Chevron U.S.A. Inc.
2410 Camino Ramon, San Ramon, California • Phone (415) 842-9500
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

Marketing Department

91 APR 04 AM 10:09

April 16, 1991

Mr. Scott Seery
Alameda County Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Re: Chevron S.S. #9-5607
5269 Crow Canyon Road, Castro Valley, CA

Dear Mr. Seery:

Enclosed is a report dated March 7, 1991 which describes groundwater monitoring by Chevron's consultant, Alton Geoscience (Alton), on December 19, 1990 at the site referenced above.

Chevron has been treating and monitoring the groundwater at this site since the installation of groundwater monitoring wells and a recovery well in March of 1985. Chevron's six year groundwater program has generated the following information:

(1) Direction of groundwater gradient has consistently been in a west-south-west direction throughout all monitoring events.

(2) A groundwater extraction and treatment system was installed at the site in October 1985 and has successfully removed all free-phase hydrocarbons from the groundwater beneath the site. A groundwater extraction and treatment system continues to treat dissolved-phase hydrocarbons and is being modified to provide an increased rate of extraction.

(3) The horizontal extent of dissolved phase hydrocarbons in the groundwater has been determined and has been shown to be consistent since a program of laboratory analysis of dissolved-phase constituents began in September 1989.

As a result of the groundwater information gathered over the last six years and the consistency of the information Chevron has collected, Chevron feels that continued monitoring on a quarterly basis will not contribute any significant new information, but rather will merely generate a large quantity of redundant data. Chevron would prefer allocating its resources toward the more beneficial activity of remediating the groundwater rather than toward the redundant activity of frequent monitoring. Chevron feels that a revision of its monitoring program is warranted at this time and has instructed its consultant, Alton, to follow the monitoring and reporting programs defined below:

Monitoring

- Measure the groundwater elevations in all wells (C1 through C16) on a semi-annual basis during the first and third quarters of each year. The topography is such that any deviation in groundwater gradient direction is very improbable.

- Obtain groundwater samples for laboratory analysis from wells C-10, C-15, and C-16 on a quarterly basis. These wells are located downgradient from the plume of dissolved-phase hydrocarbons.

- Obtain groundwater samples for laboratory analysis from wells C-6, C-8, C-11, C-12, and C-14 on a semi-annual basis during the first and third quarters of each year (note that the influent from recovery wells RW and C-9 is sampled bimonthly as required by the Castro Valley Sanitary District).

never approved !

- Obtain groundwater samples for laboratory analysis from wells C-1, C-2, C-3, C-4, C-5, C-7, C-10B, and C-13 on an annual basis during the first quarter of each year.

Reporting

- Submit a report to the appropriate regulatory agencies on a quarterly basis to document all groundwater monitoring activity since the previous report.

If you have any questions or comments, please contact me at (415) 842-8658. I have recently become the project manager for this site replacing Ms. Nancy Vukelich.

Sincerely,

Clint B. Rogers

Clint B. Rogers
Environmental Engineer

Enclosure

cc: Lester Feldman, San Francisco Bay RWQCB
Kevin Hinckley, 5269 Crow Canyon Road, Castro Valley, CA 94546
Gary Keyes, Geraghty and Miller, Richmond, CA
Stephen Rosen, Alton Geoscience, Concord, CA (w/o enclosure)

ALTON GEOSCIENCE
THE RESULTS TEAM

March 7, 1991

Mr. Clint Rogers
Chevron U.S.A., Inc.
Post Office Box 5004
San Ramon, California 94583-0804

30-321

Subject: Quarterly Ground Water Monitoring Report
Chevron Station No. 9-5607
5269 Crow Canyon Road
Castro Valley, California

Dear Mr. Rogers:

In accordance with our agreement, Alton Geoscience, Inc. transmits this Quarterly Ground Water Monitoring and Sampling Report for Chevron Station No. 9-5607, located at 5269 Crow Canyon Road, Castro Valley, California. Figure 1 shows the site location.

Monitoring and sampling of the ground water monitoring wells was performed on December 19 and 20, 1990, in accordance with the requirements and procedures of the California Regional Water Quality Control Board (RWQCB) and local regulatory agencies.

FIELD PROCEDURES

Prior to purging and sampling the wells, the depth to ground water in each well was measured from the top of casing to the nearest 0.01 foot using an electronic interface probe. Ground water samples were also collected at this time and checked for the presence of liquid-phase hydrocarbons or sheen.

Ground water analytical samples were collected after more than 3 casing volumes of ground water were purged from each well. Each sample was collected using a clean bailer (dedicated for each well), and then transferred into the appropriate clean sample containers for delivery to a California-certified laboratory following proper preservation and chain of custody procedures. Purged ground water was stored onsite in DOT-approved, 55-gallon drums until properly disposed of offsite.

SAMPLING AND ANALYTICAL RESULTS

The results of the monitoring and laboratory analyses of the ground water samples for this quarter, as well as the results of previous quarterly monitoring and sampling events are

1000 Burnett Avenue, Suite 140
Concord, California 94520
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summarized in Table 1. Based on the previous wellhead elevation survey data and depth to water measurements collected during this monitoring event, ground water elevations and the general ground water flow direction at this site are presented in Figure 2.

A non-measureable accumulation of liquid-phase hydrocarbons were noted in Monitoring Well C-3. No other liquid-phase hydrocarbons or sheen were observed. The water sampling survey forms presenting the results of the field activities and observations, as well as the official laboratory reports and chain of custody records are included in Appendix A.

Please call if you have any questions concerning this report.

Sincerely,

ALTON GEOSCIENCE, INC.

