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

Marketing Department

September 26, 1991

Mr. Paul Smith
Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94621

Re: Former Chevron Service Station #9-0020
1633 Harrison, Oakland

Dear Mr. Smith:

Enclosed we are forwarding the Quarterly Ground Water Sampling Report dated September 20, 1991, prepared by our consultant Sierra Environmental Services for the above referenced site. As indicated in the report, ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline, BTEX and halogenated volatile organics. Benzene was detected in monitor wells MW-5, MW-6 and MW-7 at concentrations of 3.0, 6.1, and 220 ppb, respectively. Negligible concentrations of VOC's were detected in all monitor wells. Based on the uneven distribution of solvents and the highest concentrations in the upgradient wells, it is highly suspected that the solvents are emanating from an off-site source. Depth to ground water was measured at approximately 20-feet below grade, and the direction of flow fluctuates from the northeast to east.

The installation of the offsite downgradient well has been temporarily placed on hold while permits are being secured for installation of an off-site upgradient well. We anticipate installing these wells by month end. The data collected from these wells will assist in our assessment of an appropriate remedial approach and assist in assessing solvent responsibility.

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. Eddie So, RWQCB-Bay Area
Ms. B.C. Owen
File (9-0020-1)

SIERRA
Environmental Services

September 20, 1991

Nancy Vukelich
Chevron USA
P.O. Box 5004
San Ramon, CA 94583

Re: Former Chevron Service Station #9-0020
1633 Harrison Street
Oakland, California
SES Project #1-199-04

Dear Ms. Vukelich:

This report presents the results of the quarterly ground water sampling at Former Chevron Service Station #9-0020, located at 1633 Harrison Street in Oakland, California (Figure 1, Appendix A). Twelve wells, MW-1 through MW-12, were sampled (Figure 2, Appendix A).

On August 27, 1991, SES personnel visited the site. Free-phase hydrocarbons were not present in any of the site wells. Water level data are shown in Table 1 (Appendix B) and a ground water elevation contour map is included as Figure 2 (Appendix A).

Ground water samples were collected on August 27, 1991 in accordance with SES Standard Operating Procedure - Ground Water Sampling (Appendix C). All analyses were performed by Superior Precision Analytical, Inc. of San Francisco, California. Analytic results for ground water are presented in Tables 2 and 3 (Appendix B). The chain of custody document and laboratory analytic reports are included in Appendix D. SES is not responsible for laboratory omissions or errors.

Thank you for allowing us to provide services to Chevron. Please call Jeanne Wahler if you have any questions.

Sincerely,
Sierra Environmental Services

J.F. Leising
Environmental Technician

Roger Greensfelder
Registered Geologist #003011

REGISTERED GEOLOGIST
R. W. GREENSFELDER
No. 003011
STATE OF CALIFORNIA

JL/RG:ly
19904QM.SE1

Appendices
A - Figures
B - Tables
C - SES Standard Operating Procedure
D - Chain of Custody Document and Laboratory Analytic Reports

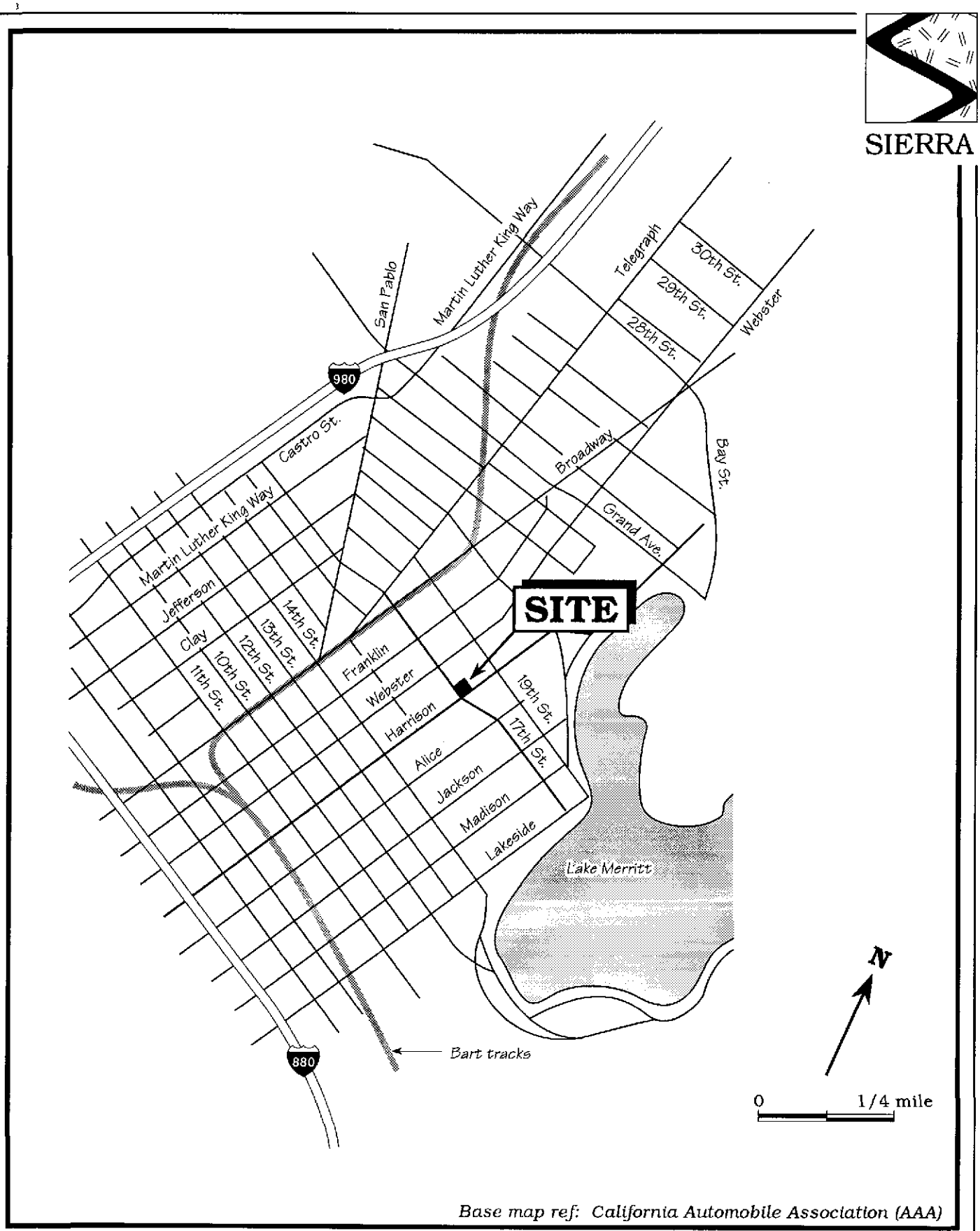

Figure 1. Site Location Map - Chevron Service Station #9-0020, 17th Street and Harrison Street, Oakland, California

