



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

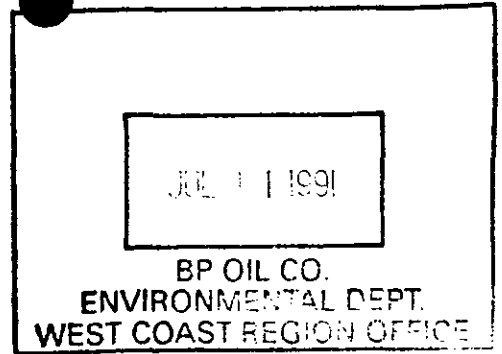
Marketing Department

July 8, 1991

RECEIVED

2:49 pm, May 04, 2009

Alameda County
Environmental Health



Mr. Rafat Shahid
Alameda County Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Re: Chevron S.S. #9-1924
4904 South Front Street, Livermore, CA

Dear Mr. Shahid:

Enclosed is a report dated May 30, 1991 which describes groundwater monitoring by Chevron's consultant, Alton Geoscience (Alton), on April 12, 1991 at the site referenced above.

The groundwater gradient direction and the low levels of dissolved hydrocarbons are consistent with previous data for this site.

If you have any questions or comments, you may contact me at (415) 842-8658.

Sincerely,

Clint B. Rogers
Environmental Engineer

Enclosure

cc: Lester Feldman, San Francisco Bay RWQCB, Oakland, CA
Jeanne Price, 213 Del Mesa Carmel, Carmel, CA 93921
Ed Hoepker, Mobil Oil, 836-B Southamton, Suite 300, Benicia, CA 94510
Peter DeSantis, BP Oil, 2868 Prospect Park Dr., Suite 360, Rancho Cordova, CA 95670

May 30, 1991

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

30-284

Subject: Quarterly Ground Water Monitoring Report
Chevron Station No. 9-1924
4904 Southfront Road
Livermore, 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. 9-1924, located at 4904 Southfront Road, Livermore, California. The site location is shown in Figure 1.

Monitoring and sampling of the ground water monitoring wells was performed on April 12, 1991, 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 to 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 in a 600-gallon, trailer-mounted steel tank (California Department of Health Services-registered), manifested, and hauled to a proper facility for disposal.

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

Mr. Clint Rogers
May 30, 1991
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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.

No liquid-phase hydrocarbons or sheen were observed in any of the ground water samples. 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

Enclosures

pw.91924
vct

Table 1
 Summary of Results of Ground Water Sampling
 Chevron Service Station #9-1924
 4904 Southfront Road, Livermore, California
 Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	TPH-G	TOG	B	T	E	X	1,2-DCA	OTHER	MC	1,1,1-TCA	1,1-DCA	PCE	LAB
C-1	03-28-86	520.39	11.75	508.64	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-1	03-15-88	520.39	13.50	506.89	27000	---	770	87	610	2100	---	---	---	---	---	---	GTCL
C-1	05-10-88	520.39	13.65	506.74	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-1	06-10-88	520.39	14.72	505.67	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-1	07-25-88	520.39	13.50	506.89	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-1	10-13-88	520.39	12.89	507.50	3200	---	220	11	62	130	---	---	---	---	---	---	NA
C-1	01-01-89	520.39	12.89	507.50	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-1	01-12-89	---	---	---	4000	---	820	43	490	260	---	---	---	---	---	---	SAL
C-1	04-10-89	520.39	13.65	506.74	4000	ND(3.0	100	ND(5	70	50	ND(5	---	---	---	---	---	CCAS
C-10	04-10-89	520.39	13.65	506.74	4000	---	100	ND(5	60	50	ND(5	---	---	---	---	---	CCAS
C-1	06-26-89	520.39	13.94	506.45	600	ND(3.0	97	20	60	50	3	---	---	---	---	---	NA
C-10	06-26-89	520.39	13.94	506.45	570	---	86	15	44	35	1.7	---	---	---	---	---	CCAS
C-1	10-13-89	520.39	13.92	506.47	1600	ND(5	64	ND(5	51	48	ND(5	5	---	---	---	---	SAL
C-1	01-03-90	520.39	13.80	506.59	1100	---	36	0.68	30	30	1	---	---	---	---	---	SAL
C-1	05-08-90	520.39	13.91	506.48	1300	---	37	9.2	40	32	1.2	---	ND(0.5	---	ND(0.5	---	PACE
C-1	09-29-90	520.39	13.93	506.46	350	---	19	1.2	32	31	ND(0.5	ND!	0.7*	1.4	ND(0.5	---	PACE
C-1	01-03-91	520.39	13.85	506.54	400	---	12	ND(0.5	17	14	ND(0.5	ND!	ND(0.5	ND(0.5	ND(0.5	ND(0.5	SAL
C-1	04/12/91	520.39	13.51	506.88	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-2	03-28-86	520.76	11.98	508.78	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-2	03-15-88	520.76	13.77	506.99	22000	---	3900	1900	1200	1200	---	---	---	---	---	---	GTCL
C-2	05-10-88	520.76	14.03	506.73	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-2	06-10-88	520.76	15.12	505.64	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-2	07-25-88	520.76	13.86	506.90	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-2	10-13-88	520.76	14.11	506.65	ND(1000.0	---	ND(0.5	ND(0.5	ND(0.5	ND(0.5	---	---	---	---	---	---	NA
C-2	01-01-89	520.76	12.83	507.93	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-2	01-12-89	---	---	---	1000	---	25	3	83	59	---	---	---	---	---	---	SAL
C-2	04-10-89	520.76	14.04	506.72	600	ND(3.0	2.5	ND(0.2	15	12	ND(0.2	---	---	---	---	---	CCAS
C-20	04-10-89	520.76	14.04	506.72	ND(10000	---	ND(10	ND(10	11	11	ND(10	---	---	---	---	---	CCAS
C-2	06-26-89	520.76	14.34	506.42	640	ND(3.0	5.3	8	18	14	ND(0.5	---	---	---	---	---	CCAS
C-20	06-26-89	520.76	14.34	506.42	750	---	3.7	0.6	13	8.2	2	---	---	---	---	---	CCAS
C-2	10-13-89	520.76	13.92	506.42	630	---	ND(5	ND(5	17	10	ND(5	---	---	---	---	---	SAL
C-2	01-03-90	520.76	14.11	506.65	880	---	3	ND(0.5	19	17	1	---	---	---	---	---	SAL
C-2	05-08-90	520.76	14.28	506.48	340	---	1.3	2.7	8.4	11	1.1	---	ND(0.5	---	ND(0.5	---	PACE
C-2	09-29-90	520.76	14.25	506.51	74	---	ND(0.5	ND(0.5	4.6	1.0	ND(0.5	ND!	1.7*	0.5	ND(0.5	---	PACE
C-2	01-03-91	520.76	14.15	506.61	2000	---	270	ND(3	79	93	ND(0.5	ND!	ND(0.5	ND(0.5	ND(0.5	ND(0.5	SAL
C-2	04/12/91	520.76	13.86	506.90	---	---	---	---	---	---	---	---	---	---	---	---	NA