Stephan Rosen
Supervising Geologist

Al Sevilla, R.C.E. 26392
Regional Manager

Enclosure

pw.95607
vct

Table 1
Summary of Results of Ground Water Sampling
Chevron Service Station # 9-5607
5269 Crow Canyon Road, Castro Valley, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	L-PH	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
C-1	03/26/85	283.46	22.83	---	260.63	---	---	---	---	---	NA
C-1	07/03/86	283.46	23.58	---	259.88	---	---	---	---	---	NA
C-1	03/26/87	283.46	20.50	---	262.96	---	---	---	---	---	NA
C-1	03/28/88	283.46	26.00	---	257.46	---	---	---	---	---	NA
C-1	03/10/89	283.46	15.86	---	267.60	---	---	---	---	---	NA
C-1	04/03/89	283.46	16.85	---	266.61	---	---	---	---	---	NA
C-1	05/08/89	283.46	22.68	---	260.78	---	---	---	---	---	NA
C-1	06/05/89	283.46	24.66	---	258.80	---	---	---	---	---	NA
C-1	07/12/90	283.46	25.56	---	257.90	---	---	---	---	---	NA
C-1	08/10/90	283.46	25.89	---	257.57	---	---	---	---	---	NA
C-1	09/13/89	283.46	26.55	---	256.91	22000	3600	1100	1000	3500	NA
C-1	10/04/89	283.46	25.24	---	258.22	---	---	---	---	---	NA
C-1	11/03/89	283.46	25.03	---	258.43	---	---	---	---	---	NA
C-1	12/04/89	283.46	26.37	---	213.28	13000	2000	550	610	1600	NA
C-1	03/07/90	283.46	22.48	---	260.98	---	---	---	---	---	NA
C-1	03/09/90	---	---	---	---	---	---	---	---	---	SAL
C-1	06/12/90	283.46	24.35	---	259.11	21000	3500	1400	840	4000	SAL
C-1	09/20/90	283.46	26.27	0.00	257.19	23000	2100	1200	860	5000	SAL
C-1	12/20/90	283.46	22.59	0.00	260.87	8200	760	410	260	1100	SAL
C-2	03/26/85	284.37	---	---	---	---	---	---	---	---	NA
C-2	07/03/86	284.37	19.69	---	264.68	---	---	---	---	---	NA
C-2	03/26/87	284.37	15.45	---	268.92	---	---	---	---	---	NA
C-2	03/28/88	284.37	20.92	---	263.45	---	---	---	---	---	NA
C-2	03/10/89	284.37	12.80	---	271.57	---	---	---	---	---	NA
C-2	04/03/89	284.37	14.26	---	270.11	---	---	---	---	---	NA
C-2	05/08/89	284.37	18.42	---	265.95	---	---	---	---	---	NA
C-2	06/05/89	284.37	20.09	---	264.28	---	---	---	---	---	NA
C-2	07/12/90	284.37	20.79	---	263.58	---	---	---	---	---	NA
C-2	08/10/90	284.37	21.40	---	262.97	---	---	---	---	---	NA
C-2	09/13/89	284.37	21.86	---	262.51	320	62	4	10	14	NA
C-2	10/04/89	284.37	19.89	---	264.48	---	---	---	---	---	NA
C-2	11/03/89	284.37	20.76	---	263.61	---	---	---	---	---	NA
C-2	12/04/89	284.37	20.82	---	263.55	1000	240	37	66	130	NA
C-2	03/07/90	284.37	17.83	---	266.54	---	---	---	---	---	NA
C-2	03/09/90	284.37	17.83	---	266.54	390	280	35	27	50	SAL
C-2	06/12/90	284.37	19.89	---	264.48	700	260	34	28	55	SAL
C-2**	09/20/90	284.37	21.97	0.00	262.40	---	---	---	---	---	NA
C-2**	12/20/90	284.37	17.73	0.00	266.64	---	---	---	---	---	NA

Table 1
Summary of Results of Ground Water Sampling
Chevron Service Station # 9-5607
5269 Crow Canyon Road, Castro Valley, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	L-PH	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
C-3	03/26/85	285.98	---	---	---	---	---	---	---	---	NA
C-3	07/03/86	285.98	26.04	---	259.94	---	---	---	---	---	NA
C-3	03/26/87	285.98	25.64	---	260.34	---	---	---	---	---	NA
C-3	03/28/88	285.98	28.82	---	257.16	---	---	---	---	---	NA
C-3	03/10/89	285.98	22.78	---	263.20	---	---	---	---	---	NA
C-3	04/03/89	285.98	22.71	---	263.27	---	---	---	---	---	NA
C-3	05/08/89	285.98	25.95	---	260.03	---	---	---	---	---	NA
C-3	06/05/89	285.98	27.62	---	258.36	---	---	---	---	---	NA
C-3	07/12/90	285.98	28.29	---	257.69	---	---	---	---	---	NA
C-3	08/10/90	285.98	28.46	---	257.52	---	---	---	---	---	NA
C-3	09/13/89	285.98	29.33	---	256.65	60000	1400	6800	2300	10000	NA
C-3	10/04/89	285.98	28.97	---	257.01	---	---	---	---	---	NA
C-3	11/03/89	285.98	28.72	---	257.26	---	---	---	---	---	NA
C-3	12/04/89	285.98	29.01	---	256.97	56000	1300	3300	1400	2700	NA
C-3	03/07/90	285.98	27.69	---	258.29	---	---	---	---	---	NA
C-3	03/09/90	285.98	27.69	---	258.29	42000	1100	5700	1600	7900	SAL
C-3	06/12/90	285.98	28.09	---	257.89	160000	1400	7100	3400	16000	SAL
C-3	09/24/90	285.98	29.18	0.00	256.80	53000	850	7700	2000	10000	SAL
C-3	12/20/90	285.98	28.27	0.00	257.71	520	1200	5400	5400	33000	SAL
C-4	03/26/85	273.01	15.14	---	257.87	---	---	---	---	---	NA
C-4	07/03/86	273.01	15.37	---	257.64	---	---	---	---	---	NA
C-4	03/26/87	273.01	---	---	---	---	---	---	---	---	NA
C-4	03/28/88	273.01	18.04	---	254.97	---	---	---	---	---	NA
C-4	03/10/89	273.01	---	---	---	---	---	---	---	---	NA
C-4	04/03/89	273.01	13.34	---	259.67	---	---	---	---	---	NA
C-4	05/08/89	273.01	15.60	---	257.41	---	---	---	---	---	NA
C-4	06/05/89	273.01	16.51	---	256.50	---	---	---	---	---	NA
C-4	07/12/90	273.01	16.99	---	256.02	---	---	---	---	---	NA
C-4	08/10/90	273.01	17.27	---	255.74	---	---	---	---	---	NA
C-4	09/13/89	273.01	18.16	---	254.85	57000	21000	3100	3200	11000	NA
C-4	10/04/89	273.01	18.24	---	254.77	---	---	---	---	---	NA
C-4	11/03/89	273.01	18.17	---	254.84	---	---	---	---	---	NA
C-4	12/04/89	273.01	18.45	---	254.56	48000	17000	2200	2800	9800	NA
C-4	03/07/90	273.01	17.20	---	255.81	---	---	---	---	---	NA
C-4	03/09/90	273.01	17.20	---	255.81	43000	20000	2300	2800	11000	SAL
C-4	06/12/90	273.01	16.66	---	256.35	82000	21000	2400	4000	16000	SAL
C-4**	09/24/90	273.01	18.11	0.00	254.90	---	---	---	---	---	NA
C-4***	12/20/90	273.01	---	---	---	---	---	---	---	---	NA

