



**Chevron U.S.A. Inc.**

2410 Camino Ramon, San Ramon, California • Phone (510) 842-9500  
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

**RECEIVED**

2:48 pm, May 04, 2009

Alameda County  
Environmental Health

Marketing Department

November 7, 1991

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

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

Dear Mr. Shahid:

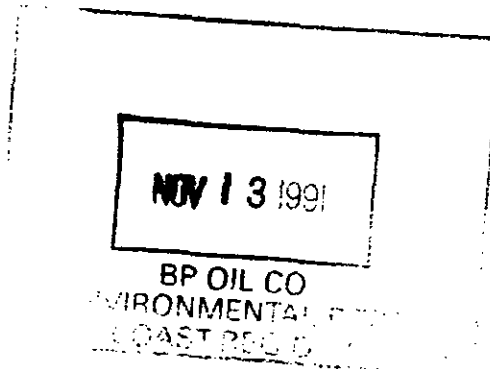
Enclosed is a report dated October 18, 1991 which describes groundwater monitoring by Chevron's consultant, Alton Geoscience (Alton), on September 4, 1991 at the site referenced above.

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

If you have any questions or comments, you may contact me at (510) 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 Southampton, Suite 300, Benicia, CA 94510

Peter DeSantis, BP Oil, 2868 Prospect Park Dr., Suite 360, Rancho Cordova, CA 95670

October 18, 1991

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

310-284

Subject: Semiannual Ground Water Monitoring Report  
Chevron Station No. ~~9-9124~~ 91924  
4904 Southfront Road  
Livermore, California

Dear Mr. Rogers:

In accordance with our agreement, Alton Geoscience transmits this Semiannual Ground Water Monitoring and Sampling Report for Chevron Station No. 9-9124, 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 September 4 and October 7, 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 water level meter. 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.

Mr. Clint Rogers  
October 18, 1991  
Page 2

310-284

### 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 monitoring and sampling events, are summarized in Table 1. Based on the previous wellhead elevation survey data and depth to water measurements, ground water elevations and the general ground water flow direction at this site were calculated as shown in Figure 2.

No liquid-phase hydrocarbons or sheen were observed in any of the ground water samples. The official laboratory reports and chain of custody records are included in Appendix A.

Insufficient water was available in C-14 to conduct all tests. Consequently the sample was only analyzed for TPH-G with BTEX distinction.

Please call if you have any questions concerning this report.