Table 1
 Summary of Results of Ground Water Sampling
 Chevron Service Station #9-1924
 4904 Southfront Road, Livermore, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/MONITORING	CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	TPH-G	TOG	B	I	E	X	1,2-DEA	OTHER	MC	1,1,1-TCA	1,1-DCA	PCE	LAB
C-3	03-20-86	521.31	12.24	509.07	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-3	03-15-88	521.31	14.21	507.10	2100	---	86	8	30	36	---	---	---	---	---	---	NA
C-3	05-10-88	521.31	14.43	506.88	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-3	06-10-88	521.31	15.53	505.78	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-3	07-25-88	521.31	14.22	507.09	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-3	10-13-88	521.31	14.10	507.21	ND(1000.0)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	---	---	---	---	---	BC
C-3	01-01-89	521.31	12.70	508.61	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-3	04-10-89	521.31	14.36	506.95	200	ND(3.0)	2.1	ND(0.2)	4.4	2.6	1.4	---	---	---	---	---	CCAS
C-3	06-26-89	521.31	14.74	506.57	260	ND(3.0)	1.1	0.7	4.9	1.6	1.5	---	---	---	---	---	CCAS
C-3	10-13-89	521.31	14.70	506.61	ND(500)	---	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	---	---	---	---	---	SAL
C-3	01-03-90	521.31	14.42	506.89	ND(500)	---	ND(0.5)	ND(0.5)	0.9	1.4	0.7	---	---	---	---	---	SAL
C-3	05-08-90	521.31	14.65	506.66	ND(50)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	0.7	---	ND(0.5)	---	ND(0.5)	---	PAGE
C-3	09-27-90	521.31	14.67	506.64	71	---	ND(0.5)	1.0	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	PAGE
C-3	01-03-91	521.31	14.58	506.73	57	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	SAL
C-3	04/12/91	521.31	14.23	507.08	98	---	ND(0.5)	ND(0.5)	1.6	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	SAL
C-5	03-20-86	520.82	12.00	508.82	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-5	03-15-88	520.82	13.75	507.07	1600	---	82	7	77	95	---	---	---	---	---	---	GTEL
C-5	05-10-88	520.82	13.92	506.90	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-5	07-10-88	520.82	13.72	507.10	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-5	07-25-88	520.82	13.72	507.10	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-5	10-13-88	520.82	13.84	506.98	2500	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	---	---	---	---	---	NA
C-5	01-01-89	520.82	13.41	507.41	---	---	---	---	---	---	---	---	---	---	---	---	BC
C-5	01-12-89	---	---	---	ND(1000.0)	---	---	---	---	---	---	---	---	---	---	---	---
C-5	04-10-89	520.82	13.88	506.94	180	ND(3.0)	2.6	ND(0.2)	6.2	5.5	1.4	---	---	---	---	---	CCAS
C-5	06-26-89	520.82	14.14	506.68	420	ND(3.0)	7.6	0.8	40	56	1.5	---	---	---	---	---	CCAS
C-5	10-13-89	520.82	14.15	506.68	620	ND(5)	ND(5)	ND(5)	10	ND(5)	ND(5)	---	---	---	---	---	SAL
C-5	01-03-90	520.82	14.10	506.72	ND(500)	---	0.7	ND(0.5)	8	6	ND(0.5)	---	---	---	---	---	SAL
C-5	05-08-90	520.82	14.00	506.82	140	---	0.6	0.8	11	7.2	0.8	---	ND(0.5)	---	ND(0.5)	---	PAGE
C-5	09-27-90	520.82	14.00	506.82	360	---	ND(0.5)	3.2	5.2	6.4	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	PAGE
C-5	01-03-91	520.82	14.00	506.82	90	---	ND(0.5)	ND(0.5)	ND(0.5)	3	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	SAL
C-5	04/12/91	520.82	13.71	507.11	270	---	12	ND(0.5)	19	7	0.5	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 #9-1924
 4904 Southfront Road, Livermore, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	TPH-G	TOG	B	T	E	X	1,2-DCA	OTHER	MC	1,1,1-TEA	1,1-DCA	PCE	LAB
C-6	03-26-86	519.62	11.12	508.50	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-6	03-15-88	519.62	12.93	506.69	46000	---	870	4600	1500	8200	---	---	---	---	---	---	GTCL
C-6	05-10-88	519.62	13.03	506.59	86000	---	1400	10000	3000	19000	---	---	---	---	---	---	GTCL
C-6	06-10-88	519.62	14.11***	505.51	---	---	---	---	---	---	---	---	---	---	---	---	---
C-6	07-25-88	519.62	12.95	506.67	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-6	10-13-88	519.62	13.14	506.48	5300	---	300	600	260	1600	---	---	---	---	---	---	BC
C-6	01-01-89	519.62	12.14	507.48	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-6	01-12-89	---	---	---	5000	---	260	110	270	720	---	---	---	---	---	---	SAL
C-6	04-12-89	519.62	12.98	506.64	5000	4.0	90	190	190	680	ND(20	---	---	---	---	---	CCAS
C-6	06-26-89	519.62	13.39	506.23	3600	ND(3.0	77	250	140	610	ND(5.0	---	---	---	---	---	CCAS
C-6	10-13-89	519.62	13.40	506.22	3500	ND(5	32	81	100	530	ND(50	---	---	---	---	---	SAL
C-6	01-03-90	519.62	13.18	506.44	3200	---	20	97	65	410	1	---	---	---	---	---	SAL
C-6	05-08-90	519.62	13.39****	506.23	1800	---	17	140	ND(2.5	400	1.6	---	ND(0.5	---	ND(0.5	---	PACE
C-6	09-29-90	519.62	13.32	506.30	8000	---	58	210	260	2100	1.0	ND!	ND(0.5	2.4	1.6	---	PACE
C-6	01-03-91	519.62	13.19	506.43	2300	---	4	79	59	380	0.5	ND!	ND(0.5	ND(0.5	ND(0.5	ND(0.5	SAL
C-6	04/12/91	519.62	12.91	506.71	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-7	03-28-86	520.30	11.67	508.63	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-7	03-15-88	520.30	13.48	506.82	8000	---	98	690	120	120	---	---	---	---	---	---	GTCL
C-7	05-10-88	520.30	13.60	506.70	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-7	06-10-88	520.30	14.68	505.62	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-7	07-25-88	520.30	13.43	506.87	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-7	10-13-88	520.30	13.61	506.69	16000	---	4400	220	1000	3000	---	---	---	---	---	---	BC
C-7	01-01-89	520.30	12.66	507.64	---	---	---	---	---	---	---	---	---	---	---	---	---
C-7	01-12-89	---	---	---	8000	---	950	47	670	640	---	---	---	---	---	---	GTCL
C-7	04-12-89	520.30	13.60	506.70	6000	ND(3.0	1100	30	760	370	ND(20	---	---	---	---	---	CCAS
C-7	06-26-89	520.30	13.88	506.42	6000	ND(3.0	1300	50	600	340	ND(10	---	---	---	---	---	CCAS
C-7	10-13-89	520.30	13.81	506.49	3900	---	1300	ND(50	160	150	ND(50	---	---	---	---	---	SAL
C-7	01-03-90	520.30	13.71	506.59	5600	---	1200	13	180	200	1	---	---	---	---	---	SAL
C-7	05-08-90	520.30	13.85	506.45	3500	---	1100	15	110	140	1.7	---	ND(0.5	---	ND(0.5	---	PACE
C-7	09-29-90	520.30	13.80	506.50	2400	---	580	ND(10	46	68	0.7	ND!	ND(0.5	ND(0.5	ND(0.5	ND(0.5	SAL
C-7	01-03-91	520.30	13.71	506.59	2500	---	300	2	110	120	0.7	ND!	ND(0.5	ND(0.5	ND(0.5	ND(0.5	SAL
C-7	04/12/91	520.30	13.46	506.84	2300	---	190	1	81	87	0.6	ND!	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 #9-1924
 4904 Southfront Road, Livermore, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	TPH-G	TOG	B	I	E	X	1,1,2-DCA	OTHER	MC	1,1,1-TCA	1,1-DCA	PEE	LAB
C-8	03-28-86	519.74	11.78	507.96	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-8	03-15-88	519.74	13.63	506.11	7500	---	360	25	10	ND(0.5)	---	---	---	---	---	---	NA
C-8	05-10-88	519.74	13.74	506.00	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-8	06-10-88	519.74	14.89	504.85	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-8	07-25-88	519.74	12.65	506.09	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-8	10-13-88	519.74	13.78	505.96	ND(1000)	---	6	5.3	ND(0.5)	ND(0.5)	---	---	---	---	---	---	BC
C-8	01-01-89	519.74	12.68	507.06	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-8	01-12-89	---	---	---	ND(1000)	---	37	4	1	5	---	---	---	---	---	---	SAL
C-8	04-12-89	519.74	13.77	505.97	3000	12.0	13	ND(5)	ND(5)	ND(5)	5	---	---	---	---	---	CCAS
C-8	06-26-89	519.74	14.03	505.71	780	ND(3.0)	14	6	ND(2.0)	6	4	---	---	---	---	---	CCAS
C-8	10-13-89	519.74	14.06	505.68	ND(500)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	---	---	---	---	---	SAL
C-8	01-03-90	519.74	13.74	506.00	910	---	ND(0.5)	ND(0.5)	1	1	1.5	---	---	---	---	---	SAL
C-8	05-07-90	519.74	14.10	505.44	620	---	3.9	6	0.5	3.4	1.9	---	ND(0.5)	---	ND(0.5)	---	PAGE
C-8	09-29-90	519.74	13.97	505.77	77	---	ND(0.5)	1.4	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	0.6*	ND(0.5)	---	PAGE
C-8	01-03-91	519.74	13.81	505.93	67	---	2	2	ND(0.5)	2	ND(0.5)	ND(0.5)	ND(0.5)	0.7	ND(0.5)	ND(0.5)	SAL
C-8	04/12/91	519.74	13.60	506.14	180	---	4	ND(0.5)	ND(0.5)	ND(0.5)	0.6	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	SAL
C-9	03-28-86	519.52	11.24	508.28	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-9	03-15-88	519.52	12.92	506.60	29000	---	540	560	580	3900	---	---	---	---	---	---	GTCL
C-9	05-10-88	519.52	13.12	506.40	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-9	06-10-88	519.52	14.16	505.36	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-9	07-25-88	519.52	13.00	506.52	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-9	10-13-88	519.52	13.13	506.39	2200	---	57	8	20	150	---	---	---	---	---	---	NA
C-9	01-01-89	519.52	12.19	507.33	---	---	---	---	---	---	---	---	---	---	---	---	---
C-9	01-12-89	---	---	---	2000	---	39	12	51	46	---	---	---	---	---	---	SAL
C-9	04-12-89	519.52	13.11	506.41	6000	ND(3.0)	16	20	55	240	2.1	---	---	---	---	---	CCAS
C-9	04-11-89	519.52	13.11	506.41	6000	---	14	25	45	290	ND(5.0)	---	---	---	---	---	CCAS
C-9	06-26-89	519.52	13.40	506.12	3900	ND(3.0)	37	63	140	690	ND(5.0)	---	---	---	---	---	CCAS
C-9	10-13-89	519.52	13.46	506.06	1300	ND(5)	7	ND(5)	26	50	ND(5)	---	---	---	---	---	SAL
C-9	01-03-90	519.52	13.30	506.32	1500	---	ND(0.5)	0.7	202	37	1.5	---	---	---	---	---	SAL
C-9	05-07-90	519.52	13.48	506.04	7100	---	21	33	89	500	1.9	---	ND(0.5)	---	ND(0.5)	---	PAGE
C-9	09-29-90	519.52	13.39	506.13	1000	---	21	3.9	31	110	1.0	ND(0.5)	---	1.8	1.0	---	PAGE
C-9	01-03-91	519.72	13.28	506.44	3200	---	ND(3)	ND(3)	32	140	0.8	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	SAL
C-9	04/12/91	519.72	13.00	506.72	---	---	---	---	---	---	---	---	---	---	---	---	NA

