Chevron U.S.A. Inc.
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Manager, Engineering

June 17, 1991

Mr. Paul Smith
Alameda County
Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Re: Former Chevron Service Station #9-0020
17th and Harrison
Oakland, CA

Dear Mr. Smith:

Enclosed we are forwarding the Quarterly Groundwater Sampling Report dated June 13, 1991, conducted by our consultant, Sierra Environmental Services for the above referenced site. As indicated in the report, groundwater samples collected were analyzed for Total Petroleum Hydrocarbons as Gasoline (TPH-G), BTEX, and Halogenated Volatile Organics. The concentration levels detected are consistent with previous sampling results.

Chevron is in the process of permitting and installing an additional off-site groundwater monitoring well to delineate the extent of the hydrocarbon contamination. This phase of the assessment has been held up while required documentation is being compiled as part of the City of Oakland's encroachment permitting requirements. We anticipate installing this well within the month of July, 1991. The data collected from this well will assist in our assessment of an appropriate remedial approach. The technical report documenting the well installation will incorporate our proposed remediation.

Chevron will continue to monitor this site and report findings on a quarterly basis.

If you have any questions or comments please do not hesitate to contact me at (415) 842-9581.

Very truly yours,
CHEVRON U.S.A. INC.

Nancy Vukelich
Environmental Engineer

Enclosure

cc: Mr. Rich Hiett, RWQCB-Bay Area
Mr. W.T. Scudder
File (9-0020Q6 Listing)

SIERRA
Environmental Services

June 13, 1991

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

Re: Chevron S.S. #9-0020
1633 Harrison Street
Oakland, California
SES Project #1-199-04

Dear Ms. Vukelich:

This report presents the results of the quarterly water sampling at Chevron S.S. #9-0020, located at 1633 Harrison Street in Oakland, California (Figure 1, Appendix A). Ground water samples from 12 wells, MW-1 through MW-12, were collected (Figure 2, Appendix A).

On May 15, 1991, SES personnel visited the site. Free phase hydrocarbons were not present in any of the site wells. Water level data is shown in Table 1 (Appendix B) and a ground water elevation contour map is included as Figure 2 (Appendix A).

The water samples were collected on May 15, 1991 in accordance with SES Standard Operating Procedure - Ground Water Sampling (Appendix C). All analyses were performed by Superior Analytical Laboratory of Martinez, California. Analytic results for ground water are presented in Table 2 (Appendix B). Chain of custody documents and 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 if you have any questions.