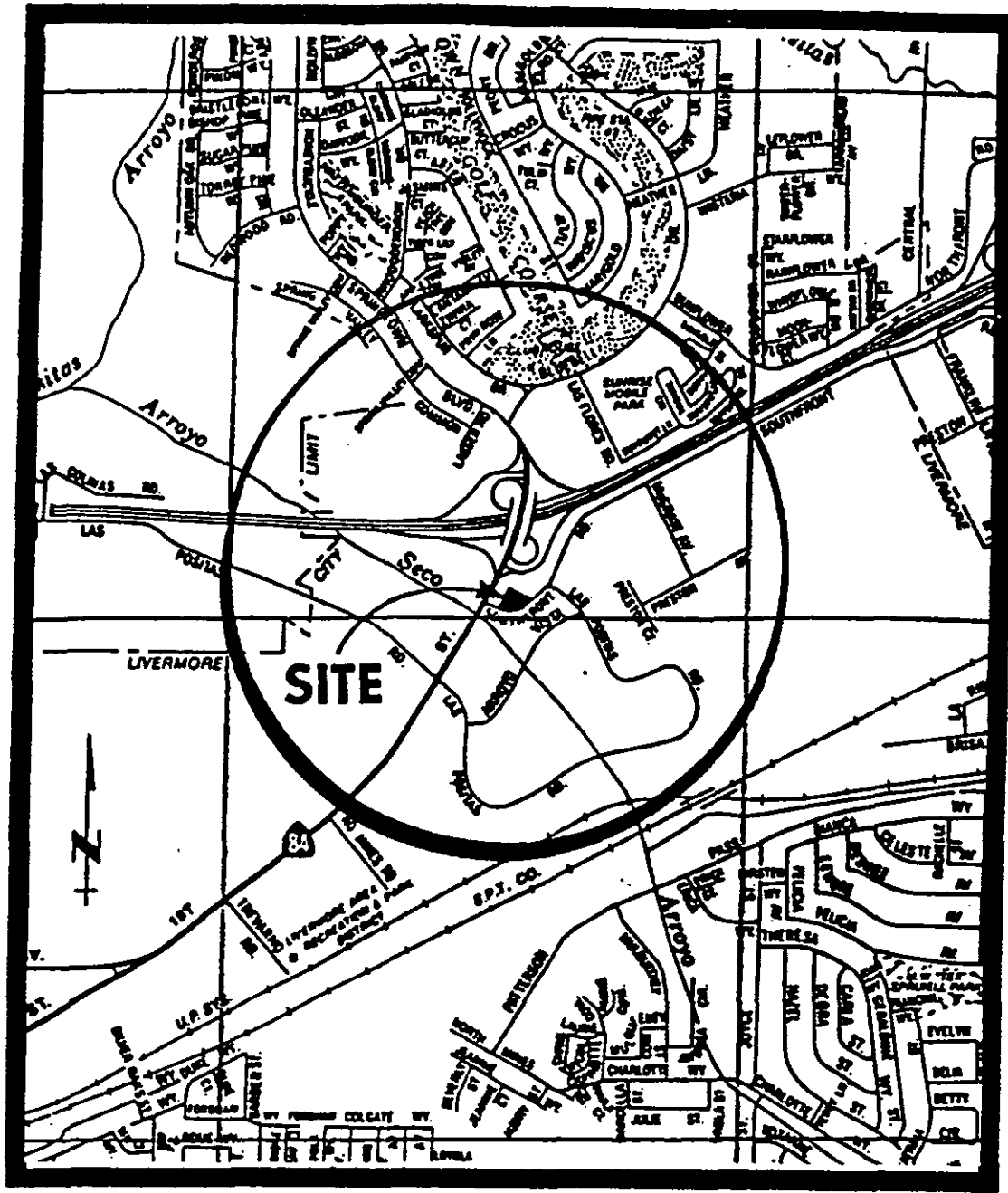
Sincerely,

ALTON GEOSCIENCE

  
John De George  
Staff Geologist

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

wp91924gnw



**FIGURE 1. SITE VICINITY MAP**

NOT TO SCALE

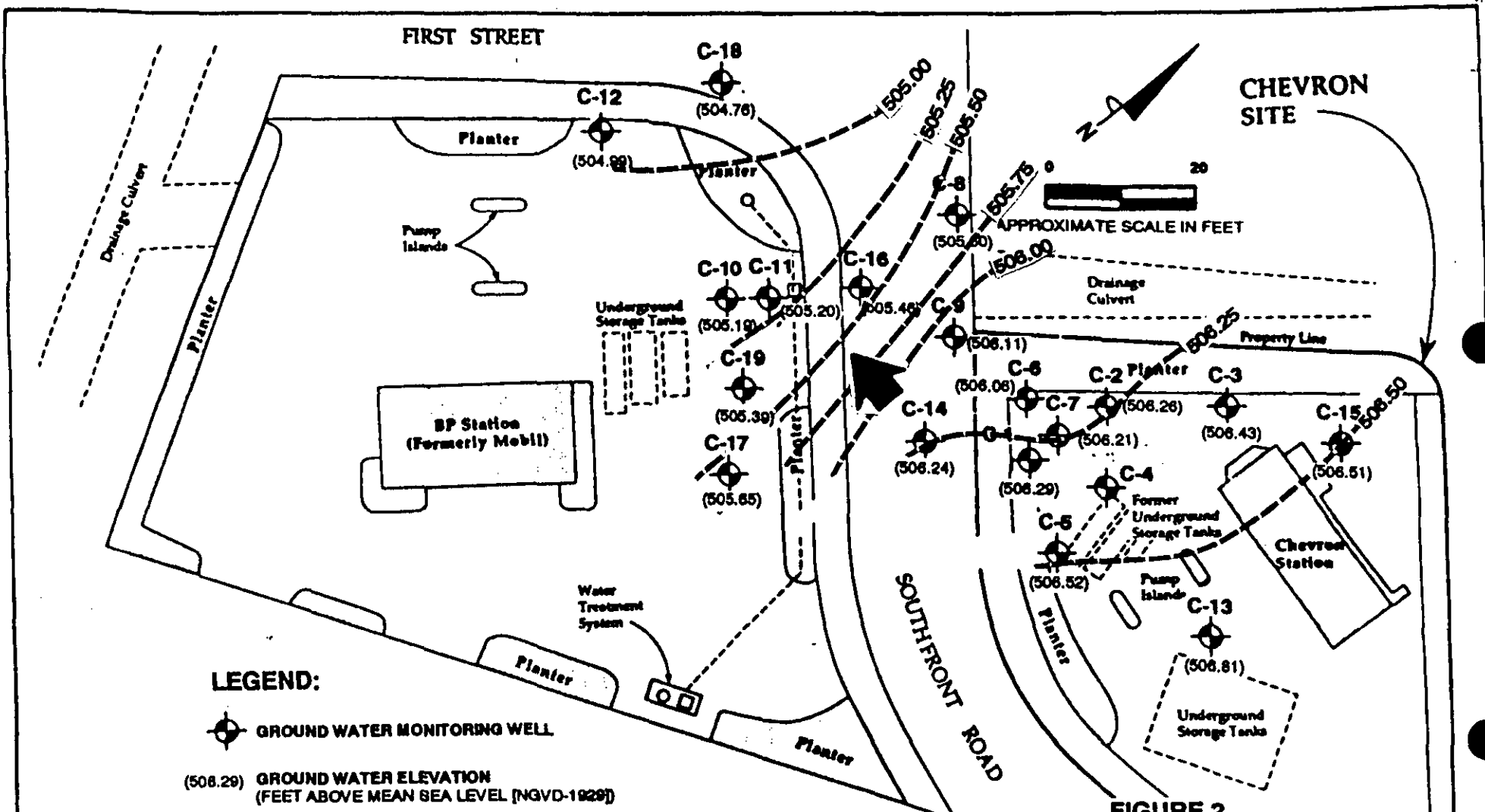
CHEVRON U.S.A.  
 CHEVRON SERVICE STATION NO. 9-1924  
 4904 SOUTH FRONT ROAD  
 LIVERMORE, CALIFORNIA

