: GTR01CHV08

QUALITY CONTROL RESULTS

Login Number: W6040577

Volatile Organics

Project ID (number): 5161.85

Method: EPA 8010

Project ID (name): CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

Matrix: Aqueous

Surrogate Results

QC Batch No.	Reference	Sample ID	BFB ELCD	BFB PID
Method: EPA 8010	Acceptability Limits:		52.8-144%	77.3-129%
050396GC11-1	CV0503962011	Calibration Verifi	89.6	103
050396GC11-2	BW05039611	Method Blank Water	100	107
050396GC11-4	DP04051303	Duplicate	83.3	98.4
050396GC11-5	MS04051302	Matrix Spike	99.5	102
050396GC11-6	LW0503962011	Laboratory Control	91.0	101
--	04057702	MW-7	99.8	100
--	04057703	MW-13	99.3	102
--	04057704	MW-2A	93.9	104
--	04057705	MW-15	80.0	99.6
--	04057706	MW-17	81.9	100
--	04057707	MW-18	78.2	102
--	04057708	MW-19A	82.9	99.5

Notes:

\*: Indicates values outside of acceptability limits. See Nonconformance Summary.

GTEL Client ID: GTR01CHV08  
Login Number: W6040577  
Project ID (number): 5161.85  
Project ID (name): CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

QUALITY CONTROL RESULTS

Volatile Organics  
Method: EPA 8010  
Matrix: Aqueous

Method Blank Results

QC Batch No: 050396GC11-2  
Date Analyzed: 03-MAY-96

Analyte	Method: EPA 8010	Concentration: ug/L
Dichlorodifluoromethane	< 5.00	
Chloromethane	< 2.00	
Vinyl chloride	< 1.00	
Bromomethane	< 2.00	
Chloroethane	< 1.00	
Trichlorofluoromethane	< 1.00	
1,1-Dichloroethene	< 1.00	
Methylene chloride	< 1.00	
trans-1,2-Dichloroethene	< 1.00	
1,1-Dichloroethane	< 1.00	
cis-1,2-Dichloroethene	< 1.00	
Chloroform	< 1.00	
1,1,1-Trichloroethane	< 1.00	
Carbon tetrachloride	< 1.00	
1,2-Dichloroethane	< 1.00	
Trichloroethene	< 1.00	
1,2-Dichloropropane	< 1.00	
Bromodichloromethane	< 1.00	
2-Chloroethyl vinyl ether	< 1.00	
cis-1,3-Dichloropropene	< 1.00	
trans-1,3-Dichloropropene	< 1.00	
1,1,2-Trichloroethane	< 1.00	
Tetrachloroethene	< 1.00	
Dibromochloromethane	< 1.00	
Chlorobenzene	< 1.00	
Bromoform	< 2.00	
1,1,2,2-Tetrachloroethane	< 1.00	
1,3-Dichlorobenzene	< 1.00	
1,4-Dichlorobenzene	< 1.00	
1,2-Dichlorobenzene	< 1.00	

Notes:

GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS  
 Login Number: W6040577  
 Project ID (number): 5161.85  
 Project ID (name): CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

Volatile Organics  
 Method: EPA 8010  
 Matrix: Aqueous

Calibration Verification Sample Summary

Analyte	Spike Amount	Check Sample Concentration	QC Percent Recovery	Acceptability Limits Recovery
EPA 8010	Units:ug/L	QC Batch:050396GC11-1		
Dichlorodifluoromethane	20.0	17.2	86.0	40-160%
Chloromethane	20.0	20.3	102.	59.5-140.5%
Vinyl chloride	20.0	18.2	91.0	68.5-131.5%
Bromomethane	20.0	14.2	71.0	58.5-141.5%
Chloroethane	20.0	20.3	102.	77-123%
Trichlorofluoromethane	20.0	19.5	97.5	66.5-133.5%
1,1-Dichloroethene	20.0	20.4	102.	63-137%
Methylene chloride	20.0	18.2	91.0	77.5-122.5%
trans-1,2-Dichloroethene	20.0	21.2	106.	64-136%
1,1-Dichloroethane	20.0	22.6	113.	71.5-116%
cis-1,2-Dichloroethene	20.0	21.4	107.	64-116%
Chloroform	20.0	21.0	105.	75-125%
1,1,1-Trichloroethane	20.0	21.5	108.	71-129%
Carbon tetrachloride	20.0	24.0	120.	68.5-131.5%
1,2-Dichloroethane	20.0	21.0	105.	71.5-128.5%
Trichloroethene	20.0	21.0	105.	77-123%
1,2-Dichloropropane	20.0	21.2	106.	74-126%
Bromodichloromethane	20.0	21.8	109.	76-124%
2-Chloroethyl vinyl ether	20.0	22.2	111.	60-140%
cis-1,3-Dichloropropene	20.0	21.5	108.	64-136%
trans-1,3-Dichloropropene	20.0	21.9	110.	64-136%
1,1,2-Trichloroethane	20.0	21.6	108.	78.5-121.5%
Tetrachloroethene	20.0	21.4	107.	70-130%
Dibromochloromethane	20.0	21.9	110.	65.5-134.5%
Chlorobenzene	20.0	20.1	101.	72-128%
Bromoform	20.0	21.2	106.	73.5-126.5%
1,1,2,2-Tetrachloroethane	20.0	19.6	98.0	49-151%
1,3-Dichlorobenzene	20.0	20.9	105.	49.5-150.5%
1,4-Dichlorobenzene	20.0	20.9	105.	69.5-130.5%
1,2-Dichlorobenzene	20.0	20.1	101.	70-130%

