



Chevron U.S.A. Products Company

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

93 MAR 17 11 20

Operations

March 8, 1993

478

Ms. Jennifer Eberle
Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94621

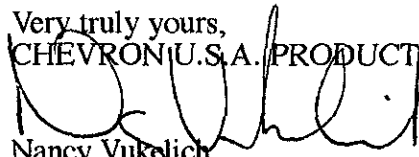
**Re: Former Chevron Service Station #9-4816
301 14th Street, Oakland**

Dear Ms. Eberle:

Enclosed we are forwarding the Quarterly Ground Water Monitoring report dated January 18, 1993, received in this office March 8, 1993, prepared by our consultant Alton Geoscience for the above referenced site. As indicated in the report, ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline and BTEX. Benzene was detected in monitor well C-4 only at a concentration of 5 ppb. Separate-phase hydrocarbons were observed in monitor wells C-1, C-2, C-3, C-5 and CR-1 at measured thicknesses of sheen, sheen, 1.32, sheen and .21-feet, respectively. Depth to ground water was measured at approximately 22-feet below grade, and the direction of flow is to the north. Elevation data from wells MW-10 and C-6 were not used in calculating gradient direction. These wells were not accessible during the December sampling event. *They were sampled on 1-21-93*

Chevron will continue to monitor this site and report findings on a quarterly basis and monitor the effectiveness of the soil vapor extraction system.

If you have any questions or comments, please do not hesitate to contact me at (510) 842-9581.

Very truly yours,
CHEVRON U.S.A. PRODUCTS COMPANY

Nancy Vukelich
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Rich Hiatt, RWQCB
Mr. Tom Berry, Weiss Associates
Mr. R.W. Cosby, 225/1936
Ms B.C. Owen
File (9-4816Q6)

Ms. Beth D. Castleberry
Ware & Freidenrich
400 Hamilton Avenue
Palo Alto, CA 94301-1825



January 18, 1993

Ms. Nancy Vukelich
Chevron U.S.A. Products Company
Post Office Box 5004
San Ramon, California 94583-0804

31-0557

Subject: Quarterly Ground Water Monitoring Report
Former Chevron Station No. 9-4816
301 14th Street
Oakland, California

Dear Ms. Vukelich:

In accordance with our agreement, Alton Geoscience transmits this Quarterly Ground Water Monitoring and Sampling Report for Chevron Station No. 9-4816, 301 14th Street, Oakland, California. Figure 1 shows the site location.

Monitoring and sampling of the ground water monitoring wells was performed on December 1, 1992, 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, each well was checked for liquid-phase hydrocarbons or sheen. The depth to ground water and, if present, free product was measured in each well from the top of casing using an electronic interface probe with 0.01 foot tolerance.

Ground water samples were collected after more than 3 casing volumes of ground water was purged from each well. Each sample was collected using a clean bailer. Ground water samples were then decanted into the appropriate clean sample containers for delivery to a California-certified laboratory following proper preservation and chain of custody procedures. Purged ground water was transferred to a 600-gallon, trailer-mounted, steel tank (California Department of Health Services-registered), and delivered as non-hazardous to the Chevron Richmond Terminal for treatment.

Ms. Nancy Vukelich
January 18, 1993
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31+0557

SAMPLING AND ANALYTICAL RESULTS

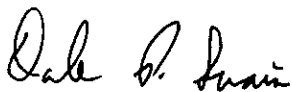
The results of the monitoring and laboratory analyses of ground water samples for this quarter, as well as the results of previous monitoring and sampling events, are summarized in Table 1. Based on the previous wellhead elevation survey data and depth to water measurements collected during this monitoring event, ground water elevations and the general ground water gradient direction at this site are presented in Figure 2.

Liquid-phase hydrocarbons were observed in monitoring wells C-1, C-2, C-3, C-5 and CR-1. Manual bailing was terminated in March of 1992 when a soil vapor extraction system began operating at this site. The official laboratory reports and chain of custody records are included in Appendix A.

Please call Dale Swain at (510) 734-8134 if you have any questions regarding this report.

Sincerely,

ALTON GEOSCIENCE,


Dale P. Swain
Staff Scientist


Robert E. Logan R. G. 5088
Manager, Northern California Operations

wp94816ds

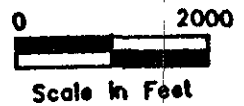


FIGURE 1: VICINITY MAP

FORMER CHEVRON SERVICE
 STATION NO. 9-4816
 301 14th STREET
 OAKLAND, CALIFORNIA

PROJECT NO. 31-0557

SOURCE: GEOSTRATEGIES, INC.