PROJECT NO. 310-284

SOURCE: WESTERN GEOLOGIC RESOURCES, INC.



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



**FIGURE 2.**  
**GROUND WATER ELEVATION CONTOUR MAP**  
**CHEVRON SERVICE STATION NO. 9 - 1924**  
**4904 SOUTHFRONT ROAD**  
**LIVERMORE, CALIFORNIA**

**ALTON GEOSCIENCE**  
 1000 Burnett Ave. Ste. 140  
 Concord, California

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	TOL	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	---	---	---	---	---	---	GTET
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-1D	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-1D	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	0.6B	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-1	09/04/91	520.39	14.10	506.29	---	---	---	---	---	---	---	---	---	---	---	---	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	---	---	---	---	---	---	GTET
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	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PC
C-2	01-01-89	520.76	12.89	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-2D	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-2D	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	1.8	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
C-2	09/04/91	520.76	14.50	506.26	---	---	---	---	---	---	---	---	---	---	---	---	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-6	TOS	B	I	E	I	1,2-DCA	OTHER	MC	1,1,1-TCA	1,1-BCA	PCE	
C-3	03-28-86	521.31	12.24	509.07	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-3	03-15-88	521.31	14.21	507.10	2100	---	86	8	30	36	---	---	---	---	---	---	BTEL
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	---	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	---	PACE
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!	1.1*	1.6	ND<0.5	---	PACE
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!	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!	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-3	09/04/91	521.31	14.88	506.43	64 *	---	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-5	03-28-86	520.82	12.00	508.82	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-5	03-15-88	520.82	13.75	507.07	1600	---	82	7	77	95	---	---	---	---	---	---	NA
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	---	---	---	---	---	---	BC
C-5	01-01-89	520.82	13.41	507.41	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-5	01-12-89	---	---	---	ND<1000	---	42	3	44	52	---	---	---	---	---	---	SAL
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	---	PACE
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!	0.7*	ND<0.5	ND<0.5	---	PACE
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!	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!	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-5	09/04/91	520.82	14.30	506.52	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