Notes:

GTEL Client ID: GTR01CHV08  
 Login Number: W6040577  
 Project ID (number): 5161.85  
 Project ID (name): CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

QUALITY CONTROL RESULTS

Volatile Organics  
 Method: EPA 8010  
 Matrix: Aqueous

Laboratory Control Sample Summary

Analyte	Spike	Check Sample	QC Percent	Acceptability Limits
	Amount	Concentration	Recovery	Recovery
EPA 8010	Units:ug/L	QC Batch:050396GC11-6		
Dichlorodifluoromethane	20.0	13.7	68.5	40-160%
Chloromethane	20.0	21.1	106.	10-193%
Vinyl chloride	20.0	21.7	109.	28-163%
Bromomethane	20.0	17.7	88.5	10-144%
Chloroethane	20.0	24.9	125.	46-137%
Trichlorofluoromethane	20.0	26.1	131.	21-156%
1,1-Dichloroethene	20.0	31.2	156.	28-167%
Methylene chloride	20.0	19.0	95.0	25-162%
trans-1,2-Dichloroethene	20.0	22.2	111.	38-155%
1,1-Dichloroethane	20.0	23.4	117.	47-132%
cis-1,2-Dichloroethene	20.0	19.1	95.5	38-155%
Chloroform	20.0	25.0	125.	49-133%
1,1,1-Trichloroethane	20.0	23.9	120.	41-138%
Carbon tetrachloride	20.0	25.3	127.	43-143%
1,2-Dichloroethane	20.0	26.9	135.	51-147%
Trichloroethene	20.0	26.1	131.	35-146%
1,2-Dichloropropane	20.0	25.5	128.	44-156%
Bromodichloromethane	20.0	18.6	93.0	42-172%
2-Chloroethyl vinyl ether	20.0	12.9	64.5	14-186%
cis-1,3-Dichloropropene	20.0	22.3	112.	22-178%
trans-1,3-Dichloropropene	20.0	19.0	95.0	22-178%
1,1,2-Trichloroethane	20.0	23.9	120.	39-136%
Tetrachloroethene	20.0	22.9	115.	25-162%
Dibromochloromethane	20.0	21.1	106.	24-191%
Chlorobenzene	20.0	14.8	74.0	38-150%
Bromoform	20.0	17.2	86.0	13-159%
1,1,2,2-Tetrachloroethane	20.0	12.1	60.5	10-184%
1,3-Dichlorobenzene	20.0	18.6	93.0	10-187%
1,4-Dichlorobenzene	20.0	25.2	126.	42-143%
1,2-Dichlorobenzene	20.0	22.5	113.	10-208%

Notes:

GTEL Client ID: GTR01CHV08  
 Login Number: W6040577  
 Project ID (number): 5161.85  
 Project ID (name): CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

QUALITY CONTROL RESULTS

Volatile Organics  
 Method: EPA 8010  
 Matrix: Aqueous

Duplicate Sample Results

Analyte	Original Concentration	Duplicate Concentration	RPD, %	Acceptability	
				Limits, %	
EPA 8010	Units: ug/L	QC Batch: 050396GC11-4	GTEL Sample ID: W6040513-03		Client ID: Batch QC
Dichlorodifluoromethane	< 5.00	< 5.00	NA	35.4	
Chloromethane	< 2.00	< 2.00	NA	24.2	
Vinyl chloride	< 1.00	< 1.00	NA	18.6	
Bromomethane	< 2.00	< 2.00	NA	24.8	
Chloroethane	< 1.00	< 1.00	NA	14.4	
Trichlorofluoromethane	< 1.00	< 1.00	NA	19.6	
1,1-Dichloroethene	< 1.00	< 1.00	NA	21.6	
Methylene chloride	< 1.00	< 1.00	NA	13.1	
trans-1,2-Dichloroethene	< 1.00	< 1.00	NA	20.9	
1,1-Dichloroethane	< 1.00	< 1.00	NA	10.5	
cis-1,2-Dichloroethene	15.0	15.4	2.63	20.9	
Chloroform	< 1.00	< 1.00	NA	14.7	
1,1,1-Trichloroethane	< 1.00	< 1.00	NA	16	
Carbon tetrachloride	< 1.00	< 1.00	NA	18.3	
1,2-Dichloroethane	< 1.00	< 1.00	NA	17	
Trichloroethene	139	139	NA	13.7	
1,2-Dichloropropane	< 1.00	< 1.00	NA	17	
Bromodichloromethane	< 1.00	< 1.00	NA	13.1	
2-Chloroethyl vinyl ether	< 1.00	< 1.00	NA	27.1	
cis-1,3-Dichloropropene	< 1.00	< 1.00	NA	23.8	
trans-1,3-Dichloropropene	< 1.00	< 1.00	NA	23.8	
1,1,2-Trichloroethane	< 1.00	< 1.00	NA	12.8	
Tetrachloroethene	192	193	0.519	17.7	
Dibromochloromethane	< 1.00	< 1.00	NA	20.6	
Chlorobenzene	< 1.00	< 1.00	NA	16.4	
Bromoform	< 2.00	< 2.00	NA	15.4	
1,1,2,2-Tetrachloroethane	< 1.00	< 1.00	NA	30	
1,3-Dichlorobenzene	< 1.00	< 1.00	NA	29.7	
1,4-Dichlorobenzene	< 1.00	< 1.00	NA	18	
1,2-Dichlorobenzene	< 1.00	< 1.00	NA	18	