ALTON GEOSCIENCE
 Pleasanton, California

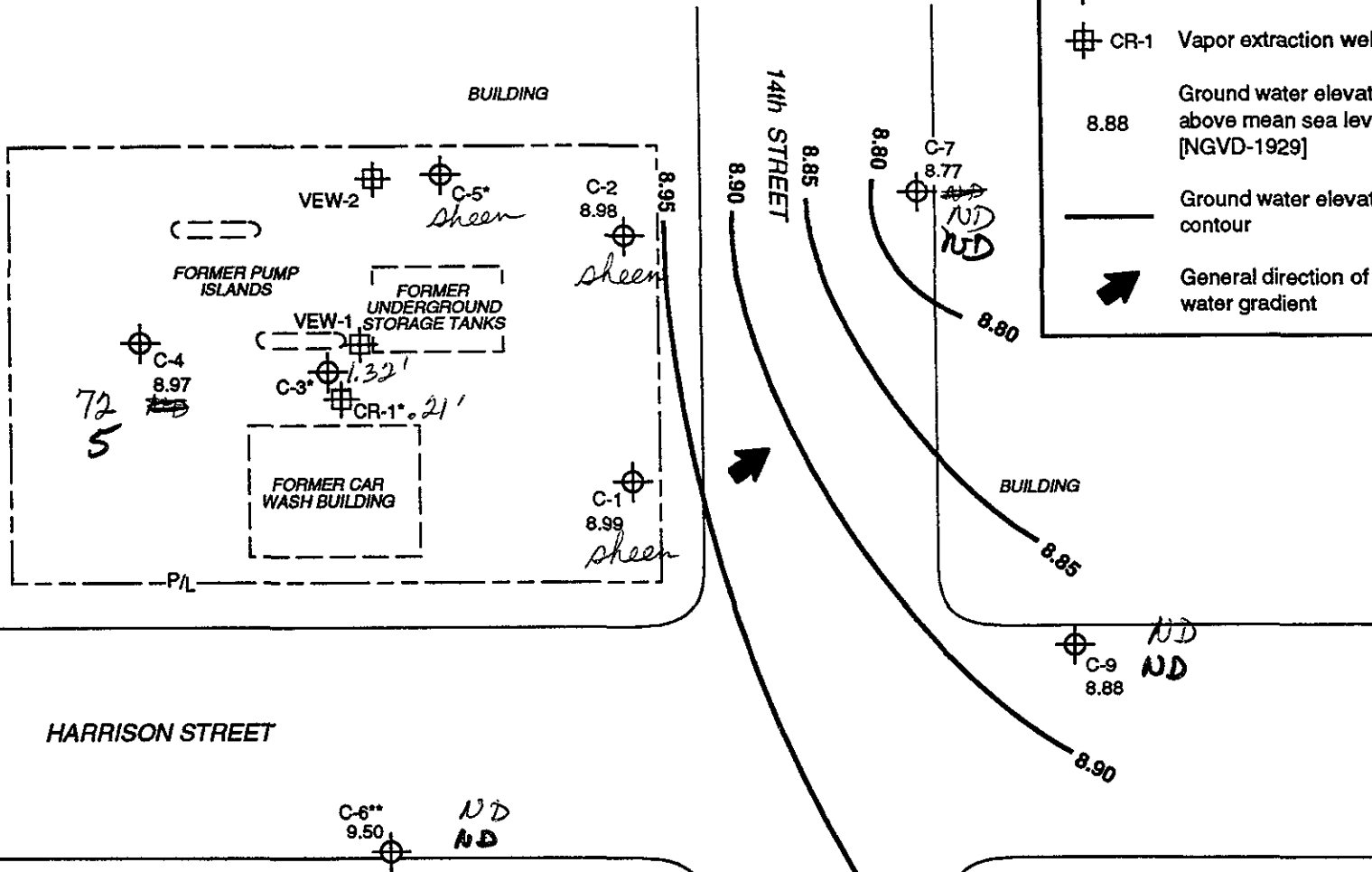


N

0 40
SCALE (FEET)

LEGEND

- C-9 Ground water monitoring well
- CR-1 Vapor extraction well
- 8.88 Ground water elevation in feet above mean sea level [NGVD-1929]
- Ground water elevation contour
- General direction of ground water gradient



MW-10**
10.32

ND
ND

HARRISON STREET

C-6**
9.50 ND
ND

BUILDING

C-8
8.95
3400
ND

**GROUND WATER ELEVATION
CONTOUR MAP**
December 1, 1992 & January 21, 1993

Former Chevron Station No. 9-4816
301 14th Street
Oakland, California

FIGURE 2

NOTES:
 Contours are interpretive based on fluid level measurements collected December 1, 1992 and January 21, 1993.
 Contour interval = 0.05 foot.
 * = Ground water elevation data not available (see Table 1).
 ** = Elevation data not used due to length of time between field events.

**ALTON
GEOSCIENCE**
Pleasanton, California

Source: Geostrategies, Inc.

red = FP
YPH-g
benz

Table 1
 Summary of Results of Ground Water Sampling
 Former Chevron Service Station No. 9-4816
 301 14th Street, Oakland, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	TOP OF WELL BOX ELEVATION	DEPTH TO WATER	FREE PRODUCT THICKNESS	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
C-1	06/13/90	30.82	21.97	---	8.85	26000	2800	5100	400	2600	NA
C-1	10/30/90	30.82	21.72	---	9.10	67000	6700	8700	900	5000	NA
C-1	01/04/91	30.82	21.84	---	8.98	---	---	---	---	---	NA
C-1	01/07/91	30.82	21.95	---	8.87	100000	12000	20000	1600	11000	NA
C-1	01/11/91	30.82	21.99	---	8.83	---	---	---	---	---	NA
C-1	02/15/91	30.82	22.12	---	8.70	---	---	---	---	---	NA
C-1	05/02/91	30.82	22.06	---	8.76	59000	5600	7700	700	5200	SAL
C-1	05/30/91	30.82	22.04	---	8.78	---	---	---	---	---	NA
C-1	06/13/91	30.82	21.80	---	9.02	---	---	---	---	---	NA
C-1	07/12/91	30.82	22.01	---	8.81	---	---	---	---	---	NA
C-1	08/07/91	30.82	---	---	---	7900	2000	150	240	330	SAL
C-1	09/24/91	30.82	---	---	---	---	---	---	---	---	NA
C-1	10/18/91	30.87 ***	22.42	---	8.45	---	---	---	---	---	NA
C-1	11/05/91	30.87	22.36	---	8.51	8700	1500	1200	150	580	SAL
C-1	01/06/92	30.87	22.34	---	8.53	---	---	---	---	---	NA
C-1	01/16/92	30.87	22.28	0.03	8.61	---	---	---	---	---	NA
C-1	01/22/92	30.87	22.43	0.09	8.51	---	---	---	---	---	NA
C-1	01/28/92	30.87	22.28	0.02	8.61	---	---	---	---	---	NA
C-1	02/04/92	30.87	22.24	0.01	8.64	---	---	---	---	---	NA
C-1	02/14/92	30.87	22.16	sheen	8.71	---	---	---	---	---	NA
C-1	02/21/92	30.87	22.07	sheen	8.80	---	---	---	---	---	NA
C-1	02/25/92	30.87	21.95	sheen	8.92	---	---	---	---	---	NA
C-1	03/06/92	30.87	21.85	0.00	9.02	---	---	---	---	---	NA
C-1	03/19/92	30.87	20.54	0.00	10.33	---	---	---	---	---	NA
C-1	05/06/92	30.87	21.39	sheen	9.48	---	---	---	---	---	NA
C-1	08/31/92	30.87	21.51	sheen	9.36	---	---	---	---	---	NA
C-1	12/01/92	30.87	21.88	sheen	8.99	---	---	---	---	---	NA