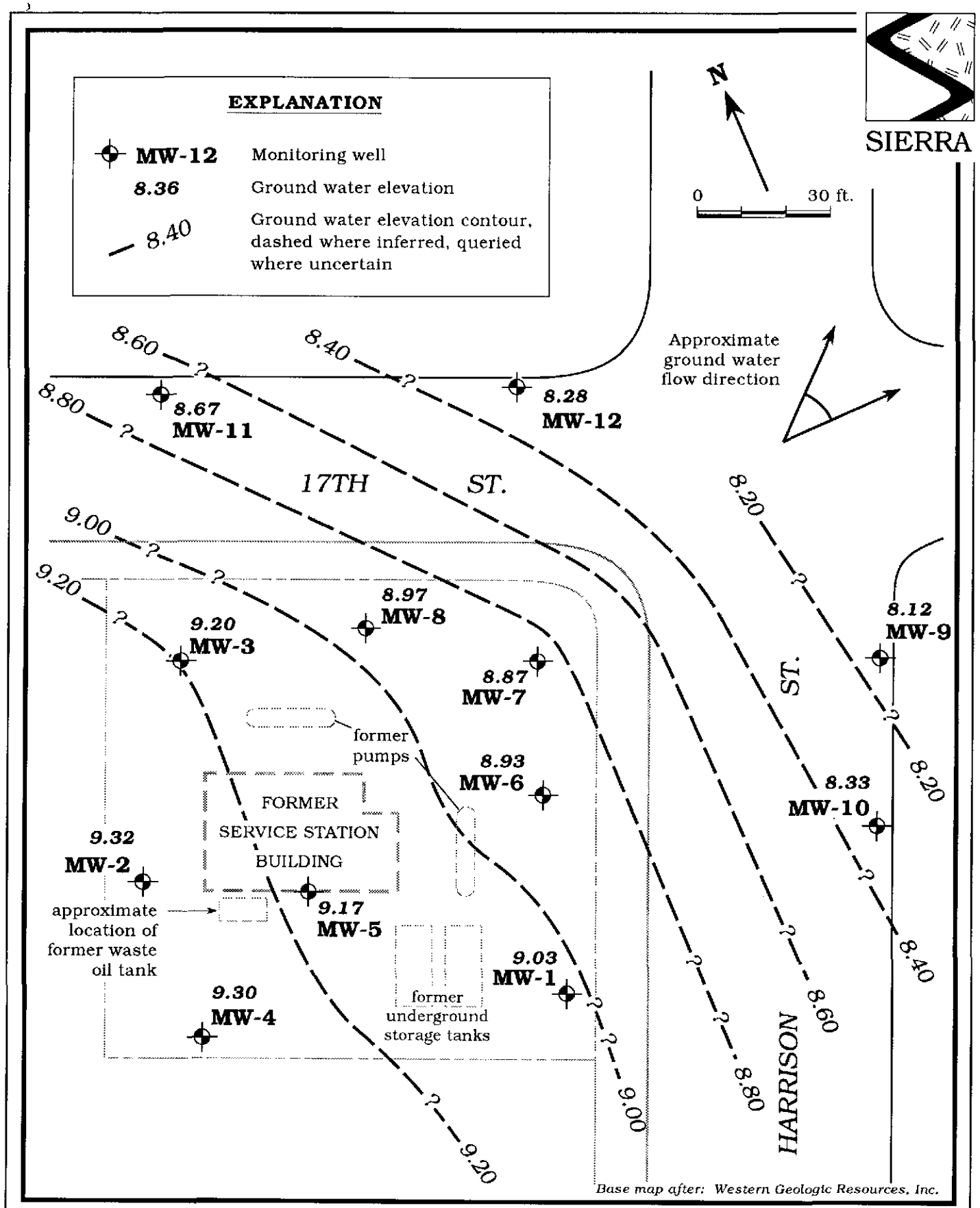

Figure 2. Monitoring Well Locations and Ground Water Elevation Contour Map – August 27, 1991 – Chevron Service Station #9-0020, 17th Street and Harrison Street, Oakland, California

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Table 1. Water Level Data and Well Construction Details - Former Chevron Service Station #9-0020, 1633 Harrison Street, Oakland, California

Well ID	Date Measured	DTW (ft)	TOC (ft)	GWE (msl)	Product Thickness* (ft)	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval
						<----------*feet below grade*---------->		
MW-1	11/3/88	20.40	29.82	9.42	---	19 - 29	17 - 29	0 - 17
	2/2/89	20.71		9.11	---			
	4/23/89	20.34		9.48	---			
	7/28/89	20.58		9.24	---			
	10/30/89	20.52		9.30	---			
	1/9/90	20.77		9.05	---			
	4/18/90	20.95		8.87	---			
	6/22/90	21.00		8.82	---			
	8/9/90	20.94		8.88	---			
	11/13/90	20.98		8.84	---			
	5/15/91	20.64		9.18	---			
	8/27/91	**20.79**		**9.03**	**0**			
MW-2	11/3/88	20.89	30.59	9.70	---	21 - 28.5	19.5 - 28.5	0 - 19.5
	2/2/89	21.21		9.38	---			
	4/23/89	20.82		9.77	---			
	7/28/89	21.02		9.57	---			
	10/30/89	20.96		9.63	---			
	1/9/90	21.25		9.34	---			
	4/18/90	21.53		9.06	---			
	6/22/90	21.57		9.02	---			
	8/9/90	21.55		9.04	---			
	11/13/90	21.54		9.05	---			
	5/15/91	21.15		9.44	---			
	8/27/91	**21.27**		**9.32**	**0**			

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Table 1. Water Level Data and Well Construction Details - Former Chevron Service Station #9-0020, 1633 Harrison Street, Oakland, California (continued)

Well ID	Date Measured	DTW (ft)	TOC (ft)	GWE (msl)	Product Thickness* (ft)	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval
						<----------*feet below grade*---------->		
MW-3	11/3/88	20.54	30.09	9.55	---	22 - 32	20 - 32	0 - 20
	2/2/89	20.85		9.24	---			
	4/23/89	20.43		9.66	---			
	7/28/89	20.64		9.45	---			
	10/30/89	20.61		9.48	---			
	1/9/90	20.88		9.21	---			
	4/18/90	21.15		8.94	---			
	6/22/90	21.20		8.89	---			
	8/9/90	21.18		8.91	---			
	11/13/90	21.15		8.94	---			
	5/15/91	20.91		9.18	---			
	8/27/91	**20.89**		**9.20**	**0**			
MW-4	4/23/89	21.33	31.17	9.84	---	19 - 33.5	18.5 - 33.5	0 - 18.5
	7/28/89	21.58		9.59	---			
	10/30/89	21.54		9.63	---			
	1/9/90	21.82		9.35	---			
	4/18/90	22.09		9.08	---			
	6/22/90	22.12		9.05	---			
	8/9/90	22.11		9.06	---			
	11/13/90	22.10		9.07	---			
	5/15/91	21.71		9.46	---			
	8/27/91	**21.87**		**9.30**	**0**			
MW-5	4/23/89	20.62	30.28	9.66	---	22 - 32	21 - 32	0 - 21
	7/28/89	20.86		9.42	---			
	10/30/89	20.82		9.46	---			
	1/9/90	21.07		9.21	---			
	4/18/90	21.35		8.93	---			
	6/22/90	21.38		8.90	---			
	8/9/90	21.36		8.92	---			
	11/13/90	21.35		8.93	---			
	5/15/91	21.29		8.99	---			
	8/27/91	**21.11**		**9.17**	**0**			

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Table 1. Water Level Data and Well Construction Details - Former Chevron Service Station #9-0020, 1633 Harrison Street, Oakland, California (continued)