Sincerely,
Sierra Environmental Services

Andrew S. Rodgers
Project Geologist

Dr. Roger Greensfelder
Registered Geologist #003011

ASR/RG:ly
19904QM.AP1

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

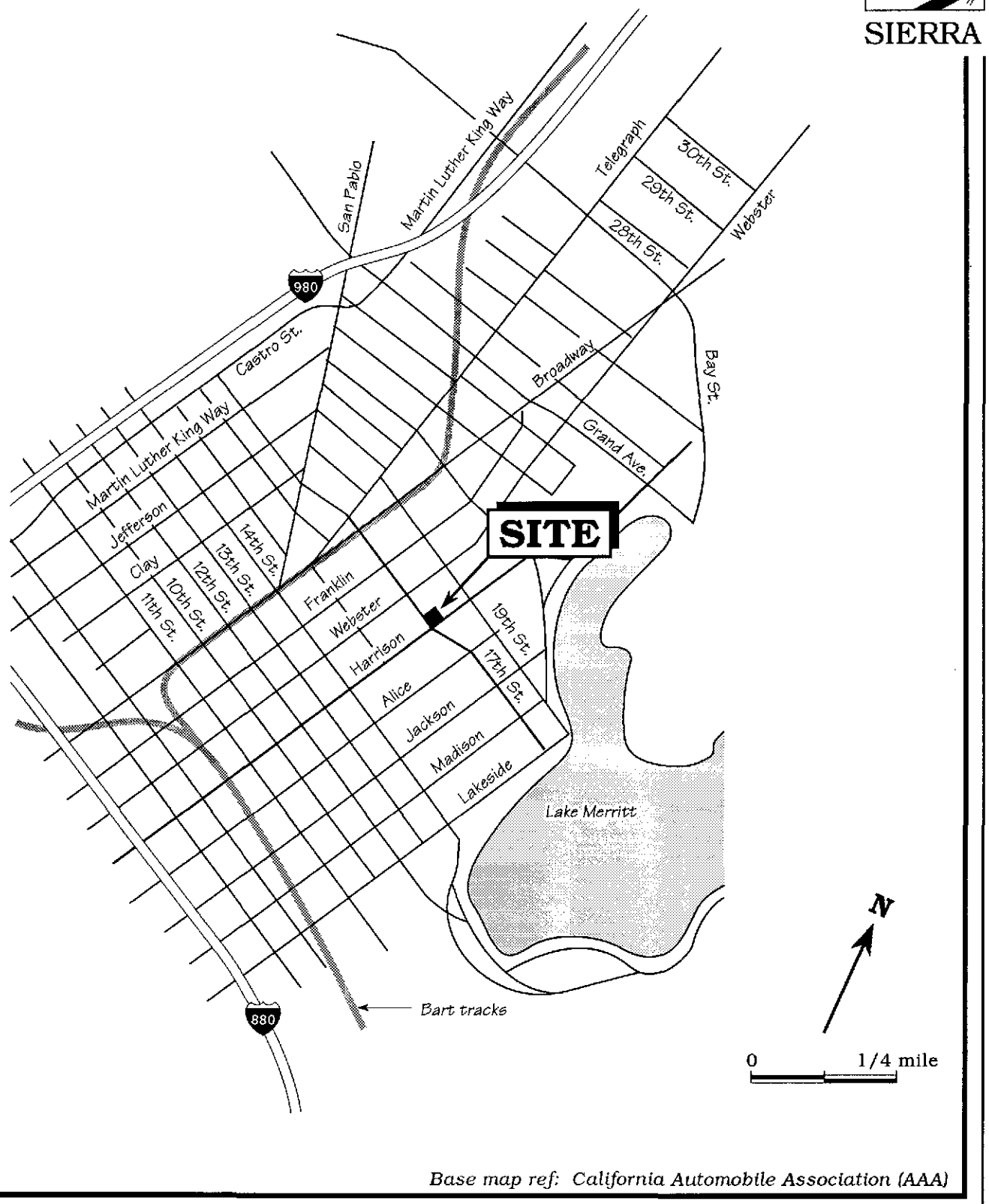

Figure 1. Site Location Map - Chevron Service Station #9-0020, 17th Street and Harrison Street, Oakland, California