Table 1
 Summary of Results of Ground Water Sampling
 Chevron Service Station #9-1924
 4904 Southfront Road, Livermore, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	TPH-G	TOG	B	T	E	X	1,2-DCA	OTHER	MC	1,1,1-TCA	1,1-DCA	PCE	LAB
C-10	03-28-86	520.41	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
C-10	03-15-88	520.41	14.86	505.55	90	---	7	ND(0.5)	ND(0.5)	ND(0.5)	---	---	---	---	---	---	NA
C-10	05-10-88	520.71	14.90	505.51	---	---	---	---	---	---	---	---	---	---	---	---	GTEL
C-10	06-10-88	520.41	15.94	504.47	---	---	---	---	---	---	---	---	---	---	---	---	---
C-10	07-25-88	520.41	14.85	505.56	---	---	---	---	---	---	---	---	---	---	---	---	---
C-10	10-13-88	520.41	14.90	505.51	ND(1000)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	---	---	---	---	---	NA
C-10	01-01-89	520.41	14.83	505.58	---	---	---	---	---	---	---	---	---	---	---	---	BC
C-10	01-12-89	---	---	---	ND(1000)	---	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)	---	---	---	---	---	---	NA
C-10	04-11-89	520.41	14.90	505.51	ND(300)	ND(3.0)	4.8	ND(0.5)	ND(0.5)	ND(1)	6.1	---	---	---	---	---	SAL
C-10	06-26-89	520.41	15.12	505.29	ND(100)	4.0	0.7	ND(0.5)	ND(0.5)	1.5	ND(0.5)	---	---	---	---	---	CCAS
C-10	10-13-89	520.41	15.11	505.30	ND(500)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	---	---	---	---	---	CCAS
C-10	01-03-90	520.41	15.01	505.40	ND(500)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	3	---	---	---	---	---	SAL
C-10	05-07-90	520.41	15.53	504.88	ND(50)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	ND(0.5)	---	---	---	SAL
C-10	09-27-90	520.41	15.20	505.21	ND(50)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	ND(0.5)	ND(0.5)	---	---	PACE
C-10	01-03-91	520.41	15.06	505.35	ND(50)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	1.2*	ND(0.5)	ND(0.5)	---	PACE
C-10	04/12/91	520.41	14.86	505.55	110	---	16	ND(0.5)	ND(0.5)	2.9	2.7	1	ND(1)	ND(0.5)	ND(0.5)	ND(0.5)	SAL
C-11	03-28-86	520.04	13.82	506.22	---	---	---	---	---	---	---	---	---	---	---	---	---
C-11	03-15-88	520.04	14.49	505.55	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-11	05-10-88	520.04	14.31	505.73	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-11	06-10-88	520.04	15.47	504.57	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-11	07-25-88	520.04	13.60	506.44	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-11	10-14-88	520.04	14.53	505.51	1.9	---	240	33	4.7	67	---	---	---	---	---	---	NA
C-11	01-01-89	520.04	14.10	505.94	---	---	---	---	---	---	---	---	---	---	---	---	BC
C-11	01-12-89	---	---	---	ND(1000)	---	ND(0.3)	0.8	ND(0.3)	ND(0.3)	---	---	---	---	---	---	---
C-11	04-12-89	520.04	14.36	505.68	ND(50)	ND(3.0)	4.3	ND(1)	ND(1)	ND(1)	ND(1)	---	---	---	---	---	CCAS
C-11	06-26-89	520.04	14.58	505.46	ND(50)	4.0	2	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.2)	---	---	---	---	---	CCAS
C-11	10-13-89	520.04	14.71	505.33	ND(500)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	---	---	---	---	---	CCAS
C-11	01-03-90	520.04	14.61	505.43	ND(500)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	0.7	---	---	---	---	---	SAL
C-11	05-08-90	520.04	15.53	504.51	110	---	12	11	0.9	22	ND(0.5)	---	ND(0.5)	---	---	---	SAL
C-11	09-28-90	520.04	15.51	504.53	ND(50)	---	2.0	1.4	ND(0.5)	3.3	ND(0.5)	ND(1)	1.2*	ND(0.5)	ND(0.5)	---	PACE
C-11	01-03-91	520.04	14.63	505.41	ND(50)	---	2	ND(0.5)	ND(0.5)	2	ND(0.5)	ND(1)	ND(0.5)	ND(0.5)	ND(0.5)	1	PACE
C-11	04/12/91	520.04	14.30	505.74	---	---	---	---	---	---	---	---	---	---	---	---	NA

Table 1
 Summary of Results of Ground Water Sampling
 Chevron Service Station #9-1924
 4904 Southfront Road, Livermore, California
 Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	TPH-G	TOG	B	T	E	X	1,2-DECA	OTHER	MC	1,1,1-TCA	1,1-DECA	PCE	LAB
C-12	03-20-86	519.82	13.61	506.21	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-12	03-15-88	519.82	14.55	505.27	ND(1.0	---	ND(0.5	ND(0.5	ND(0.5	ND(0.5	---	---	---	---	---	---	NA
C-12	05-10-88	519.82	14.57	505.25	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-12	06-10-88	519.82	15.63	504.19	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-12	07-25-88	519.82	14.31	505.31	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-12	10-13-88	519.82	14.60	505.22	ND(1000	---	ND(0.5	ND(0.5	ND(0.5	ND(0.5	---	---	---	---	---	---	BC
C-12	01-12-89	519.82	14.62	505.20	ND(1000	---	ND(0.3	ND(0.3	ND(0.3	ND(0.3	---	---	---	---	---	---	SAL
C-12	04-11-89	519.82	14.61	505.21	ND(100	ND(3.0	ND(0.2	ND(0.2	ND(0.2	ND(0.4	ND(0.2	---	---	---	---	---	CCAS
C-12	06-26-89	519.82	14.75	505.07	ND(50	ND(3.0	ND(0.2	ND(0.2	ND(2.0	ND(2.0	ND(0.2	---	---	---	---	---	CCAS
C-12	10-13-89	519.82	14.77	505.05	ND(500	ND(5	ND(5	ND(5	ND(5	ND(5	ND(5	---	---	---	---	---	SAL
C-12	01-03-90	519.82	14.85	504.97	ND(500	---	ND(0.5	ND(0.5	ND(0.5	0.6	ND(0.5	---	---	---	---	---	SAL
C-12	05-07-90	519.82	14.75	505.07	ND(50	---	ND(0.5	ND(0.5	ND(0.5	ND(0.5	ND(0.5	---	ND(0.5	---	---	---	PACE
C-12	09-27-90	519.82	14.61	505.21	ND(50	---	ND(0.5	ND(0.5	ND(0.5	ND(0.5	ND(0.5	ND(	ND(0.5	ND(0.5	ND(0.5	---	PACE
C-12	01-03-91	519.82	14.70	505.12	ND(50	---	ND(0.5	ND(0.5	ND(0.5	ND(0.5	ND(0.5	ND(	ND(0.5	ND(0.5	ND(0.5	ND(0.5	SAL
C-12	04/12/91	519.82	14.52	505.30	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-13	03-20-86	522.24	12.95	509.29	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-13	03-15-88	522.24	14.82	507.42	250	---	2	ND(0.5	9	3	---	---	---	---	---	---	GTEL
C-13	05-10-88	522.24	15.03	507.21	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-13	06-10-88	522.24	16.10	506.14	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-13	07-25-88	522.24	14.73	507.51	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-13	10-13-88	522.24	14.91	507.33	ND(1000.0	---	1.9	ND(0.5	ND(0.5	ND(0.5	---	---	---	---	---	---	BC
C-13	01-01-89	522.24	14.10	508.14	---	---	---	---	---	---	---	---	---	---	---	---	BC
C-13	01-12-89	---	---	---	ND(1000	---	ND(0.3	0.6	4	ND(0.3	---	---	---	---	---	---	NA
C-13	04-10-89	522.24	14.99	507.25	ND(100	ND(3.0	ND(0.2	ND(0.2	8	ND(0.4	ND(0.2	---	---	---	---	---	CCAS
C-13	06-26-89	522.24	15.16	507.08	ND(50	ND(3.0	0.3	ND(2.0	ND(2.0	ND(2.0	ND(0.2	---	---	---	---	---	CCAS
C-13	10-13-89	522.24	15.23	507.01	ND(500	ND(5	ND(5	ND(5	ND(5	ND(5	ND(5	---	---	---	---	---	SAL
C-13	01-03-90	522.24	15.15	507.09	ND(500	---	ND(0.5	ND(0.5	0.5	0.6	ND(0.5	---	---	---	---	---	SAL
C-13	05-08-90	522.24	15.02	507.22	ND(50	---	ND(0.5	ND(0.5	ND(0.5	ND(0.5	ND(0.5	---	ND(0.5	---	---	---	PACE
C-13	09-27-90	522.24	15.11	507.13	ND(50	---	ND(0.5	0.6	ND(0.5	ND(0.5	ND(0.5	---	ND(0.5	---	---	---	PACE
C-13	01-03-91	522.24	15.08	507.16	ND(50	---	ND(0.5	ND(0.5	ND(0.5	0.6	ND(0.5	ND(	ND(0.5	ND(0.5	ND(0.5	ND(0.5	SAL
C-13	04/12/91	522.24	14.77	507.47	---	---	---	---	---	---	---	---	---	---	---	---	NA