Well ID	Date Measured	DTW (ft)	TOC (ft)	GWE (msl)	Product Thickness* (ft)	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval
						<----------*feet below grade*---------->		
MW-6	4/23/89	20.05	29.46	9.41	---	19 - 26	18.5 - 26	0 - 18.5
	7/28/89	20.30		9.16	---			
	10/30/89	20.32		9.14	---			
	1/9/90	20.51		8.95	---			
	4/18/90	20.72		8.74	---			
	6/22/90	20.77		8.69	---			
	8/9/90	20.74		8.72	---			
	11/13/90	20.75		8.71	---			
	5/15/91	20.61		8.85	---			
	8/27/91	**20.53**		**8.93**	**0**			
MW-7	4/23/89	18.99	29.01	10.02	---	18.5 - 27	17.5 - 27	0 - 17.5
	7/28/89	19.94		9.07	---			
	10/30/89	19.97		9.04	---			
	1/9/90	20.15		8.86	---			
	4/18/90	20.37		8.64	---			
	6/22/90	20.40		8.61	---			
	8/9/90	20.38		8.63	---			
	11/13/90	20.41		8.60	---			
	5/15/91	20.47		8.54	---			
	8/27/91	**20.14**		**8.87**	**0**			
MW-8	4/23/89	20.14	29.57	9.43	---	18.5 - 26	17.5 - 26	0 - 17.5
	7/28/89	20.37		9.20	---			
	10/30/89	20.32		9.25	---			
	1/9/90	20.60		8.97	---			
	4/18/90	20.87		8.70	---			
	6/22/90	20.34		9.23	---			
	8/9/90	20.89		8.68	---			
	11/13/90	20.86		8.71	---			
	5/15/91	20.49		9.08	---			
	8/27/91	**20.60**		**8.97**	**0**			

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Table 1. Water Level Data and Well Construction Details - Former Chevron Service Station #9-0020, 1633 Harrison Street, Oakland, California (continued)

Well ID	Date Measured	DTW (ft)	TOC (ft)	GWE (msl)	Product Thickness* (ft)	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval
						<----------*feet below grade*---------->		
MW-9	6/22/90	20.80	28.67	7.87	---	20 - 25	19.5 - 25	0 - 19.5
	8/9/90	20.74		7.93	---			
	11/13/90	20.78		7.89	---			
	5/15/91	20.48		8.19	---			
	8/27/91	**20.55**		**8.12**	**0**			
MW-10	6/22/90	20.48	28.60	8.12	---	18 - 24	17 - 24	0 - 17
	8/9/90	20.45		8.15	---			
	11/13/90	20.47		8.13	---			
	5/15/91	20.15		8.45	---			
	8/27/91	**20.27**		**8.33**	**0**			
MW-11	6/22/90	21.03	29.37	8.34	---	19 - 26	18.5 - 26	0 - 18.5
	8/9/90	21.02		8.35	---			
	11/13/90	20.93		8.44	---			
	5/15/91	20.61		8.76	---			
	8/27/91	**20.70**		**8.67**	**0**			
MW-12	6/22/90	20.45	28.43	7.98	---	18.5 - 26	17.5 - 26	0 - 17.5
	8/9/90	20.43		8.00	---			
	11/13/90	20.45		7.98	---			
	5/15/91	20.07		8.36	---			
	8/27/91	**20.15**		**8.28**	**0**			

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Table 1. Water Level Data and Well Construction Details - Former Chevron Service Station #9-0020, 1633 Harrison Street, Oakland, California (continued)

EXPLANATIONS:

DTW = Depth to water
TOC = Top of casing elevation
GWE = Ground water elevation
msl = Measurements referenced relative to mean sea level

NOTES:

Top of casing elevations were surveyed relative to mean sea level.

MW-1 through MW-12 well construction details are from October 26 and 27, 1988; April 12, 13, 14 and 19, 1989 and June 18, 19 and 20, 1990 boring logs by Western Geologic Resources, Inc., San Rafael, California.

* Product thickness measurements were made using an MMC flexi-dip interface probe. Product thickness information prior to May 15, 1991 was not available for inclusion in this report.

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Table 2. Analytic Results for Ground Water - Petroleum Hydrocarbons - Former Chevron Service Station #9-0020, 1633 Harrison Street, Oakland, California

Well ID	Date Sampled	Analytic Method	Analytic Lab	TPPH(G)	B	T	E	X	O&G
				<----------ppb---------->					
MW-1	11/3/88	8015/624	BC	<1,000[1]	<1.0	<1.0	<1.0	<1.0	---
	2/10/89	524.2/8240	CCAS	<100	<0.2	<0.2	<0.2	<0.4	---
	4/24/89	524.2/8260	CCAS	<50	<0.5	<1.0	<1.0	<1.0	<3,000
	7/28/89	8260	CCAS	<50	<0.1	<0.5	<0.2	<0.5	<3,000
	10/30/89	8015/8020	GTEL	<500	<0.3	<0.3	<0.3	<0.6	---
	1/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	4/18/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	8/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	11/13/90	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---
	5/15/91	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---
	8/27/91	**8015/8020**	**SPA**	**110[2]**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	---
MW-2	11/3/88	624/8015	BC	<1,000[1]	<1.0	<1.0	<1.0	<1.0	---
	2/10/89	524.2/8240	CCAS	<100	<0.2	<0.2	<0.2	<0.4	---
	4/24/89	524.2/8260	CCAS	<50	<0.5	<1.0	<1.0	<1.0	<3,000
	7/28/89	8260	CCAS	<100	<0.2	<1.0	<0.2	<0.4	<3,000
	10/30/89	8015/8020	GTEL	<500	<0.3	<0.3	<0.3	<0.6	---
	1/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	4/18/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	8/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	11/13/90	8015/8020	SAL	<50	<0.5	0.8	<0.5	0.9	---
	5/15/91	8015/8020	SAL	83[2]	<0.5	<0.5	<0.5	<0.5	---
	8/27/91	**8015/8020**	**SPA**	**97[2]**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	---
MW-3	11/3/88	624/8015	BC	<1,000[1]	<1.0	<1.0	<1.0	<1.0	---
	2/10/89	524.2/8240	CCAS	<100	<0.2	<0.2	<0.2	<0.4	---
	4/24/89	524.2/8260	CCAS	<50	<0.5	<1.0	<1.0	<1.0	<3,000
	7/28/89	8260	CCAS	<100	<0.2	<1.0	<0.2	<0.4	<3,000
	10/30/89	8015/8020	GTEL	<500	<0.3	<0.3	<0.3	<0.6	---
	1/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	4/18/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---

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Table 2. Analytic Results for Ground Water - Petroleum Hydrocarbons - Former Chevron Service Station #9-0020, 1633 Harrison Street, Oakland, California (continued)

Well ID	Date Sampled	Analytic Method	Analytic Lab	TPPH(G)	B	T	E	X	O&G
				<----------ppb---------->					
MW-3 (cont)	8/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	11/13/90	8015/8020	SAL	51[2]	<0.5	<0.5	<0.5	<0.5	---
	5/15/91	8015/8020	SAL	85[2]	<0.5	<0.5	<0.5	<0.5	---
	8/27/91	**8015/8020**	**SPA**	**91[2]**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**---**
MW-4	4/24/89	524.2/8260	CCAS	<50	<0.5	<1.0	<1.0	<1.0	<3,000
	7/28/89	8260	CCAS	<50	<0.1	<0.5	<0.1	<0.2	<3,000
	10/30/89	8015/8020	GTEL	<500	<0.3	<0.3	<0.3	<0.6	---
	1/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	4/18/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	8/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	11/13/90	8015/8020	SAL	<50	<0.5	1	0.5	1	---
	5/15/91	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---
	8/27/91	**8015/8020**	**SPA**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**---**
MW-5	4/24/89	524.2/8260	CCAS	<50	<0.5	<1.0	<1.0	<1.0	<3,000
	7/28/89	8260	CCAS	<100	<0.2	<1.0	<0.2	<0.4	<3,000
	10/30/89	8015/8020	GTEL	<500	<0.3	<0.3	<0.3	<0.6	---
	1/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	4/18/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	8/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	11/13/90	8015/8020	SAL	<50	<0.5	1	<0.5	1	---
	5/15/91	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---
	8/27/91	**8015/8020**	**SPA**	**94**	**3.0**	**5.0**	**1.5**	**5.5**	**---**
MW-6	4/24/89	524.2/8260	CCAS	<50	<0.5	<1.0	<1.0	<1.0	<3
	7/28/89	8260	CCAS	<100	<0.2	<1.0	<0.2	<0.4	<3
	10/30/89	8015/8020	GTEL	<500	<0.3	<0.3	<0.3	<0.6	---
	1/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	4/18/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	8/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---