Table 1
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Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/MONITORING	TOP OF WELL BOX ELEVATION	DEPTH TO WATER	FREE PRODUCT THICKNESS	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
C-2	06/13/90	30.91	22.08	---	8.83	15000	1100	1900	260	1700	NA
C-2	10/30/90	30.91	21.81	---	9.10	13000	2800	1900	240	1000	NA
C-2	01/04/91	30.91	21.90	---	9.01	---	---	---	---	---	NA
C-2	01/07/91	30.91	22.03	---	8.88	15000	3400	2500	340	1400	NA
C-2	01/11/91	30.91	22.13	---	8.78	---	---	---	---	---	NA
C-2	02/15/91	30.91	22.36	---	8.55	---	---	---	---	---	NA
C-2	05/02/91	30.91	22.44	---	8.47	19000	4500	3200	660	2900	SAL
C-2D	05/02/91	30.91	22.44	---	8.47	21000	3200	2200	410	2000	SAL
C-2	05/30/91	30.91	22.44	---	8.47	---	---	---	---	---	NA
C-2	06/13/91	30.91	---	---	---	---	---	---	---	---	NA
C-2	07/12/91	30.91	22.57	0.01	8.35	---	---	---	---	---	NA
C-2	08/07/91	30.91	---	0.11	---	---	---	---	---	---	NA
C-2	09/24/91	30.91	---	---	---	---	---	---	---	---	NA
C-2	10/18/91	30.72 ***	22.34	0.07	8.44	---	---	---	---	---	NA
C-2	11/05/91	30.72	22.26	0.04	8.49	---	---	---	---	---	NA
C-2	01/06/92	30.72	22.25	---	8.47	---	---	---	---	---	NA
C-2	01/16/92	30.72	22.16	0.01	8.57	---	---	---	---	---	NA
C-2	01/22/92	30.72	22.25	0.02	8.49	---	---	---	---	---	NA
C-2	01/28/92	30.72	22.18	0.01	8.55	---	---	---	---	---	NA
C-2	02/04/92	30.72	22.15	0.01	8.58	---	---	---	---	---	NA
C-2	02/14/92	30.72	22.09	0.00	8.63	---	---	---	---	---	NA
C-2	02/21/92	30.72	22.06	sheen	8.66	---	---	---	---	---	NA
C-2	02/25/92	30.72	21.96	0.00	8.76	---	---	---	---	---	NA
C-2	03/06/92	30.72	21.80	0.00	8.92	---	---	---	---	---	NA
C-2	03/19/92	30.72	21.12	0.00	9.60	---	---	---	---	---	NA
C-2	05/06/92	30.72	21.30	sheen	9.42	---	---	---	---	---	NA
C-2	08/31/92	30.72	21.43	sheen	9.29	---	---	---	---	---	NA
C-2	12/01/92	30.72	21.74	sheen	8.98	---	---	---	---	---	NA

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 Former Chevron Service Station No. 9-4816
 301 14th Street, Oakland, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	TOP OF WELL BOX ELEVATION	DEPTH TO WATER	FREE PRODUCT THICKNESS	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
C-3	06/13/90	---	24.75	3.00	---	---	---	---	---	---	NA
C-3	10/30/90	---	23.81	2.50	---	---	---	---	---	---	NA
C-3	01/04/91	---	24.15	2.70	---	---	---	---	---	---	NA
C-3	01/07/91	---	24.13	2.50	---	---	---	---	---	---	NA
C-3	01/11/91	---	24.35	2.66	---	---	---	---	---	---	NA
C-3	02/15/91	---	24.70	2.93	---	---	---	---	---	---	NA
C-3 *	05/02/91	---	---	---	---	---	---	---	---	---	NA
C-3	05/30/91	---	24.08	2.49	---	---	---	---	---	---	NA
C-3	06/13/91	---	---	---	---	---	---	---	---	---	NA
C-3	07/12/91	---	---	---	---	---	---	---	---	---	NA
C-3	08/07/91	---	---	2.64	---	---	---	---	---	---	NA
C-3	09/24/91	---	---	---	---	---	---	---	---	---	NA
C-3	10/18/91	30.79 ***	24.44	2.50	---	#	---	---	---	---	NA
C-3	11/05/91	30.79	24.31	2.46	---	#	---	---	---	---	NA
C-3	01/06/92	30.79	24.25	2.39	---	#	---	---	---	---	NA
C-3	01/16/92	30.79	24.02	2.29	---	#	---	---	---	---	NA
C-3	01/22/92	30.79	24.10	2.28	---	#	---	---	---	---	NA
C-3	01/28/92	30.79	24.06	2.29	---	#	---	---	---	---	NA
C-3	02/04/92	30.79	24.04	2.31	---	#	---	---	---	---	NA
C-3	02/14/92	30.79	23.93	2.31	---	#	---	---	---	---	NA
C-3	02/21/92	30.79	24.61	3.05	---	#	---	---	---	---	NA
C-3	02/25/92	30.79	23.69	2.23	---	#	---	---	---	---	NA
C-3	03/06/92	30.79	23.69	2.23	---	#	---	---	---	---	NA
C-3	03/19/92	30.79	22.98	2.26	---	#	---	---	---	---	NA
C-3	05/06/92	30.79	22.74	1.93	---	#	---	---	---	---	NA
C-3	08/31/92	30.79	21.77	1.93	---	#	---	---	---	---	NA
C-3	12/01/92	30.79	22.63	1.32	---	#	---	---	---	---	NA