Table 1
 Summary of Results of Ground Water Sampling
 Chevron Service Station #9-1924
 4904 Southfront Road, Livermore, California
 Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	TPH-G	TQG	B	T	E	X	1,2-DCA	OTHER	MC	1,1,1-TCA	1,1-DCA	PCE	LAB
C-14	03-28-86	520.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-14	03-15-88	520.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-14	05-10-88	520.00	13.39	506.69	120000	---	13000	29000	2700	18	---	---	---	---	---	---	NA
C-14	06-10-88	520.00	14.65	505.43	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-14	07-25-88	520.00	13.47	506.61	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-14	10-13-88	520.00	13.58	506.50	ND	---	ND	ND	ND	ND	---	---	---	---	---	---	NA
C-14	01-01-89	520.00	13.00	507.08	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-14	01-12-89	---	---	---	NS	---	ND	ND	ND	ND	---	---	---	---	---	---	NA
C-14	04-12-89	520.00	13.47	506.61	NS	ND	ND	ND	ND	ND	ND	---	---	---	---	---	NA
C-14	06-26-89	520.00	13.80	506.28	140000	---	14000	25000	3400	26000	30	---	---	---	---	---	NA
C-14G	10-13-89	520.00	13.62	506.46	86000	---	12000	16000	1600	13000	---	---	---	---	---	---	SAL
C-14	01-03-90	520.00	13.91	506.17	120000	---	9500	16000	1800	13000	25	3	---	---	---	---	SAL
C-14G	01-04-90	520.00	13.91	506.17	76000	---	3900	8100	1200	7700	18	1	---	---	---	---	SAL
C-14	05-08-90	520.00	13.89	506.19	62000	---	7500	17000	1400	14000	13	---	ND(0.5)	---	ND(0.5)	---	PAGE
C-14**	09-27-90	520.00	13.78	506.30	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-14**	01-03-91	520.00	13.72	506.36	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-14	04/12/91	520.00	12.97	507.11	60000	---	750	3800	720	9200	ND(0.5)	ND!	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	SAL
C-15	03-28-86	522.41	13.14	509.27	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-15	03-15-88	522.41	15.13	507.28	ND(1.0)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	---	---	---	---	---	GTEL
C-15	05-10-88	522.41	15.40	507.01	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-15	06-10-88	522.41	16.49	505.92	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-15	07-25-88	522.41	15.17	507.24	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-15	10-13-88	522.41	15.33	507.08	ND(1000)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	---	---	---	---	---	BC
C-15	01-01-89	522.41	13.70	508.71	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-15	01-12-89	---	---	---	ND(1000)	---	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)	---	---	---	---	---	---	SAL
C-15	04-12-89	522.41	15.34	507.07	ND(100)	ND(3.0)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.4)	ND(0.2)	---	---	---	---	---	CCAS
C-15	06-26-89	522.41	15.72	506.69	ND(50)	ND(3.0)	ND(0.2)	ND(0.2)	ND(2.0)	ND(2.0)	ND(0.2)	---	---	---	---	---	CCAS
C-15	10-13-89	522.41	15.96	506.45	ND(500)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	---	---	---	---	---	SAL
C-15	01-03-90	522.41	15.42	506.99	ND(500)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	---	---	---	---	SAL
C-15	05-08-90	522.41	15.62	506.79	ND(50)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	ND(0.5)	---	ND(0.5)	---	PAGE
C-15	09-27-90	522.41	15.59	506.82	ND(50)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND!	2.9*	ND(0.5)	ND(0.5)	---	PAGE
C-15	01-03-91	522.41	15.50	506.91	ND(50)	---	ND(0.5)	ND(0.5)	ND(0.5)	0.6	ND(0.5)	ND!	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	SAL
C-15	04/12/91	522.41	15.21	507.20	---	---	---	---	---	---	---	---	---	---	---	---	NA

Table 1
 Summary of Results of Ground Water Sampling
 Chevron Service Station #9-1924
 4904 Southfront Road, Livermore, California
 Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	TPH-G	TG6	B	T	E	X	1,2-DCA	OTHER	MC	1,1,1-TEA	1,1-DCA	PCE	LAB
C-16	03-28-86	519.60	---	---	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-16	03-15-88	519.60	---	---	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-16	05-10-88	519.60	13.70	505.90	4500	---	1000	73	140	180	---	---	---	---	---	---	NA
C-16	06-10-88	519.60	14.80	504.80	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-16	07-25-88	519.60	13.69	505.99	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-16	10-13-88	519.60	13.80	505.88	1800	---	16	5.5	ND(1.0)	16	---	---	---	---	---	---	BC
C-16	01-01-89	519.60	13.45	506.23	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-16	01-12-89	---	---	---	1000	---	360	11	78	51	---	---	---	---	---	---	SAL
C-16	04-11-89	519.60	13.78	505.90	15800	ND(3.0)	130	4	21	19	8	---	---	---	---	---	CCAS
C-16	06-26-89	519.60	14.02	505.66	1300	ND(3.0)	170	8	37	43	ND(1.0)	---	---	---	---	---	CCAS
C-16	10-13-89	519.60	14.01	505.67	1000	ND(5)	20	ND(5)	7	ND(5)	ND(5)	---	---	---	---	---	SAL
C-16	01-03-90	519.60	13.97	505.71	1300	---	150	3	41	24	5	---	---	---	---	---	SAL
C-16	05-07-90	519.60	14.45	505.23	480	---	49	4.4	29	13	4.5	---	ND(0.5)	---	ND(0.5)	---	PACE
C-16	09-29-90	519.60	14.32	505.36	360	---	18	2.1	11	8.0	1.8	ND!	ND(0.5)	ND(0.5)	ND(0.5)	---	PACE
C-16	01-03-91	519.60	13.96	505.72	230	---	12	ND(0.5)	6	6	2	ND!	0.8	ND(0.5)	ND(0.5)	ND(0.5)	SAL
C-16	04/12/91	519.60	13.74	505.94	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-17	03-28-86	520.82	13.40	507.34	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-17	03-15-88	520.82	14.76	506.06	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-17	05-10-88	520.82	14.77	506.05	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-17	06-10-88	520.82	15.84	504.98	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-17	07-25-88	520.82	14.63	506.19	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-17	10-13-88	520.82	14.83	505.99	270000	---	18	900	760	5500	---	---	---	---	---	---	NA
C-17	01-01-89	520.82	14.78	506.04	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-17	01-12-89	---	---	---	190000	---	ND(15)	490	2100	6700	---	---	---	---	---	---	SAL
C-17	04-11-89	520.82	14.83	506.06	27000	---	6.0	30	150	320	1000	ND(10)	---	---	---	---	CCAS
C-17	06-26-89	520.82	15.03	505.79	20000	ND(3.0)	50	390	660	2000	ND(10)	---	---	---	---	---	CCAS
C-17D	06-26-89	520.82	15.03	505.79	27000	---	40	420	740	2200	ND(10)	---	---	---	---	---	CCAS
C-17	10-13-89	520.82	15.02	505.80	17000	ND(5)	ND(25)	48	230	480	ND(25)	---	---	---	---	---	SAL
C-17	01-03-90	520.82	15.10	505.72	14000	---	ND(0.3)	29	120	210	ND(0.5)	---	---	---	---	---	SAL
C-17	05-08-90	520.82	15.12	505.70	9500	---	25	130	210	470	ND(0.5)	---	ND(0.5)	---	ND(0.5)	---	PACE
C-17	09-29-90	520.82	14.99	505.83	ND(50)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND!	ND(0.5)	1.9	ND(0.5)	---	PACE
C-17D	09-29-90	520.82	14.99	505.83	ND(50)	---	ND(0.5)	3.4	ND(0.5)	ND(0.5)	ND(0.5)	ND!	1.8*	1.9	ND(0.5)	---	PACE
C-17	01-03-91	520.82	14.92	505.90	3700	---	ND(0.5)	28	56	140	ND(0.5)	ND!	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	SAL
C-17D	01-03-91	520.82	14.92	505.90	8600	---	ND(3)	10	59	150	ND(0.5)	ND!	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	SAL
C-17	04/12/91	520.82	14.71	506.11	8600	---	ND(5) *****	5	47	120	ND(0.5)	ND!	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	SAL
C-17D	04/12/91	520.82	14.71	506.11	4400	---	ND(0.5)	11	48	120	ND(0.5)	ND!	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 #9-1924
 4904 Southfront Road, Livermore, California
 Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/MONITORING	CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	TPH-G	TOG	B	T	E	X	1,2-DCA	OTHER	MC	1,1,1-TCA	1,1-DCA	PCE	LAB
C-18	03-28-86	518.96	---	---	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-18	03-15-88	518.96	---	---	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-18	05-10-88	518.96	---	---	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-18	06-10-88	518.96	14.89	504.07	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-18	07-25-88	518.96	13.79	505.17	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-18	10-13-88	518.96	13.86	505.10	ND(1000	---	ND(0.5	ND(0.5	ND(0.5	ND(0.5	---	---	---	---	---	---	BC
C-18	01-01-89	518.96	13.94	505.02	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-18	01-12-89	---	---	---	ND(1000	---	ND(0.3	ND(0.3	ND(0.3	ND(0.3	---	---	---	---	---	---	SAL
C-18	04-11-89	518.96	14.86	504.10	ND(200	ND(3.0	ND(0.2	ND(0.2	ND(0.2	ND(0.4	3.6	---	---	---	---	---	CCAS
C-18	06-26-89	518.96	14.02	504.94	ND(50	ND(3.0	ND(0.2	ND(0.2	ND(2.0	ND(2.0	3.1	---	---	---	---	---	CCAS
C-18	10-13-89	518.96	15.06	503.90	ND(500	ND(5	ND(5	ND(5	ND(5	ND(5	ND(5	---	---	---	---	---	SAL
C-18	01-03-90	518.96	14.07	504.89	ND(500	---	ND(0.5	ND(0.5	ND(0.5	ND(0.5	1	---	---	---	---	---	SAL
C-18	05-07-90	518.96	14.01	504.95	ND(50	---	ND(0.5	ND(0.5	ND(0.5	ND(0.5	ND(0.5	---	ND(0.5	---	ND(0.5	---	PACE
C-18	09-27-90	518.96	13.91	505.05	ND(50	---	ND(0.5	ND(0.5	ND(0.5	ND(0.5	ND(0.5	ND!	0.6*	ND(0.5	ND(0.5	---	PACE
C-18	01-03-91	518.96	13.98	504.98	ND(50	---	ND(0.5	ND(0.5	ND(0.5	ND(0.5	ND(0.5	ND!	ND(0.5	ND(0.5	ND(0.5	ND(0.5	SAL
C-18	04/12/91	518.96	13.83	505.13	ND(50	---	ND(0.5	ND(0.5	ND(0.5	ND(0.5	ND(0.5	ND!	ND(0.5	ND(0.5	ND(0.5	ND(0.5	SAL
C-19	03-28-86	520.99	---	---	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-19	03-15-88	520.99	---	---	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-19	05-10-88	520.99	15.23	505.76	18	---	1400	360	350	1300	---	---	---	---	---	---	GTEL
C-19	06-10-88	520.99	16.58	504.41	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-19	07-25-88	520.99	15.19	505.80	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-19	10-13-88	520.99	15.27	505.72	ND(1000	---	8.3	4.7	4.4	ND(0.5	---	---	---	---	---	---	BC
C-19	01-01-89	520.99	15.20	505.79	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-19	01-12-89	---	---	---	ND(1000	---	5	4	ND(0.3	ND(0.3	---	---	---	---	---	---	NA
C-19	04-11-89	520.99	15.24	505.75	ND(1000	ND(3.0	1.8	ND(2	ND(2	ND(4	13	---	---	---	---	---	CCAS
C-19	04-11-89	520.99	15.24	505.76	500	---	1.2	ND(0.2	0.6	0.6	14	---	---	---	---	---	CCAS
C-19	06-26-89	520.99	15.44	505.55	500	ND(3.0	2.5	ND(5.0	ND(5.0	ND(5.0	26	---	---	---	---	---	CCAS
C-19	10-13-89	520.99	15.47	505.52	540	ND(5	ND(5	ND(5	ND(5	ND(5	13	13	---	---	---	---	SAL
C-19	01-03-90	520.99	15.45	505.54	ND(500	---	1.2	0.7	1.3	0.9	11	---	---	---	---	---	SAL
C-19	05-07-90	520.99	15.68	505.31	ND(50	---	ND(0.5	ND(0.5	ND(0.5	ND(0.5	4.6	---	ND(0.5	---	ND(0.5	---	PACE
C-19	09-28-90	520.99	15.52	505.47	ND(50	---	ND(0.5	ND(0.5	ND(0.5	ND(0.5	ND(0.5	ND!	1.2*	ND(0.5	ND(0.5	---	PACE
C-19	01-03-91	520.99	15.56	505.43	66	---	ND(0.5	ND(0.5	ND(0.5	ND(0.5	1	ND!	ND(0.5	ND(0.5	ND(0.5	0.9	SAL
C-19	04/12/91	520.99	15.20	505.79	---	---	---	---	---	---	---	---	---	---	---	---	NA