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Table 2. Analytic Results for Ground Water - Petroleum Hydrocarbons - Former Chevron Service Station #9-0020, 1633 Harrison Street, Oakland, California (continued)

Well ID	Date Sampled	Analytic Method	Analytic Lab	TPPH(G)	B	T	E	X	O&G
				<----------ppb---------->					
MW-6	11/13/90	8015/8020	SAL	<50	3	5	0.5	2	---
(cont)	5/15/91	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---
	8/27/91	**8015/8020**	**SPA**	**180**	**6.1**	**12**	**3.8**	**14**	**---**
MW-7	4/24/89	524.2/8260	CCAS	8,400[3]	100	260	160	1,300	3[4]
	7/28/89	8260	CCAS	7,000[3]	230	90	70	440	<3,000
(D)	7/28/89	8260	CCAS	6,000[3]	280	180	58	430	---
	10/30/89	8015/8020	GTEL	10,000[3]	570	55	160	400	---
(D)	10/30/89	8015/8020	GTEL	9,900[3]	520	82	180	410	---
	1/9/90	8015/8020	GTEL	3,400[3]	290	72	9	200	---
	4/18/90	8015/8020	GTEL	6,800[3]	350	140	110	400	---
	8/9/90	8015/8020	GTEL	11,000[3]	360	130	14	660	---
	11/13/90	8015/8020	SAL	6,500	230	110	97	460	---
	5/15/91	8015/8020	SAL	4,600	180	55	46	300	---
	8/27/91	**8015/8020**	**SPA**	**7,000**	**220**	**53**	**63**	**340**	**---**
MW-8	4/24/89	524.2/8260	CCAS	<50	<0.5	<1.0	<1.0	<1.0	3,000
	4/24/89	524.2/8260[5]	CCAS	<50	<0.5	<1.0	<1.0	<1.0	---
	7/28/89	8260	CCAS	<100	<0.2	<1.0	<0.2	<0.4	<3,000
	10/30/89	8015/8020	GTEL	<500	<0.3	<0.3	<0.3	<0.6	---
	1/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	4/18/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	8/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	11/13/90	8015/8020	SAL	<50	<0.5	0.8	<0.5	2	---
	5/15/91	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---
	8/27/91	**8015/8020**	**SPA**	**73[2]**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**---**
MW-9	6/22/90	8015/8020	PACE	5,700[3]	47	31	280	530	<1,000
	8/9/90	8015/8020	GTEL	8,000[3]	<0.3	17	210	480	---
	11/13/90	8015/8020	SAL	6,400	<3	20	240	450	---
	5/15/91	8015/8020	SAL	5,700	2	16	190	390	---
	8/27/91	**8015/8020**	**SPA**	**6,700**	**<3**	**31**	**180**	**350**	**---**

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Table 2. Analytic Results for Ground Water - Petroleum Hydrocarbons - Former Chevron Service Station #9-0020, 1633 Harrison Street, Oakland, California (continued)

Well ID	Date Sampled	Analytic Method	Analytic Lab	TPPH(G)	B	T	E	X	O&G
				<----------ppb---------->					
MW-10	6/22/90	8015/8020	PACE	<50[3]	<0.5	<0.5	<0.5	<0.5	<1,000
	8/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	11/13/90	8015/8020	SAL	<50	<0.5	2	0.5	2	---
	5/15/91	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---
	8/27/91	**8015/8020**	**SPA**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**---**
MW-11	6/22/90	8015/8020	PACE	<50[3]	<0.5	<0.5	<0.5	<0.5	<1,000
	8/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	11/13/90	8015/8020	SAL	76	0.6	1	0.9	4	---
	5/15/91	8015/8020	SAL	78[2]	<0.5	<0.5	<0.5	<0.5	---
	8/27/91	**8015/8020**	**SPA**	**110[2]**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**---**
MW-12	6/22/90	8015/8020	PACE	<50[3]	<0.5	<0.5	<0.5	<0.5	<1,000
	8/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	11/13/90	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---
	5/15/91	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---
	8/27/91	**8015/8020**	**SPA**	**56[2]**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**---**
MW-AA	11/3/88	624/8015	BC	---	<1.0	<1.0	<1.0	<1.0	---
(Trip Blank)	2/10/89	524.2/8240	CCAS	<50	<0.1	<0.1	<0.1	<0.2	---
	4/24/89	524.2/8260	CCAS	<50	<0.5	<1.0	<1.0	<1.0	---
	7/28/89	8260	CCAS	<50	<0.1	<0.5	<0.1	<0.2	---
	10/30/89	8015/8020	GTEL	<500	<0.3	<0.3	<0.3	<0.6	---
	1/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	4/18/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	6/22/90	8015/8020	PACE	<50	<0.5	<0.5	<0.5	<0.5	---
	8/9/90	8015/8020	GTEL	<50	<0.3	<0.3	<0.3	<0.6	---
	11/13/90	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---
	5/15/91	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---
	8/27/91	**8015/8020**	**SPA**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**---**

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Table 2. Analytic Results for Ground Water - Petroleum Hydrocarbons - Former Chevron Service Station #9-0020, 1633 Harrison Street, Oakland, California (continued)

Well ID	Date Sampled	Analytic Method	Analytic Lab	TPPH(G)	B	T	E	X	O&G
				<----------ppb---------->					
MW-BB	5/15/91	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---
(Bailer Blank)	**8/27/91**	**8015/8020**	**SPA**	**51[2]**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**---**

EXPLANATIONS:

TPPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
O&G = Oil and Grease
ppb = Parts per billion
--- = Not analyzed/Not applicable
(D) = Duplicate analysis

ANALYTIC METHODS:

8015 = EPA Method 8015 for TPPH(G)
624 = EPA Method 624 for BTEX
8020 = EPA Method 8020 for BTEX
524.2/8240 = EPA Method 524.2/8240 for VOCs
8260 = Approved variance for Method 8240 using a capillary column and GC/MS for TPPH(G) and BTEX

ANALYTIC LABORATORIES:

BC = Brown and Caldwell Laboratories of Emeryville, California
CCAS = Coast to Coast Analytical Services of San Luis Obispo, California
GTEL = Groundwater Technology Environmental Laboratories of Concord, California
PACE = Pace Laboratories, Inc. of Novato, California
SAL = Superior Analytical Laboratory of San Francisco, California
SPA = Superior Precision Analytical, Inc. of San Francisco, California

NOTES:

Analytic results for ground water prior to May 15, 1991 were compiled from the ground water sampling report for this service station prepared 12/14/90 by Western Geologic Resources, Inc. of San Rafael, California.

1 Analyzed for total fuel hydrocarbons.
2 Laboratory reported that peaks did not match typical gasoline pattern.
3 Fuel characterized as gasoline.
4 Acetone and 2-butanone were detected at 50 and 160 ppb, respectively.

