Chevron

April 23, 1997

Chevron Products Company
6001 Bollinger Canyon Road
Building L
San Ramon, CA 94583
P.O. Box 6004
San Ramon, CA 94583-0904

Marketing – Sales West
Phone 510 842-9500

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

Re: Former Chevron Service Station # 9-1026
3701 Broadway
Oakland, California

Dear Ms. Hugo:

Enclosed is a copy of the First Quarter (Semi-Annual) Groundwater Monitoring & Sampling Report for 1997 that was prepared by our consultant Gettler-Ryan Inc. for the above noted site. Monitoring wells were sampled and analyzed for TPH-g, BTEX and MtBE constituents.

Nine wells were monitored and six wells were sampled (B-1, B-4, E, F, EA-1 and EA-2). Concentrations of BTEX constituents were detected in wells B-1 and B-4, while well EA-1 only detected the benzene and xylene constituents in concentrations of 2.8 ppb and 0.8 ppb respectively. Separate phase hydrocarbons (SPH) were detected in monitoring wells B, B-2, and B-3. All three wells were bailed and approximately 2.0 gals., 0.0 gals., and 0.5 gals., were removed from the respective wells. Monitoring wells E, F and EA-2 were below method detection limits for all constituents.

Monitoring well B-4 continues to be impacted by BTEX, TPH-g and MtBE constituents, which may indicate the presence of a source located upgradient of Chevron's site. Chevron's portion of the plume appears to stable and contained.

Depth to the groundwater varied from 11.38 feet to 15.06 feet below grade with direction of flow to the southwest.

Chevron implemented the sampling program outlined in the Comprehensive Site Evaluation and Proposed Future Action Plan, dated December 20, 1994, which initiated semi-annual monitoring, with the first and third quarters being the sampling periods. The next sampling event would be in September of 1997.

If you have any questions or comments, call me at (510) 842-9136.

Sincerely
CHEVRON PRODUCTS COMPANY

Philip R. Briggs
Site Assessment and Remediation Project Manager

Enclosure

cc. Ms. Bette Owen, Chevron

Mr. W. Bruce Bercovich
Kay & Merkel
100 The Embarcadero, 3rd Floor
San Francisco, CA 94105

GETTLER-RYAN INC.

April 9, 1997 Job #5127.80

Mr. Phill Briggs
Chevron Products Company
P.O. Box 5004
San Ramon, CA 94583

Re: Semi-Annual Groundwater Monitoring & Sampling Report
Former Chevron Service Station #9-1026
3701 Broadway
Oakland, California

Dear Mr. Briggs:

This report documents the semi-annual groundwater sampling event performed by Gettler-Ryan Inc. (G-R). On March 6, 1997, field personnel were on-site to monitor nine wells (B, B-1 through B-4, E, F, EA-1, and EA-2), and sample six wells (B-1, B-4, E, F, EA-1, and EA-2) at the Former Chevron Service Station #9-1026 located at 3701 Broadway in Oakland, California.

Static groundwater levels were measured on March 6, 1997. All wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were present in three wells (B, B-2 and B-3). Static water level data and groundwater elevations are presented in Table 1. Separate-phase hydrocarbon removal data is presented in Table 2. 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 Table 1. The chain of custody document and laboratory analytical reports are attached.

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

Sincerely,

Deanna L. Harding
Project Coordinator

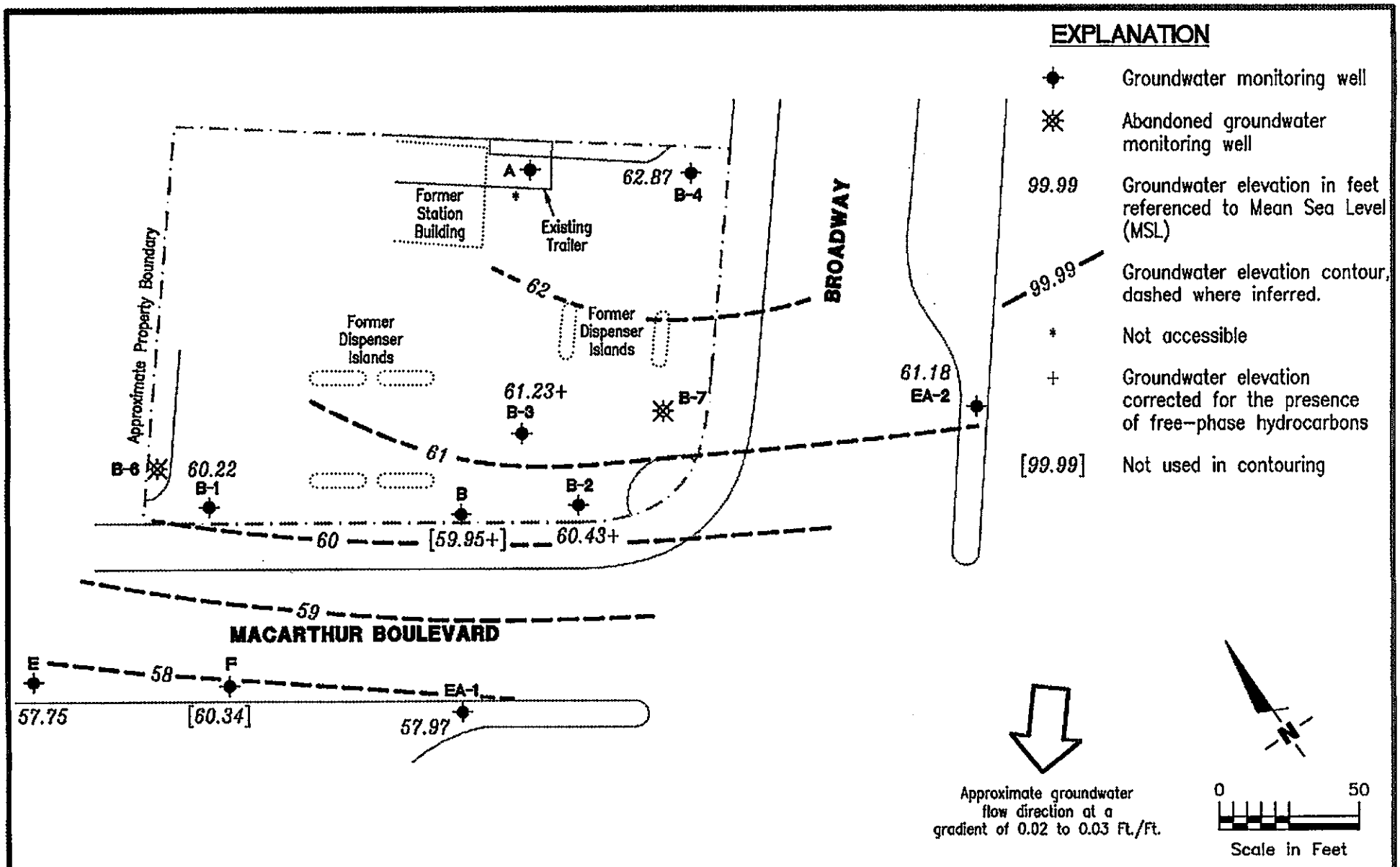
Stephen J. Carter
Senior Geologist, R.G. No. 5577