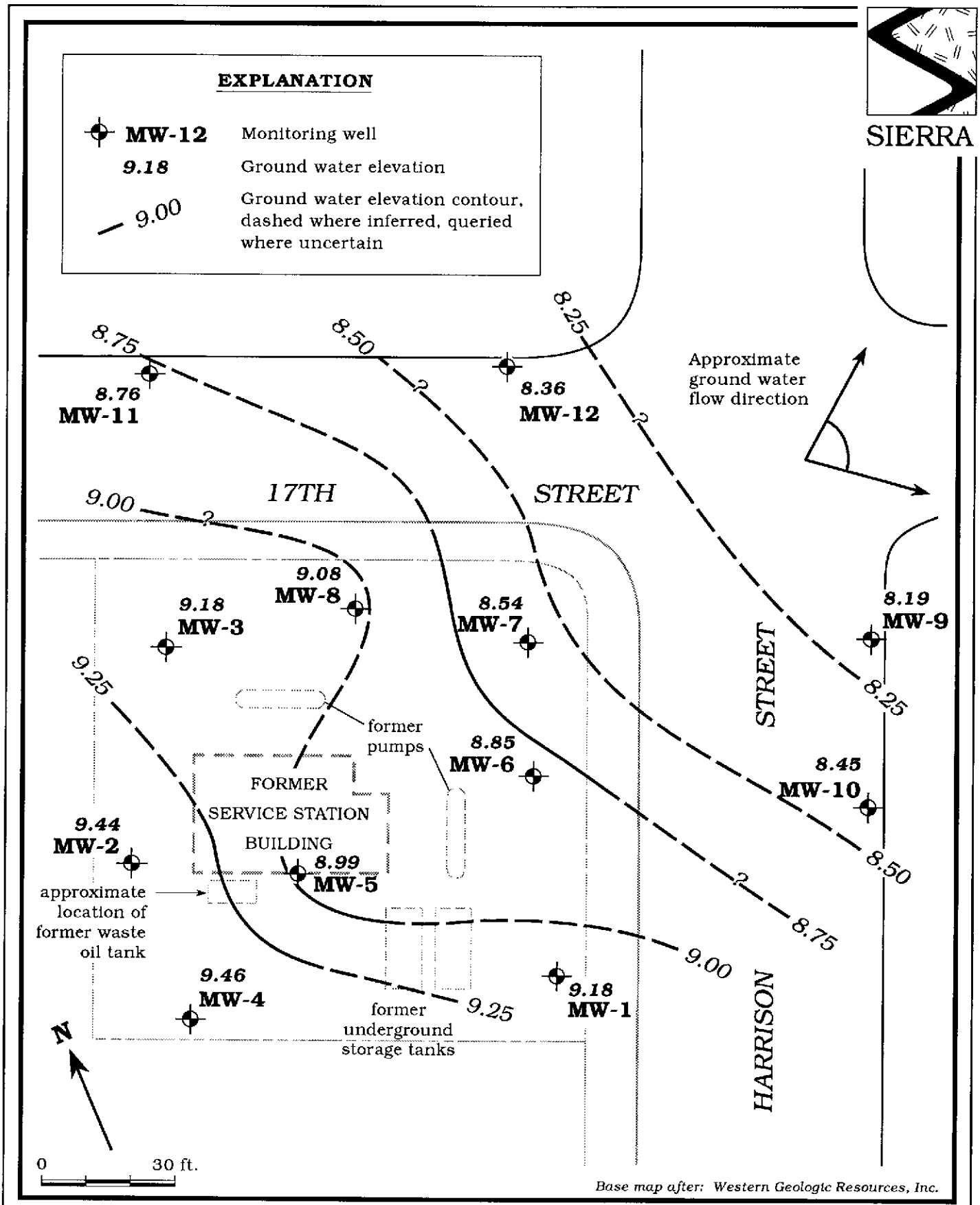

Figure 2. Monitoring Well Locations and Ground Water Elevation Contour Map – May 15, 1991 – Chevron Service Station #9-0020, 17th Street and Harrison Street, Oakland, California

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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**	**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**	**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**	**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**	**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**	**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**	**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**	**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**	**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**	**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**	**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**	**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**	**0**			

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 - 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**	**---**
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**	**---**
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	---
	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**	**---**

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Table 2. Analytic Results for Ground Water - 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-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**	**---**
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**	**---**
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	---
	11/13/90	8015/8020	SAL	<50	3	5	0.5	2	---
	5/15/91	**8015/8020**	**SAL**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**---**

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Table 2. Analytic Results for Ground Water - 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-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
	7/28/89	8260[5]	CCAS	6,000[3]	280	180	58	430	---
	10/30/89	8015/8020	GTEL	10,000[3]	570	55	160	400	---
	10/30/89	8015/8020[5]	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**	---
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**	---
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**	---
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**	---

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Table 2. Analytic Results for Ground Water - 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-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**	**---**
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**	**---**
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**	**---**
MW-BB (Bailer Blank)	**5/15/91**	**8015/8020**	SAL	<50	<0.5	<0.5	<0.5	<0.5	---

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

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

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

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 50 ppb, 2-butanone 160 ppb.
[5] Duplicate analysis.