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Table 3. Analytic Results for Ground Water - Volatile Organic Compounds - Former Chevron Service Station #9-0020, 1633 Harrison Street, Oakland, California

Well ID	Date Sampled	Analytic Method	Analytic Lab	Carb Tet	Chloro-form	PCE	TCE	1,2-DCE	t-1,2-DCE	c-1,2-DCE	TCA	1,2-DCA	1,2-DCP	MC	Other HVOCs[1]
				<----------ppb---------->											
MW-1	11/3/88	624	BC	18.0	7.0	<1.0	<1.0	---	<1.0	---	<1.0	<1.0	---	---	---
	2/10/89	524.2/8240	CCAS	17.0	6.0	<0.2	<0.2	---	<0.2	<0.2	<0.2	<0.2	---	---	---
	4/24/89	524.2/8260	CCAS	16.0	6.0	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	---	---	---
	7/28/89	8260	CCAS	20.0	6.4	<0.1	<0.1	---	<0.1	<0.1	0.3	<0.1	---	---	---
	10/30/89	601	GTEL[2]	11.0	4.9	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	---	---	---
	1/9/90	601	GTEL[2]	24.0	7.2	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	---	---	---
	4/18/90	601	GTEL[2]	23.0	5.5	<0.5	<0.5	<0.5	---	---	1.4	<0.5	<0.5	<0.5	---
	8/9/90	601	GTEL[2]	32.0	11.0	0.76	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	8010	SAL	24	7	0.7	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	5/15/91	8010	SAL	15	5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	8/27/91	**8010**	**SPA**	**18**	**4.2**	**<0.5**	**<0.5**	---	---	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**ND**
MW-2	11/3/88	624	BC	3.0	2.0	34.0	3.0	---	10.0	---	<1.0	<1.0	---	---	---
	2/10/89	524.2/8240	CCAS	1.4	1.0	17.2	<0.2	---	<0.2	6.3	<0.2	<0.2	---	---	---
	4/24/89	524.2/8260	CCAS	2.0	2.0	38.0	3.0	9.0	---	---	<1.0	<1.0	---	---	---
	7/28/89	8260	CCAS	3.7	2.0	46.0	2.6	---	<0.2	<0.2	<0.2	<0.2	---	---	---
	10/30/89	601	GTEL[2]	1.4	2.6	53.0	1.1	14.0	---	---	<0.5	<0.5	---	---	---
	1/9/90	601	GTEL[2]	3.6	3.9	78.0	5.3	16.0	---	---	<0.5	<0.5	---	---	---
	4/18/90	601	GTEL[2]	1.5	2.7	130.0	3.9	19.0	---	---	<0.5	<0.5	<0.5	<0.5	---
	8/9/90	601	GTEL[2]	2.1	2.1	74.0	6.1	15.0	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	8010	SAL	<0.5	2	40	4	---	<0.5	10	<0.5	<0.5	<0.5	<0.5	---
	5/15/91	8010	SAL	2	2	56	6	---	<0.5	15	<0.5	<0.5	<0.5	<0.5	ND
	8/27/91	**8010**	**SPA**	**1.1**	**0.9**	**46**	**3.9**	---	---	**8.0**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**ND**
MW-3	11/3/88	624	BC	8.0	6.0	84.0	3.0	---	5.0	---	<1.0	<1.0	---	---	---
	2/10/89	524.2/8240	CCAS	5.8	4.0	53.0	1.9	---	<0.2	9.0	<0.2	<0.2	---	---	---
	4/24/89	524.2/8260	CCAS	7.0	6.0	110.0	3.0	11.0	---	---	<1.0	<1.0	---	---	---
	7/28/89	8260	CCAS	8.6	5.0	49.0	2.1	---	<0.2	11.0	<0.2	<0.1	---	---	---
	10/30/89	601	GTEL[2]	5.6	5.3	62.0	0.77	8.2	---	---	<0.5	<0.5	---	---	---
	1/9/90	601	GTEL[2]	8.6	6.1	81.0	3.8	8.7	---	---	<0.5	<0.5	---	---	---
	4/18/90	601	GTEL[2]	7.6	5.8	120.0	2.4	11.0	---	---	<0.5	<0.5	<0.5	<0.5	---
	8/9/90	601	GTEL[2]	11.0	6.7	81.0	5.1	11.0	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	8010	SAL	7	5	43	4	---	<0.5	9	<0.5	<0.5	<0.5	<0.5	---
	5/15/91	8010	SAL	6	4	46	3	---	<0.5	8	<0.5	<0.5	<0.5	<0.5	ND
	8/27/91	**8010**	**SPA**	**5.5**	**3.8**	**43**	**2.6**	---	---	**8.1**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**ND**

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Table 3. Analytic Results for Ground Water - Volatile Organic Compounds - Former Chevron Service Station #9-0020, 1633 Harrison Street, Oakland, California (continued)

Well ID	Date Sampled	Analytic Method	Analytic Lab	Carb Tet	Chloro-form	PCE	TCE	1,2-DCE	t-1,2-DCE	c-1,2-DCE	TCA	1,2-DCA	1,2-DCP	MC	Other HVOCs[1]
				<-----					ppb						----->
MW-4	4/24/89	524.2/8260	CCAS	35.0	11.0	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	---	---	---
	7/28/89	8260	CCAS	32.0	9.3	<0.1	<0.1	---	<0.1	<0.1	<0.1	<0.1	---	---	---
	10/30/89	601	GTEL[2]	32.0	8.5	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	---	---	---
	1/9/90	601	GTEL[2]	36.0	9.8	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	---	---	---
	4/18/90	601	GTEL[2]	41.0	9.5	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	---
	8/9/90	601	GTEL[2]	38.0	11.0	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	8010	SAL	40	11	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	5/15/91	8010	SAL	35	10	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	8/27/91	**8010**	**SPA**	**28**	**6.1**	**<0.5**	**<0.5**	**---**	**---**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**ND**
MW-5	4/24/89	524.2/8260	CCAS	4.0	5.0	4.0	<1.0	2.0	---	---	<1.0	<1.0	---	---	---
	7/28/89	8260	CCAS	5.6	4.0	5.3	0.3	---	0.2	2.3	0.5	<0.2	---	---	---
	10/30/89	601	GTEL[2]	2.9	2.0	2.7	<0.5	0.86	---	---	<0.5	<0.5	---	---	---
	1/9/90	601	GTEL[2]	8.2	4.6	7.8	0.6	3.1	---	---	<0.5	<0.5	---	---	---
	4/18/90	601	GTEL[2]	6.3	2.8	2.6	<0.5	1.7	---	---	<0.5	<0.5	<0.5	<0.5	---
	8/9/90	601	GTEL[2]	11.0	4.8	6.0	<0.5	2.3	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	8010	SAL	7	3	5	<0.5	---	<0.5	1	<0.5	<0.5	<0.5	<0.5	---
	5/15/91	8010	SAL	4	2	3	<0.5	---	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	ND
	8/27/91	**8010**	**SPA**	**3.3**	**1.1**	**2.3**	**<0.5**	**---**	**---**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW-6	4/24/89	524.2/8260	CCAS	13.0	7.0	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	---	---	---
	7/28/89	8260	CCAS	9.6	4.0	<0.2	<0.2	---	<0.2	<0.2	0.5	0.6	---	---	---
	10/30/89	601	GTEL[2]	8.2	3.6	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	---	---	---
	1/9/90	601	GTEL[2]	10.0	4.2	<0.5	<0.5	<0.5	---	---	<0.5	1.8	---	---	---
	4/18/90	601	GTEL[2]	11.0	3.8	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	---
	8/9/90	601	GTEL[2]	20.0	6.6	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	8010	SAL	15	5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	5/15/91	8010	SAL	11	4	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	8/27/91	**8010**	**SPA**	**8.0**	**2.2**	**2.4**	**<0.5**	**---**	**---**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**ND**
MW-7	4/24/89	524.2/8260	CCAS	3.0	9.0	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	---	---	---
	7/28/89	8260	CCAS	<2.0	<10.0	<2.0	<2.0	---	<2.0	<2.0	<10.0	6.0	---	---	---
	7/28/89	8260[3]	CCAS	<5.0	<20.0	<5.0	<5.0	---	<5.0	<5.0	<5.0	<5.0	---	---	---
	10/30/89	601	GTEL[2]	<1.0	3.9	<1.0	<1.0	<1.0	---	---	<1.0	6.4	---	---	---
	10/30/89	601[3]	GTEL[2]	<1.0	3.1	<1.0	<1.0	<1.0	---	---	<1.0	6.2	---	---	---
	1/9/90	601	GTEL[2]	<0.5	3.0	<0.5	<0.5	<0.5	---	---	<0.5	8.4	---	---	---
	4/18/90	601	GTEL[2]	<0.5	3.2	<0.5	<0.5	<0.5	---	---	<0.5	7.7	0.6	0.6	---