REGISTERED GEOLOGIST
STEPHEN J. CARTER
No. 5577
STATE OF CALIFORNIA

DLH/SJC/dlh
5127.QML

Figure 1: Potentiometric Map
Table 1: Water Level Data and Groundwater Analytical Results
Table 2: Separate-phase Hydrocarbon Removal Data
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

6747 Sierra Court, Suite J • Dublin, California 94568 • (510) 551-7555



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

POTENTIOMETRIC MAP
Former Chevron Service Station No. 9-1026
3701 Broadway
Oakland, California

FIGURE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
5127		March 6, 1997	

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	TPH(G)	B	T	E	X	MTBE
					<———		ppb			———>
A	5/9/89	13.92	61.36	0	11,000	260	<2	94	230	—
	8/9/89	15.62	59.66	0	12,000	370	<1.5	100	240	—
75.28	11/9/89	15.95	59.33	0	16,000	690	10	180	350	—
	2/8/90	14.73	60.55	0	14,000	600	7	120	270	—
	5/10/90	15.48	59.80	0	16,000	840	4.8	140	340	—
	8/9/90	15.66	59.62	0	17,000	510	40	170	280	—
	11/13/90	16.48	58.80	0	9,000	570	3.1	86	170	—
	3/27/91	—	—	—	8,000	660	<5	110	250	—
	4/5/91	13.22	62.06	0	—	—	—	—	—	—
	6/19/91	15.37	59.91	0	8,900	740	<3	120	280	—
	8/21/91	15.99	59.29	0	6,800	620	23	85	200	—
	11/8/91	16.15	59.13	0	4,000	640	<5	77	160	—
	2/13/92	14.58	60.70	0	8,000	860	<5	120	390	—
	5/1/92	14.26	61.02	0	13,000	870	19	220	780	—
75.29	11/18/92	16.38	58.91	0	12,000	1,500	83	360	530	—
	3/19/93	12.16	63.13	0	14,000	820	6.1	180	420	—
	6/10/93	14.25	61.04	0	9,000	700	13	170	310	—
	9/8/93	—	—	—	—	—	—	—	—	—
	12/21/93	—	—	—	—	—	—	—	—	—
	3/9/94	13.34	61.95	0	9,600	860	21	200	390	—
	9/21/94[2]	—	—	—	—	—	—	—	—	—
	12/20/94[2]	—	—	—	—	—	—	—	—	—
	3/28/95[2]	—	—	—	—	—	—	—	—	—
	6/22/95[2]	—	—	—	—	—	—	—	—	—
	9/21/95[7]	—	—	—	—	—	—	—	—	—
	3/22/96[7]	—	—	—	—	—	—	—	—	—
	9/25/96[7]	—	—	—	—	—	—	—	—	—
	3/6/97[7]	—	—	—	—	—	—	—	—	—
B	5/9/89	13.97	59.58	0.20	—	—	—	—	—	—
	8/9/89	15.69	57.86	0.20	—	—	—	—	—	—
73.39	11/9/89	15.29	58.16	0.08	—	—	—	—	—	—
	2/8/90	14.46	58.93	0	—	—	—	—	—	—
	5/10/90	14.07	58.32	0	—	—	—	—	—	—
	8/9/90	15.12	58.27	0	—	—	—	—	—	—
	11/13/90	15.76	57.63	0	—	—	—	—	—	—
	4/5/91	13.38	60.01	0	—	—	—	—	—	—
	6/19/91	15.14	58.25	0	26,000	7,100	370	430	1,000	—
	8/21/91	15.58	57.81	0	16,000	4,900	270	390	640	—
	11/8/91	15.71	57.68	0	11,000	2,400	48	280	160	—
	2/13/92	14.66	58.73	0	6,800	2,400	60	220	140	—
	5/1/92	14.50	58.89	Sheen	16,000	6,000	180	370	460	—
	11/18/92	15.60	57.79	0	28,000	2,200	150	920	4,300	—

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	TPH(G)	B	T	E	X	MTBE
					<------	------	ppb	------	------	------>
B	3/19/93	13.29	60.12	0.03	—	—	—	—	—	—
(cont)	6/10/93	14.30	59.11	0.03	—	—	—	—	—	—
	9/8/93	15.33	58.25	0.24	—	—	—	—	—	—
	12/21/93	14.73	58.76	0.12	—	—	—	—	—	—
	3/9/94	14.07	59.35	0.04	—	—	—	—	—	—
	9/21/94	15.50	57.91[3]	0.02[4]	—	—	—	—	—	—
	12/20/94	13.75	59.88[3]	0.12	—	—	—	—	—	—
	3/28/95[2]	—	—	—	—	—	—	—	—	—
	6/22/95	14.56	58.92[3]	0.11	—	—	—	—	—	—
	9/21/95	15.88	58.41[3]	1.12	—	—	—	—	—	—
	3/22/96	13.02	61.19[3]	1.02	—	—	—	—	—	—
	9/25/96	15.76	58.81[3]	1.47	—	—	—	—	—	—
	3/6/97	14.30	59.95[3]	1.08	—	—	—	—	—	—
B-1	5/9/89	12.58	59.19	0	16,000	2,300	260	81	740	—
	8/9/89	14.09	57.68	0	12,000	2,600	340	100	870	—
71.77	11/9/89	14.06	57.71	0	17,000	340	140	110	760	—
	2/8/90	12.65	59.12	0	5,500	70	19	17	150	—
	5/10/90	13.62	58.15	0	18,000	770	110	73	600	—
	8/9/90	13.87	57.90	0	82,000	750	66	95	980	—
	11/13/90	14.38	57.39	0	43,000	1,300	120	74	760	—
	3/27/91	—	—	—	18,000	580	92	94	770	—
	4/5/91	11.73	60.04	0	—	—	—	—	—	—
	6/19/91	13.56	58.21	0	21,000	910	56	96	810	—
	8/21/91	13.90	57.87	0	50,000	2,400	610	300	1,800	—
	11/8/91	14.05	57.72	0	540,000	3,600	1,500	1,900	5,900	—
	2/13/92	12.68	59.09	0	20,000	500	100	150	920	—
	5/1/92	12.92	58.85	Sheen	27,000	2,800	200	310	1,900	—
72.30	11/18/92	14.30	58.00	0	300	9.7	3.4	2.3	21	—
	3/19/93	12.28	60.02	0	130	23	.9	<0.5	5.6	—
	6/10/93	13.04	59.26	0	170	21	1.1	.8	6.6	—
	9/8/93	13.88	58.46	0.05	—	—	—	—	—	—
	12/21/93	13.53	58.77	0	<50	6.7	.5	<0.5	1.2	—
	3/9/94	12.65	59.65	0	1,300	520	8.8	2.4	53	—
	9/21/94	14.40	57.90	0	390	130	2.7	2.4	7.7	—
	12/20/94	12.35	59.95	0	1,600	520	9.9	8.9	34	—
	3/28/95	10.76	61.54	0	160	38	2.1	1.4	5.4	—
	6/22/95	12.60	59.70	0	340	73	3.1	2.4	7.5	—
	9/21/95	13.65	58.65	0	140	19	1.0	1.2	6.1	—
	3/22/96	10.94	61.36	0	200	<0.5	0.6	2.1	2.2	<5.0
	9/25/96	13.76	58.54	0	690	5.4	1.2	1.6	6.8	<5.0
	3/6/97	12.08	60.22	0	420	31	1.0	2.5	4.3	5.9