Table 1
Summary of Results of Ground Water Sampling
Chevron Service Station # 9-5607
5269 Crow Canyon Road, Castro Valley, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	L-PH	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
C-5	03/26/85	287.95	25.33	---	262.62	---	---	---	---	---	NA
C-5	07/03/86	287.95	26.41	---	261.54	---	---	---	---	---	NA
C-5	03/26/87	287.95	24.96	---	262.99	---	---	---	---	---	NA
C-5	03/28/88	287.95	29.80	---	258.15	---	---	---	---	---	NA
C-5	03/10/89	287.95	25.89	---	262.06	---	---	---	---	---	NA
C-5	04/03/89	287.95	24.38	---	263.57	---	---	---	---	---	NA
C-5	05/08/89	287.95	27.80	---	260.15	---	---	---	---	---	NA
C-5	06/05/89	287.95	29.42	---	258.53	---	---	---	---	---	NA
C-5	07/12/90	287.95	29.86	---	258.09	---	---	---	---	---	NA
C-5	08/10/90	287.95	29.77	---	258.18	---	---	---	---	---	NA
C-5	09/13/89	287.95	30.95	---	257.00	310	ND	ND	ND	ND	NA
C-5	10/04/89	287.95	31.48	---	256.47	---	---	---	---	---	NA
C-5	11/03/89	287.95	31.32	---	256.63	---	---	---	---	---	NA
C-5	12/04/89	287.95	31.70	---	256.25	ND	ND	ND	ND	1	NA
C-5	03/07/90	287.95	30.28	---	257.67	---	---	---	---	---	NA
C-5	03/09/90	287.95	30.28	---	257.67	ND	ND	ND	ND	ND	SAL
C-5	06/12/90	287.95	30.48	---	257.47	90	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-5	09/24/90	287.95	31.78	0.00	256.17	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-5	12/20/90	287.95	33.29	0.00	254.66	170	ND<0.5	ND<0.5	1.0	0.7	SAL
C-6	03/26/85	---	16.74	---	---	---	---	---	---	---	NA
C-6	07/03/86	275.28	17.46	---	257.82	---	---	---	---	---	NA
C-6	03/26/87	275.28	18.37	---	256.91	---	---	---	---	---	NA
C-6	03/28/88	275.28	29.84	---	255.44	---	---	---	---	---	NA
C-6	03/10/89	275.28	14.44	---	260.84	---	---	---	---	---	NA
C-6	04/03/89	275.28	14.44	---	260.84	---	---	---	---	---	NA
C-6	05/08/89	275.28	17.16	---	258.12	---	---	---	---	---	NA
C-6	06/05/89	275.28	18.51	---	256.77	---	---	---	---	---	NA
C-6	07/12/90	275.28	18.71	---	256.97	---	---	---	---	---	NA
C-6	08/10/90	275.28	19.32	---	255.96	---	---	---	---	---	NA
C-6	09/13/89	275.28	19.95	---	255.33	47	5600	3000	2400	10000	NA
C-6	10/04/89	275.28	19.87	---	255.44	---	---	---	---	---	NA
C-6	11/03/89	275.28	19.35	---	255.93	---	---	---	---	---	NA
C-6	12/04/89	275.28	19.59	---	255.69	40000	8100	1800	1700	7500	NA
C-6	03/07/90	275.28	18.39	---	256.89	---	---	---	---	---	NA
C-6	03/09/90	275.28	18.39	---	256.89	73000	23000	5900	3400	17000	SAL
C-6	06/12/90	275.28	18.87	---	256.41	85000	19000	6500	3400	16000	SAL
C-6	09/24/90	275.28	19.99	0.00	255.29	72000	15000	3200	2600	11000	SAL
C-6	12/20/90	275.28	21.57	0.00	253.71	100000	11000	4200	3400	16000	SAL

Table 1
Summary of Results of Ground Water Sampling
Chevron Service Station # 9-5607
5269 Crow Canyon Road, Castro Valley, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	L-PH	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
C-7	03/26/85	---	09.61	---	---	---	---	---	---	---	NA
C-7	07/03/86	270.70	10.74	---	259.96	---	---	---	---	---	NA
C-7	03/26/87	270.70	10.08	---	260.62	---	---	---	---	---	NA
C-7	03/28/88	270.70	13.79	---	256.91	---	---	---	---	---	NA
C-7	03/10/89	270.70	10.42	---	260.28	---	---	---	---	---	NA
C-7	04/03/89	270.70	09.14	---	261.56	---	---	---	---	---	NA
C-7	05/08/89	270.70	11.91	---	258.79	---	---	---	---	---	NA
C-7	06/05/89	270.70	11.54	---	259.16	---	---	---	---	---	NA
C-7	07/12/90	270.70	13.45	---	257.25	---	---	---	---	---	NA
C-7	08/10/90	270.70	13.37	---	257.33	---	---	---	---	---	NA
C-7	09/13/89	270.70	14.60	---	256.10	410	1.3	ND	10	ND	NA
C-7	10/04/89	270.70	15.17	---	255.53	---	---	---	---	---	NA
C-7	11/03/89	270.70	15.28	---	255.42	---	---	---	---	---	NA
C-7	12/04/89	270.70	15.70	---	255.00	1000	1	ND	5	ND	NA
C-7	03/07/90	270.70	14.22	---	256.48	---	---	---	---	---	NA
C-7	03/09/90	270.70	14.22	---	256.48	590	2.8	2.4	3.5	2.0	SAL
C-7	06/12/90	270.70	14.18	---	256.52	1200	ND<7	5.0	8.2	3.2	SAL
C-7	09/24/90	270.70	15.44	SHEEN	255.26	400	1.4	1.9	1.4	2.2	SAL
C-7D	09/24/90	270.70	15.44	SHEEN	255.26	580	ND<0.5	2.4	1.4	1.5	SAL
C-7	12/20/90	270.70	17.08	0.00	253.62	2300	ND<0.5	6.5	4.7	9.3	SAL
C-8	03/26/85	---	08.68	---	---	---	---	---	---	---	NA
C-8	07/03/86	288.40	13.89	---	274.51	---	---	---	---	---	NA
C-8	03/26/87	288.40	06.01	---	282.39	---	---	---	---	---	NA
C-8	03/28/88	288.40	10.66	---	277.74	---	---	---	---	---	NA
C-8	03/10/89	288.40	06.61	---	281.79	---	---	---	---	---	NA
C-8	04/03/89	288.40	06.46	---	281.94	---	---	---	---	---	NA
C-8	05/08/89	288.40	08.97	---	279.43	---	---	---	---	---	NA
C-8	06/05/89	288.40	10.88	---	277.52	---	---	---	---	---	NA
C-8	07/12/90	288.40	12.15	---	276.25	---	---	---	---	---	NA
C-8	08/10/90	288.40	12.46	---	275.94	---	---	---	---	---	NA
C-8	09/13/89	288.40	12.78	---	275.62	ND	ND	ND	ND	ND	NA
C-8	10/04/89	288.40	12.51	---	275.89	---	---	---	---	---	NA
C-8	11/03/89	288.40	14.63	---	273.77	---	---	---	---	---	NA
C-8	12/04/89	288.40	09.59	---	278.81	64	0.6	0.6	ND	1	NA
C-8	03/07/90	288.40	08.80	---	279.60	---	---	---	---	---	NA
C-8	03/09/90	288.40	08.80	---	279.60	ND	ND	ND	ND	ND	NA
C-8	06/12/90	288.40	08.94	---	279.46	120	2.5	1.2	1.0	1.4	SAL
C-8**	09/24/90	288.40	13.54	0.00	274.86	---	---	---	---	---	NA
C-8**	12/20/90	288.40	9.33	0.00	279.07	---	---	---	---	---	NA

