



Chevron U.S.A. Inc.

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

Marketing Department

January 2, 1992

Mr. Paul Smith
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 Mr. Smith:

Enclosed we are forwarding the Quarterly Ground Water Monitoring report dated December 19, 1991, prepared by our consultant Alton Geoscience for the above referenced site. As indicated in the report, groundwater samples collected were analyzed for total petroleum hydrocarbons as gasoline and BTEX. Benzene was detected in monitor wells C-1 and C-4 at concentrations of 1500 and 130 ppb, respectively. Separate-phase hydrocarbons were observed in monitor wells C-2, C-3, C-5 and CR-1 at measured thicknesses of .04, 2.46, 2.29 and 2.43 feet, respectively. Purging of the phase separated hydrocarbons will continue until a dedicated recovery system can be installed. We have instructed Alton Geoscience to increase the purging frequency from monthly to weekly.

A draft corrective action work plan has been forwarded to the property owners for their review. Upon receipt of their comments, the work plan will be formalized and forwarded to you for your review and concurrence. Chevron will continue to examine all monitor wells for the presence of separate phase hydrocarbons on a weekly basis and perform quarterly chemical analysis. Monitor wells which exhibit separate phase hydrocarbons are bailed during this inspection.

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. INC.


Nancy Vukelich
Environmental Engineer

Enclosure

cc: Mr. Eddy So, RWQCB
Ms. Fatima Lelic, Weiss Associates
Ms B.C. Owen
File (9-4816Q2)

Ms. Beth Castleberry
WARE & FREIDENRICH
400 Hamilton Avenue
Palo Alto, CA 94301

91-0111-9-1007 26

DEC 18 '91 T.L.H.

December 19, 1991

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

310-557

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 November 5, 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, 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 stored onsite in DOT-approved, 55-gallon drums pending removal by Erickson Inc., a licensed hauler. The purged ground water was transported as non-hazardous to Gibson Oil/ Pilot Petroleum of Redwood City, California for recycling.

Ms. Nancy Vukelich
December 19, 1991
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SAMPLING AND ANALYTICAL RESULTS

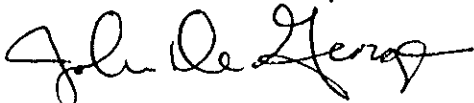
The results of the monitoring and laboratory analyses of ground water samples for this quarter, as well as the results of previous monitoring and sampling events, are summarized in Table 1. Based on the previous wellhead elevation survey data and depth to water measurements collected during this monitoring 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-2, C-3, C-5 and CR-1. Approximately 4.5 gallons of free product, in total, was manually recovered from the wells. The official laboratory reports and chain of custody records are included in Appendix A.

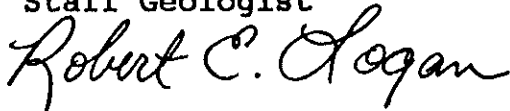
Please call John De George at (510) 682-1582 if you have any questions regarding this report.