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	TPH(G)	B	T	E	X	MTBE
					<--------		ppb			-------->
B-2	5/9/89	14.58	59.93	0	170,000	30,000	8,400	2,300	12,000	---
	8/9/89	16.06	58.45	0	60,000	29,000	8,700	2,400	12,000	---
74.51	11/9/89	16.95	57.56	0	110,000	32,000	5,500	2,800	12,000	---
	2/8/90	15.56	58.95	0	67,000	28,000	5,900	2,300	11,000	---
	5/10/90	15.94	58.57	0	69,000	24,000	4,800	2,000	11,000	---
	8/9/90	15.97	58.54	0	100,000	33,000	4,000	2,100	12,000	---
	11/13/90	16.70	57.81	0	110,000	33,000	4,300	2,900	13,000	---
	3/27/91	---	---	---	160,000	26,000	3,200	2,600	15,000	---
	4/5/91	14.20	60.31	0	---	---	---	---	---	---
	6/19/91	15.83	58.68	0	100,000	22,000	2,500	2,000	11,000	---
	8/21/91	16.31	58.20	0	80,000	28,000	2,800	2,400	12,000	---
	11/8/91	16.60	57.91	0	94,000	29,000	1,900	2,200	11,000	---
	2/13/92	15.93	58.58	0	280,000	34,000	2,500	4,600	23,000	---
	5/1/92	14.94	59.57	Sheen	29,000	1,700	300	1,100	4,300	---
74.52	11/18/92	16.71	57.81	0	26,000	11,000	170	870	950	---
	3/19/93	14.06	60.46	0	110,000	28,000	1,200	2,200	12,000	---
	6/10/93	14.88	59.64	0	140,000	15,000	930	1,900	8,800	---
	9/8/93	16.03	58.52	0.04	---	---	---	---	---	---
	12/21/93	15.61	58.91	0	980,000	21,000	30,000	9,100	71,000	---
	3/9/94	14.53	59.99	Sheen	110,000	23,000	920	1,300	7,800	---
	9/21/94[5]	---	---	---	---	---	---	---	---	---
	12/20/94	14.65	59.86	0	70,000	25,000	710	920	5,300	---
	3/28/95	12.30	62.22	0	76,000	20,000	920	1,200	5,200	---
	6/22/95	14.22	60.30	0	89,000	21,000	3,8000	1,500	6,800	---
	9/21/95	15.80	58.72	0	84,000	24,000	2,900	1,800	9,800	---
	3/22/96	12.85	61.69[5]	0.02	---	---	---	---	---	---
	9/25/96	15.98	58.56[5]	0.03	---	---	---	---	---	---
	3/6/97	14.11	60.43[5]	0.02	---	---	---	---	---	---
B-3	5/9/89	14.02	60.01	0	70,000	12,000	9,500	400	8,900	---
	8/9/89	15.38	58.74	0	---	---	---	---	---	---
74.12	11/9/89	15.55	58.61	0.05	---	---	---	---	---	---
	2/8/90	14.68	59.44	<0.01	---	---	---	---	---	---
	5/10/90	15.15	58.99	0.02	---	---	---	---	---	---
	8/9/90	15.27	58.85	<0.01	---	---	---	---	---	---
	11/13/90	16.04	58.13	0.06	---	---	---	---	---	---
	4/5/91	13.30	60.82	<0.01	---	---	---	---	---	---
	6/19/91	15.16	58.96	0	260,000	20,000	9,000	2,200	16,000	---
	8/21/91	15.61	58.51	0	70,000	28,000	11,000	1,800	11,000	---
	11/8/91	15.77	58.35	0	150,000	29,000	9,700	2,200	13,000	---
	2/13/92	14.88	59.24	0	100,000	27,000	9,906	2,000	11,000	---
	5/1/92	14.20	59.93	0.01	---	---	---	---	---	---

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	TPH(G)	B	T	E	X	MTBE
					<----------ppb---------->					
B-3/74.13 (cont)	11/18/92	15.68	58.47	0.03	—	—	—	—	—	—
	3/19/93	13.75	61.24	1.08	—	—	—	—	—	—
	6/10/93	14.79	60.04	0.87	—	—	—	—	—	—
	9/8/93	15.38	58.81	0.08	—	—	—	—	—	—
	12/21/93	14.74	59.39	0.00	1,100,000	18,000	29,000	8,900	59,000	—
	3/9/94	13.53	60.60	0.00	130,000	11,000	20,000	1,700	15,000	—
	9/21/94	15.70	58.45[3]	0.02[4]	—	—	—	—	—	—
	12/20/94	13.48	60.67[5]	0.03	—	—	—	—	—	—
	3/28/95	—	—	1.54	—	—	—	—	—	—
	6/22/95	14.25	60.86[3]	1.23	—	—	—	—	—	—
	9/21/95	15.25	59.12[3]	0.30	—	—	—	—	—	—
	3/22/96	11.46	62.97[3]	0.37	—	—	—	—	—	—
	9/25/96	14.82	60.13[3]	1.02	—	—	—	—	—	—
	3/6/97	**13.12**	**61.23[3]**	**0.28**	—	—	—	—	—	—
B-4	5/9/89	14.93	61.50	0	3,600	840	34	120	200	—
	8/9/89	16.65	59.78	0	<500	4,200	130	370	260	—
76.43	11/9/89	—	—	—	5,000	4,200	83	400	250	—
	2/8/90	16.99	59.44	0	14,000	6,000	70	530	300	—
	5/10/90	16.05	60.38	0	12,000	5,400	130	460	320	—
	8/9/90	16.49	59.94	0	16,000	7,400	120	530	350	—
	11/13/90	16.64	59.79	0	21,000	7,000	100	550	320	—
	3/27/91	17.42	59.01	0	17,000	8,500	120	500	300	—
	4/5/91	14.66	61.77	0	14,000	7,700	75	610	210	—
	6/19/91	16.48	59.95	0	16,000	7,800	110	550	340	—
	8/21/91	17.00	59.43	0	18,000	11,000	110	450	340	—
	11/8/91	17.38	59.05	0	18,000	6,800	98	500	620	—
	2/13/92	16.42	60.01	0	15,000	9,100	86	570	350	—
	5/1/92	15.50	60.93	0	36,000	16,000	180	990	690	—
	3/19/93	14.11	62.32	0	26,000	15,000	150	900	790	—
	6/10/93	15.44	60.99	0	35,000	14,000	180	940	590	—
	9/8/93	16.65	59.78	0	34,000	15,000	170	1,100	870	—
	12/21/93	16.45	59.98	0	30,000	12,000	74	610	340	—
	3/9/94	14.88	61.55	0	37,000	15,000	140	1,000	580	—
	9/21/94	17.14	59.29	0	32,000	14,000	110	660	190	—
	12/20/94	14.99	61.44	0	23,000	8,400	97	640	530	—
	3/28/95	11.33	65.10	0	27,000	9,900	120	880	540	—
	6/22/95	14.59	61.84	0	33,000	12,000	84	650	150	—
	9/21/95	16.19	60.24	0	20,000[6]	12,000	72	540	68	—
	3/22/96	12.00	64.43	0	29,000	10,000	72	560	170	400
	9/25/96	16.28	60.15	0	53,000	11,000	<50	160	74	<500
	3/6/97	**13.56**	**62.87**	**0**	**<5,000**	**17,000**	**<50**	**<50**	**<50**	**<500**