Table 1
Summary of Results of Ground Water Sampling
Chevron Service Station # 9-5607
5269 Crow Canyon Road, Castro Valley, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	L-PH	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
C-9	07/03/86	268.46	13.89	---	254.57	---	---	---	---	---	NA
C-9	03/26/87	268.46	13.74	---	254.72	---	---	---	---	---	NA
C-9	03/28/88	268.46	14.99	---	253.47	---	---	---	---	---	NA
C-9	03/10/89	268.46	13.39	---	255.07	---	---	---	---	---	NA
C-9	04/03/89	268.46	12.84	---	255.62	---	---	---	---	---	NA
C-9	05/08/89	268.46	14.38	---	254.08	---	---	---	---	---	NA
C-9	06/05/89	268.46	15.36	---	253.10	---	---	---	---	---	NA
C-9	07/12/90	268.46	15.65	---	252.81	---	---	---	---	---	NA
C-9	08/10/90	268.46	15.80	---	252.66	---	---	---	---	---	NA
C-9	09/13/89	268.46	16.53	---	251.93	42000	14000	1100	2800	4200	NA
C-9	10/04/89	268.46	16.52	---	251.94	---	---	---	---	---	NA
C-9	11/03/89	268.46	16.51	---	251.95	---	---	---	---	---	NA
C-9	12/04/89	268.46	16.79	---	251.67	36000	11000	670	2500	3800	NA
C-9	03/07/90	268.46	16.22	---	252.24	---	---	---	---	---	NA
C-9	03/09/90	268.46	16.22	---	252.24	28000	12000	940	3000	4700	NA
C-9	06/12/90	268.40	14.88	---	253.52	39000	11000	1600	2300	4800	SAL
C-9	09/24/90	268.40	16.30	0.00	252.10	120000	13000	1600	3700	6800	SAL
C-9	12/20/90	268.40	17.23	0.00	251.17	51000	9300	560	2800	3300	SAL
C-9D	12/20/90	268.40	17.23	0.00	251.17	44000	12000	580	2800	3500	SAL
C-10A	03/07/90	264.84	20.21	---	244.63	---	---	---	---	---	NA
C-10A	03/09/90	---	---	---	---	ND	1.6	0.7	0.8	3.5	SAL
C-10A	06/12/90	264.84	19.70	---	245.14	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-10	09/24/90	264.84	19.54	0.00	245.30	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-10	12/20/90	264.84	19.84	0.00	245.00	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-10B	03/07/90	264.85	21.44	---	243.41	---	---	---	---	---	NA
C-10B	06/12/90	264.85	19.94	---	244.91	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-10B	09/24/90	264.85	19.77	0.00	245.08	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-10B	12/20/90	264.85	20.00	0.00	244.85	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-11	03/07/90	265.30	22.74	---	242.56	---	---	---	---	---	NA
C-11	03/09/90	---	---	---	---	ND	1.2	0.7	ND	1.4	SAL
C-11	06/12/90	265.30	21.98	---	243.32	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-11	09/24/90	265.30	21.88	0.00	243.42	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-11	12/20/90	265.30	23.18	0.00	242.12	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL

Table 1
Summary of Results of Ground Water Sampling
Chevron Service Station # 9-5607
5269 Crow Canyon Road, Castro Valley, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	L-PH	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
C-12	03/07/90	269.66	14.92	---	254.74	---	---	---	---	---	NA
C-12	03/09/90	---	---	---	---	1400	230	140	33	180	SAL
C-12	06/12/90	269.66	14.79	---	254.87	720	190	71	18	73	SAL
C-12	09/24/90	269.66	15.72	0.00	253.94	ND<50	1.1	ND<0.5	ND<0.5	.6	SAL
C-12	12/20/90	269.66	15.26	0.00	254.40	810	210	26	8.2	23	SAL
C-13	03/07/90	284.32	11.18	---	273.14	---	---	---	---	---	NA
C-13	03/09/90	---	---	---	---	ND	15	3.7	1.0	6.2	SAL
C-13	06/12/90	284.32	10.70	---	273.62	ND<50	2.6	ND<0.5	ND<0.5	ND<0.5	SAL
C-13	09/24/90	284.32	11.60	0.00	272.72	ND<50	2.4	ND<0.5	ND<0.5	ND<0.5	SAL
C-13	12/20/90	284.32	10.16	0.00	274.16	ND<50	1.6	ND<0.5	ND<0.5	ND<0.5	SAL
C-14	03/07/90	270.74	15.18	---	255.56	---	---	---	---	---	NA
C-14	03/09/90	270.74	---	---	---	ND	ND	ND	ND	ND	SAL
C-14	06/12/90	270.74	13.42	---	257.32	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-14	09/24/90	270.74	12.84	0.00	257.90	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-14	12/20/90	270.74	16.72	0.00	254.02	ND<50	1.7	0.7	ND<0.5	0.7	SAL
C-15	03/07/90	246.15	11.10	---	235.05	---	---	---	---	---	NA
C-15	03/09/90	246.15	---	---	---	410	ND	1.4	0.5	0.6	SAL
C-15	06/12/90	246.15	10.78	---	235.37	420	11	ND<0.5	ND<0.5	ND<0.5	SAL
C-15	09/24/90	246.15	10.93	0.00	235.22	430	ND<0.5	1.5	ND<0.5	ND<0.5	SAL
C-15	12/20/90	246.15	11.08	0.00	235.07	300	1.3	1.1	0.6	1.5	SAL
C-16	03/07/90	246.69	18.50	---	256.02	---	---	---	---	---	NA
C-16	03/09/90	---	---	--	---	ND	ND	ND	ND	ND	SAL
C-16	06/12/90	246.69	11.42	---	235.27	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-16	09/24/90	246.69	11.39	0.00	235.30	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-16	12/20/90	246.69	11.57	0.00	235.12	ND<50	ND<0.5	ND<0.5	ND<0.5	0.7	SAL
RW	12/04/89	---	---	---	---	62000	29000	1700	1800	8800	NA
RW	03/07/90	274.52	18.50	---	256.02	---	---	---	---	---	NA
RW	06/12/90	274.52	18.49	---	256.03	31000	15000	2000	560	3100	SAL
RW*	09/24/90	NA	NA	NA	NA	---	---	---	---	---	NA
RW	12/20/90	NA	NA	NA	NA	ND<50	0.5	ND<0.5	ND<0.5	1.2	SAL

Table 1
Summary of Results of Ground Water Sampling
Chevron Service Station # 9-5607
5269 Crow Canyon Road, Castro Valley, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	L-PH	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
RINSATE	09/24/90	NA	NA	---	NA	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
RINSATE	12/20/90	NA	NA	---	NA	ND<50	ND<0.5	0.6	ND<0.5	0.9	SAL
TB	09/24/90	NA	NA	---	NA	200	1.9	14	4.4	32	SAL
TB	12/20/90	NA	NA	---	NA	ND<50	0.5	ND<0.5	ND<0.5	1.2	SAL

EXPLANATION OF ABBREVIATIONS:

TPH-G	:Total Petroleum Hydrocarbons as Gasoline (EPA method 8015 modified)	---	:Not Analyzed/Not Measured
L-PH	:Liquid Phase Hydrocarbon thickness in feet.	NA	:Not Applicable/Not Available
B	:Benzene (EPA method 8020 or 8240)	ND	:Not Detected
T	:Toluene (EPA method 8020 or 8240)	TB	:Trip Blank
E	:Ethylbenzene (EPA method 8020 or 8240)	D	:Duplicate
X	:Xylenes (EPA method 8020 or 8240)	SAL	:Superior Analytical Laboratory
		*	:Not sampled due to insufficient water in well.
		**	:Well sampled annually.
		***	:Well could not be located.