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	TOB	B	T	E	X	1,2-DCA	OTHER	MC	1,1,1-TCA	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	---	---	---	---	---	---	GTEL
C-6	05-10-88	519.62	13.03	506.59	86000	---	1400	10000	3000	19000	---	---	---	---	---	---	NA
C-6	06-10-88	519.62	14.11***	505.51	---	---	---	---	---	---	---	---	---	---	---	---	NA
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	---	---	---	---	---	---	NA
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-6	09/04/91	519.62	13.56	506.06	---	---	---	---	---	---	---	---	---	---	---	---	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	---	---	---	---	---	---	GTEL
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	---	---	---	---	---	---	NA
C-7	01-01-89	520.30	12.66	507.64	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-7	01-12-89	---	---	---	8000	---	950	47	670	640	---	---	---	---	---	---	SAL
C-7	04-12-89	520.30	13.60	506.70	6000	ND<3.0	1100	30	760	370	ND<20	---	---	---	---	---	C
C-7	06-26-89	520.30	13.88	506.42	6000	ND<3.0	1300	50	600	340	ND<10	---	---	---	---	---	CLUG
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
C-7	09/04/91	520.30	14.09	506.21	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-7	10/07/91	520.30	---	---	4700	---	170	1.9	97	59	ND<0.5	ND!	24	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	TOS	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	---	---	---	---	---	---	---
C-10	05-10-88	520.71	14.90	505.51	---	---	---	---	---	---	---	---	---	---	---	---	---
C-10	06-10-88	520.41	15.94	504.47	---	---	---	---	---	---	---	---	---	---	---	---	---
C-10	07-25-88	520.41	14.85	505.56	---	---	---	---	---	---	---	---	---	---	---	---	NA
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	---	---	---	---	---	---	BC
C-10	01-01-89	520.41	14.83	505.59	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-10	01-12-89	---	---	---	ND<1000	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	---	---	SAL
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	---	---	---	---	---	CCAS
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	---	---	---	---	---	---	SAL
C-10	01-03-90	520.41	15.91	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	---	ND<0.5	---	PAGE
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!	1.2*	ND<0.5	ND<0.5	---	PAGE
C-10	01-03-91	520.41	15.96	505.35	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-10	04/12/91	520.41	14.86	505.55	110	---	16	ND<0.5	2.9	2.7	1	ND!	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-10	09/04/91	520.41	15.22	505.19	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-11	03-28-86	520.04	13.82	506.22	---	---	---	---	---	---	---	---	---	---	---	---	NA
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	---	---	---	---	---	---	---	---	---	---	---	---	---
C-11	07-25-88	520.04	13.60	506.44	---	---	---	---	---	---	---	---	---	---	---	---	---
C-11	10-14-88	520.04	14.53	505.51	1.9	---	240	33	4.7	67	---	---	---	---	---	---	---
C-11	01-01-89	520.04	14.10	505.94	---	---	---	---	---	---	---	---	---	---	---	---	---
C-11	01-12-89	---	---	---	ND<1000	---	ND<0.3	0.8	ND<0.3	ND<0.3	---	---	---	---	---	---	SAL
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	---	---	---	---	---	---	SAL
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	---	ND<0.5	---	PAGE
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!	1.2*	ND<0.5	ND<0.5	---	PAGE
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!	ND<0.5	ND<0.5	ND<0.5	1	SAL
C-11	04/12/91	520.04	14.30	505.74	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-11	09/04/91	520.04	14.84	505.20	---	---	---	---	---	---	---	---	---	---	---	---	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	TGS	B	T	E	X	1,2-DCA	OTHER	MC	1,1,1-TCA	1,1-DCA	PCE	LAB
C-14	03-28-86	520.08	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
C-14	03-15-88	520.08	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
C-14	05-10-88	520.08	13.39	506.69	120000	---	13000	29000	2700	18	---	---	---	---	---	---	---
C-14	06-10-88	520.08	14.65	505.43	---	---	---	---	---	---	---	---	---	---	---	---	---
C-14	07-25-88	520.08	13.47	506.61	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-14	10-13-88	520.08	13.58	506.50	ND	---	ND	ND	ND	ND	---	---	---	---	---	---	NA
C-14	01-01-89	520.08	13.00	507.08	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-14	01-12-89	---	---	---	NS	---	ND	ND	ND	ND	---	---	---	---	---	---	NA
C-14	04-12-89	520.08	13.47	506.61	NS	ND	ND	ND	ND	ND	ND	---	---	---	---	---	NA
C-14	06-26-89	520.08	13.80	506.28	140000	---	14000	25000	3400	26000	30	---	---	---	---	---	NA
C-146	10-13-89	520.08	13.62	506.46	86000	---	12000	16000	1600	13000	---	---	---	---	---	---	SAL
C-14	01-03-90	520.08	13.91	506.17	120000	---	9500	16000	1800	13000	25	3	---	---	---	---	SAL
C-146	01-04-90	520.08	13.91	506.17	76000	---	3900	8100	1200	7700	18	1	---	---	---	---	SAL
C-14	05-08-90	520.08	13.89	506.19	62000	---	7500	17000	1400	14000	13	---	ND<0.5	---	ND<0.5	---	PAGE
C-14**	09-27-90	520.08	13.78	506.30	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-14**	01-03-91	520.08	13.72	506.36	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-14	04/12/91	520.08	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-140	07/04/91	520.08	13.84	506.24	110000	---	2800	11000	1300	13000	---	---	---	---	---	---	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	---	---	---	---	---	---	STEL