Table 1
 Summary of Results of Ground Water Sampling
 Chevron Service Station #9-1924
 4904 Southfront Road, Livermore, California
 Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/MONITORING	CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	TPH-G	TOG	B	T	E	X	1,2-DCEa	OTHER	MC	1,1,1-TEA	1,1-DCA	PCE	LAB
TB	01-12-89	NA	NA	NA	---	---	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)	---	---	---	---	---	---	SAL
TB	04-12-89	NA	NA	NA	ND(50)	---	ND(0.5)	ND(0.5)	ND(1.0)	ND(1.0)	ND(1.0)	---	---	---	---	---	SAL
TB	06-26-89	NA	NA	NA	ND(50)	---	ND(0.1)	ND(0.1)	ND(1.0)	ND(1.0)	ND(0.1)	---	---	---	---	---	SAL
TB	10-13-89	NA	NA	NA	ND(500)	---	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	---	---	---	---	---	SAL
TB	01-03-90	NA	NA	NA	ND(500)	---	ND(0.5)	0.5	ND(0.5)	0.7	ND(0.5)	---	---	---	---	---	SAL
TB	05-07-90	NA	NA	NA	ND(50)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	ND(0.5)	---	ND(0.5)	---	PACE
TB	09-28-90	NA	NA	NA	ND(50)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	---	---	---	---	---	PACE
TB	01-03-91	NA	NA	NA	ND(50)	---	ND(0.5)	ND(0.5)	ND(0.5)	0.8	---	---	---	---	---	---	SAL
TB	04/12/91	NA	NA	NA	ND(50)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	---	---	---	---	---	SAL
RIMSATE	09-27-90	NA	NA	NA	ND(50)	---	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	---	---	---	---	---	PACE
RIMSATE	01-03-91	NA	NA	NA	ND(50)	---	ND(0.5)	ND(0.5)	ND(0.5)	0.6	---	---	---	---	---	---	SAL
RIMSATE	04/12/91	NA	NA	NA	ND(50)	---	ND(0.5)	0.6	ND(0.5)	0.5	---	---	---	---	---	---	SAL

EXPLANATION OF ABBREVIATIONS:

TPH-G	: Total Petroleum Hydrocarbons as Gasoline (EPA method 8015 modified)	ND	: Not Detected
TOG	: Total Oil & Grease (EPA Method 503D & 503E)	TB	: Trip Blank
B	: Benzene (EPA method 8020 or 8240)	D	: Duplicate
T	: Toluene (EPA method 8020 or 8240)	GTEL	: GTEL Laboratory
E	: Ethylbenzene (EPA method 8020 or 8240)	BC	: Brown & Caldwell Laboratory
X	: Xylenes (EPA method 8020 or 8240)	SAL	: Superior Analytical Laboratory
1,2-DCEa	: 1,2-Dichloroethane	CCAS	: CCAS Laboratory
MC	: Methylene Chloride	PACE	: PACE Labs
OTHER	: Carbon Disulfide(5,13) Vinyl Chloride (3,1)	*	: Probable laboratory contamination.
TEA	: 1,1,1-Trichloroethane	**	: Not sampled due to insufficient water in well.
1,1-DCA	: 1,1-Dichloroethane	***	: 0.01 feet L-PH measured.
PCE	: Tetrachloroethane	****	: Sheen observed.
---	: Not Analyzed/Not Measured	*****	: Diluted 1:10.
NA	: Not Applicable/Not Available	ND!	: Not detected at various detection limits. (See laboratory reports).
		14G	: Grab sample.

Monitoring Wells C-3, C-5, C-7, C-8, C-10, C-14, C-17, and C-18 sampled semiannually.

Monitoring Wells C-1, C-2, C-6, C-9, C-11, C-12, C-13, C-15, C-16, and C-19 sampled annually.