Notes:

NA - The concentration of the analyte is less than the reporting limit.

GTEL Client ID: GTR01CHV08  
 Login Number: W6040577  
 Project ID (number): 5161.85  
 Project ID (name): CHEVRON/1001067/POWELL @ LANDGREN/EMERYVILLE/CA

QUALITY CONTROL RESULTS

Volatile Organics  
 Method: EPA 8010  
 Matrix: Aqueous

Matrix Spike(MS) Results

GTEL Sample ID:W6040513-02		MS ID:MS04051302			
Analysis Date: 03-MAY-96		04-MAY-96			
Units: ug/L	Sample	Spike	MS	MS	Acceptability Limits
Analyte	Conc.	Added	Conc.	% Rec.	%Rec.
Dichlorodifluoromethane	< 5.0 (0.000)	20.0	11.1	55.5	40-160
Chloromethane	< 2.0 (0.000)	20.0	18.7	93.5	10-193
Vinyl chloride	< 0.80(0.000)	20.0	20.8	104.	28-163
Bromomethane	< 1.2 (0.000)	20.0	16.0	80.0	10-144
Chloroethane	< 0.80(0.000)	20.0	23.1	116.	46-137
Trichlorofluoromethane	< 0.50(0.000)	20.0	29.0	145.	21-156
1,1-Dichloroethene	< 0.50(0.000)	20.0	27.1	136.	28-167
Methylene chloride	< 0.80(0.000)	20.0	18.6	93.0	25-162
trans-1,2-Dichloroethene	< 0.50(0.000)	20.0	22.1	111.	38-155
1,1-Dichloroethane	< 0.50(0.000)	20.0	23.3	117.	47-132
cis-1,2-Dichloroethene	< 0.50(0.000)	20.0	18.8	94.0	38-155
Chloroform	< 0.50(0.000)	20.0	24.5	123.	49-133
1,1,1-Trichloroethane	< 0.50(0.000)	20.0	23.3	117.	41-138
Carbon tetrachloride	< 0.50(0.000)	20.0	24.9	125.	43-143
1,2-Dichloroethane	< 0.50(0.000)	20.0	26.4	132.	51-147
Trichloroethene	< 0.50(0.360)	20.0	20.2	99.2	35-146
1,2-Dichloropropane	< 0.50(0.000)	20.0	23.7	119.	44-156
Bromodichloromethane	< 0.50(0.000)	20.0	18.1	90.5	42-172
2-Chloroethyl vinyl ether	< 1.0 (0.000)	20.0	0.00	0.00*	14-186
cis-1,3-Dichloropropene	< 0.50(0.000)	20.0	21.3	107.	22-178
trans-1,3-Dichloropropene	< 0.50(0.000)	20.0	18.7	93.5	22-178
1,1,2-Trichloroethane	< 0.50(0.000)	20.0	23.8	119.	39-136
Tetrachloroethene	< 0.50(0.0800)	20.0	22.8	114.	25-162
Dibromochloromethane	< 0.50(0.000)	20.0	21.0	105.	24-191
Chlorobenzene	< 0.50(0.000)	20.0	14.5	72.5	38-150
Bromoform	< 1.2 (0.000)	20.0	16.4	82.0	13-159
1,1,2,2-Tetrachloroethane	< 0.50(0.0500)	20.0	17.3	86.3	10-184
1,3-Dichlorobenzene	< 0.80(0.000)	20.0	18.0	90.0	10-187
1,4-Dichlorobenzene	< 0.80(0.000)	20.0	24.7	124.	42-143
1,2-Dichlorobenzene	< 0.80(0.170)	20.0	21.9	109.	10-208

Notes:

Values in parentheses in the sample concentration column are used for % recovery calculations.

050396GC11-5: 2-Chloroethylvinyl ether decomposes in the presence of Hydrochloric Acid (used as a preservative).