Note: Top of casing and Ground Water Elevations are expressed as feet above mean sea level (NGVD-1929).

FIGURE 1. SITE VICINITY MAP

0 1

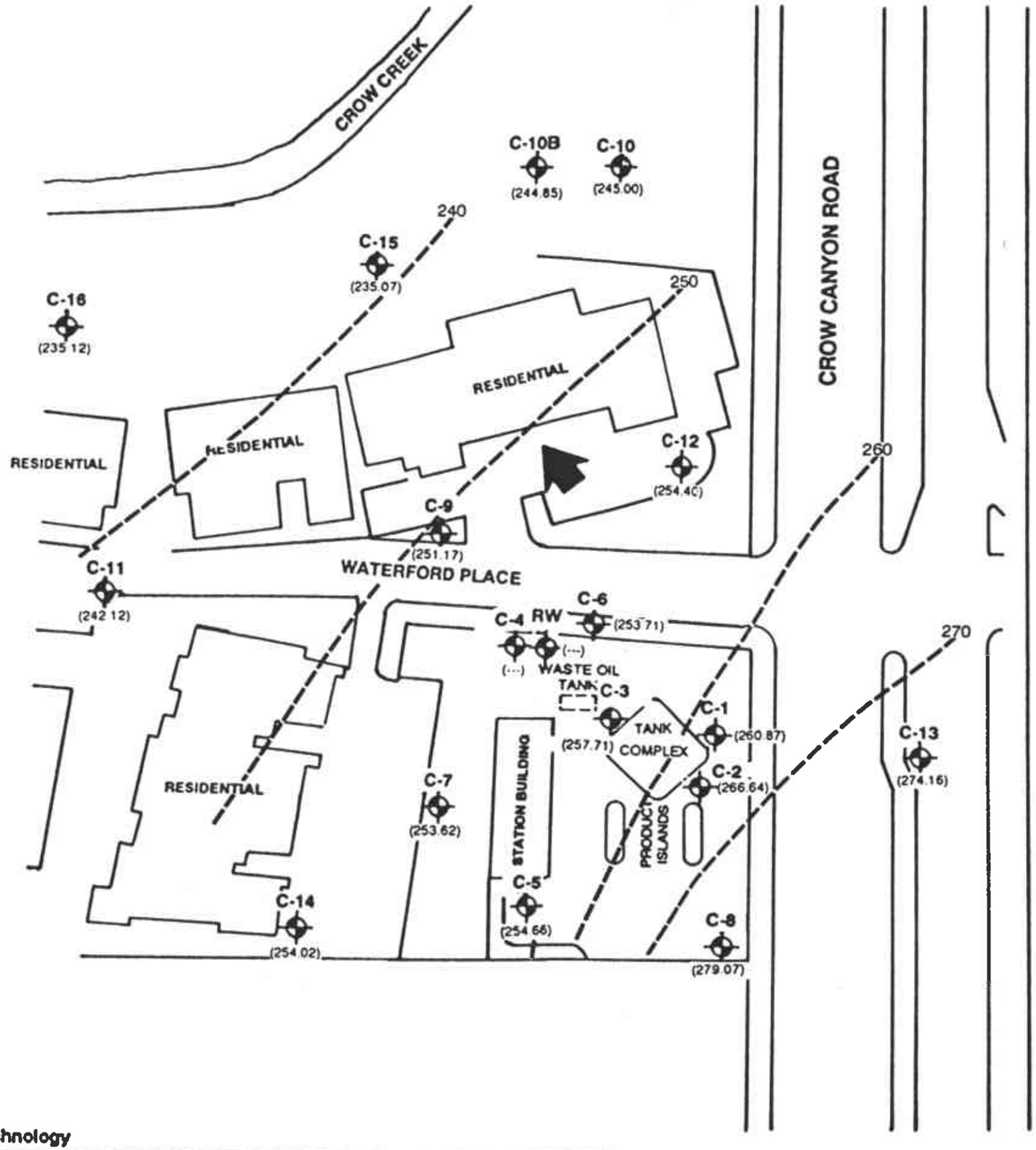
SCALE IN MILES

CHEVRON U.S.A.
CHEVRON SERVICE STATION NO. 9-5807
5269 CROW CANYON ROAD
CASTRO VALLEY, CALIFORNIA

PROJECT NO. 30-321

SOURCE: USGS 7.5 MINUTE SERIES
HAYWARD QUADRANGLE

ALTON GEOSCIENCE
1000 Burnett Ave., Ste. 140
Concord, CA 94520



Source: Groundwater Technology

PROJECT NO. 30-321

N

0 50

APPROXIMATE SCALE IN FEET

LEGEND:

- GROUND WATER MONITORING WELL
- (260.87) GROUND WATER ELEVATION (FEET ABOVE MEAN SEA LEVEL (NGVD-1929))
- GROUND WATER ELEVATION CONTOUR
- GENERAL DIRECTION OF GROUND WATER FLOW

CONTOUR LINES ARE INTERPRETIVE BASED ON FLUID LEVELS IN MONITORING WELLS MEAUSRED ON 12/20/90.

(---) ELEVATION DATA NOT AVAILABLE

FIGURE 2. GROUND WATER ELEVATION CONTOUR MAP

Chevron Service Station No. 9-5607
5269 Crow Canyon Road
Castro Valley, California