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Table 3. Analytic Results for Ground Water - Volatile Organic Compounds - Former Chevron Service Station #9-0020, 1633 Harrison Street, Oakland, California (continued)

Well ID	Date Sampled	Analytic Method	Analytic Lab	Carb Tet	Chloro-form	PCE	TCE	1,2-DCE	t-1,2-DCE	c-1,2-DCE	TCA	1,2-DCA	1,2-DCP	MC	Other HVOCs[1]
				<-----					ppb						----->
MW-7	8/9/90	601	GTEL[2]	3.3	7.7	<0.5	<0.5	<0.5	---	---	<0.5	8.4	<0.5	1.8	---
(cont)	11/13/90	8010	SAL	0.6	3	<0.5	<0.5	---	<0.5	<0.5	<0.5	4	<0.5	<0.5	---
	5/15/91	8010	SAL	2	2	<0.5	<0.5	---	<0.5	<0.5	<0.5	3	<0.5	<0.5	ND
	8/27/91	**8010**	**SPA**	**0.7**	**2.8**	**<0.5**	**<0.5**	**---**	**---**	**<0.5**	**<0.5**	**2.7**	**<0.5**	**<0.5**	**ND**
MW-8	4/24/89	524.2/8260	CCAS	2.0	3.0	6.0	<1.0	4.0	---	---	<1.0	<1.0	---	---	---
	4/24/89	524.2/8260[3]	CCAS	2.0	2.0	6.0	<1.0	3.0	---	---	<1.0	<1.0	---	---	---
	7/28/89	8260	CCAS	2.3	2.0	5.6	<0.2	---	<0.2	3.8	<0.2	<0.2	---	---	---
	10/30/89	601	GTEL[2]	2.5	2.6	8.0	<0.5	5.5	---	---	<0.5	<0.5	---	---	---
	1/9/90	601	GTEL[2]	4.9	3.9	19.0	0.9	6.6	---	---	<0.5	<0.5	---	---	---
	4/18/90	601	GTEL[2]	3.8	2.8	17.0	0.6	5.7	---	---	<0.5	<0.5	<0.5	<0.5	---
	8/9/90	601	GTEL[2]	5.3	4.4	27.0	1.2	9.2	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	8010	SAL	3	2	21	0.7	---	<0.5	6	<0.5	<0.5	<0.5	<0.5	---
	5/15/91	8010	SAL	2	2	30	0.9	---	<0.5	6	<0.5	<0.5	<0.5	<0.5	ND
	8/27/91	**8010**	**SPA**	**1.4**	**1.1**	**32**	**1.0**	**---**	**---**	**4.7**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**ND**
MW-9	6/22/90	8010	PACE	<0.5	<0.5	<0.5	<0.5	---	<0.5	---	<0.5	<0.5	<0.5	<0.5	---
	8/9/90	601	GTEL[2]	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	<0.5	0.71	<0.5	<0.5	---
	11/13/90	8010	SAL	<0.5	<0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	1	<0.5	<0.5	---
	5/15/91	8010	SAL	<0.5	<0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	ND
	8/27/91	**8010**	**SPA**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**---**	**---**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**ND**
MW-10	6/22/90	8010	PACE	9.6	8.9	<0.5	<0.5	---	<0.5	---	<0.5	<0.5	<0.5	<0.5	---
	8/9/90	601	GTEL[2]	11.0	7.8	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	8010	SAL	5	4	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	5/15/91	8010	SAL	5	4	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	8/27/91	**8010**	**SPA**	**6.9**	**3.4**	**<0.5**	**<0.5**	**---**	**---**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**ND**
MW-11	6/22/90	8010	PACE	4.6	6.5	73	1.3	---	<0.5	8.9	<0.5	<0.5	<0.5	<0.5	---
	8/9/90	601	GTEL[2]	8.1	6.8	84	2.0	4.6	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	8010	SAL	<0.5	<0.5	39	<0.5	---	<0.5	2	5	<0.5	<0.5	<0.5	---
	5/15/91	8010	SAL	1	3	7	0.5	---	<0.5	2	<0.5	<0.5	<0.5	<0.5	ND
	8/27/91	**8010**	**SPA**	**4.1**	**3.3**	**73**	**1.0**	**---**	**---**	**2.4**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**ND**

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Table 3. Analytic Results for Ground Water - Volatile Organic Compounds - Former Chevron Service Station #9-0020, 1633 Harrison Street, Oakland, California (continued)

Well ID	Date Sampled	Analytic Method	Analytic Lab	Carb Tet	Chloro-form	PCE	TCE	1,2-DCE	t-1,2-DCE	c-1,2-DCE	TCA	1,2-DCA	1,2-DCP	MC	Other HVOCs[1]
				<--------					*ppb*						-------->
MW-12	6/22/90	8010	PACE	6.0	7.3	7.4	<0.5	---	<0.5	13	<0.5	<0.5	<0.5	<0.5	---
	8/9/90	601	GTEL[2]	8.0	7.0	6.7	<0.5	5.8	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	8010	SAL	<0.5	<0.5	9	<0.5	---	<0.5	3	3	<0.5	<0.5	<0.5	---
	5/15/91	8010	SAL	4	4	10	<0.5	---	<0.5	3	<0.5	<0.5	<0.5	<0.5	ND
	8/27/91	**8010**	**SPA**	**3.1**	**2.6**	**10**	**<0.5**	**---**	**---**	**2.3**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**ND**
MW-AA	11/3/88	624	BC	<1.0	<1.0	<1.0	<1.0	---	<1.0	---	<1.0	<1.0	---	---	---
(Trip	2/10/89	524.2/8240	CCAS	<0.1	<0.5	<0.1	<0.1	---	<0.1	<0.1	<0.1	<0.1	---	---	---
Blank)	4/24/89	524.2/8260	CCAS	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	---	---	---
	7/28/89	8260	CCAS	<0.1	<0.5	<0.1	<0.1	<0.1	---	<0.1	<0.1	<0.1	---	---	---
	10/30/89	601	GTEL[2]	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	---	---	---
	1/9/90	601	GTEL[2]	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	---	---	---
	4/18/90	601	GTEL[2]	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	---
	6/22/90	8010	PACE	<0.5	<0.5	<0.5	<0.5	---	<0.5	---	<0.5	<0.5	<0.5	<0.5	---
	8/9/90	8010	GTEL[2]	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	8010	SAL	<0.5	<0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	5/15/91	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/27/91	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
MW-BB	5/15/91	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(Bailer	**8/27/91**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
Blank)															

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Table 3. Analytic Results for Ground Water - Volatile Organic Compounds - Former Chevron Service Station #9-0020, 1633 Harrison Street, Oakland, California (continued)

EXPLANATION:

Carb Tet = Carbon Tetrachloride
PCE = Tetrachloroethene
TCE = Trichloroethylene
1,2-DCE = 1,2-Dichloroethene
t-1,2-DCE = trans-1,2-Dichloroethene
c-1,2-DCE = cis-1,2-Dichloroethene
TCA = 1,1,1-Trichloroethane
1,2-DCA = 1,2-Dichloroethane
1,2-DCP = 1,2-Dichloropropane
MC = Methylene Chloride
Other HVOCs = Other Halogenated Volatile Organic Compounds
--- = Not analyzed
ND = Not detected

ANALYTIC METHODS:

624 = EPA Method 624 for VOCs
524.2/8240 = EPA Method 524.2/8240 for VOCs
8260 = Approved variance for Method 8240 using a capillary column and GC/MS for VOCs
601 = EPA Method 601 for VOCs
8010 = EPA Method 8010 for VOCs

ANALYTIC LABORATORIES:

BC = Brown and Caldwell Laboratories of Emeryville, California
CCAS = Coast to Coast Analytical Services of San Luis Obispo, California
GTEL = Groundwater Technology Environmental Laboratories of Concord, California
PACE = Pace Laboratories, Inc. of Novato, California
SAL = Superior Analytical Laboratories, Inc. of San Francisco, California
SPA = Superior Precision Analytical, Inc. of San Francisco, California

NOTES:

Analytic results for ground water prior to May 15, 1991 were compiled from the ground water sampling report for this former service station prepared 12/14/90 by Western Geologic Resources, Inc. of San Rafael, California.