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Table 3. Analytic Results for Ground Water - 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**
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**
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**

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Table 3. Analytic Results for Ground Water - 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**
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**
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**
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	---
	8/9/90	601	GTEL[2]	3.3	7.7	<0.5	<0.5	<0.5	---	---	<0.5	8.4	<0.5	1.8	---
	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**

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Table 3. Analytic Results for Ground Water - 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-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**
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**
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**
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**
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**

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Table 3. Analytic Results for Ground Water - 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-AA (Trip Blank)	11/3/88	624	BC	<1.0	<1.0	<1.0	<1.0	---	<1.0	---	<1.0	<1.0	---	---	---
	2/10/89	524.2/8240	CCAS	<0.1	<0.5	<0.1	<0.1	---	<0.1	<0.1	<0.1	<0.1	---	---	---
	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	---	---	---	---	---	---	---	---	---	---	---	---	---	---

EXPLANATIONS:

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

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] 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.

SIERRA

APPENDIX C
SIERRA ENVIRONMENTAL SERVICES
STANDARD OPERATING PROCEDURE

SIERRA

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 ft) 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.

SIERRA

APPENDIX D

CHAIN OF CUSTODY DOCUMENTS AND ANALYTIC REPORTS

11869

Chain-of-Custody Record

Facility No. 9-0020
Facility Address 17th and Harrison
Consultant Project Number 1-199-04
Consultant Name SIERRA ENVIRONMENTAL SERVICES
Address P.O. Box 2546, Martinez, CA 94553
Project Contact (Name) Andy Rogers
(Phone) (415) 370-1280
(FAX Number) (415) 370-7959

Contact (Name) Nancy Vukelich
(Phone) 842-9581
Laboratory Name Superior
Laboratory Release Number 4368660
Samples Collected by (Name) Ted Moise / Andrew Minkwitz
Collection Date 5/15/91
Signature Ted Moise

	Sample No.	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)	Chlorinated Hydrocarbons (8010)	Non-Chlorinated Hydrocarbons (8020)	Total Lead (AA)	Metals: Cd, Cr, Zn, Ni (ICAP or AA)				Remarks
1	AA	3x40	W	N/A		HCl	Yes	✓										* Analyze in listed order *
2	BB	3x40	↓	↓		↓	↓	✓										
3	MW-1	6x40						✓			✓							
4	MW-2	6x40						✓			✓							
5	MW-3	6x40						✓			✓							
6	MW-4	6x40						✓			✓							
7	MW-5	6x40						✓			✓							
8	MW-6	6x40						✓			✓							
9	MW-8	6x40						✓			✓							
10	MW-10	6x40						✓			✓							
11	MW-12	6x40						✓			✓							
12	MW-11	6x40	↓	↓		↓		✓			✓							↓

Please initial: [initials]
Samples Stored in ice. No
Appropriate containers. Y
Samples preserved. Y
VOA's without headspace. Y
Comments:

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Turn Around Time (Circle One)
Ted Moise	SES	5/16/91				24 hours
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	48 hours
Relinquished By (Signature)	Organization	Date/Time	Received for Laboratory by (Signature) Doderman 5/16/91		Date/Time 10:10	(5 days) 10 days As Contracted

[signature] 5/16/91

Chain-of-Custody Record

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

Chevron Facility No. 9-0020
Facility Address 17th and Harrison
Consultant Project Number 1-199-04
Consultant Name SIERRA ENVIRONMENTAL SERVICES
Address P.O. Box 2546, Martinez, CA 94553
Project Contact (Name) Andy Rogers
(Phone) (415) 370-1280
(FAX Number) (415) 370-7959