Table 1
 Summary of Results of Ground Water Sampling
 Former Chevron Service Station No. 9-4816
 301 14th Street, Oakland, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	TOP OF WELL BOX ELEVATION	DEPTH TO WATER	FREE PRODUCT THICKNESS	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
C-4	06/13/90	31.42	22.73	---	8.69	440	47	47	3	61	NA
C-4	10/30/90	31.42	22.48	---	8.94	210	72	13	1	11	NA
C-4	01/04/91	31.42	22.64	---	8.78	---	---	---	---	---	NA
C-4	01/07/91	31.42	22.74	---	8.68	890	100	130	15	88	NA
C-4	01/11/91	31.42	22.81	---	8.61	---	---	---	---	---	NA
C-4	02/15/91	31.42	22.55	---	8.87	---	---	---	---	---	NA
C-4	05/02/91	31.42	22.54	---	8.88	330	140	11	2	9	SAL
C-4	05/30/91	31.42	22.55	---	8.87	---	---	---	---	---	NA
C-4	06/13/91	31.42	---	---	---	---	---	---	---	---	NA
C-4	07/12/91	31.42	---	---	---	---	---	---	---	---	NA
C-4	08/07/91	31.42	---	---	---	1500	400	79	13	61	SAL
C-4	09/24/91	31.42	---	---	---	---	---	---	---	---	NA
C-4	10/18/91	31.20 ***	22.97	---	8.23	---	---	---	---	---	NA
C-4	11/05/91	31.20	22.90	---	8.30	310	130	11	2.6	6.8	SAL
C-4	01/06/92	31.20	22.84	---	8.36	---	---	---	---	---	NA
C-4	01/16/92	31.20	22.75	---	8.45	---	---	---	---	---	NA
C-4	01/22/92	31.20	22.81	---	8.39	---	---	---	---	---	NA
C-4	01/28/92	31.20	22.77	---	8.43	---	---	---	---	---	NA
C-4	02/04/92	31.20	22.72	---	8.48	300	100	26	2.4	14	SAL
C-4	02/14/92	31.20	22.58	---	8.62	---	---	---	---	---	NA
C-4	02/21/92	31.20	22.60	---	8.60	---	---	---	---	---	NA
C-4	02/25/92	31.20	22.50	---	8.70	---	---	---	---	---	NA
C-4	03/06/92	31.20	---	---	---	---	---	---	---	---	NA
C-4	03/19/92	31.20	21.75	---	9.45	---	---	---	---	---	NA
C-4	05/06/92	31.20	21.82	---	9.38	200	26	ND<0.5	1.2	1.4	SAL
C-4	08/31/92	31.20	21.88	---	9.32	190	20	1.2	1.7	1.7	SAL
C-4	12/01/92	31.20	22.23	---	8.97	72 ✓	5 ✓	0.5 ✓	ND<0.5 ✓	1.3 ✓	SAL

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C-5	10/30/90	31.25	22.11	---	9.14	20000	2500	3300	320	2200	NA
C-5	01/04/91	31.25	22.55	0.31	---	---	---	---	---	---	NA
C-5	01/07/91	31.25	22.36	0.04	9.26	---	---	---	---	---	NA
C-5	01/11/91	31.25	23.08	0.73	---	---	---	---	---	---	NA
C-5	02/15/91	31.25	24.70	2.74	---	---	---	---	---	---	NA
C-5	05/02/91	31.25	22.02	2.00	---	---	---	---	---	---	NA
C-5	05/30/91	31.25	24.78	2.70	---	---	---	---	---	---	NA
C-5	06/13/91	31.25	24.70	2.77	---	---	---	---	---	---	NA
C-5	07/12/91	31.25	25.10	2.72	---	---	---	---	---	---	NA
C-5	08/07/91	31.25	---	2.69	---	---	---	---	---	---	NA
C-5	09/24/91	31.25	---	---	---	---	---	---	---	---	NA
C-5	10/18/91	30.16 ***	24.71	2.51	---	#	---	---	---	---	NA
C-5	11/05/91	30.16	24.47	2.29	---	#	---	---	---	---	NA
C-5	01/06/92	30.16	24.68	---	---	#	---	---	---	---	NA
C-5	01/16/92	30.16	24.03	1.82	---	#	---	---	---	---	NA
C-5	01/22/92	30.16	24.01	1.67	---	#	---	---	---	---	NA
C-5	01/28/92	30.16	23.79	1.46	---	#	---	---	---	---	NA
C-5	02/04/92	30.16	23.81	1.54	---	#	---	---	---	---	NA
C-5	02/14/92	30.16	22.79	1.59	---	#	---	---	---	---	NA
C-5	02/21/92	30.16	24.40	2.22	---	#	---	---	---	---	NA
C-5	02/25/92	30.16	23.25	1.03	---	#	---	---	---	---	NA
C-5	03/06/92	30.16	23.20	1.19	---	#	---	---	---	---	NA
C-5	## 03/19/92	30.16	---	---	---	---	---	---	---	---	NA
C-5	## 05/06/92	30.16	---	---	---	---	---	---	---	---	NA
C-5	!! 08/31/92	30.16	21.86	sheen	---	---	---	---	---	---	NA
C-5	!! 12/01/92	30.16	22.24	sheen	---	---	---	---	---	---	NA