C-15	05-10-88	522.41	15.40	507.01	---	---	---	---	---	---	---	---	---	---	---	---	---
C-15	06-10-88	522.41	16.49	505.92	---	---	---	---	---	---	---	---	---	---	---	---	---
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	---	---	---	---	---	---	---
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
C-15	09/04/91	522.41	15.90	506.51	---	---	---	---	---	---	---	---	---	---	---	---	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	TG	B	T	E	X	1,2-DCA	OTHER	MC	1,1,1-TCA	1,1-DCA	PCE	LAB
C-16	03-28-86	519.68	---	---	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-16	03-15-88	519.68	---	---	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-16	05-10-88	519.68	13.78	505.90	4500	---	1000	73	140	180	---	---	---	---	---	---	NA
C-16	06-10-88	519.68	14.88	504.80	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-16	07-25-88	519.68	13.69	505.99	---	---	---	---	---	---	---	---	---	---	---	---	---
C-16	10-13-88	519.68	13.80	505.88	1600	---	16	5.5	ND<1.0	16	---	---	---	---	---	---	---
C-16	01-01-89	519.68	13.45	506.23	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-16	01-12-89	---	---	---	1000	---	360	11	78	51	---	---	---	---	---	---	SAL
C-16	04-11-89	519.68	13.78	505.90	15800	ND<3.0	130	4	21	19	8	---	---	---	---	---	CCA
C-16	06-26-89	519.68	14.02	505.66	1300	ND<3.0	170	8	37	43	ND<1.0	---	---	---	---	---	CCA
C-16	10-13-89	519.68	14.01	505.67	1000	ND<5	20	ND<5	7	ND<5	ND<5	---	---	---	---	---	SAL
C-16	01-03-90	519.68	13.97	505.71	1300	---	150	3	41	24	5	---	---	---	---	---	SAL
C-16	05-07-90	519.68	14.45	505.23	480	---	49	4.4	29	13	4.5	---	ND<0.5	---	ND<0.5	---	PAC
C-16	09-29-90	519.68	14.32	505.36	360	---	18	2.1	11	8.0	1.8	ND!	ND<0.5	ND<0.5	ND<0.5	---	PAC
C-16	01-03-91	519.68	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	519.68	13.74	505.94	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-16	09/04/91	519.68	14.22	505.46	---	---	---	---	---	---	---	---	---	---	---	---	NA
C-17	03-28-86	520.82	13.48	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	---	---	---	---	---	---	---
C-17	01-01-89	520.82	14.78	506.04	---	---	---	---	---	---	---	---	---	---	---	---	---
C-17	01-12-89	---	---	---	190000	---	ND<15	490	2100	6700	---	---	---	---	---	---	---
C-17	04-11-89	520.82	14.83	506.06	27000	6.0	30	150	320	1000	ND<10	---	---	---	---	---	---
C-17	06-26-89	520.82	15.03	505.79	20000	ND<3.0	50	390	660	2000	ND<10	---	---	---	---	---	CCA
C-17D	06-26-89	520.82	15.03	505.79	27000	---	40	420	740	2200	ND<10	---	---	---	---	---	CCA
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	---	PAC
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	---	PAC
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	---	PAC
C-17	01-03-91	520.82	14.92	505.90	3700	---	ND<0.5	28	56	140	ND<0.5	ND!	1.8*	1.9	ND<0.5	ND<0.5	PAC
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<5	11	48	120	ND<0.5	ND!	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-17	09/04/91	520.82	15.17	505.65	5800	---	ND<5	27	49	79	ND<0.5	ND!	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-17D	09/04/91	520.82	15.17	505.65	4100	---	ND<5	21	36	61	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-6	T06	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	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
C-18	03-15-88	518.96	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
C-18	05-10-88	518.96	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
C-18	06-10-88	518.96	14.89	504.07	---	---	---	---	---	---	---	---	---	---	---	---	---
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-18	09/04/91	518.96	14.20	504.76	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	---	---	---	---	---	---	GTCL
C-19	06-10-88	520.99	16.58	504.41	---	---	---	---	---	---	---	---	---	---	---	---	---
C-19	07-25-88	520.99	15.19	505.80	---	---	---	---	---	---	---	---	---	---	---	---	---
C-19	10-13-88	520.99	15.27	505.72	ND<1000	---	8.3	4.7	4.4	ND<0.5	---	---	---	---	---	---	---
C-19	01-01-89	520.99	15.20	505.79	---	---	---	---	---	---	---	---	---	---	---	---	---
C-19	01-12-89	---	---	---	ND<1000	---	5	4	ND<0.3	ND<0.3	---	---	---	---	---	---	SAL
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
C-19	09/04/91	520.99	15.60	505.39	---	---	---	---	---	---	---	---	---	---	---	---	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-6	TOG	B	T	E	X	1,2-DCE	OTHER	MC	1,1,1-TCA	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	---	---	---	---	---	CCAS
TB	06-26-89	NA	NA	NA	ND<50	---	ND<0.1	ND<0.1	ND<1.0	ND<1.0	ND<0.1	---	---	---	---	---	CCAS
TB	10-13-89	NA	NA	NA	ND<500	---	ND<5	ND<5	ND<5	ND<5	ND<5	---	---	---	---	---	CCAS
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	---	CCAS
TB	09-28-90	NA	NA	NA	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	CCAS
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
TB	09/04/91	NA	NA	NA	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	SAL
RINSATE	09-27-90	NA	NA	NA	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
RINSATE	01-03-91	NA	NA	NA	ND<50	---	ND<0.5	ND<0.5	ND<0.5	0.6	---	---	---	---	---	---	SAL
RINSATE	04/12/91	NA	NA	NA	ND<50	---	ND<0.5	0.6	ND<0.5	0.5	---	---	---	---	---	---	SAL
RINSATE	09/04/91	NA	NA	NA	ND<50	---	ND<0.5	0.6	ND<0.5	0.5	---	---	---	---	---	---	SAL