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

Licm

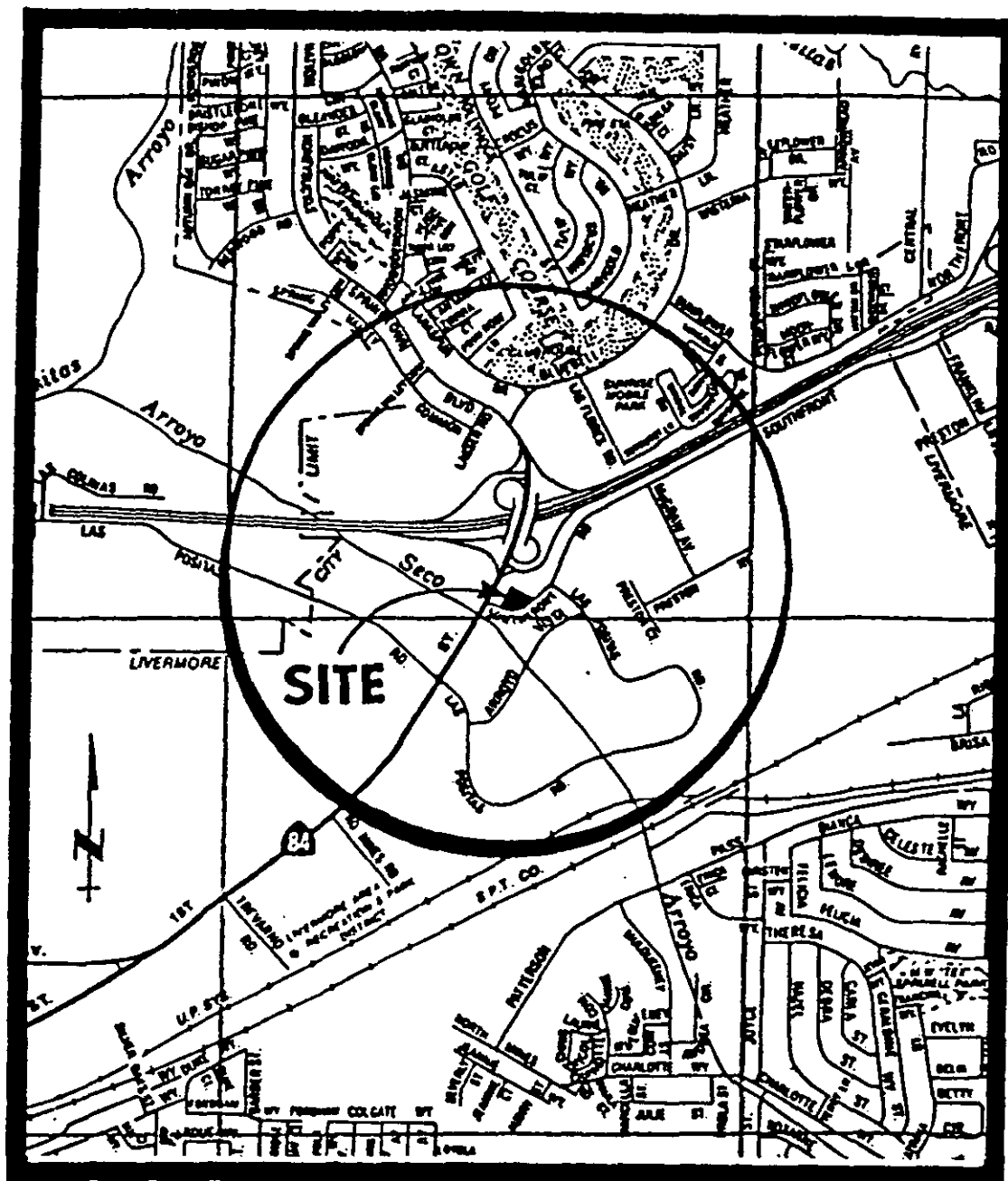


FIGURE 1. SITE VICINITY MAP

NOT TO SCALE

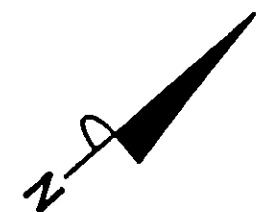
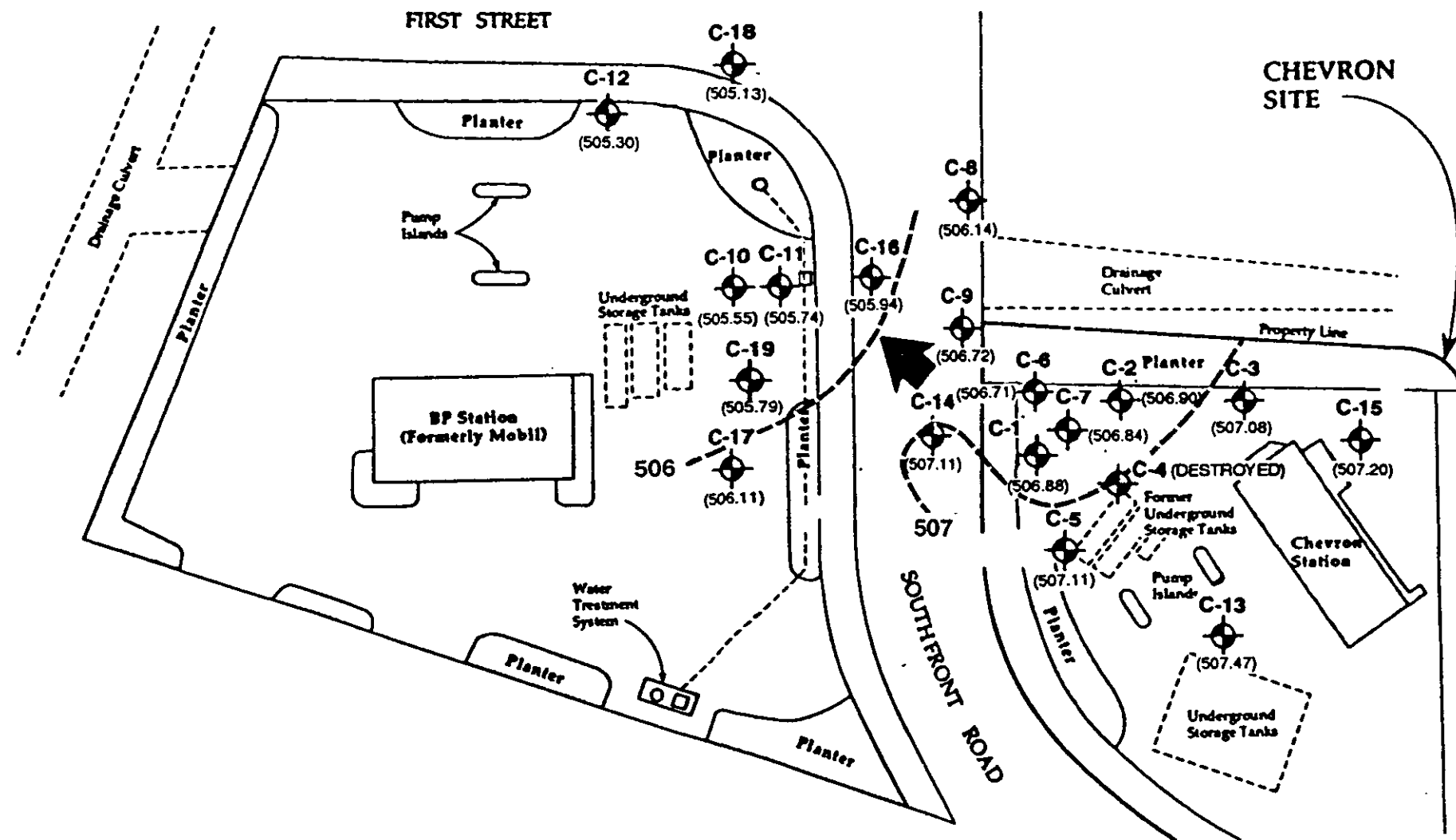
CHEVRON U.S.A.
 CHEVRON SERVICE STATION NO. 9-1924
 4904 SOUTH FRONT ROAD
 LIVERMORE, CALIFORNIA

PROJECT NO. 30-284

SOURCE: WESTERN GEOLOGIC RESOURCES, INC.



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



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

Note:
Contour lines are interpretive based on fluid levels in monitoring wells measured on 04/12/91.

FIGURE 2. GROUND WATER ELEVATION CONTOUR MAP

CHEVRON U.S.A.
CHEVRON SERVICE STATION NO. 9-1924
4904 SOUTHRONT ROAD
LIVERMORE, CALIFORNIA

APPENDIX A
FIELD SAMPLE FORMS,
OFFICIAL LABORATORY RESULTS, AND
CHAIN OF CUSTODY FORMS

JOB NUMBER 300284

TECHNICIAN Dennis

JOB LOCATION 91924 Livermore

DATE 4-12-91

PUMPOUT <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	DATE OF LAST PUMPOUT: <u>1-3-91</u>			WEATHER: <u>Sunny</u> TIME: <u>9:30</u>		COMMENTS (Notes, conditions, etc.)
	HOLD		LEVEL			
WELL #	DEPTH TO WATER	SAMPLE TIME	PROD. THICKNESS (FT)	TOTAL DEPTH	Ht. of WATER Col.	
✓C-3	14.23	12:25		17.94	3.71	
✓C-10	14.86	12:55		33.10	18.24	
C-12	14.52			18.08		
C-13	14.77			20.84		
C-15	15.21			21.00		
✓C-18	13.83	1:30		26.37	12.54	
C-19	15.20			20.00		
C-11	14.30			18.38		
✓C-5	13.71	2:00		18.97	5.26	
C-2	13.86			23.82		
C-16	13.74			28.27		
✓C-8	13.60	2:30		22.16	8.56	
C-1	13.51			18.85		
C-6	12.91			21.72		
✓C-7	13.46	2:55		21.57	8.11	
C-9	13.00			21.93		
✓C-17	14.71	3:30		20.01	5.30	
✓C-14	12.97	4:10		14.21	1.24	New bailer
T.B.		12:00				
Rinse		12:20				
C-17-D		3:35				

3"
2"
2"
3"

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C-3 PROJECT# 300284 LOCATION Livermore DATE 4-12-91
 SAMPLING TEAM Dennis SAMPLING METHOD: BAILER PUMP
 DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER
 STEAM CLEAN

WELL DATA:

DEPTH TO WATER 4.23 ft
 TOTAL DEPTH 17.94 ft
 HT. WATER COL 3.71 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 1.34 gal
 Volumes to Purge X 3 Vol
 Total Volume to Purge 4.02 gal

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
72.2	15.46	7.71	12:11	Clear	1
69.0	15.75	7.58	12:12	"	2
68.1	15.58	7.45	12:13	"	3
67.2	15.66	7.40	12:14	"	4
67.0	15.60	7.37	12:15	"	5
ACTUAL VOLUME PURGED					<u>5.25</u> gal

COMMENTS:

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C-5 PROJECT # 300284 LOCATION Livermore DATE 4-12-91
 SAMPLING TEAM Dennis SAMPLING METHOD: BAILER PUMP
 DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER
 STEAM CLEAN

WELL DATA:

DEPTH TO WATER 13.71 ft
 TOTAL DEPTH 18.97 ft
 HT. WATER COL 5.26 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.63
6 in	X1.44

Volume of Water Column 1.89 gal
 Volumes to Purge x 3 Vol
 Total Volume to Purge 5.67 gal

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
77.6	15.25	7.45	1:49	Clear	1
74.6	14.31	7.39	1:51	"	2
73.5	14.17	7.37	1:52	"	3
72.3	14.22	7.36	1:53	"	4
71.0	14.15	7.35	1:55	"	5.75
ACTUAL VOLUME PURGED					<u>6</u> gal

COMMENTS:

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C-7 PROJECT# 300284 LOCATION Livermore DATE 4-12-91
 SAMPLING TEAM Dennis SAMPLING METHOD: BAILER PUMP
 DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER
 STEAM CLEAN

WELL DATA:

DEPTH TO WATER 3.46 ft
 TOTAL DEPTH 21.57 ft
 HT. WATER COL 8.11 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.63
6 in	X1.44

Volume of Water Column 2.92 gal
 Volumes to Purge X 3 Vol
 Total Volume to Purge 8.76 gal

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
71.6	14.87	7.42	2:42	Clear	1.5
72.0	15.05	7.28	2:43	"	3
72.7	14.59	7.17	2:44	"	4.5
72.1	14.07	7.10	2:45	"	6
71.3	14.46	7.07	2:46	"	8.75
ACTUAL VOLUME PURGED					<u>9</u> gal

COMMENTS:

ALTON GEOSCIENCE, INC.
 Water Sampling Field Survey

WELL # C-8 PROJECT# 300284 LOCATION Livermore DATE 4-12-91
 SAMPLING TEAM Dennis SAMPLING METHOD: BAILER PUMP
 DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONISED WATER
 STEAM CLEAN

WELL DATA:

DEPTH TO WATER 13.60 ft
 TOTAL DEPTH 22.16 ft
 HT. WATER COLUMN 8.56 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 308 gal
 Volumes to Purge X 3 Vol
 Total Volume to Purge 9.24 gal

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
73.7	13.12	7.58	2:19	Clear	2
67.9	11.93	7.45	2:21	"	4
65.2	11.62	7.33	2:22	"	6
64.0	11.12	7.28	2:23	Cloudy, lt. gray	8
63.6	11.30	7.26	2:25	" "	9.25
ACTUAL VOLUME PURGED					<u>9.5</u> gal

COMMENTS:

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C-10 PROJECT # 300284 LOCATION Livermore DATE 4-12-91
 SAMPLING TEAM Dennis SAMPLING METHOD: BAILER PUMP
 DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONISED WATER
 STEAM CLEAN

WELL DATA:

DEPTH TO WATER 4.82 ft
 TOTAL DEPTH 33.10 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 6.56 gal
 Volumes to Purge 3 Vol
 Total Volume to Purge 19.68 gal

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
75.9	18.76	7.56	12:42	Clear	4
69.8	17.51	7.45	12:44	Cloudy, lt. gray	8
67.8	16.60	7.34	12:46	" "	12
66.5	16.47	7.29	12:47	" "	16
66.3	16.80	7.29	12:49	" "	19.75
ACTUAL VOLUME PURGED					<u>20.1</u> gal

COMMENTS:

ALTON GEOSCIENCE, INC.
 Water Sampling Field Survey

WELL # C-14 PROJECT # 300284 LOCATION Livermore DATE 4/12-91
 SAMPLING TEAM Deunis SAMPLING METHOD: BAILER PUMP
 DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER
 STEAM CLEAN

WELL DATA:

DEPTH TO WATER 2.97 ft
 TOTAL DEPTH 14.21 ft
 HT. WATER COL 1.24 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 0.45 gal
 Volumes to Purge X 3 Vol
 Total Volume to Purge 1.34 gal

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
75.4	6.90	8.32	3:45	Cloudy, Lt. gray	.25
70.6	7.26	8.77	3:47	" "	.50
67.7	7.15	9.05	3:49	" "	.75
67.1	7.26	9.30	3:52	" "	1.00
67.2	8.43	9.56	3:58		1.5
ACTUAL VOLUME PURGED					<u>1.75</u> gal

COMMENTS:

Slow producer! See times

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # C-17 PROJECT # 300284 LOCATION Livermore DATE 4-12-91
 SAMPLING TEAM Dennis SAMPLING METHOD: BAILER PUMP
 DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONISED WATER
 STEAM CLEAN

WELL DATA:

DEPTH TO WATER 4.71 ft
 TOTAL DEPTH 20.01 ft
 HT. WATER COL 5.30 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 1.91 gal
 Volumes to Purge X 3 Vol
 Total Volume to Purge 5.72 gal

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
76.9	12.42	7.45	3:11	Cloudy, lt. gray	1.25
72.8	12.70	7.36	3:12	" "	2.5
70.5	14.74	7.43	3:15	" "	3.75
70.3	13.96	7.40	3:20	" "	5
71.2	12.24	7.42	3:26	" "	5.75

ACTUAL VOLUME PURGED 6 gal

Slow producer!

COMMENTS:

Dry @ 3:15

ALTON GEOSCIENCE, INC.
 Water Sampling Field Survey

WELL # C-18 PROJECT# _____

LOCATION Livermore

DATE 4-12-91

SAMPLING TEAM Dennis

SAMPLING METHOD: BAILER PUMP _____

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

WELL DATA:

DEPTH TO WATER 3.83 ft

TOTAL DEPTH 26.37 ft

HT. WATER COL 12.54 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.63
6 in	X1.44

Volume of Water Column 2.01 gal

Volumes to Purge X 3 Vol

Total Volume to Purge 6.03 gal

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
72.6	15.55	7.60	1:18	Cloudy Lt. gray	1.25
68.5	14.57	7.50	1:19	" "	2.5
66.2	14.01	OFFSCALE	1:21	" "	3.75
66.1	14.26	7.33	1:22	" "	5
65.6	13.85	7.30	1:24	" "	6

ACTUAL VOLUME PURGED 6.25 gal

COMMENTS:

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE. UNIT I SAN FRANCISCO, CA 94124 PHONE (415) 647-2081 I S DHS #1332

LABORATORY NO.: 11736
 CLIENT: Alton Geoscience
 CLIENT JOB NO.: 300284

DATE RECEIVED: 04/15/91
 DATE REPORTED: 04/22/91

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
11736- 1	0491031	04/12/91	04/19/91
11736- 2	0491101	04/12/91	04/19/91
11736- 3	0491181	04/12/91	04/19/91
11736- 4	0491051	04/12/91	04/19/91
11736- 5	0491081	04/12/91	04/19/91
11736- 6	0491071	04/12/91	04/19/91
11736- 7	0491171	04/12/91	04/19/91
11736- 8	0491141	04/12/91	04/19/91
11736- 9	0491173	04/12/91	04/19/91
11736-10	0491002	04/12/91	04/19/91

Laboratory Number:	11736	11736	11736	11736	11736
	1	2	3	4	5

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	98	110	ND<50	270	180
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	ND<0.5	16	ND<0.5	12	4
TOLUENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
ETHYL BENZENE:	1.6	2.9	ND<0.5	19	ND<0.5
XYLENES:	ND<0.5	2.7	ND<0.5	7	ND<0.5

Laboratory Number:	11736	11736	11736	11736	11736
	6	7	8	9	10

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	2300	8600	60000	4400	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	190	ND<5 *	750	ND<0.5	ND<0.5
TOLUENE:	1	5	3800	11	ND<0.5
ETHYL BENZENE:	81	47	720	48	ND<0.5
XYLENES:	87	120	9200	120	ND<0.5

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SUPERIOR ANALYTICAL LABORATORY, INC.

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DHS #1332

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

LABORATORY NO.: 11736
CLIENT: Alton Geoscience
CLIENT JOB NO.: 300284

DATE RECEIVED: 04/15/91
DATE REPORTED: 04/22/91

Page 2 of 3

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
11736-11	0491004	04/12/91	04/19/91

Laboratory Number: 11736
11

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)
OIL AND GREASE:	NA
TPH/GASOLINE RANGE:	ND<50
TPH/DIESEL RANGE:	NA
BENZENE:	ND<0.5
TOLUENE:	0.6
ETHYL BENZENE:	ND<0.5
XYLENES:	0.5

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DHS #1332

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

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 3 of 3
QA/QC INFORMATION
SET: 11736

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: 08/24/90

SW-846 Method 8020/BTXE

Minimum Quantitation Limit in Water: 0.5ug/l

* DILUTED 1:10

Standard Reference: 04/09/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	08/24/90	200ng	90/92	1.8	63-111
Benzene	04/09/91	200ng	89/88	0.6	72-119
Toluene	04/09/91	200ng	87/87	0.0	70-116
Ethyl Benzene	04/09/91	200ng	88/87	0.6	73-119
Total Xylene	04/09/91	600ng	88/87	1.3	71-118

Richard Srna, Ph.D.