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	TPH(G)	B	T	E	X	MTBE
					<---------- ppb ---------->					
B-6	5/9/89	12.11	60.55	0	26,000	120	110	250	1,300	—
	8/9/89	14.72	57.94	0	19,000	470	150	440	1,400	—
72.66	11/9/89	13.85	58.81	0	13,000	70	36	36	440	—
	2/8/90	7.73	64.93	0	2,900	16	5	10	58	—
	5/10/90	—	—	—	—	—	—	—	—	—
	8/9/90	14.51	58.15	0	14,000	55	3	130	500	—
	11/13/90	14.86	57.80	0	—	—	—	—	—	—
	4/5/91	10.43	62.23	0	—	—	—	—	—	—
	6/19/91[1]	—	—	—	—	—	—	—	—	—
B-7	5/9/89	14.73	60.67	0	210,000	13,000	19,000	2,000	20,000	—
	8/9/89	16.36	59.04	0	672,000	8,7000	17,000	2,700	30,000	—
75.40	11/9/89	16.64	58.76	0	150,000	7,000	12,000	1,800	16,000	—
	2/8/90	15.69	59.71	0	41,000	2,500	6,900	1,100	11,000	—
	5/10/90	—	—	—	—	—	—	—	—	—
	8/9/90	16.31	59.09	0	50,000	1,100	3,900	640	7,200	—
	11/13/90	17.09	58.31	0	—	—	—	—	—	—
	4/5/91	14.36	61.04	0	—	—	—	—	—	—
	6/19/91[1]	—	—	—	—	—	—	—	—	—
E	11/18/92	12.20	57.87	0	280	2.7	2.4	3	12	—
70.07	3/19/93	9.97	60.10	0	<50	<0.5	<0.5	<0.5	<1.5	—
	6/10/93	10.98	59.09	0	<50	<0.5	<0.5	<0.5	<1.5	—
	9/8/93	11.80	58.29	0.03	—	—	—	—	—	—
	12/21/93	11.25	58.82	0	<50	<0.5	<0.5	<0.5	<0.5	—
	3/9/94	10.67	59.40	0	<50	<0.5	0.7	<0.5	0.7	—
	9/21/94	12.29	57.78	0	<50	2.5	<0.5	1.0	<0.5	—
	12/20/94	15.53	54.54	0	<50	0.5	<0.5	<0.5	<0.5	—
	3/28/95	8.45	61.62	0	<50	<0.5	<0.5	<0.5	<0.5	—
	6/22/95	10.57	59.50	0	<50	<0.5	<0.5	<0.5	<0.5	—
	9/21/95	11.59	58.48	0	<50	<0.5	<0.5	<0.5	<0.5	—
	3/22/96	9.02	61.05	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/6/97	**12.32**	**57.75**	**0**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**
F	5/9/89	18.70	53.31	0	<500	<0.5	<0.5	0.6	1	—
	8/9/89	19.03	52.98	0	—	—	—	—	—	—
72.01	11/9/89	19.02	52.99	0	—	—	—	—	—	—
	2/8/90	18.70	53.31	0	<50	0.4	<0.3	0.3	<0.6	—
	5/10/90	18.98	53.03	0	—	—	—	—	—	—
	8/9/90	18.95	53.06	0	—	—	—	—	—	—
	11/13/90	19.10	52.91	0	—	—	—	—	—	—
	3/27/91	—	—	—	64	<0.5	<0.5	<0.5	1	—