## EXPLANATION OF ABBREVIATIONS:

TPH-6	:Total Petroleum Hydrocarbons as Gasoline (EPA method 8015 modified)	TB	:Trip Blank
TOG	:Total Oil & Grease (EPA Method 503D & 503E)	D	:Duplicate
B	:Benzene (EPA method 8020 or 8240)	BTEL	:BTEL Laboratory
T	:Toluene (EPA method 8020 or 8240)	BC	:Brown & Caldwell Laboratory
E	:Ethylbenzene (EPA method 8020 or 8240)	SAL	:Superior Analytical Laboratory
X	:Xylenes (EPA method 8020 or 8240)	CCAS	:CCAS Laboratory
1,2-DCEa	:1,2-Dichloroethane	PACE	:PACE Labs
MC	:Methylene Chloride	*	:Probable laboratory contamination.
OTHER	:Carbon Disulfide(5,13) Vinyl Chloride (3,1)	**	:Not sampled due to insufficient water in well.
TCA	:1,1,1-Trichloroethane	***	:0.01 feet L-PH measured.
1,1-DCA	:1,1-Dichloroethane	****	:Seen observed.
PCE	:Tetrachloroethane	*****	:Diluted 1:10.
---	:Not Analyzed/Not Measured	ND!	:Not detected at various detection limits, (See laboratory reports).
NA	:Not Applicable/Not Available	14G	:Grab sample.
ND	:Not Detected	0	:Insufficient water in well for EPA 8010 analysis, only 1 and 1/2 40-ml VDA's sampled.

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).