Table 1
 Summary of Results of Ground Water Sampling
 Former Chevron Service Station No. 9-4816
 301 14th Street, Oakland, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	TOP OF WELL BOX ELEVATION	DEPTH TO WATER	FREE PRODUCT THICKNESS	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
C-6	05/02/91	30.41	21.84	---	8.57	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-6	05/30/91	30.41	---	---	---	---	---	---	---	---	NA
C-6	07/12/91	30.41	22.86	---	7.55	---	---	---	---	---	NA
C-6 **	08/07/91	30.41	---	---	---	---	---	---	---	---	NA
C-6	09/24/91	30.41	21.88	---	8.53	---	---	---	---	---	NA
C-6	10/18/91	30.41	22.18	---	8.23	---	---	---	---	---	NA
C-6	11/05/91	30.41	22.14	---	8.27	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-6	01/06/92	30.41	22.09	---	8.32	---	---	---	---	---	NA
C-6	01/16/92	30.41	22.04	---	8.37	---	---	---	---	---	NA
C-6	01/22/92	30.41	22.04	---	8.37	---	---	---	---	---	NA
C-6	01/28/92	30.41	21.99	---	8.42	---	---	---	---	---	NA
C-6	02/04/92	30.41	21.94	---	8.47	ND<50	ND<0.5	ND<0.5	ND<0.5	0.6	SAL
C-6	02/14/92	30.41	21.87	---	8.54	---	---	---	---	---	NA
C-6	02/21/92	30.41	21.83	---	8.58	---	---	---	---	---	NA
C-6	02/25/92	30.41	21.71	---	8.70	---	---	---	---	---	NA
C-6	03/06/92	30.41	21.53	---	8.88	---	---	---	---	---	NA
C-6	03/19/92	30.41	20.92	---	9.49	---	---	---	---	---	NA
C-6	05/06/92	30.41	21.02	---	9.39	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-6	08/31/92	30.41	21.14	---	9.27	80	ND<0.5	ND<0.5	ND<0.5	2.4	SAL
C-6	01/21/93 ✓	30.41	20.91	---	9.50	ND<50 ✓	ND<0.5 ✓	ND<0.5 ✓	ND<0.5 ✓	ND<0.5 ✓	SAL

Table 1
 Summary of Results of Ground Water Sampling
 Former Chevron Service Station No. 9-4816
 301 14th Street, Oakland, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/MONITORING	TOP OF WELL BOX ELEVATION	DEPTH TO WATER	FREE PRODUCT THICKNESS	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
C-7	05/02/91	30.56	21.81	---	8.75	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-7	05/30/91	30.56	---	---	---	---	---	---	---	---	NA
C-7	07/12/91	30.56	22.15	---	8.41	---	---	---	---	---	NA
C-7	08/07/91	30.56	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-7	09/24/91	30.56	21.53	---	9.03	---	---	---	---	---	NA
C-7	10/18/91	30.56	22.07	---	8.49	---	---	---	---	---	NA
C-7	11/05/91	30.56	22.01	---	8.55	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-7	01/06/92	30.56	22.03	---	8.53	---	---	---	---	---	NA
C-7	01/16/92	30.56	21.98	---	8.58	---	---	---	---	---	NA
C-7	01/22/92	30.56	22.05	---	8.51	---	---	---	---	---	NA
C-7	01/28/92	30.56	22.01	---	8.55	---	---	---	---	---	NA
C-7	02/14/92	30.56	21.94	---	8.62	---	---	---	---	---	NA
C-7	02/21/92	30.56	21.94	---	8.62	---	---	---	---	---	NA
C-7	02/25/92	30.56	21.82	---	8.74	---	---	---	---	---	NA
C-7	03/06/92	30.56	21.65	---	8.91	---	---	---	---	---	NA
C-7	03/19/92	30.56	20.92	---	9.64	---	---	---	---	---	NA
C-7	05/06/92	30.56	21.21	---	9.35	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-7	08/31/92	30.56	21.39	---	9.17	ND<50	ND<0.5	0.7	ND<0.5	0.9	SAL
C-7	12/01/92	30.56	21.79	---	8.77	ND<50 ✓	ND<0.5 ✓	ND<0.5 ✓	ND<0.5 ✓	0.9 ✓	SAL