[1] The tabulated analytic results for ground water prior to May 15, 1991 do not specify whether or not other HVOCs were detected.

[2] GTEL does not speciate 1,2-dichloroethene; however, according to a footnote from a table created by Western Geological Services of San Rafael, California, the analytical reports incorrectly state levels for trans-1,2-dichloroethene.

[3] Duplicate analysis.

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APPENDIX C
SIERRA ENVIRONMENTAL SERVICES
STANDARD OPERATING PROCEDURE

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SES STANDARD OPERATING PROCEDURE

GROUND WATER SAMPLING

The following describes sampling procedures used by SES field personnel to collect and handle ground water samples. Before samples are collected, careful consideration is given to the type of analysis to be performed so that precautions are taken to prevent loss of volatile components or contamination of the sample, and to preserve the sample for subsequent analysis. Wells will be sampled no less than 24 hours after well development. Collection methods specific to ground water sampling are presented below.

Prior to sampling, each well is checked for the presence of free-phase hydrocarbons using an MMC flexi-dip interface probe. Product thickness (measured to the nearest 0.01 foot) is noted on the sampling form. Water level measurements are also made using either a water level meter or the interface probe. The water level measurements are also noted on the sampling form.

Prior to sampling, each well is purged of a minimum of four well casing volumes of water using a steam-cleaned PVC bailer, or a pre-cleaned pump. Temperature, pH and electrical conductivity are measured at least three times during purging. Purging is continued until these parameters have stabilized (i.e., changes in temperature, pH or conductivity do not exceed ±0.5°F, 0.1 or 5%, respectively).

The purge water is stored temporarily on-site in 55-gallon Department of Transportation-approved drums pending analytic results. The drums are labeled with the date, contents, the SES field personnel initials and SES phone number.

Ground water samples are collected from the wells with steam-cleaned Teflon bailers. The water samples are decanted into the appropriate container for the analysis to be performed. Pre-preserved sample containers may be used or the analytic laboratory may add preservative to the sample upon arrival. Duplicate samples are collected from each well as a back-up sample and/or to provide quality control. The samples are labeled to include the project number, sample ID, date, preservative, and the field person's initials. The samples are placed in polyethylene bags and in an ice chest (maintained at 4°C with blue ice or ice) for transport under chain-of-custody to the laboratory.

The chain-of-custody form includes the project number, analysis requested, sample ID, date analysis and the SES field person's name. The form is signed and dated (with the transfer time) by each person who yields or receives the samples beginning with the field personnel and ending with the laboratory personnel.

A trip blank and bailer blank accompanies each sampling set, or 5% trip blanks and 5% bailer blanks are included for sets of greater than 20 samples. The bailer blank is prepared by pouring previously boiled water into a steam-cleaned Teflon bailer prior to sampling a well. The trip and bailer blanks are analyzed for some or all of the same compounds as the ground water samples.

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APPENDIX D
CHAIN OF CUSTODY DOCUMENTS AND
LABORATORY ANALYTIC REPORTS

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☒ No SF #: 2259

Chain-of-Custody-Record

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

Chevron Facility Number: 9-0020
Facility Address: 1633 Harrison St Oakland
Consultant Project Number: 1-199-04
Consultant Name: Sierra Environmental Services
Address: Box 2546 Martinez CA 94553
Project Contact (Name): Jeanne Wahler
(Phone): 415-370-1280 (Fax Number):

Chevron Contact (Name): Nancy Vukelich
(Phone): 415-842-9581
Laboratory Name: SAL
Laboratory Release Number: 4368660 (SAL)
Samples Collected by (Name): DM/JL
Collection Date: 8/27/91
Signature: [signature]

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	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)						Remarks
AA		3	W	N/A		HCl	Yes	✓													Sheet 1 of 2; Analyze in order
BB		↓	↓	↓		↓	↓	✓													↓
MW-2		↓	↓	↓		↓	↓	✓													↓
MW-2		↓	↓	↓		↓	↓				✓										↓
MW-12		↓	↓	↓		↓	↓	✓													↓
MW-12		↓	↓	↓		↓	↓				✓										↓
MW-8		↓	↓	↓		↓	↓	✓													↓
MW-8		↓	↓	↓		↓	↓				✓										↓
MW-10		↓	↓	↓		↓	↓	✓													↓
MW-10		↓	↓	↓		↓	↓				✓										↓
MW-5		↓	↓	↓		↓	↓	✓													↓
MW-5		↓	↓	↓		↓	↓				✓										↓
MW-6		↓	↓	↓		↓	↓	✓													↓
MW-6		↓	↓	↓		↓	↓				✓										↓

Please Initial:
Samples stored in ice. [initialed]
Appropriate containers [initialed]
Samples preserved [initialed]
VOA's without headspace [initialed]

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
[signature]	SES	8/28/91 0800	Ted Morse	SES	8/28/91 1:20
Ted Morse	SES	8/28/91 1:20			
			Recieved For Laboratory By (Signature): D. Stewart		8/28/91 1:20

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days (circled)
10 Days
As Contracted

COC-3.DWG/03 91/HCH

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☒ No SF # 122-59

Chain-of-Custody-Record

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

Chevron Facility Number 9-0020
Facility Address 1633 Harrison St. Oakland CA.
Consultant Project Number 1-199-04
Consultant Name Sierra Environmental Services
Address P.O. Box 2546 Martinez CA 94553
Project Contact (Name) Jeanne Wahler
(Phone) 415 370-1280 (Fax Number) 415 370-7959

Chevron Contact (Name) Nancy Vukelich
(Phone) 415 842-9581
Laboratory Name Superior Analytical Laboratory
Laboratory Release Number 4368660
Samples Collected by (Name) Joe Leising
Collection Date 8/27/91
Signature

Sheet 2 of 2

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: 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)	Remarks
MW-1		3	W	N/A		HCl	Yes	✓								Analyze
MW-1											✓					in order
MW-4								✓								
MW-4											✓					
MW-3								✓								
MW-3											✓					
MW-11								✓								
MW-11											✓					
MW-9								✓								
MW-9											✓					
MW-7								✓								
MW-7		↓	↓	↓		↓	↓				✓					

Please Initial:
Samples stored in ice. JW
Appropriate containers JW
Samples preserved JW
VOA's without headspace JW
Container

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	SES	8/28/91 0800	Tad Mose	SES	8/28/91 1:20
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Tad Mose	SES	8/28/91 1:20			
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
			D Stew		8/28/91 1:20

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
(5 Days)
10 Days
As Contracted

COC-3.DWG/03 91/HCH

Superior Precision Analytical, Inc.
1555 Burke, Unit I • 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.: 12259
CLIENT: Sierra Environmental Services
CLIENT JOB NO.: 1-199-04