Sincerely,

ALTON GEOSCIENCE,



John De George
Staff Geologist



Robert E. Logan R. G. 5088
Manager, Concord Operations

wp94816jd

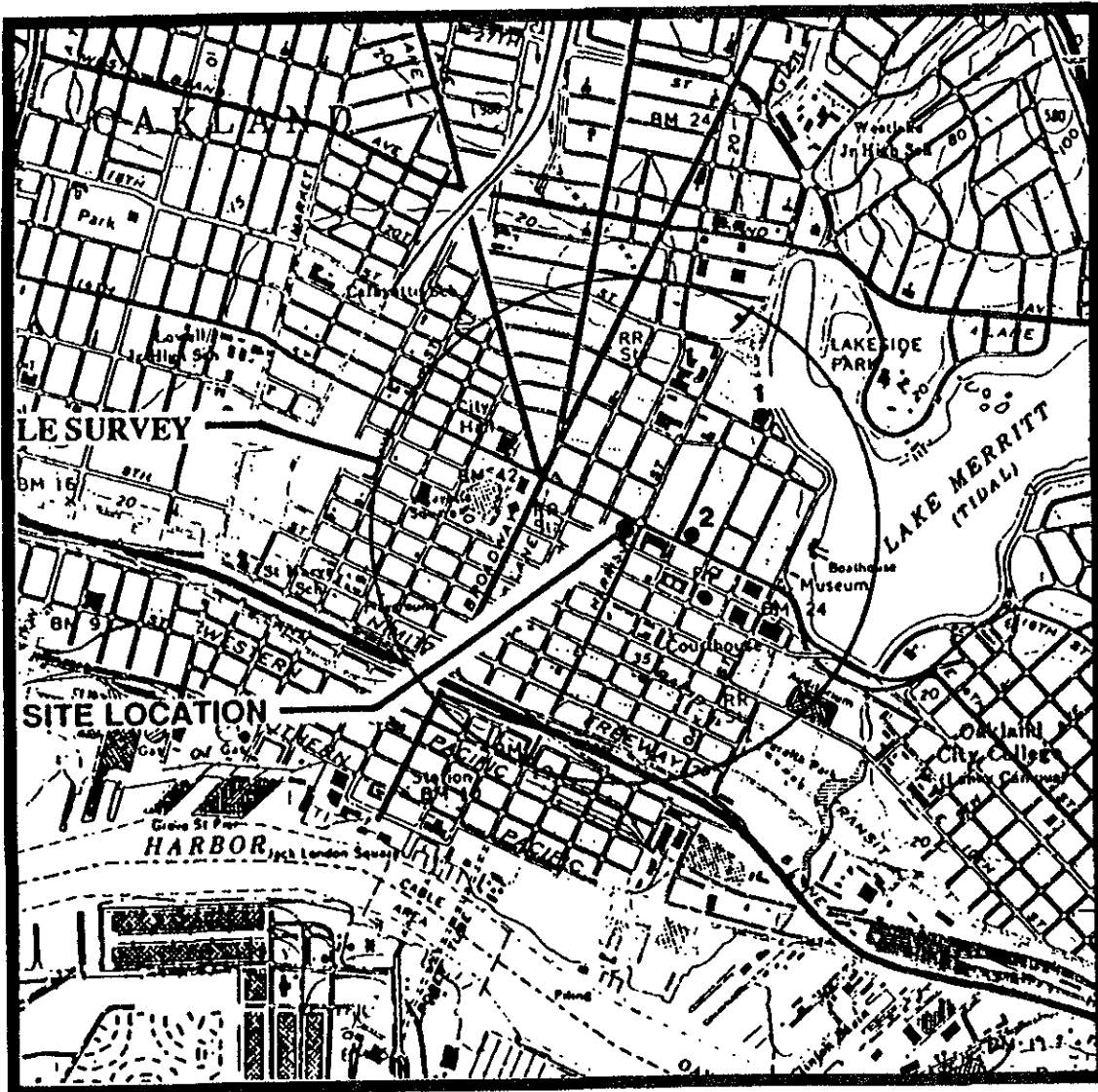


FIGURE 1: VICINITY MAP

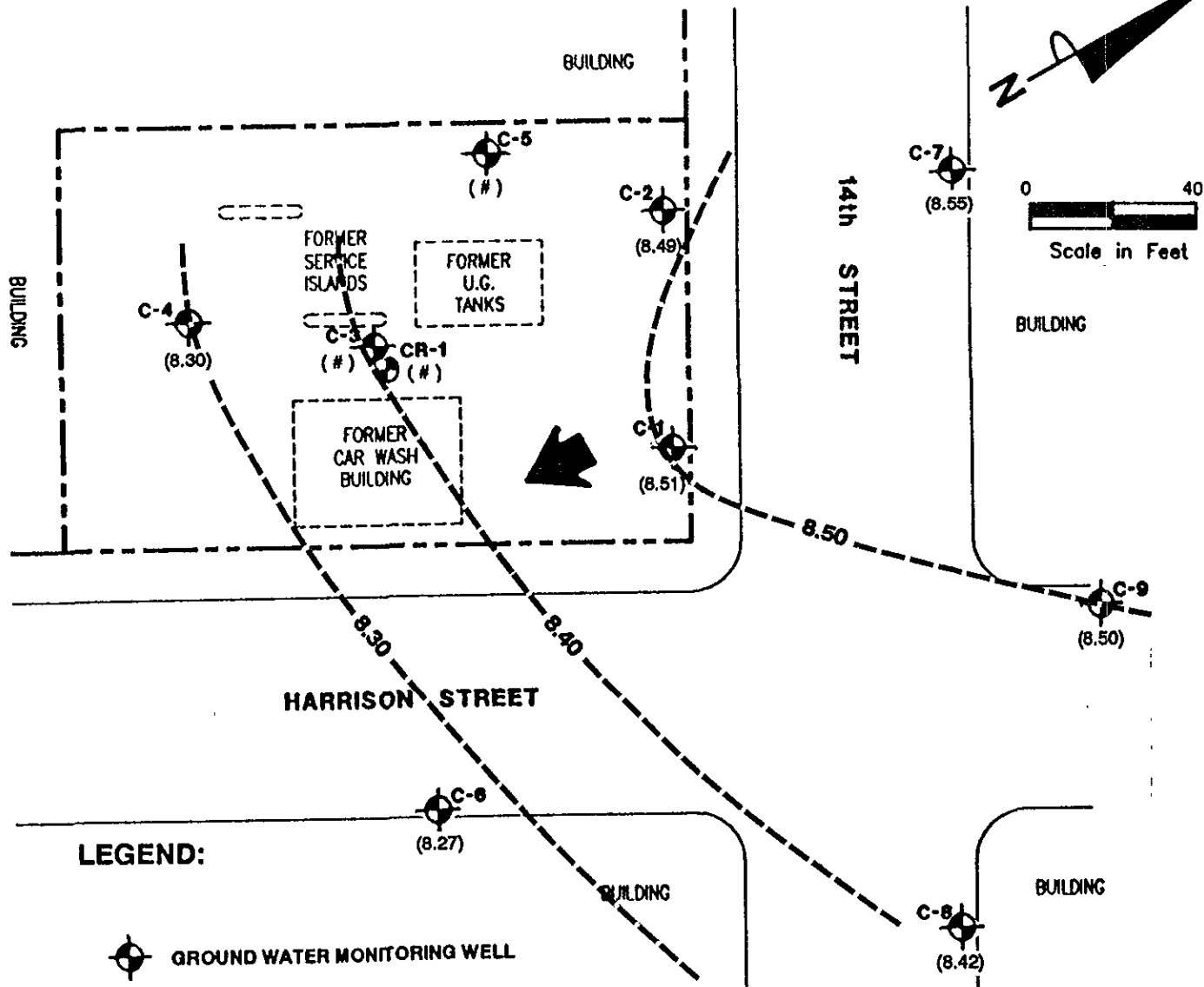
FORMER CHEVRON SERVICE
 STATION NO. 4816
 301 14th STREET
 OAKLAND, CALIFORNIA