Table 1
 Summary of Results of Ground Water Sampling
 Former Chevron Service Station No. 9-4816
 301 14th Street, Oakland, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	TOP OF WELL BOX ELEVATION	DEPTH TO WATER	FREE PRODUCT THICKNESS	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
C-8	05/02/91	30.12	21.24	---	8.88	5000	ND<0.5	17	140	470	SAL
C-8	05/30/91	30.12	---	---	---	---	---	---	---	---	NA
C-8	07/12/91	30.12	---	---	---	---	---	---	---	---	NA
C-8	08/07/91	30.12	---	---	---	6300	ND<0.5	28	100	120	SAL
C-8	09/24/91	30.12	21.33	---	8.79	---	---	---	---	---	NA
C-8	10/18/91	30.12	21.76	---	8.36	---	---	---	---	---	NA
C-8	11/05/91	30.12	21.70	---	8.42	5100	ND<0.5	20	92	74	SAL
C-8	01/06/92	30.12	21.73	---	8.39	---	---	---	---	---	NA
C-8	01/16/92	30.12	21.63	---	8.49	---	---	---	---	---	NA
C-8	01/22/92	30.12	21.70	---	8.42	---	---	---	---	---	NA
C-8	01/28/92	30.12	21.65	---	8.47	---	---	---	---	---	NA
C-8	02/04/92	30.12	21.62	---	8.50	5300	ND<2.5	2.5	97	61	SAL
C-8	02/14/92	30.12	21.53	---	8.59	---	---	---	---	---	NA
C-8	02/21/92	30.12	21.51	---	8.61	---	---	---	---	---	NA
C-8	02/25/92	30.12	21.39	---	8.73	---	---	---	---	---	NA
C-8	03/06/92	30.12	21.21	---	8.91	---	---	---	---	---	NA
C-8	03/19/92	30.12	20.57	---	9.55	---	---	---	---	---	NA
C-8	05/06/92	30.12	20.77	---	9.35	3700	ND<0.5	29	110	130	SAL
C-8	08/31/92	30.12	20.91	---	9.21	1100	1.3	2.0	31	48	SAL
C-8	12/01/92	30.12	21.17	---	8.95	3400 ✓	ND<0.5 ✓	19 ✓	140 ✓	290 ✓	SAL

whoops

Table 1
 Summary of Results of Ground Water Sampling
 Former Chevron Service Station No. 9-4816
 301 14th Street, Oakland, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	TOP OF WELL BOX ELEVATION	DEPTH TO WATER	FREE PRODUCT THICKNESS	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
C-9	05/02/91	30.15	21.27	---	8.88	ND<50	ND<0.5	ND<0.5	ND<0.5	0.8	SAL
C-9	05/30/91	30.15	---	---	---	---	---	---	---	---	NA
C-9	07/12/91	30.15	21.57	---	8.58	---	---	---	---	---	NA
C-9	08/07/91	30.15	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-9D	08/07/91	30.15	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-9	09/24/91	30.15	21.10	---	9.05	---	---	---	---	---	NA
C-9	10/18/91	30.15	21.67	---	8.48	---	---	---	---	---	NA
C-9	11/05/91	30.15	21.65	---	8.50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-9D	11/05/91	30.15	21.65	---	8.50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-9	01/06/92	30.15	21.65	---	8.50	---	---	---	---	---	NA
C-9	01/16/92	30.15	21.58	---	8.57	---	---	---	---	---	NA
C-9	01/22/92	30.15	21.65	---	8.50	---	---	---	---	---	NA
C-9	01/28/92	30.15	21.63	---	8.52	---	---	---	---	---	NA
C-9	02/04/92	30.15	21.58	---	8.57	ND<50	ND<0.5	0.7	ND<0.5	0.7	SAL
C-9D	02/04/92	30.15	21.58	---	8.57	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-9	02/14/92	30.15	21.54	---	8.61	---	---	---	---	---	NA
C-9	02/21/92	30.15	21.52	---	8.63	---	---	---	---	---	NA
C-9	02/25/92	30.15	21.39	---	8.76	---	---	---	---	---	NA
C-9	03/06/92	30.15	21.21	---	8.94	---	---	---	---	---	NA
C-9	03/19/92	30.15	20.47	---	9.68	---	---	---	---	---	NA
C-9	05/06/92	30.15	20.81	---	9.34	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-9	08/31/92	30.15	20.97	---	9.18	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
C-9	12/01/92	30.15	21.27	---	8.88	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL

Table 1
 Summary of Results of Ground Water Sampling
 Former Chevron Service Station No. 9-4816
 301 14th Street, Oakland, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	TOP OF WELL BOX ELEVATION	DEPTH TO WATER	FREE PRODUCT THICKNESS	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
CR-1	10/30/90	---	23.81	2.50	---	---	---	---	---	---	NA
CR-1	01/04/91	---	24.08	2.70	---	---	---	---	---	---	NA
CR-1	01/07/91	---	23.30	3.00	---	---	---	---	---	---	NA
CR-1	01/11/91	---	24.24	2.64	---	---	---	---	---	---	NA
CR-1	02/15/91	---	24.72	2.92	---	---	---	---	---	---	NA
CR-1 *	05/02/91	---	---	---	---	---	---	---	---	---	NA
CR-1	05/30/91	---	23.07	2.42	---	---	---	---	---	---	NA
CR-1	06/13/91	---	---	---	---	---	---	---	---	---	NA
CR-1	07/12/91	---	---	---	---	---	---	---	---	---	NA
CR-1	08/07/91	---	---	2.69	---	---	---	---	---	---	NA
CR-1	09/24/91	---	---	---	---	---	---	---	---	---	NA
CR-1	10/18/91	30.17 ***	23.75	2.50	---	#	---	---	---	---	NA
CR-1	11/05/91	30.17	23.64	2.43	---	#	---	---	---	---	NA
CR-1	01/06/92	30.17	23.57	---	---	#	---	---	---	---	NA
CR-1	01/16/92	30.17	23.41	2.30	---	#	---	---	---	---	NA
CR-1	01/22/92	30.17	23.44	2.24	---	#	---	---	---	---	NA
CR-1	01/28/92	30.17	23.40	2.29	---	#	---	---	---	---	NA
CR-1	02/14/92	30.17	23.31	2.34	---	#	---	---	---	---	NA
CR-1	02/21/92	30.17	24.10	3.19	---	#	---	---	---	---	NA
CR-1	02/25/92	30.17	23.15	1.03	---	#	---	---	---	---	NA
CR-1 ##	03/06/92	30.17	---	---	---	---	---	---	---	---	NA
CR-1 ##	03/19/92	30.17	---	---	---	---	---	---	---	---	NA
CR-1 ##	05/06/92	30.17	---	---	---	---	---	---	---	---	NA
CR-1 !!	08/31/92	30.17	21.84	0.41	---	---	---	---	---	---	NA
CR-1 !!	12/01/92	30.17	22.06	0.21	---	---	---	---	---	---	NA
MW-10	01/21/93	31.59	21.27	---	10.32	ND<50 ✓	ND<0.5 ✓	ND<0.5 ✓	ND<0.5 ✓	ND<0.5 ✓	SAL