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	TPH(G)	B	T	E	X	MTBE
					<----------		ppb			---------->
F	6/19/91	18.95	53.06	0	—	—	—	—	—	—
(cont)	8/21/91	>19.94	<52.07	0	—	—	—	—	—	—
	11/8/91	>19.94	<52.07	0	—	—	—	—	—	—
	2/13/92	18.60	53.41	0	<50	<0.5	<0.5	<0.5	<0.5	—
	5/1/92	Dry	—	—	—	—	—	—	—	—
71.72	11/18/92	14.85	56.87	0	<50	<0.5	<0.5	<0.5	<0.5	—
	3/19/93	14.25	57.47	0	<50	<0.5	<0.5	<0.5	<1.5	—
	6/10/93	13.92	57.80	0	<50	<0.5	<0.5	<0.5	<1.5	—
	9/8/93	14.80	56.95	0.04	—	—	—	—	—	—
	12/21/93	13.31	58.41	0	<50	<0.5	<0.5	<0.5	<0.5	—
	3/9/94	12.99	58.73	0	<50	<0.5	<0.5	<0.5	<0.5	—
	9/21/94	16.30	55.42	0	<50	<0.5	<0.5	<0.5	<0.5	—
	12/20/94	12.57	59.15	0	<50	<0.5	<0.5	<0.5	<0.5	—
	3/28/95	8.95	62.77	0	<50	<0.5	<0.5	<0.5	<0.5	—
	6/22/95	13.77	57.95	0	<50	<0.5	<0.5	<0.5	<0.5	—
	9/21/95	13.45	58.27	0	<50	<0.5	<0.5	<0.5	<0.5	—
	3/22/96	11.16	60.56	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/6/97	**11.38**	**60.34**	**0**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**
EA-1	5/9/89	14.56	59.38	0	<500	<0.5	<0.5	<0.5	<0.5	—
	8/9/89	16.09	57.85	0	<500	<0.5	<0.5	<0.5	<0.5	—
73.94	11/9/89	15.84	58.10	0	<500	<0.5	<0.5	<0.5	<0.5	—
	2/8/90	15.05	58.89	0	<50	<0.3	<0.3	<0.3	<0.6	—
	5/10/90	15.65	58.29	0	<50	1	0.3	<0.3	<0.6	—
	8/9/90	15.67	58.27	0	<50	<0.3	<0.3	<0.3	<0.6	—
	11/13/90	16.32	57.62	0	<50	<0.4	<0.3	<0.3	<0.4	—
	3/27/91	—	—	—	<50	0.7	0.5	<0.5	<0.5	—
	4/5/91	14.03	59.91	0	—	—	—	—	—	—
	6/19/91	15.56	58.38	0	<50	<0.5	<0.5	<0.5	<0.5	—
	8/21/91	15.99	57.95	0	<50	<0.4	<0.3	<0.3	<0.4	—
	11/08/91	16.13	57.81	0	<50	<0.5	<0.5	<0.5	<0.5	—
	2/13/92	15.10	58.84	0	<50	<0.5	<0.5	<0.5	<0.5	—
	5/1/92	18.80	55.14	0	<50	2.7	<0.5	<0.5	<0.5	—
71.85	11/18/92	15.97	55.88	0	<10	<0.3	<0.3	<0.3	<0.5	—
	3/19/93	13.66	58.19	0	<50	<0.5	<0.5	<0.5	<1.5	—
	6/10/93	14.71	57.14	0	<50	<0.5	<0.5	<0.5	<1.5	—
	9/8/93	15.58	56.33	0.08	—	—	—	—	—	—
	12/21/93	15.02	56.83	0	<50	<0.5	<0.5	<0.5	<0.5	—
	3/9/94	14.38	57.47	0	<50	<0.5	1.0	<0.5	<0.5	—
	9/21/94	16.12	55.73	0	<50	<0.5	<0.5	<0.5	<0.5	—
	12/20/94	14.05	57.80	0	<50	<0.5	<0.5	<0.5	<0.5	—
	3/28/95	12.05	59.80	0	<50	<0.5	<0.5	<0.5	<0.5	—

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	TPH(G)	B	T	E	X	MTBE
					<----------ppb---------->					
EA-1	6/22/95	14.35	57.50	0	<50	2.0	<0.5	<0.5	<0.5	—
(cont)	9/21/95	15.36	56.49	0	<50	<0.5	<0.5	<0.5	<0.5	—
	3/22/96	12.71	59.14	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/6/97	**13.88**	**57.97**	**0**	**<50**	**2.8**	**<0.5**	**<0.5**	**0.8**	**<5.0**
EA-2	5/9/89	15.95	59.29	0	760	<0.5	<0.5	1.1	<0.5	—
	8/9/89	17.45	57.79	0	<500	<0.5	<0.5	<0.5	<0.5	—
75.24	11/9/89	17.41	57.83	0	<500	<0.5	1	<0.5	<0.5	—
	2/8/90	16.57	58.67	0	190	<0.3	<0.3	<0.3	<0.6	—
	5/10/90	17.12	58.12	0	<50	<0.3	<0.3	<0.3	<0.6	—
	8/9/90	17.20	58.04	0	120	<0.3	<0.3	<0.3	<0.6	—
	11/13/90	17.88	57.36	0	160	<0.4	1	<0.3	<0.4	—
	3/27/91	—	—	—	110	<0.5	<0.5	<0.5	<0.5	—
	4/5/91	15.54	59.70	0	—	—	—	—	—	—
	6/19/91	17.07	58.17	0	<50	<0.5	<0.5	<0.5	<0.5	—
	8/21/91	17.46	57.78	0	70	0.8	1.4	<0.3	<0.4	—
	11/8/91	17.58	57.66	0	<50	<0.5	0.7	<0.5	<0.5	—
	2/13/92	16.69	58.55	0	<50	<0.5	<0.5	<0.5	<0.5	—
	5/1/92	16.16	59.08	0	340	<0.5	2.6	0.7	<0.5	—
76.24	11/18/92	17.61	58.63	0	450	<0.5	3.3	<0.5	0.8	—
	3/19/93	15.00	61.24	0	450	<0.5	2.3	0.6	<1.5	—
	6/10/93	16.08	60.16	0	250	<0.5	1.3	<0.5	<1.5	—
	9/8/93	17.07	59.17	0	<50	<0.5	<0.5	<0.5	<1.5	—
	12/21/93	16.60	59.64	0	170	<0.5	1.3	<0.5	<0.5	—
	3/9/94	15.83	60.41	0	200	1.8	1.4	<0.5	<0.5	—
	9/21/94	17.60	58.64	0	<50	<0.5	<0.5	<0.5	<0.5	—
	12/20/94	15.53	60.71	0	950	31	15	1.7	<0.5	—
	3/28/95	13.28	62.96	0	71	2.0	0.6	<0.5	<0.5	—
	6/22/95	15.62	60.62	0	300	<0.5	3.7	<0.5	0.6	—
	9/21/95	16.78	59.46	0	170	<0.5	<0.5	<0.5	<0.5	—
	3/22/96	13.88	62.36	0	90	<0.5	<0.5	<0.5	<0.5	<5.0
	3/6/97	**15.06**	**61.18**	**0**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**
Trip Blank	5/9/89	—	—	—	<500	<0.5	<0.5	<0.5	<0.5	—
TBLB	8/9/89	—	—	—	<500	<0.5	<0.5	<0.5	<0.5	—
	11/9/89	—	—	—	<500	<0.5	<0.5	<0.5	<0.5	—
	2/8/90	—	—	—	<50	<0.3	<0.3	<0.3	<0.6	—
	5/10/90	—	—	—	<50	<0.3	<0.3	<0.3	<0.6	—
	8/9/90	—	—	—	<50	<0.3	<0.3	<0.3	<0.6	—
	11/13/90	—	—	—	<50	<0.4	<0.3	<0.3	<0.4	—
	3/27/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	6/19/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	TPH(G)	B	T	E	X	MTBE
					<---ppb--->					
TB-LB (cont)	8/21/91	—	—	—	<50	<0.4	<0.3	<0.3	<0.4	—
	11/8/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	2/13/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	5/1/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	11/18/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	3/19/93	—	—	—	<50	<0.5	<0.5	<0.5	<1.5	—
	6/10/93	—	—	—	<50	<0.5	<0.5	<0.5	<1.5	—
	9/8/93	—	—	—	<50	<0.5	<0.5	<0.5	<1.5	—
	12/21/93	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	3/9/94	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	9/21/94	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	12/20/94	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	3/28/95	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	6/22/95	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	9/21/95	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	3/22/96	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/25/96	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/6/97	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<5.0

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California (continued)

EXPLANATION:

TOC = Top of casing elevation
(ft) = feet
DTW = Depth to water
GWE = Groundwater elevation
msl = Mean sea level
TPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl-tertiary-butyl ether
ppb = Parts per billion
— = Not analyzed/not applicable

ANALYTICAL METHODS

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

NOTES:

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

Analytical methods prior to September 21, 1994 are assumed to be 8015/8020.