ALTON GEOSCIENCE
1000 Burnett Ave., Ste. 140
Concord, CA 94520

APPENDIX A

FIELD SAMPLE FORMS,

OFFICIAL LABORATORY RESULTS, AND

CHAIN OF CUSTODY FORMS

ALTON GEOSCIENCE, INC
1170 Burnett Ave., Ste. S
Concord, CA 94520

JOB NUMBER 30-321 #9-5607 TECHNICIAN Lang

JOB LOCATION Castro Valley DATE 12/19/20

PUMPOUT ☒ YES ☐ NO | DATE OF LAST PUMPOUT: | WEATHER: Cold | TIME: 1133

	WELL #	HOLD DEPTH TO WATER	CUT DEPTH TO PRODUCT	LEVEL PROD. THICKNESS (FT)	TOTAL DEPTH	DEPTH TO PUMP	COMMENTS (Notes, conditions, etc.)
							* All wells Have Ded. Bailer unless indicated
4"	C-5	33.29	∅	∅	40.23		
3"	C-10	19.84	∅	∅	22.87		
3"	C-10B	20.00	∅	∅	33.35		
3"	C-11	23.18	∅	∅	31.80		
3"	C-16	11.57	∅	∅	30.98		No Ded. Bailer
3"	C-12	15.26	∅	∅	28.25		No Ded. Bailer
3"	C-13	10.16	∅	∅	28.40		" "
3"	C-15	11.08	∅	∅	19.60		" "
2"	C-7	17.08	∅	∅	27.05		" "
4"	C-1	22.59	∅	∅	43.07		" "
4"	C-6	21.57	∅	∅	30.91		Broken Casing / No Cap / No Ded Bailer
4"	C-9	17.23	∅	∅	29.10		Need Chevron lock / no Ded. Bailer
4"	C-3	28.27	∅	∅	31.55		No Ded Bailer
4"	C-2	17.73	∅	∅	44.53		No Ded. Bailer / No Casing Cap
	C-4						Could not locate
2"	C-8	9.33	∅	∅	25.44		
							* C-3 monument was severly damaged during excavation. Was replaced (the Sewer lid). Casing was Broke which as a result, a Casing Cap Cannot Be put on Casing. Also 1 gravel fell into well during excavation. Contained
	TB	Time →					
	Rinsate	Time →					
							** Small amount of free product removed about 2 days prior to purging. Keck did not pick up.

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C-1 PROJECT# 30-321 LOCATION Castro Valley DATE 12/20/90

SAMPLING TEAM Lang SAMPLING METHOD: BAILER ___ PUMP X

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER X
STEAM CLEAN ___

WELL DATA:

DEPTH TO WATER 22.59 ft

TOTAL DEPTH ~~22~~ 43.07 ft

HT. WATER COL 20.48 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 13.3 /gal

Volumes to Purge X 3 Vol

Total Volume to Purge 39.9 gal

Begun 1540

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
41.8	.61	7.95	1540	Cloudy	7
49.3		7.1	1545		14
55.5	.85	7.24	1544		21
55.9	.79	7.08	1545	Clear	28
56.5	.78	7.05	1546		35

Sampled 1620

ACTUAL VOLUME PURGED 40 /gal

COMMENTS: metr X 1000

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C-3 PROJECT# 30-321 LOCATION Castro Valley DATE 11/20/92

SAMPLING TEAM Lang SAMPLING METHOD: BAILER X PUMP ___

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER X
STEAM CLEAN ___

WELL DATA:

DEPTH TO WATER 28.27 ft

TOTAL DEPTH 31.55 ft

HT. WATER COL 3.28 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 3.13 gal

Volumes to Purge X 3 Vol

Total Volume to Purge 6.39 gal

Begin 1034

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
46.6	.52	8.02	1035	Cloudy	1
49.7	.65	7.78	1037	" "	2
51.0	.59	7.63	1038	" "	3
55.1	.58	7.52	1039	" "	4
56.5	.59	7.50	1041	" "	5

Sampled 1047

ACTUAL VOLUME PURGED 6.39/gal

COMMENTS: meter X 1000

Small amount of free product. Was not picked up by Keck Interphase probe. Bailed out about 2 cups of water & product mixed

Very Slow Producer

* Please See measurement sheet

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C5 PROJECT# 30-321 LOCATION Castro Valley DATE 12/19/90

SAMPLING TEAM Lang SAMPLING METHOD: BAILER X PUMP ___

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER X
STEAM CLEAN ___

WELL DATA:

DEPTH TO WATER 33.29 ft

TOTAL DEPTH 40.23 ft

HT. WATER COL 6.94 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 4.65 gal

Volumes to Purge X 3 Vol

Total Volume to Purge 13.95 gal

Begin 1201

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
53.4	1.20	7.68	1203	Lt Brown	2
55.5	1.09	7.29	1205	" "	4
52.3	1.07	7.32	1207	" "	6
54.9	1.06	7.26	1210	" "	8
54.8	1.06	7.23	1213	" "	10

Sampled 1558

ACTUAL VOLUME PURGED 14 /gal

COMMENTS: meth X 1000

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C 6 PROJECT# 30-321 LOCATION Castro Valley DATE 12/20/90

SAMPLING TEAM Lary SAMPLING METHOD: BAILER X PUMP ___

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER X
STEAM CLEAN ___

WELL DATA:

DEPTH TO WATER 21.57 ft

TOTAL DEPTH 30.91 ft

HT. WATER COL 9.34 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 607 gal

Volumes to Purge X 3 Vol

Total Volume to Purge 1821 gal

Begin 1106

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
42.4	1.16	7.23	1106	Cloudy	3
45	1.13	7.19	1107	"	6
46	1.10	7.16	1108	"	9
47	1.07	7.10	1109		12
46	1.03	7.07	1112		15

12/21/90 Sampled 1118

ACTUAL VOLUME PURGED 185/gal

COMMENTS: meter X1000

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C-7 PROJECT# 30-321 LOCATION Castro Valley DATE 12/20/90

SAMPLING TEAM Lang SAMPLING METHOD: BAILER ___ PUMP X

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER X
STEAM CLEAN ___

WELL DATA:

DEPTH TO WATER 7.08 ft

TOTAL DEPTH 27.05 ft

HT. WATER COL 9.97 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 1.60 gal

Volumes to Purge X 3 Vol

Total Volume to Purge 4.80 gal

Begin 1522

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
48.5	1.48	8.89	1522	Cloudy	1
51.9	1.32	7.66	1523	Clear	2
54.0	1.33	7.04	1525	Cloudy	3
56.3	1.28	7.69	1526	" "	4
56.9	1.26	7.65	1527	" "	5

Sampled 1530

ACTUAL VOLUME PURGED 5 /gal

COMMENTS: meth X1000

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C9 PROJECT# 30-321 LOCATION Castro Valley DATE 12/20/90

SAMPLING TEAM Lang SAMPLING METHOD: BAILER ___ PUMP X

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER X
STEAM CLEAN ___

WELL DATA:

DEPTH TO WATER 7.23 ft

TOTAL DEPTH 29.10 ft

HT. WATER COL 11.87 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 7.72 gal

Volumes to Purge X 3 Vol

Total Volume to Purge 23.16 gal

Begin 1134

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
51.0	1.55	7.17	1134	clear	4
55.5	1.54	6.98	1135	" "	8
58.4	1.47	6.52	1136	" "	12
60.2	1.47	6.38	1136	" "	16
61.1	1.45	6.34	1137	" "	20

Sampled 1149

ACTUAL VOLUME PURGED 23.5 /gal

COMMENTS: meter x1000

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C10 PROJECT# 30-321 LOCATION Castro Valley DATE 12/19/90

SAMPLING TEAM Lang SAMPLING METHOD: BAILER ___ PUMP X

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER X
STEAM CLEAN ___

WELL DATA:

DEPTH TO WATER 19.74 ft

TOTAL DEPTH 22.97 ft

HT. WATER COL 3.03 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 1.09 gal