Table 1
 Summary of Results of Ground Water Sampling
 Former Chevron Service Station No. 9-4816
 301 14th Street, Oakland, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	TOP OF WELL BOX ELEVATION	DEPTH TO WATER	FREE PRODUCT THICKNESS	GROUND WATER ELEVATION	TPH-G	B	T	E	X	LAB
TB	05/02/91	NA	NA	NA	NA	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
TB	08/07/91	NA	NA	NA	NA	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
TB	11/05/91	NA	NA	NA	NA	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
TB	02/04/92	NA	NA	NA	NA	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
TB	05/06/92	NA	NA	NA	NA	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
TB	08/31/92	NA	NA	NA	NA	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
TB	12/01/92	NA	NA	NA	NA	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
RINSATE	08/07/91	NA	NA	NA	NA	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
RINSATE	11/05/91	NA	NA	NA	NA	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
RINSATE	02/04/92	NA	NA	NA	NA	ND<50	ND<0.5	1.1	ND<0.5	ND<0.5	SAL
RINSATE	05/06/92	NA	NA	NA	NA	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
RINSATE	08/31/92	NA	NA	NA	NA	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
RINSATE	12/01/92	NA	NA	NA	NA	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL

EXPLANATION OF ABBREVIATIONS:

TPH-G :Total Petroleum Hydrocarbons as Gasoline (EPA method 8015 modified)
 B :Benzene (EPA method 8020 or 8240)
 T :Toluene (EPA method 8020 or 8240)
 E :Ethylbenzene (EPA method 8020 or 8240)
 X :Xylenes (EPA method 8020 or 8240)
 --- :Not Analyzed/ Not Measured
 ND :Not Detected
 TB :Trip Blank
 D :Duplicate
 NA :Not Applicable/Not Available

* :Not monitored or sampled due to onsite excavation work
 ** :Car with flat tire parked over well, could not purge or sample.
 *** :Top of well box elevations resurveyed following excavation activities.
 # :Ground water elevation not computed for wells containing greater than 0.20 feet of free product.
 ## :Unable to access. Remediation equipment in monitoring well.
 ! :Unable to access. Standing water over well.
 !! :Monitoring wells need to be resurveyed.

Note: Top of well box and ground water elevations are expressed as feet above mean sea level (NGVD - 1929). Free product thickness expressed in feet.

Weekly product bailing discontinued on 3-19-92 by Nancy Vukelich of Chevron USA Products Company.

APPENDIX A
OFFICIAL LABORATORY RESULTS
AND
CHAIN OF CUSTODY FORMS



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

DEC 23 1992

Alton Geoscience
Attn: DALE SWAIN

Project 31-0557
Reported 12/16/92

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed	Matrix
87347- 1	TB-LB	12/01/92	12/14/92	Water
87347- 2	RIN	12/01/92	12/15/92	Water
87347- 3	C-9	12/01/92	12/14/92	Water
87347- 4	C-7	12/01/92	12/14/92	Water
87347- 5	C-4	12/01/92	12/14/92	Water
87347- 6	C-8	12/01/92	12/14/92	Water

RESULTS OF ANALYSIS

Laboratory Number: 87347- 1 87347- 2 87347- 3 87347- 4 87347- 5

	87347- 1	87347- 2	87347- 3	87347- 4	87347- 5
Gasoline:	ND<50	ND<50	ND<50	ND<50	72 ✓
Benzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	5.0 ✓
Toluene:	ND<0.5	0.6	ND<0.5	ND<0.5	0.5 ✓
Ethyl Benzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5 ✓
Xylenes:	ND<0.5	0.6	ND<0.5	ND<0.5	1.3 ✓
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L

Laboratory Number: 87347- 6

Gasoline:	3400 ✓
Benzene:	ND<0.5 ✓
Toluene:	19 ✓
Ethyl Benzene:	140 ✓
Xylenes:	290 ✓
Concentration:	ug/L



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

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: 87347

NA = ANALYSIS NOT REQUESTED

ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT

ug/L = parts per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:

Minimum Detection Limit in Water: 5000ug/L

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:

Minimum Quantitation Limit for Diesel in Water: 50ug/L

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:

Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE

Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	200 ng	94/88	7%	70-130
Benzene:	200 ng	91/91	0%	70-130
Toluene:	200 ng	95/95	0%	70-130
Ethyl Benzene:	200 ng	100/100	0%	70-130
Xylenes:	200 ng	97/99	2%	70-130