DATE RECEIVED: 08/28/91
DATE REPORTED: 09/05/91

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
12259- 1	AA	08/27/91	09/04/91
12259- 2	BB	08/27/91	09/04/91
12259- 3	MW-2	08/27/91	09/04/91
12259- 4	MW-12	08/27/91	09/04/91
12259- 5	MW-8	08/27/91	09/04/91
12259- 6	MW-10	08/27/91	09/04/91
12259- 7	MW-5	08/27/91	09/04/91
12259- 8	MW-6	08/27/91	09/04/91
12259- 9	MW-1	08/27/91	09/04/91
12259-10	MW-4	08/27/91	09/04/91

Laboratory Number:	12259 1	12259 2	12259 3	12259 4	12259 5
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	51*	97*	56*	73*
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:	12259 6	12259 7	12259 8	12259 9	12259 10
ANALYTE LIST	Amounts/Quantitation Limits (ug/l)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	94	180	110*	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	ND<0.5	3.0	6.1	ND<0.5	ND<0.5
TOLUENE:	ND<0.5	5.0	12	ND<0.5	ND<0.5
ETHYL BENZENE:	ND<0.5	1.5	3.8	ND<0.5	ND<0.5
XYLENES:	ND<0.5	5.5	14	ND<0.5	ND<0.5

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

LABORATORY NO.: 12259
CLIENT: Sierra Environmental Services
CLIENT JOB NO.: 1-199-04

DATE RECEIVED: 08/28/91
DATE REPORTED: 09/05/91

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
12259-11	MW-3	08/27/91	09/04/91
12259-12	MW-11	08/27/91	09/04/91
12259-13	MW-9	08/27/91	09/04/91
12259-14	MW-7	08/27/91	09/04/91

Laboratory Number:	12259 11	12259 12	12259 13	12259 14
ANALYTE LIST	Amounts/Quantitation Limits (ug/l)			
OIL AND GREASE:	NA	NA	NA	NA
TPH/GASOLINE RANGE:	91*	110*	6700	7000
TPH/DIESEL RANGE:	NA	NA	NA	NA
BENZENE:	ND<0.5	ND<0.5	ND<3	220
TOLUENE:	ND<0.5	ND<0.5	31	53
ETHYL BENZENE:	ND<0.5	ND<0.5	180	63
XYLENES:	ND<0.5	ND<0.5	350	340

Superior Precision Analytical, Inc.
1555 Burke, Unit I ▪ 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

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

QA/QC INFORMATION
SET: 12259

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	101/98	2.7	59-121
Benzene	06/13/91	200ng	93/91	2.2	70-125
Toluene	06/13/91	200ng	101/100	1.0	74-116
Ethyl Benzene	06/13/91	200ng	104/103	1.0	75-120
Total Xylene	06/13/91	600ng	102/101	1.1	75-119

* Does not match typical gasoline pattern.

Richard Srna, Ph.D.
Laboratory Director

Superior Precision Analytical, Inc.
1555 Burke, Unit I • 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.: 12259-9
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 08/27/91
DATE RECEIVED: 08/28/91
DATE ANALYZED: 08/30/91

EPA SW-846 METHOD 8010
HALOGENATED VOLATILE ORGANICS
SAMPLE: MW-1

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	4.2
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	18
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 %DIFF = <15%
MS/MSD average recovery = 85 % :MS/MSD RPD =< 1 %

Richard Srna, Ph.D.
Laboratory Director

Superior Precision Analytical, Inc.
1555 Burke, Unit I • 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.: 12259-3
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 08/27/91
DATE RECEIVED: 08/28/91
DATE ANALYZED: 08/30/91

EPA SW-846 METHOD 8010
HALOGENATED VOLATILE ORGANICS
SAMPLE: MW-2

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	0.9
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	1.1
1,2-Dichloroethane	0.5	ND
Trichlorothylene	0.5	3.9
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	46
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	8.0

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard %DIFF = <15%
MS/MSD average recovery = 85 % :MS/MSD RPD =< 1 %

Richard Srna, Ph.D.
Laboratory Director

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1555 Burke, Unit I • 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.: 12259-11
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 08/27/91
DATE RECEIVED: 08/28/91
DATE ANALYZED: 08/30/91

EPA SW-846 METHOD 8010
HALOGENATED VOLATILE ORGANICS
SAMPLE: MW-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	3.8
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	5.5
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	2.6
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	43
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	8.1

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard %DIFF = <15%
MS/MSD average recovery = 85 % :MS/MSD RPD =< 1 %

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

LABORATORY NO.: 12259-10
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 08/27/91
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EPA SW-846 METHOD 8010
HALOGENATED VOLATILE ORGANICS
SAMPLE: MW-4

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	6.1
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	28
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 %DIFF = <15%
MS/MSD average recovery = 85 % :MS/MSD RPD =< 1 %

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

LABORATORY NO.: 12259-7
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 08/27/91
DATE RECEIVED: 08/28/91
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EPA SW-846 METHOD 8010
HALOGENATED VOLATILE ORGANICS
SAMPLE: MW-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	1.1
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	3.3
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	2.3
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard %DIFF = <15%
MS/MSD average recovery = 85 % :MS/MSD RPD =< 1 %

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

LABORATORY NO.: 12259-8
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 08/27/91
DATE RECEIVED: 08/28/91
DATE ANALYZED: 08/30/91

EPA SW-846 METHOD 8010
HALOGENATED VOLATILE ORGANICS
SAMPLE: MW-6

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	2.2
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	8.0
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	2.4
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard %DIFF = <15%
MS/MSD average recovery = 85 % :MS/MSD RPD =< 1 %

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

LABORATORY NO.: 12259-14
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 08/27/91
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EPA SW-846 METHOD 8010
HALOGENATED VOLATILE ORGANICS
SAMPLE: MW-7

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	2.8
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	0.7
1,2-Dichloroethane	0.5	2.7
Trichloroethylene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard %DIFF = <15%
MS/MSD average recovery = 85 % :MS/MSD RPD =< 1 %

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

LABORATORY NO.: 12259-5
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 08/27/91
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EPA SW-846 METHOD 8010
HALOGENATED VOLATILE ORGANICS
SAMPLE: MW-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	1.1
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	1.4
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	1.0
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	32
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	4.7

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard %DIFF = <15%
MS/MSD average recovery = 85 % :MS/MSD RPD =< 1 %

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

LABORATORY NO.: 12259-13
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 08/27/91
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EPA SW-846 METHOD 8010
HALOGENATED VOLATILE ORGANICS
SAMPLE: MW-9

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 %DIFF = <15%
MS/MSD average recovery = 85 % :MS/MSD RPD =< 1 %

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

LABORATORY NO.: 12259-6
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 08/27/91
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EPA SW-846 METHOD 8010
HALOGENATED VOLATILE ORGANICS
SAMPLE: MW-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	3.4
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	6.9
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 %DIFF = <15%
MS/MSD average recovery = 85 % :MS/MSD RPD =< 1 %

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

LABORATORY NO.: 12259-12
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 08/27/91
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EPA SW-846 METHOD 8010
HALOGENATED VOLATILE ORGANICS
SAMPLE: MW-11

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	3.3
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	4.1
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	1.0
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	73
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	2.4

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard %DIFF = <15%
MS/MSD average recovery = 85 % :MS/MSD RPD =< 1 %

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

LABORATORY NO.: 12259-4
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 08/27/91
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EPA SW-846 METHOD 8010
HALOGENATED VOLATILE ORGANICS
SAMPLE: MW-12

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	2.6
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	3.1
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	10
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	2.3

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard %DIFF = <15%
MS/MSD average recovery = 85 % :MS/MSD RPD =< 1 %

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