* Product thickness measurements on and after September 21, 1994 were measured using an MMC flexi-dip interface probe.

1 Well abandoned. Exact date unknown.
2 Well inaccessible on this date.
3 GWE corrected for the presence of free-phase hydrocarbons using: GWE = [(TOC-DTW)+(0.8)(Product Thickness)]. 0.8 is the assumed specific gravity of free-phase hydrocarbons.
4 Approximate thickness; equipment not functioning properly.
5 Well not located this event.
6 Laboratory report indicates data obtained from multiple dilutions. Dilution factor noted represents the dilution used for majority of results.
7 Well inaccessible due to office trailer positioned over well.

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Table 2. Separate-phase Hydrocarbon Thickness and Product Removal -
Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California

WELL ID	DATE	PRODUCT THICKNESS (ft)	AMOUNT BAILED (gals./ prod. & water)
B	6/22/95	0.11	1.0
	9/21/95	1.12	2.0
	3/22/96	1.02	2.0
	9/25/96	1.47	1.5
	3/6/97	1.08	2.0
B-2	3/22/96	0.02	0.25
	9/25/96	0.03	0.25
	3/6/97	0.02	0.00
B-3	3/28/95	1.54	2.0
	6/22/95	1.23	0.5
	9/21/95	0.30	0.5
	3/22/96	0.37	0.25
	9/25/96	1.02	1.0
	3/6/97	0.28	0.50

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Explanation:

(ft) = feet
gals. = gallons
prod = product

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. 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 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: Clyde Galantine / FCline
DATE: 3/6/97
ADDRESS: 3701 Broadway
JOB #: ~~9~~ 5127.85
CITY: Oakland CA
SS#: 9-1026

Well ID: B
Well Condition: OK
Well Location Description:
Well Diameter: 4" in
Hydrocarbon Thickness: 1.08'
Total Depth: ft
Depth to Liquid: 14.30 ft

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

# of casing Volume: ____ x ____ x(VF) ____ #Estimated purge Volume ____ gal.

Purge Equipment:
Sampling Equipment: disp bailer
Did well dewater:
If yes, Time: Volume:

Starting Time:
Sampling Time:
Purging Flow Rate: gpm.

Time	pH	Conductivity	Temperature	Volume

Weather Conditions:
Water Color:
Odor:
Sediment Description:

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
B	Voa	X	HCL	GTEL	TPHg BTEX MTBE

Comments: Bail ~ 2 gallons FP/H2O

WELL SAMPLING FIELD DATA SHEET

SAMPLER: Clyde Galantine / F Cline | DATE: 3/6/97

ADDRESS: 3701 Broadway | JOB #: ~~9~~ 5127.85

CITY: Oakland CA | SS#: 9-1026

Well ID: B-1 | Well Condition: OK

Well Location Description:

Well Diameter: 4" in | Hydrocarbon Thickness:

Total Depth: 33 ft

Depth to Liquid: 12.08 ft

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

# of casing Volume: 3 Y 20.92 x .66 x(VF) 13.8 #Estimated purge Volume: 41.4 gal.

Purge Equipment: Grundfos | Sampling Equipment: disp bailer

Did well dewater: N/o | If yes, Time: ___ | Volume:

Starting Time: 12:20 | Purging Flow Rate: 4.6 gpm.

Sampling Time: 12:32

Time	pH	Conductivity	Temperature	Volume
12:23	7.13	198	21.C	13.8
12:26	6.85	192	20.7	27.6
12:29	6.81	190	20.5	41.4
12:32	6.84	191	20.6	42.0

Weather Conditions: Clear warming

Water Color: Clear | Odor: N. E

Sediment Description: N/a

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
B-1	Voa	X	HCL	GTEL	TPHg BTEX MTBE

Comments:

WELL SAMPLING FIELD DATA SHEET

SAMPLER: Clyde Galantine / F Cline
DATE: 3/6/97

ADDRESS: 3701 Broadway
JOB #: ~~9~~ 5127.85

CITY: Oakland CA
SS#: 9-1026

Well ID: B-2
Well Condition: OK

Well Location Description:

Well Diameter: 2" in
Hydrocarbon Thickness: 0.02'

Total Depth: 19 ft
Depth to Liquid: 14.11 ft

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

# of casing Volume: 4.89 x .17 x(VF) #Estimated purge Volume: 2.5 gal.

Purge Equipment: disp bailer
Sampling Equipment:

Did well dewater:
If yes, Time: Volume:

Starting Time:
Sampling Time:
Purging Flow Rate: gpm.

Time	pH	Conductivity	Temperature	Volume

Weather Conditions:
Water Color:
Odor:
Sediment Description:

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
B-2	Voa	X	HCL	GTEL	TPHg BTEX MTBE

Comments: ~~0~~ Bailed

WELL SAMPLING FIELD DATA SHEET

SAMPLER: Clyde Galantine / F Cline
DATE: 3/6/97

ADDRESS: 3701 Broadway
JOB #: ~~9~~ 5127.85

CITY: Oakland CA
SS#: 9-1026

Well ID: B-3
Well Condition:

Well Location Description:

Well Diameter: in
Hydrocarbon Thickness: 0.28'

Total Depth: ft

Depth to Liquid: 13.12 ft

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

# of casing Volume: ____ x ____ x(VF) ____ #Estimated purge Volume ____ gal.

Purge Equipment:
Sampling Equipment: disp bailer

Did well dewater:
If yes, Time: ____ Volume:

Starting Time:
Purging Flow Rate: gpm.

Sampling Time:

Time	pH	Conductivity	Temperature	Volume

Weather Conditions: clear, breezy
Water Color: brown
Odor: FP
Sediment Description: —

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
B-3	Voa	X	HCL	GTEL	TPHg BTEX MTBE

Comments: bailed ~ 1/2 gallon FP/H2O

WELL SAMPLING FIELD DATA SHEET

SAMPLER: Clyde Galantine / F Cline | DATE: 3/6/97

ADDRESS: 3701 Broadway | JOB #: ~~9~~ 5127.85

CITY: Oakland CA | SS#: 9-1026

Well ID: B-4 | Well Condition: OK

Well Location Description:

Well Diameter: 2" in | Hydrocarbon Thickness:

Total Depth: 19 ft

Depth to Liquid: 13.56 ft

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

# of casing Volume: 5.44 x .17 x(VF) 3 | #Estimated purge Volume: 2.8 gal.

Purge Equipment: hand bail | Sampling Equipment: disp bailer

Did well dewater: No | If yes, Time: ___ | Volume:

Starting Time: 11:48 | Purging Flow Rate: <1 gpm.