Laboratory Director

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DHS #1332

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

LABORATORY NO.: 11736-1
 CLIENT: ALTON GEOSCIENCE
 JOB NO.: 3000284

DATE SAMPLED: 04/12/91
 DATE RECEIVED: 04/15/91
 DATE ANALYZED: 04/18/91

EPA SW-846 METHOD 8010
 HALOGENATED VOLATILE ORGANICS
 SAMPLE: 0491031

Compound	MDL (ug/L)	RESULTS (ug/l)
Chloromethane/Vinyl Chloride	1.0	ND
Bromomethane/Chloroethane	1.0	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
Methylene Chloride	0.5	ND
trans-1,2-Dichloroethene	0.5	ND
1,1-Dichloroethane	0.5	ND
Chloroform	0.5	ND
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	ND
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit

ug/l = parts per billion (ppb)

QA/QC Summary: Daily Standard RPD = <15

MS/MSD average recovery = 123 % :MS/MSD RPD = << 0.9 %

Richard Srna, Ph.D.



Laboratory Director

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DHS #1332

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

LABORATORY NO.: 11736-4
 CLIENT: ALTON GEOSCIENCE Res.
 JOB NO.: 300284

DATE SAMPLED: 04/12/91
 DATE RECEIVED: 04/12/91
 DATE ANALYZED: 04/18/91

EPA SW-846 METHOD 8010
 HALOGENATED VOLATILE ORGANICS
 SAMPLE: 0491051

Compound	MDL (ug/L)	RESULTS (ug/l)
Chloromethane/Vinyl Chloride	1.0	ND
Bromomethane/Chloroethane	1.0	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
Methylene Chloride	0.5	ND
trans-1,2-Dichloroethene	0.5	ND
1,1-Dichloroethane	0.5	ND
Chloroform	0.5	ND
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	ND
1,2-Dichloroethane	0.5	0.5
Trichloroethylene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit

ug/l = parts per billion (ppb)

QA/QC Summary: Daily Standard %DIFF = <15%

MS/MSD average recovery = 110 % ; MS/MSD RPD = < 1 %

Richard Srna, Ph.D.

Robert Watson (for)
 Laboratory Director

SUPERIOR ANALYTICAL LABORATORY, INC.

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DHS #1332

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

LABORATORY NO.: 11736-6

DATE SAMPLED: 04/12/91

DATE RECEIVED: 04/15/91

CLIENT: ALTON GEOSCIENCE

DATE ANALYZED: 04/18/91

JOB NO.: 3000284

EPA SW-846 METHOD 8010
 HALOGENATED VOLATILE ORGANICS
 SAMPLE: 0491071

Compound	MDL (ug/L)	RESULTS (ug/l)
Chloromethane/Vinyl Chloride	1.0	ND
Bromomethane/Chloroethane	1.0	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
Methylene Chloride	0.5	ND
trans-1,2-Dichloroethene	0.5	ND
1,1-Dichloroethane	0.5	ND
Chloroform	0.5	ND
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	ND
1,2-Dichloroethane	0.5	0.6
Trichloroethylene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit

ug/l = parts per billion (ppb)

QA/QC Summary: Daily Standard RPD = <15

MS/MSD average recovery = 123 % :MS/MSD RPD = < <0.9 %

Richard Srna, Ph.D.

Richard Srna
 Laboratory Director

SUPERIOR ANALYTICAL LABORATORY, INC.

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DHS #1332

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

LABORATORY NO.: 11736-5

DATE SAMPLED: 04/12/91

CLIENT: ALTON GEOSCIENCE

DATE RECEIVED: 04/15/91

JOB NO.: 3000284

DATE ANALYZED: 04/18/91

EPA SW-846 METHOD 8010
HALOGENATED VOLATILE ORGANICS
SAMPLE: 0491081

Compound	MDL (ug/L)	RESULTS (ug/l)
Chloromethane/Vinyl Chloride	1.0	ND
Bromomethane/Chloroethane	1.0	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
Methylene Chloride	0.5	ND
trans-1,2-Dichloroethene	0.5	ND
1,1-Dichloroethane	0.5	ND
Chloroform	0.5	ND
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	ND
1,2-Dichloroethane	0.5	0.6
Trichloroethylene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit

ug/l = parts per billion (ppb)

QA/QC Summary: Daily Standard RPD = <15

MS/MSD average recovery = 123 % :MS/MSD RPD = < 0.9 %

Richard Srna, Ph.D.

Robert Water (for)
Laboratory Director

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

DHS #1332

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

LABORATORY NO.: 11736-2

DATE SAMPLED: 04/12/91

DATE RECEIVED: 04/15/91

CLIENT: ALTON GEOSCIENCE

DATE ANALYZED: 04/18/91

JOB NO.: 3000284

EPA SW-846 METHOD 8010
 HALOGENATED VOLATILE ORGANICS
 SAMPLE: 0491101

Compound	MDL (ug/L)	RESULTS (ug/l)
Chloromethane/Vinyl Chloride	1.0	ND
Bromomethane/Chloroethane	1.0	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
Methylene Chloride	0.5	ND
trans-1,2-Dichloroethene	0.5	ND
1,1-Dichloroethane	0.5	ND
Chloroform	0.5	ND
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	ND
1,2-Dichloroethane	0.5	1
Trichloroethylene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit

ug/l = parts per billion (ppb)

QA/QC Summary: Daily Standard RPD = <15

MS/MSD average recovery = 123 % :MS/MSD RPD = << 0.9 %

Richard Srna, Ph.D.

Robert Watson (for)
 Laboratory Director

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

DHS #1332

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

LABORATORY NO.: 11736-8

DATE SAMPLED: 04/12/91

CLIENT: ALTON GEOSCIENCE

DATE RECEIVED: 04/15/91

JOB NO.: 3000284

DATE ANALYZED: 04/18/91

EPA SW-846 METHOD 8010
 HALOGENATED VOLATILE ORGANICS
 SAMPLE: 0491141

Compound	MDL (ug/L)	RESULTS (ug/l)
Chloromethane/Vinyl Chloride	10	ND
Bromomethane/Chloroethane	10	ND
Trichlorofluoromethane	5	ND
1,1-Dichloroethene	5	ND
Methylene Chloride	5	ND
trans-1,2-Dichloroethene	5	ND
1,1-Dichloroethane	5	ND
Chloroform	5	ND
1,1,1-Trichloroethane	5	ND
Carbon tetrachloride	5	ND
1,2-Dichloroethane	5	ND
Trichloroethylene	5	ND
1,2-Dichloropropane	5	ND
Bromodichloromethane	5	ND
Cis-1,3-Dichloropropene	5	ND
trans-1,3-Dichloropropene	5	ND
1,1,2-Trichloroethane	5	ND
Tetrachloroethene	5	ND
Dibromochloromethane	5	ND
Chlorobenzene	5	ND
Bromoform	5	ND
1,1,2,2-Tetrachloroethane	5	ND
1,3-Dichlorobenzene	5	ND
1,2-Dichlorobenzene	5	ND
1,4-Dichlorobenzene	5	ND
Cis-1,2-Dichloroethene	5	ND

MDL = Method Detection Limit

ug/l = parts per billion (ppb)

QA/QC Summary: Daily Standard RPD = <15

MS/MSD average recovery = 123 % :MS/MSD RPD = < <0.9 %

Richard Srna, Ph.D.

Robert W. Srna
 Laboratory Director

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I • SAN FRANCISCO CA 94124 • PHONE (415) 647-2081

DHS #1332

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

LABORATORY NO.: 11736-7

DATE SAMPLED: 04/12/91

DATE RECEIVED: 04/15/91

CLIENT: ALTON GEOSCIENCE

DATE ANALYZED: 04/18/91

JOB NO.: 3000284

EPA SW-846 METHOD 8010
 HALOGENATED VOLATILE ORGANICS
 SAMPLE: 0491171

Compound	MDL (ug/L)	RESULTS (ug/l)
Chloromethane/Vinyl Chloride	1.0	ND
Bromomethane/Chloroethane	1.0	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
Methylene Chloride	0.5	ND
trans-1,2-Dichloroethene	0.5	ND
1,1-Dichloroethane	0.5	ND
Chloroform	0.5	ND
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	ND
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit

ug/l = parts per billion (ppb)

QA/QC Summary: Daily Standard RPD = <15

MS/MSD average recovery = 123 % :MS/MSD RPD = << 0.9 %

Richard Srna, Ph.D.

Robert W. Hong
 Laboratory Director

OUTSTANDING QUALITY AND SERVICE

APR 25 1991

SUPERIOR ANALYTICAL LABORATORY, INC.

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DHS #1332

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

LABORATORY NO.: 11736-3
 CLIENT: ALTON GEOSCIENCE
 JOB NO.: 3000284

DATE SAMPLED: 04/12/91
 DATE RECEIVED: 04/15/91
 DATE ANALYZED: 04/18/91

EPA SW-846 METHOD 8010
 HALOGENATED VOLATILE ORGANICS
 SAMPLE: 0491181

Compound	MDL (ug/L)	RESULTS (ug/l)
Chloromethane/Vinyl Chloride	1.0	ND
Bromomethane/Chloroethane	1.0	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
Methylene Chloride	0.5	ND
trans-1,2-Dichloroethene	0.5	ND
1,1-Dichloroethane	0.5	ND
Chloroform	0.5	ND
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	ND
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit

ug/l = parts per billion (ppb)

QA/QC Summary: Daily Standard RPD = <15

MS/MSD average recovery = 123 % ; MS/MSD RPD = < <0.9 %

Richard Srna, Ph.D.

Robert Water
 Laboratory Director

OUTSTANDING QUALITY AND SERVICE