Chevron Contact (Name) Nancy Vukelich
(Phone) 842-9581
Laboratory Name Superior
Laboratory Release Number 4368660
Samples Collected by (Name) Ted Morse/Andrew Minkewitz
Collection Date 5/15/91
Signature Ted Morse

Sample No.	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)	BTEX + TPH Gas (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Chlorinated Hydrocarbons (8010)	Non-Chlorinated Hydrocarbons (8020)	Total Lead (AA)	Metals: Cd, Cr, Zn, Ni (ICAP or AA)	Remarks
18 MW-9	6x40	W	N/A		HCl	Yes	✓			✓				Analyze
19 MW-7	6x40	↓	↓		↓	↓	✓			✓				↓

Please initial: (TM)
Samples Stored in ice. Yes
Appropriate containers. Y
Samples preserved. Y
VOA's without headspace. Y
Comments:

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Ted Morse	SES	5/16/91			
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received for Laboratory by (Signature)		Date/Time
			Rodermann		5/16/91 10:10

Turn Around Time (Circle One)
24 hours
48 hours
5 days
10 days
As Contracted

5/16/91

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081 DHS #1332

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11869 DATE RECEIVED: 05/16/91
CLIENT: Sierra Environmental Services DATE REPORTED: 05/29/91
CLIENT JOB NO.: 1-199-04

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
11869- 1	AA	05/15/91	05/21/91
11869- 2	BB	05/15/91	05/21/91
11869- 3	MW-1	05/15/91	05/21/91
11869- 4	MW-2	05/15/91	05/21/91
11869- 5	MW-3	05/15/91	05/21/91
11869- 6	MW-4	05/15/91	05/21/91
11869- 7	MW-5	05/15/91	05/21/91
11869- 8	MW-6	05/15/91	05/21/91
11869- 9	MW-8	05/15/91	05/21/91
11869-10	MW-10	05/15/91	05/21/91

Laboratory Number:	11869 1	11869 2	11869 3	11869 4	11869 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	* 83	* 85
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:	11869 6	11869 7	11869 8	11869 9	11869 10
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	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
TOLUENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
ETHYL BENZENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
XYLENES:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5

SUPERIOR ANALYTICAL LABORATORY, INC.
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CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11869 DATE RECEIVED: 05/16/91
CLIENT: Sierra Environmental Services DATE REPORTED: 05/29/91
CLIENT JOB NO.: 1-199-04

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
11869-11	MW-12	05/15/91	05/21/91
11869-12	MW-11	05/15/91	05/21/91
11869-13	MW-9	05/15/91	05/21/91
11869-14	MW-7	05/15/91	05/21/91

Laboratory Number:	11869 11	11869 12	11869 13	11869 14
ANALYTE LIST	Amounts/Quantitation Limits (ug/l)			
OIL AND GREASE:	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	* 78	5700	4600
TPH/DIESEL RANGE:	NA	NA	NA	NA
BENZENE:	ND<0.5	ND<0.5	2	180
TOLUENE:	ND<0.5	ND<0.5	16	55
ETHYL BENZENE:	ND<0.5	ND<0.5	190	46
XYLENES:	ND<0.5	ND<0.5	390	300

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CERTIFICATE OF ANALYSIS

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

QA/QC INFORMATION
SET: 11869

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: 08/24/90

SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/l
Standard Reference: 04/09/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	08/24/90	200ng	83/79	5.9	63-111
Benzene	04/09/91	200ng	105/95	9.5	72-119
Toluene	04/09/91	200ng	103/95	8.6	70-116
Ethyl Benzene	04/09/91	200ng	105/97	7.4	73-119
Total Xylene	04/09/91	600ng	104/97	7.3	71-118

* Does not match typical gasoline pattern.

Richard Srna, Ph.D.
Laboratory Director

SUPERIOR ANALYTICAL LABORATORY, INC.
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CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11869-3
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 05/15/91
DATE RECEIVED: 05/16/91
DATE ANALYZED: 05/22/91

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	5
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	15
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard RPD = <15
MS/MSD average recovery = 71 % :MS/MSD RPD =< 6 %

Richard Srna, Ph.D.

