



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

92 OCT 21 11 2: 40

October 19, 1992

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

478

Re: Former Chevron Service Station #9-4816
301 14th Street, Oakland 94612

Dear Ms. Eberle:

Enclosed we are forwarding the Quarterly Ground Water Monitoring report dated October 13, 1992, 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 and C-8 only at concentrations of 20 and 1.3 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, 1.93, sheen and .41-feet, respectively. Depth to ground water was measured at approximately 21-feet below grade, and the direction of flow is to the west.

As stated in my letter to you on October 5, 1992, Chevron has instructed its consultant to perform monthly ground water elevation measurements for three (3) consecutive months, with a quarterly monitoring frequency resuming after this period. These three (3) months will provide useful data to evaluate the water level data accuracy and variations. If ground water continues to flow in a westerly direction while the system continues to operate, this will support that the change in ground water gradient is due to the operation of the soil vapor extraction system. Observed changes in the ground water gradient are likely the result of the decreased soil pore pressure created by the on-site soil vapor extraction system.

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 Hielt, RWQCB
Mr. Tom Berry, Weiss Associates
Mr. R.W. Cosby, 225/1936
Ms B.C. Owen
File (9-4816Q5)

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

Why isn't MW-10 shown on this map? It should've been sampled as well.
on 6-23-92, mw was ND for TPH-g + BTEX (It was sampled after install.)

October 13, 1992

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 August 31, 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.

↓
copy of manifest?

Ms. Nancy Vukelich
October 13, 1992
Page 2

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.

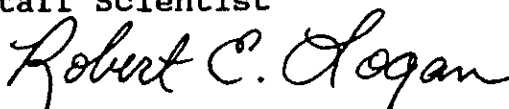
Liquid-phase hydrocarbons were observed in monitoring wells C-1, C-2, C-3, C-5 and CR-1. Manual bailing was terminated in March of 1992 when a soil vapor extraction system began operating at this site. The official laboratory reports and chain of custody records are included in Appendix A.

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.



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

Table 1
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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-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

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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-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

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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

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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-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

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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-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

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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

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

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

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

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
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

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



Alton Geoscience
Attn: DALE SWAIN

Project 31-0557
Reported 09/09/92

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
86605- 1	TB-LB	08/31/92	09/08/92 Water
86605- 2	RIN	08/31/92	09/08/92 Water
86605- 3	C-9	08/31/92	09/08/92 Water
86605- 4	C-7	08/31/92	09/08/92 Water
86605- 5	C-6	08/31/92	09/08/92 Water
86605- 6	C-4	08/31/92	09/04/92 Water
86605- 7	C-8	08/31/92	09/04/92 Water

RESULTS OF ANALYSIS

Laboratory Number: 86605- 1 86605- 2 86605- 3 86605- 4 86605- 5

Gasoline:	ND<50	ND<50	ND<50 ✓	ND<50 ✓	80 ✓
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	0.7	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	0.9	2.4

Concentration: ug/L ug/L ug/L ug/L ug/L

Laboratory Number: 86605- 6 86605- 7

Gasoline:	190 ✓	1100 ✓
Benzene:	20	1.3
Toluene:	1.2	2.0
Ethyl Benzene:	1.7	31
Xylenes:	1.7	48

Concentration: ug/L ug/L

SEP 24 1992



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: 86605

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	95/95	0	70-130
Benzene:	200 ng	91/84	8	70-130
Toluene:	200 ng	98/91	8	70-130
Ethyl Benzene:	200 ng	100/93	8	70-130
Xylenes:	200 ng	97/90	8	70-130

Richard Srna, Ph.D.

Delmina V. Langit (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 # 9-4816</u> Facility Address <u>301 14TH ST. OAKLAND, CA</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> (Phone) <u>510-842-9500</u> Laboratory Name <u>SAL</u> Laboratory Release Number <u>3523000</u> Samples Collected by (Name) <u>Andrew Block</u> Collection Date <u>8-31-92</u> Signature <u>[Signature]</u>
--	---	--

SEP 2 4 1992

Sample Number	Lab Sample Number	Number of Containers	Media S = Soil W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analytes To Be Performed											Remarks				
								BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)								
TB-LB	1	1	W	G	1310	HCL	Yes	X															DO NOT BILL for TB-LB sample
RIN	2	1	W	G	1310	HCL	Y	X															
C-9	3	2	W	G	1315	HCL	Y	X															
C-7	4	2	W	G	1333	HCL	Y	X															
C-6	5	2	W	G	1352	HCL	Y	X															
C-4	6	2	W	G	1420	HCL	Y	X															
C-8	7	2	W	G	1515	HCL	Y	X															

Please Initial: _____

Samples Stored in ice. _____

Appropriate containers _____

Samples preserved _____

VOA's without headspace _____

Comments: _____

Relinquished By (Signature) <u>[Signature]</u>	Organization <u>ALTON</u>	Date/Time <u>9-1-92</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>Exp-it</u>	Date/Time <u>9-1-92</u> <u>9:36</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>Exp-it</u>	Date/Time <u>9-1-92</u> <u>10:40</u>	Received By (Signature) _____	Organization _____	Date/Time _____	
Relinquished By (Signature) _____	Organization _____	Date/Time _____	Received For Laboratory By (Signature) <u>[Signature]</u>	Date/Time <u>9/1/92</u> <u>10:40</u>		

COC-1.0MW.03.91/HCH