**APPENDIX A**

**OFFICIAL LABORATORY RESULTS AND  
CHAIN OF CUSTODY FORMS**





# Superior Precision Analytical, Inc.

1555 Burke, Unit 1 • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-9520

SEP 24 1991

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

LABORATORY NO.: 12321  
CLIENT: Alton Geoscience  
CLIENT JOB NO.: 310284

DATE RECEIVED: 09/06/91  
DATE REPORTED: 09/19/91

Page 1 of 2

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
12321- 1	T.B.	09/04/91	09/13/91
12321- 2	RIN.	09/04/91	09/13/91
12321- 3	C-3	09/04/91	09/13/91
12321- 4	C-10	09/04/91	09/13/91
12321- 5	C-18	09/04/91	09/13/91
12321- 6	C-5	09/04/91	09/16/91
12321- 7	C-8	09/04/91	09/13/91
12321- 8	C-17	09/04/91	09/16/91
12321- 9	C-17D	09/04/91	09/13/91
12321-10	C-14	09/04/91	09/13/91

Laboratory Number:	12321 1	12321 2	12321 3	12321 4	12321 5
--------------------	------------	------------	------------	------------	------------

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	ND<50	64*	ND<50	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
TOLUENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
ETHYL BENZENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
XYLENES:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5

Laboratory Number:	12321 6	12321 7	12321 8	12321 9	12321 10
--------------------	------------	------------	------------	------------	-------------

ANALYTE LIST	Amounts/Quantitation Limits (ug/l)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	140	5800	4100	110000
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	ND<0.5	1.8	ND<5	ND<5	2800
TOLUENE:	ND<0.5	4.7	27	21	11000
ETHYL BENZENE:	ND<0.5	0.8	49	36	1300
XYLENES:	ND<0.5	4.8	79	61	13000



# Superior Precision Analytical, Inc.

1555 Burke, Unit 1 • San Francisco, California 94124 • (415) 617 2081 / fax (415) 821-7123

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

LABORATORY NO.: 12434  
CLIENT: Alton Geoscience  
CLIENT JOB NO.: 310284

DATE RECEIVED: 10/07/91  
DATE REPORTED: 10/17/91

Page 1 of 2

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
12434- 1	C-7	10/07/91	10/14/91

Laboratory Number: 12434  
1

ANALYTE LIST	Amounts/Quantitation Limits (ug/l)
OIL AND GREASE:	NA
TPH/GASOLINE RANGE:	4700
TPH/DIESEL RANGE:	NA
BENZENE:	170
TOLUENE:	1.9
ETHYL BENZENE:	97
XYLENES:	59



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

A N A L Y S I S   F O R   T O T A L   P E T R O L E U M   H Y D R O C A R B O N S

Page 2 of 2  
QA/QC INFORMATION  
SET: 12321

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: 07/23/91

SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Water: 0.5ug/l  
Standard Reference: 06/13/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	07/23/91	200ng	98/82	18	59-121
Benzene	06/13/91	200ng	86/85	1.2	70-125
Toluene	06/13/91	200ng	88/87	0.6	74-116
Ethyl Benzene	06/13/91	200ng	91/90	1.1	75-120
Total Xylene	06/13/91	600ng	94/93	0.9	75-119

\* Gasoline range concentration reported. A non-standard gasoline pattern was observed in the chromatogram.

Richard Srna, Ph.D.

*Emily A. N...*  
Laboratory Director



# Superior Precision Analytical, Inc.

1555 Burke. Unit 1 • San Francisco, California 94174 • (415) 647-7081 / Fax (415) 821 7123

## 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 2 of 2  
QA/QC INFORMATION  
SET: 12434

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: 07/23/91

SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Water: 0.5ug/l  
Standard Reference: 06/13/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	07/23/91	200ng	81/86	7.0	59-121
Benzene	06/13/91	200ng	81/84	3.7	70-125
Toluene	06/13/91	200ng	78/81	3.8	74-116
Ethyl Benzene	06/13/91	200ng	80/83	3.7	75-120
Total Xylene	06/13/91	600ng	82/85	4.2	75-119

Richard Srna, Ph.D.