Sampling Time: 12:00

Time	pH	Conductivity	Temperature	Volume
11:46	6.29	2250	19.5	1
11:49	6.32	2410	19.5	2
11:53	6.39	2400	19.4	3
12:00	6.35	2400	19.6	Sample

Weather Conditions: clear, breezy

Water Color: lt gray | Odor: hydrocarbon

Sediment Description: silt

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
B-4	Voa	X	HCL	GTEL	TPHg BTEX MTBE

Comments: nearly dewatered

WELL SAMPLING FIELD DATA SHEET

SAMPLER: Clyde Galantine / F Cline
DATE: 3/6/97

ADDRESS: 3701 Broadway
JOB #: ~~9~~ 5127.85

CITY: Oakland CA
SS#: 9-1026

Well ID: E
Well Condition: Okay

Well Location Description:

Well Diameter: 2" in
Hydrocarbon Thickness: 0

Total Depth: 33 ft
Depth to Liquid: 12.32 ft

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

# of casing Volume: 3 4 20.68 x 0.17 x(VF) 3.5 #Estimated purge Volume: 16.5 gal.

Purge Equipment: Grundfos
Sampling Equipment: disp bailer

Did well dewater: NO
If yes, Time: ___ Volume:

Starting Time: 11:23
Sampling Time: 1131

Purging Flow Rate: 2C gpm.

Time	pH	Conductivity	Temperature	Volume
11.25	6.80	196	19.7	4
1127	6.77	200	20.3	8
1129	6.79	197	19.9	12
1131	6.80		20C	13

Weather Conditions: Clear Breeze
Water Color: clear
Odor: None
Sediment Description: N/a

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
E	Voa	X	HCL	GTEL	TPHg BTEX MTBE

Comments:

WELL SAMPLING FIELD DATA SHEET

SAMPLER: Clyde Galantine / F Cline
DATE: 3/6/97

ADDRESS: 3701 Broadway
JOB #: ~~9~~ 5127.85

CITY: Oakland CA
SS#: 9-1026

Well ID: F
Well Condition: Okay

Well Location Description:

Well Diameter: 2" in
Hydrocarbon Thickness: 0

Total Depth: 21 ft
Depth to Liquid: 11.38 ft

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

# of casing Volume: 3 x 9.62 x 0.17 x(VF) 1.6 #Estimated purge Volume: 4.9 gal.

Purge Equipment: Grundfos
Sampling Equipment: disp bailer

Did well dewater:
If yes, Time: Volume:

Starting Time: 1142
Purging Flow Rate: gpm.
Sampling Time: 1148

Time	pH	Conductivity	Temperature	Volume
1143	6.86	187	18.4	1.6
1144	6.79	191	19.6	3.2
1145	6.77	196	19.3	4.8
1148	6.78	191	19.2	5.6

Weather Conditions: Clear warm
Water Color: clear
Odor: Na
Sediment Description: Na

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
F	Voa	X	HCL	GTEL	TPHg BTEX MTBE

Comments:

WELL SAMPLING FIELD DATA SHEET

SAMPLER: Clyde Galentine / F Cline
DATE: 3/6/97

ADDRESS: 3701 Broadway
JOB #: ~~9~~ 5127.85

CITY: Oakland CA
SS#: 9-1026

Well ID: EA-1
Well Condition: okay

Well Location Description: NE Indian Box

Well Diameter: 4" in
Hydrocarbon Thickness: 0

Total Depth: 27 ft
Depth to Liquid: 13.88 ft

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

# of casing Volume: 3x 13.12 x .66 x(VF) 8.7 #Estimated purge Volume: 25 gal.

Purge Equipment: Grundfos
Sampling Equipment: Bailer

Did well dewater: No
If yes, Time: ___ Volume: ___

Starting Time: 1107
Purging Flow Rate: 3 gpm.
Sampling Time: 1119

Time	pH	Conductivity	Temperature	Volume
1110	6.93	191	19.4	3
1113	6.88	193	20.7	6
1116	6.84	194	20.6	9
1119	6.86	195	20.7	12

Weather Conditions: clear warm
Water Color: clear
Odor: No
Sediment Description: No

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
EA-1	Voa	X	HCL	GTEL	TPHg BTEX MTBE

Comments:

WELL SAMPLING FIELD DATA SHEET

SAMPLER: Clyde Galantine / F Cline
DATE: 3/6/97

ADDRESS: 3701 Broadway
JOB #: ~~90~~ 5127.85

CITY: Oakland CA
SS#: 9-1026

Well ID: EA-2
Well Condition: Okay

Well Location Description:

Well Diameter: 4 in
Hydrocarbon Thickness: 0

Total Depth: 30 ft
Depth to Liquid: 15.06 ft

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

# of casing Volume: 14.94 x 0.66 x(VF) 9.8 #Estimated purge Volume: 29.5 gal.

Purge Equipment: Centrifugal
Sampling Equipment: disp bailer

Did well dewater: NO
If yes, Time: ___ Volume: ___

Starting Time: 1201
Purging Flow Rate: 3.3 gpm.
Sampling Time: 1212

Time	pH	Conductivity	Temperature	Volume
1204	7.18	1616	21.3	9.9
1207	7.06	171	21.2	19.8
1209	7.07	175	21.2	29.7
1212	7.07	174	21.3	30.5

Weather Conditions: Sunny clear warm
Water Color: clear
Odor: Mild
Sediment Description: N/A

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
EA-2	Voa	X	HCL	GTEL	TPHg BTEX MTBE

Comments:

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

Chevron Facility Number #9-1026
Facility Address 3701 Broadway, Oakland, CA
Consultant Project Number 5127
Consultant Name Gettler-Ryan
Address 6747 Sierra Ct, Ste J, Dublin 94568
Project Contact (Name) Deanna Harding
(Phone) 551-7555 (Fax Number) 551-7888

Chevron Contact (Name) Mr. Phil Briggs
(Phone) (510) 842-9136
Laboratory Name NEI/GTEL Service Code: ZZ02790
Laboratory Service Order # 9033191
Samples Collected by (Name) Clyde Galanton / Frank Chinn
Collection Date 3/6/97
Signature Clyde Galanton

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	TPH Gas + BTEX w/MTBE (8020)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)					Remarks
EA-1	1	3	W	G	11:19			X												
E	2	3			11:31			X												
F	3	3			11:48			X												
EA-2	4	3			12:12			X												
B-1	5	3			12:32			X												
B-4	6	3			12:00			X												
TBLB	7	2			—			X												

DO NOT BILL TB-LB ANALYSIS

Analyses To Be Performed

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Clyde Galanton	G-R Inc.	3/6/97 17:30	D. Harding	G-R Inc.	3/7/97
D. Harding	G-R	3/7/97 11:15	John Weber	NEI/GTEL	3/7/97 11:15
John Weber	NEI/GTEL	3/7/97 16:50	Received For Laboratory By (Signature)		Date/Time 3/7/97 0850

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

NEI/GTEL
ENVIRONMENTAL LABORATORIES, INC.