PROJECT NO. 310-557

SOURCE: GEOSTRATEGIES, INC.

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



LEGEND:

GROUND WATER MONITORING WELL

RECOVERY WELL

(8.51) GROUND WATER ELEVATION
(FEET ABOVE MEAN SEA LEVEL [NGVD-1929])

(#) GROUND WATER ELEVATION DATA NOT AVAILABLE
(SEE TABLE 1)

GENERAL GROUND WATER GRADIENT DIRECTION

NOTE:

1. CONTOUR LINES ARE INTERPRETIVE BASED ON FLUID LEVELS IN MONITORING WELLS MEASURED ON 11/5/91.

FIGURE 2.

GROUND WATER ELEVATION CONTOUR MAP

11-5-91

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



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

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-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

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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-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-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

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-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-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-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

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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-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-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
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

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
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

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.

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.

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

AG: 15

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

LABORATORY NO.: 84320
CLIENT: Alton Geoscience
CLIENT JOB NO.: 310-557

DATE RECEIVED: 11/06/91
DATE REPORTED: 11/13/91

Page 1 of 2

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
84320- 1	TB	11/05/91	11/12/91
84320- 2	RIN	11/05/91	11/12/91
84320- 3	C-6	11/05/91	11/12/91
84320- 4	C-7	11/05/91	11/13/91
84320- 5	C-8	11/05/91	11/12/91
84320- 6	C-9	11/05/91	11/12/91
84320- 7	C-9D	11/05/91	11/12/91
84320- 8	C-1	11/05/91	11/12/91
84320- 9	C-4	11/05/91	11/12/91

Laboratory Number:	84320	84320	84320	84320	84320
	1	2	3	4	5

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	ND<50	ND<50	ND<50	5100
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	20
ETHYL BENZENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	92
XYLENES:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	74

Laboratory Number:	84320	84320	84320	84320
	6	7	8	9

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)			
OIL AND GREASE:	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	ND<50	8700	310
TPH/DIESEL RANGE:	NA	NA	NA	NA
BENZENE:	ND<0.5	ND<0.5	1500	130
TOLUENE:	ND<0.5	ND<0.5	1200	11
ETHYL BENZENE:	ND<0.5	ND<0.5	150	2.6
XYLENES:	ND<0.5	ND<0.5	580	6.8



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: 84320

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 5520F:
Minimum Detection Limit in Water: 5000ug/L

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

EPA-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L
Standard Reference: 10/04/91

SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/L
Standard Reference: 10/11/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	10/04/91	200 ng	119/119	0	70-130
Benzene	10/11/91	200 ng	96/99	4	70-130
Toluene	10/11/91	200 ng	92/94	2	70-130
Ethyl Benzene	10/11/91	200 ng	91/92	2	70-130
Total Xylenes	10/11/91	200 ng	96/98	2	70-130

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Laboratory Director