Volumes to Purge X 3 Vol

Total Volume to Purge 3.27 gal

Begin 1251

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
56.5	1.66	7.17	1252	Cloudy	.50
59.4	1.68	6.99	1254	" "	1.00
60.0	1.63	7.08	1256	" "	1.50
60.5	1.56	7.07	1258	" "	2.00
60.8	1.54	7.06	1300	" "	2.50

Sampled 1153 ACTUAL VOLUME PURGED 3.5 /gal

COMMENTS: meter X 1000 Slow Producer

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C10B PROJECT# 30-321 LOCATION Castro Valley DATE 12/19/20

SAMPLING TEAM Lary SAMPLING METHOD: BAILER ___ PUMP X

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER X
STEAM CLEAN ___

Begin 1310

WELL DATA:

DEPTH TO WATER 20.00 ft

TOTAL DEPTH 33.35 ft

HT. WATER COL 13.35 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 4.81 gal

Volumes to Purge X 3 Vol

Total Volume to Purge 14.43 gal

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
50.6	.95	7.56	1311	Lt brown	2.5
54.8	1.06	7.40	1312	" "	5.0
57.7	1.07	7.28	1312	" "	7.5
59.7	1.06	7.23	13 14	" "	10
59.9	1.04	7.20	1316	" "	12.5

Sampled 1146

ACTUAL VOLUME PURGED 14.5 /gal

COMMENTS: meter X 1000

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C 11 PROJECT# 30-321 LOCATION Castro Valley DATE 12/20/90

SAMPLING TEAM Lay SAMPLING METHOD: BAILER ___ PUMP X

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER X
STEAM CLEAN ___

WELL DATA:

DEPTH TO WATER 23.18 ft

TOTAL DEPTH 31.80 ft

HT. WATER COL 8.62 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 3.10 gal

Volumes to Purge X 3 Vol

Total Volume to Purge 9.30 gal

Begin 1052

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
49.3	1.24	7.51	1052	Lt Brown	1.5
54.0	1.55	7.31	1053	Cloudy	3
57.3	1.65	7.16	1055	Clear	4.5
57.3	1.66	7.07	1056	"	6
57.7	1.63	7.06	1058	"	7.5

Sampled 1110 ACTUAL VOLUME PURGED 9.5 /gal

COMMENTS: meth X 1000

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C12 PROJECT# 30-321 LOCATION Castro Valley DATE 12/20/90

SAMPLING TEAM Larry SAMPLING METHOD: BAILER ___ PUMP X

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER X
STEAM CLEAN ___

WELL DATA:

DEPTH TO WATER 5.26 ft

TOTAL DEPTH 28.25 ft

HT. WATER COL 22.99 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 4.68 gal

Volumes to Purge x 3 Vol

Total Volume to Purge 14.04 gal

Begin 1303

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
56.2	1.21	7.16	1304	Cloudy	2.5
59.0	1.20	7.81	1305	Lt Brown	5
60.7	1.21	7.60	1306	" "	7.5
61.7	1.30	7.29	1308	" "	10
62.1	1.25	7.26	1309	" "	12.5

Sampled 1340 ACTUAL VOLUME PURGED 14.1 /gal

COMMENTS: meter X 1000

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C13 PROJECT# 30-321 LOCATION Castro Valley DATE 12/20/90

SAMPLING TEAM Lang SAMPLING METHOD: BAILER ___ PUMP X

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER X
STEAM CLEAN ___

WELL DATA:

DEPTH TO WATER 10.16 ft

TOTAL DEPTH 28.40 ft

HT. WATER COL 18.24 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 6.57 gal

Volumes to Purge X 3 Vol

Total Volume to Purge 19.71 gal

Begin 1421

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
49.9	1.30	6.75	1422	cloudy	3
55.7	1.39	6.91	1422	" "	6
57.3	1.48	7.01	1423	" "	9
58.0	1.48	7.14	1424	" "	12
58.7	1.46	7.15	1425	" "	15

Sampled 1434

ACTUAL VOLUME PURGED 19.8 /gal

COMMENTS: meter X 1000

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # CM PROJECT# 30-321 LOCATION Castro Valley DATE 12/20/90

SAMPLING TEAM Carry SAMPLING METHOD: BAILER ___ PUMP X

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER X
STEAM CLEAN ___

WELL DATA:

DEPTH TO WATER 16.72 ft

TOTAL DEPTH 27.84 ft

HT. WATER COL 11.12 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 4.00 gal

Volumes to Purge X 3 Vol

Total Volume to Purge 12.00 gal

Begin 1117

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
53.7	1.02	7.04	1119	Dark Brown	2
55.7	1.00	7.92	1120	Cloudy	4
57.3	.78	7.68	1122	"	6
58.3	.70	7.62	1123	Clear	8
58.9	.69	7.60	1124	Clear	10

Sampled 1323 ACTUAL VOLUME PURGED 12 /gal

COMMENTS: meter X 1000 Slow Producer

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C-15 PROJECT# 30-321 LOCATION Castro Valley DATE 12/20/90

SAMPLING TEAM Larry SAMPLING METHOD: BAILER ___ PUMP X

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER X
STEAM CLEAN ___

WELL DATA:

DEPTH TO WATER 11.08 ft

TOTAL DEPTH 19.60 ft

HT. WATER COL 8.52 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 3.07 gal

Volumes to Purge X 3 Vol

Total Volume to Purge 9.21 gal

Begin 1455

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
50.9	187	7.72	1456	Lt Brown	1.5
55.6	1.96	7.50	1457	" "	3
57.6	1.95	7.26	1459	Cloudy	4.5
58.8	1.95	7.29	1459	" "	6
59.2	1.94	7.30	1500	" "	7.5

1512 ACTUAL VOLUME PURGED 9.5/gal

Sampled 1512

COMMENTS: meter X 1000

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C16 PROJECT# 30-321 LOCATION Castro Valley DATE 12/20/90

SAMPLING TEAM CG SAMPLING METHOD: BAILER ___ PUMP X

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER X
STEAM CLEAN ___

WELL DATA:

DEPTH TO WATER 11.57 ft

TOTAL DEPTH 30.98 ft

HT. WATER COL 19.41 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 6.99 gal

Volumes to Purge X 3 Vol

Total Volume to Purge 20.97 gal

Begin 1206

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
59.7	1.17	7.26	1207	clear	4
60.2	1.13	7.69	1208	clear	8
60.4	1.19	7.62	1209	" "	12
60.4	1.32	7.61	1210	" "	16
60.7	1.31	7.60	1211	" "	20

Sampled 1246

ACTUAL VOLUME PURGED 21 /gal

COMMENTS: meth X1000 Slow Producer!

MAR - 7 1991

SUPERIOR ANALYTICAL LABORATORIES, INC.