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

March 17, 1997

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

RE: NEI/GTEL Client ID: GTR01CHV08
Login Number: W7030114
Project ID (number): 5127
Project ID (name): CHEVRON/9-1026/3701 BROADWAY/OAKLAND/CA

Dear Deanna Harding:

Enclosed please find the analytical results for the samples received by NEI/GTEL Environmental Laboratories, Inc. on 03/08/97.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by NEI/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 California 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,
NEI/GTEL Environmental Laboratories, Inc.

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

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7030114
Project ID (number): 5127
Project ID (name): CHEVRON/9-1026/3701 BROADWAY/OAKLAND/CA

Method: EPA 8020A
Matrix: Aqueous

NEI/GTEL Sample Number	W7030114-01	W7030114-02	W7030114-03	W7030114-04
Client ID	EA-1	E	F	EA-2
Date Sampled	03/06/97	03/06/97	03/06/97	03/06/97
Date Analyzed	03/16/97	03/16/97	03/16/97	03/16/97
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:			
MTBE	5.0	ug/L	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	0.5	ug/L	2.8	< 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	0.8	< 0.5	< 0.5	< 0.5
BTEX (total)	--	ug/L	3.6	--	--	--
TPH as Gasoline	50	ug/L	< 50	< 50	< 50	< 50

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020A:

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 promulgated Update II.

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7030114
Project ID (number): 5127
Project ID (name): CHEVRON/9-1026/3701 BROADWAY/OAKLAND/CA

Method: EPA 8020A
Matrix: Aqueous

NEI/GTEL Sample Number	W7030114-05	W7030114-06	W7030114-07	--
Client ID	B-1	B-4	TBLB	--
Date Sampled	03/06/97	03/06/97		--
Date Analyzed	03/16/97	03/17/97	03/15/97	--
Dilution Factor	1.00	100.	1.00	--

Analyte	Reporting Limit	Units	Concentration:			
MTBE	5.0	ug/L	5.9	< 500	< 5.0	--
Benzene	0.5	ug/L	31.	17000	< 0.5	--
Toluene	0.5	ug/L	1.0	< 50.	< 0.5	--
Ethylbenzene	0.5	ug/L	2.5	< 50.	< 0.5	--
Xylenes (total)	0.5	ug/L	4.3	< 50.	< 0.5	--
BTEX (total)	--	ug/L	39.	17000	--	--
TPH as Gasoline	50	ug/L	420	< 5000	< 50	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020A:

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 promulgated Update II.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7030114 Volatile Organics
Project ID (number): 5127 Method: EPA 8020A
Project ID (name): CHEVRON/9-1026/3701 BROADWAY/OAKLAND/CA Matrix: Aqueous

Surrogate Results

QC Batch No.	Reference	Sample ID	TFT	BFB
Method: EPA 8020A		Acceptability Limits:	43-136%	43-133%
031597GC5-1	CV031597205	Calibration Verifi	101.	95.1
031597GC5-3	BW0315975	Method Blank Water	96.1	96.0
031597GC5-4	DP03011001	Duplicate	94.2	73.0
031597GC5-6	MS03011403	Matrix Spike	96.0	80.2
--	03011401	EA-1	95.1	73.5
--	03011402	E	93.5	70.0
--	03011403	F	92.9	72.8
--	03011404	EA-2	93.1	71.9
--	03011405	B-1	96.8	90.6
--	03011406	B-4	97.6	94.8
--	03011407	TBLB	94.2	76.4

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

Project ID (Number): 5127
Project ID (Name): Chevron SS #9-1026
3701 Broadway
Oakland, CA
Work Order Number: W7-03-0114
Date Reported: 03-17-97

METHOD BLANK REPORT

Volatile Organics in Water
EA Method 8020A

Date of Analysis: 15-MAR-97 QC Batch No: 031597GC5-3

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

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7030114 Volatile Organics
Project ID (number): 5127 Method: EPA 8020A
Project ID (name): CHEVRON/9-1026/3701 BROADWAY/OAKLAND/CA Matrix: Aqueous

Calibration Verification Sample Summary

Analyte		Spike Amount	Check Sample Concentration	QC Percent Recovery	Acceptability Limits Recovery
EPA 8020A	Units:ug/L	QC Batch:031597GC5-1			
Benzene		20.0	18.8	94.0	77-123%
Toluene		20.0	19.2	96.0	77.5-122.5%
Ethylbenzene		20.0	19.4	97.0	63-137%
Xylenes (Total)		60.0	54.3	90.5	85-115%
TPH as Gasoline		500.	507.	101.	80-120%

Notes:
QC check source: Supelco #LA12389

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7030114 Volatile Organics
Project ID (number): 5127 Method: EPA 8020A
Project ID (name): CHEVRON/9-1026/3701 BROADWAY/OAKLAND/CA Matrix: Aqueous

Duplicate Sample Results

Analyte	Original Concentration	Duplicate Concentration	RPD, %	Acceptability Limits, %
EPA 8020A Units: ug/L	QC Batch: 031597GC5-4	GTEL Sample ID: W7030110-01		Client ID: Batch QC
MTBE	547.	540.	1.29	20
Benzene	< 5.00	< 5.00	NA	23.9
Toluene	< 10.0	< 10.0	NA	27.2
Ethylbenzene	< 10.0	< 10.0	NA	21.6
Xylenes (Total)	< 20.0	< 20.0	NA	22.0

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

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7030114 Volatile Organics
Project ID (number): 5127 Method: EPA 8020A
Project ID (name): CHEVRON/9-1026/3701 BROADWAY/OAKLAND/CA Matrix: Aqueous

Matrix Spike(MS) Results

GTEL Sample ID:W7030114-03 MS ID:MS03011403
Analysis Date: 16-MAR-97 16-MAR-97

Units: ug/L Analyte	Sample Conc.	Spike Added	MS Conc.	MS % Rec.	Acceptability Limits %Rec.
Benzene	< 0.5 (0.000)	20.0	19.2	96.0	67-110
Toluene	< 0.5 (0.000)	20.0	18.4	92.0	68-115
Ethylbenzene	< 0.5 (0.000)	20.0	17.5	87.5	65-120
Xylenes (Total)	< 0.5 (0.000)	60.0	47.4	79.0	62-119

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