Laboratory Director

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081 DHS #1332

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11869-4
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 05/15/91
DATE RECEIVED: 05/16/91
DATE ANALYZED: 05/22/91

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	2
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	2
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	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	56
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	15

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard RPD = <15
MS/MSD average recovery = 71 % :MS/MSD RPD =< 6 %

Richard Srna, Ph.D.

Laboratory Director

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081 DHS #1332

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11869-5
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 05/15/91
DATE RECEIVED: 05/16/91
DATE ANALYZED: 05/22/91

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	4
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	6
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	3
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

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard RPD = <15
MS/MSD average recovery = 71 % :MS/MSD RPD =< 6 %

Richard Srna, Ph.D.

Laboratory Director

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081 DHS #1332

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11869-6
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 05/15/91
DATE RECEIVED: 05/16/91
DATE ANALYZED: 05/22/91

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	10
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	35
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard RPD = <15
MS/MSD average recovery = 71 % :MS/MSD RPD =< 6 %

Richard Srna, Ph.D.

Laboratory Director

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081 DHS #1332

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11869-6
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 05/15/91
DATE RECEIVED: 05/16/91
DATE ANALYZED: 05/22/91

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	10
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	35
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard RPD = <15
MS/MSD average recovery = 71 % :MS/MSD RPD =< 6 %

Richard Srna, Ph.D.

Laboratory Director

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081 DHS #1332

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11869-7
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 05/15/91
DATE RECEIVED: 05/16/91
DATE ANALYZED: 05/22/91

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	2
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	4
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	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	0.8

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard RPD = <15
MS/MSD average recovery = 71 % :MS/MSD RPD =< 6 %

Richard Srna, Ph.D.
Laboratory Director

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081 DHS #1332

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11869-8
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 05/15/91
DATE RECEIVED: 05/16/91
DATE ANALYZED: 05/22/91

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	4
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	11
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard RPD = <15
MS/MSD average recovery = 71 % :MS/MSD RPD =< 6 %

Richard Srna, Ph.D.

Onyi A Nwogu (for)
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SUPERIOR ANALYTICAL LABORATORY, INC.

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CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11869-14
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 05/15/91
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DATE ANALYZED: 05/22/91

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

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard RPD = <15
MS/MSD average recovery = 71 % :MS/MSD RPD =< 6 %

Richard Srna, Ph.D.

Laboratory Director

SUPERIOR ANALYTICAL LABORATORY, INC.
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CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11869-9
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 05/15/91
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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	2
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	2
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	0.9
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	30
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	6

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard RPD = <15
MS/MSD average recovery = 71 % :MS/MSD RPD =< 6 %

Richard Srna, Ph.D.

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SUPERIOR ANALYTICAL LABORATORY, INC.
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CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11869-13
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 05/15/91
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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	0.5
Trichloroethylene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard RPD = <15
MS/MSD average recovery = 71 % :MS/MSD RPD =< 6 %

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CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11869-10
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 05/15/91
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DATE ANALYZED: 05/22/91

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	4
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	5
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard RPD = <15
MS/MSD average recovery = 71 % :MS/MSD RPD =< 6 %

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CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11869-12
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

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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
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	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	7
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

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard RPD = <15
MS/MSD average recovery = 71 % :MS/MSD RPD =< 6 %

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SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081 DHS #1332

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11869-11
CLIENT: Sierra Environmental Services
JOB NO.: 1-199-04

DATE SAMPLED: 05/15/91
DATE RECEIVED: 05/16/91
DATE ANALYZED: 05/22/91

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	4
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	4
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	3

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard RPD = <15
MS/MSD average recovery = 71 % :MS/MSD RPD =< 6 %

Richard Srna, Ph.D.

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OUTSTANDING QUALITY AND SERVICE