*Cecilia G. Jorgensen (for)*  
Laboratory Director



# Superior Precision Analytical, Inc.

1555 Burke, Unit 1 • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

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

LABORATORY NO.: 12321-3  
CLIENT: Alton Geoscience  
JOB NO.: 310284

DATE SAMPLED: 09/04/91  
DATE RECEIVED: 09/06/91  
DATE ANALYZED: 09/17/91

EPA SW-846 METHOD 8010  
HALOGENATED VOLATILE ORGANICS  
SAMPLE: C-3

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 = 74 % :MS/MSD RPD = < 2 %

Richard Srna, Ph.D.

*Orny A. D. Srna*  
Laboratory Director



# Superior Precision Analytical, Inc.

1555 Burke, Unit 1 • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

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

LABORATORY NO.: 12321-6  
CLIENT: Alton Geoscience  
JOB NO.: 310284

DATE SAMPLED: 09/04/91  
DATE RECEIVED: 09/06/91  
DATE ANALYZED: 09/17/91

EPA SW-846 METHOD 8010  
HALOGENATED VOLATILE ORGANICS  
SAMPLE: C-5

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 = 74 % :MS/MSD RPD = < 2 %

Richard Srna, Ph.D.

*Gregory A. N. [Signature]*  
Laboratory Director



# Superior Precision Analytical, Inc.

1555 Burke, Unit 1 • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

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

LABORATORY NO.: 12434-1  
CLIENT: Alton Geoscience  
JOB NO.: 310284

DATE SAMPLED: 10/07/91  
DATE RECEIVED: 10/07/91  
DATE ANALYZED: 10/15/91

EPA SW-846 METHOD 8010  
HALOGENATED VOLATILE ORGANICS  
SAMPLE: C-7

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	24
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
2-Chloroethyl vinyl ether	5	ND

MDL = Method Detection Limit

ug/l = parts per billion (ppb)

QA/QC Summary: Daily Standard RPD = <15

MS/MSD average recovery = 100 % :MS/MSD RPD = < 1 %

Richard Srna, Ph.D.

*Cecilia G. Joaquin (for)*  
Laboratory Director



# Superior Precision Analytical, Inc.

1555 Burke, Unit 1 • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

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

LABORATORY NO.: 12321-7  
CLIENT: Alton Geoscience  
JOB NO.: 310284

DATE SAMPLED: 09/04/91  
DATE RECEIVED: 09/06/91  
DATE ANALYZED: 09/17/91

EPA SW-846 METHOD 8010  
HALOGENATED VOLATILE ORGANICS  
SAMPLE: C-8

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 = 74 % :MS/MSD RPD = < 2 %

Richard Srna, Ph.D.

*Gregory A. Newcomb*  
Laboratory Director





# Superior Precision Analytical, Inc.

1555 Burke, Unit 1 • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

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

LABORATORY NO.: 12321-4  
CLIENT: Alton Geoscience  
JOB NO.: 310284

DATE SAMPLED: 09/04/91  
DATE RECEIVED: 09/06/91  
DATE ANALYZED: 09/17/91

EPA SW-846 METHOD 8010  
HALOGENATED VOLATILE ORGANICS  
SAMPLE: C-10

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 = 74 % :MS/MSD RPD = < 2 %

Richard Srna, Ph.D.

*Ernyi A. Nardolillo*  
Laboratory Director



# Superior Precision Analytical, Inc.

1555 Burke, Unit 1 • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

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

LABORATORY NO.: 12321-8  
CLIENT: Alton Geoscience  
JOB NO.: 310284

DATE SAMPLED: 09/04/91  
DATE RECEIVED: 09/06/91  
DATE ANALYZED: 09/19/91

EPA SW-846 METHOD 8010  
HALOGENATED VOLATILE ORGANICS  
SAMPLE: C-17

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 = 80 % :MS/MSD RPD = < 2 %

Richard Srna, Ph.D.

*Ernie A. Nino*  
Laboratory Director



# Superior Precision Analytical, Inc.

1555 Burke, Unit 1 • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

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

LABORATORY NO.: 12321-9  
CLIENT: Alton Geoscience  
JOB NO.: 310284

DATE SAMPLED: 09/04/91  
DATE RECEIVED: 09/06/91  
DATE ANALYZED: 09/19/91

EPA SW-846 METHOD 8010  
HALOGENATED VOLATILE ORGANICS  
SAMPLE: C-17D

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 = 80 % :MS/MSD RPD = < 2 %

Richard Srna, Ph.D.

*Richard Srna*  
Laboratory Director