825 ARNOLD, STE. 114 • MARTINEZ, CALIFORNIA 94553 • (415) 229-1512

DOHS #319
DOHS #220

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 82167
CLIENT: Alton Geoscience
CLIENT JOB NO.: 30-321

DATE RECEIVED: 12/26/90
DATE REPORTED: 01/09/91

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
82167- 1	1290011	12/20/90	01/07/91
82167- 2	1290031	12/20/90	01/07/91
82167- 3	1290051	12/20/90	01/07/91
82167- 4	1290061	12/20/90	01/07/91
82167- 5	1290071	12/20/90	01/09/91
82167- 6	1290091	12/20/90	01/07/91
82167- 7	1290101	12/20/90	01/07/91
82167- 8	1290171	12/20/90	01/07/91
82167- 9	1290111	12/20/90	01/07/91
82167-10	1290121	12/20/90	01/07/91

Laboratory Number:	82167 1	82167 2	82167 3	82167 4	82167 5
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	8200	520	170	100000	2300
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	760	1200	ND<0.5	11000	ND<0.5
TOLUENE:	410	5400	ND<0.5	4200	6.5
ETHYL BENZENE:	260	5400	1.0	3400	4.7
XYLENES:	1100	33000	0.7	16000	9.3

Laboratory Number:	82167 6	82167 7	82167 8	82167 9	82167 10
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	51000	ND<50	ND<50	ND<50	810
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	9300	ND<0.5	ND<0.5	ND<0.5	210
TOLUENE:	560	ND<0.5	ND<0.5	ND<0.5	26
ETHYL BENZENE:	2800	ND<0.5	ND<0.5	ND<0.5	8.2
XYLENES:	3300	ND<0.5	ND<0.5	ND<0.5	23

MAR - 7 1991

SUPERIOR ANALYTICAL LABORATORIES, INC.

825 ARNOLD. STE. 114 • MARTINEZ, CALIFORNIA 94553 • (415) 229-1512

DOHS #319
DOHS #220

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 82167
CLIENT: Alton Geoscience
CLIENT JOB NO.: 30-321

DATE RECEIVED: 12/26/90
DATE REPORTED: 01/09/91

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
82167-11	1290131	12/20/90	01/07/91
82167-12	1290141	12/20/90	01/07/91
82167-13	1290151	12/20/90	01/07/91
82167-14	1290161	12/20/90	01/07/91
82167-15	1290004	12/20/90	01/07/91
82167-16	1290002	12/20/90	01/07/91
82167-17	1290093	12/20/90	01/07/91

Laboratory Number:	82167 11	82167 12	82167 13	82167 14	82167 15
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	ND<50	300	ND<50	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	1.6	1.7	1.3	ND<0.5	ND<0.5
TOLUENE:	ND<0.5	0.7	1.1	ND<0.5	0.6
ETHYL BENZENE:	ND<0.5	ND<0.5	0.6	ND<0.5	ND<0.5
XYLENES:	ND<0.5	0.7	1.5	0.7	0.9

Laboratory Number:	82167 16	82167 17
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)	
OIL AND GREASE:	NA	NA
TPH/GASOLINE RANGE:	ND<50	44000
TPH/DIESEL RANGE:	NA	NA
BENZENE:	0.5	12000
TOLUENE:	ND<0.5	580
ETHYL BENZENE:	ND<0.5	2800
XYLENES:	1.2	3500

MAR - 7 1991

SUPERIOR ANALYTICAL LABORATORIES, INC.
825 ARNOLD, STE. 114 • MARTINEZ, CALIFORNIA 94553 • (415) 229-1512
DOHS #319
DOHS #220

CERTIFICATE OF ANALYSIS

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

QA/QC INFORMATION
SET: 82167

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
ug/l = part per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 503E:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA-SW846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/l
Standard Reference: NA

EPA-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/l
Standard Reference: 10/25/90

SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/l
Standard Reference: 12/14/90

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	10/25/90	200 ng	98	2	70-130
Benzene	12/14/90	200 ng	114	1	70-130
Toluene	12/14/90	200 ng	107	0	70-130
Ethyl Benzene	12/14/90	200 ng	101	1	70-130
Total Xylene	12/14/90	200 ng	108	1	70-130

Richard Srna, Ph.D.
Laboratory Director

OUTSTANDING QUALITY AND SERVICE

8Z167 Page 1 of 2

Chain-of-Custody-Record

MAR - 7 1991

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

Chevron Facility Number: 9-5607
Facility Address: 5269 Crow Canyon Rd. Castro Vll.
Consultant Project Number: 30-321
Consultant Name: Alton Geoscience
Address: 1000 Burnett Ave Concord
Project Contact (Name): Stephan Poen
(Phone) (415) 682-1582 (Fax Number) (415) 682-8921

Chevron Contact (Name): John Randall
(Phone): (415) 842-9625
Laboratory Name: Sufferco
Laboratory Release Number: 2542150
Samples Collected by (Name): Larry
Collection Date: 12/20 + 12/21 1990
Signature: Larry Brownewell

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)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Chlorinated HC (8010)	Non Chlorinated HC (8020)	Total Lead (AA)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)
1290011	3	W	G	1620	HCL Pres.	yes	X						
1290031				1047									
1290051				1558									
1290061				1118									
1290071				1530									
1290091				1149									
1290101				1146									
1290171				1146									
1290111				1110									
1290121				1340									
1290131				1434									
1290141				1325									
1290151				1512									
1290161				1296									

Analyses To Be Performed

Please run TPH-G + BTXE in Series!!

Remarks

Please Initial:
Samples Stored in Ice. gpo
Appropriate containers. gpo
Samples preserved. gpo
VOA's without headspace. gpo
Comments:

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Larry Brownewell	Alton	12/26/90	Lisa Mitchell 627	Express 24	12/26/90 1:13
Nick Thermo	Alton	12/26 1:13	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time 1530 12/26/90

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

COC-1.DWG/11 80/NCH

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

Chevron Facility Number: 9-3607
Facility Address: 5269 Crow Canyon Rd
Consultant Project Number: 30-321
Consultant Name: Alton Geoscience
Address: 1000 Burnett Ave.
Project Contact (Name): Stephen [illegible]
(Phone) (415) 682-1572 (Fax Number) (415) 682-3921

Chevron Contact (Name): John Randall
(Phone): (415) 842-9635
Laboratory Name: Superior
Laboratory Release Number: 2542150
Samples Collected by (Name): [illegible]
Collection Date: 12/20/ + 12/21/90
Signature: [illegible]

MAR - 7 1991

Analyses To Be Performed

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)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Chlorinated HC (8010)	Non Chlorinated HC (8020)	Total Lead (AA)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)						Remarks
1290001	1	W	G	1104	HCl Pres	yes	X												Please run TPH-G + BTXE in Series
1290002	1	↓	↓	1105	↓	↓	X												
1290093	2	W	G	1149	HCL Pres	yes	X												

RP
yes
yes
yes
yes

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
[signature]	Alton	12/24/90	[signature] 627	Sequoia [illegible]	12/26/90 1:13
Vicki Thames	Alton	12/26 1:13			
			Received For Laboratory By (Signature): [signature]		12/26/90 1530

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

COC-1.DWG/11 90/HCH