Richard Srna, Ph.D.
Nancy A. Nelson for
Laboratory Director



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1525

FEB 8 1993

Alton Geoscience
Attn: DALE SWAIN

Project 31-0557
Reported 02/04/93

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed	Matrix
87695- 1	TB-LB	01/21/93 ✓	01/30/93	Water
87695- 2	MW-10	01/21/93	01/30/93	Water
87695- 3	C-6	01/21/93	02/01/93	Water

RESULTS OF ANALYSIS

Laboratory Number: 87695- 1 87695- 2 87695- 3

MW 10 C6

Gasoline:	ND<50	ND<50	ND<50	✓
Benzene:	ND<0.5	ND<0.5	ND<0.5	✓
Toluene:	ND<0.5	ND<0.5	ND<0.5	✓
Ethyl Benzene:	ND<0.5	ND<0.5	ND<0.5	✓
Xylenes:	ND<0.5	ND<0.5	ND<0.5	✓
Concentration:	ug/L	ug/L	ug/L	



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229 1512 / fax (510) 229-1526

FEB 8 1993

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: 87695

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

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/L

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	88/87	1	70-130
Benzene:	82/77	7	70-130
Toluene:	100/95	6	70-130
Ethyl Benzene:	111/105	6	70-130
Xylenes:	109/103	6	70-130

Richard Srna, Ph.D.

Richard Srna (for)
Laboratory Director

Chevron U.S.A. Inc. P.O. BOX 5004 San Ramon, CA 94583 FAX (415)842-9591	Chevron Facility Number <u>Former SS # 9-4816</u> Facility Address <u>301 14th St. Oakland</u> Consultant Project Number <u>31-0557</u> Consultant Name <u>ALTON Geoscience</u> Address <u>5870 Stoneridge Dr., Ste 6. Pleasanton</u> Project Contact (Name) <u>Dale Swain</u> (Phone) <u>510-734-8134</u> (Fax Number) <u>734-8420</u>	Chevron Contact (Name) <u>Nancy Vukelich</u> DEC 2 + 1992 (Date) <u>510-842-9500</u> (Phone) Laboratory Name <u>SAL</u> Laboratory Release Number <u>3523000</u> Samples Collected by (Name) <u>Andrew Black</u> Collection Date <u>12-1-92</u> Signature <u>[Signature]</u>
--	---	--

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed										Remarks	
								BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Hydrocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)				
TB-LB	1	1	W	G	1210	HCL	Yes	X											Do NOT Bill for TB-LB Sample Please initial: _____ Samples stored in ice. _____ Appropriate containers _____ Samples preserved. _____ VOA's without headspace. _____ Comments: _____
RIN	2	1	W	G	1210	HCL	Y	X											
C-9	3	2	W	G	1216	HCL	Y	X											
C-7	4	2	W	G	1232	HCL	Y	X											
C-4	5	2	W	G	1252	HCL	Y	X											
C-8	6	2	W	G	1445	HCL	Y	X											

Relinquished By (Signature) <u>[Signature]</u>	Organization <u>ALTON</u>	Date/Time <u>12-4-92/1150</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>Express-1+</u>	Date/Time <u>12/4 1150</u>	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days <input checked="" type="radio"/> 10 Days As Contracted
Relinquished By (Signature) <u>[Signature]</u>	Organization <u>Express-1+</u>	Date/Time <u>12/4/1255</u>	Received By (Signature) _____	Organization _____	Date/Time _____	
Relinquished By (Signature) _____	Organization _____	Date/Time _____	Received For Laboratory By (Signature) <u>[Signature]</u>	Date/Time <u>1/10 12/4/91</u>		

Fax copy of Lab Report and COC to Chevron Contact: ~~X~~ No 87695 Chain-of-Custody-Record

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

Chevron Facility Number 9-4B16
Facility Address 301 14th St, Oakland
Consultant Project Number 31-0557
Consultant Name ALTON GEOSCIENCE
Address 5870 Stoneridge Dr., #6, Pleasanton
Project Contact (Name) Dale Swain
(Phone) (510) 734-8134 (Fax Number) (510) 734-8420

Chevron Contact (Name) _____
(Phone) (510) 842-9500
Laboratory Name Superior Analytical
Laboratory Release Number _____
Sample Collected by (Name) Jon Vail
Collection Date 1-21-93
Signature [Signature]

Sample Number	Lab Sample Number	Number of Containers	Media S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Leak (Yes or No)	Analysis To Be Performed												<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Do Not Bill Chevron For TB-LB analysis Analyze ↓ </div>						
								BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (8520)	Petroleum Hydrocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Inerts Ca, Cr, Fe, Zn, Ni (8040 or 81)	FEB 8 1993										
TB-LB		1	W	G	0815	HCl	Y	X																		
AW-10		2	W	G	1146	↓	Y	X																		
C-6		2	W	G	1106	↓	Y	X																		

Please Initial: E7
 Samples Stored in Ice.
 Appropriate Containers
 Samples Preserved
 TV's
 Other: _____

Retrieved By (Signature) <u>[Signature]</u>	Organization <u>ALTON</u>	Date/Time <u>1035 1/25/93</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>Express-IT</u>	Date/Time <u>1035 1/25/93</u>
Retrieved By (Signature) <u>[Signature]</u>	Organization <u>Express-IT</u>	Date/Time <u>1318 1/25/93</u>	Received By (Signature) _____	Organization _____	Date/Time _____
Retrieved By (Signature) _____	Organization _____	Date/Time _____	Received For Laboratory By (Signature) <u>[Signature]</u>	Organization _____	Date/Time <u>1318 1/25/93</u>

Turn Around Time (Circle Choice)

- 24 Hrs.
- 48 Hrs.
- 5 Days
- 10 Days**
- As Contracted