Chevron

Chevron U.S.A. Products Company
6001 Bollinger Canyon Rd., Bldg. L
P.O. Box 5004
San Ramon, CA 94583-0804

Site Assessment & Remediation Group
Phone (510) 842-9500

October 11, 1994

Ms. Susan Hugo
Alameda County Environmental Health
1131 Harbor Bay Pkwy, 2nd Flr.
Alameda, CA 94502-6577

Re: Former Chevron Service Station No. 9-3864
5101 Telegraph Avenue, Oakland, California

Dear Ms. Hugo :

At the request of Chevron U.S.A. Products Co., Sierra Environmental Services (SES) re-sampled the monitoring wells at the above referenced site. Wells that have shown detectable levels of dissolved hydrocarbons which are normally non-detect are now showing non-detect which is consistent with the historical trend. SES sampled the wells using disposable bailers versus a submersible pump which can introduce contamination if the pump is not properly cleaned. Based on the latest results, it appears the detection of dissolved hydrocarbons may have come from the pump. The water levels were approximately the same as the last sampling event with the exception of C-2 which shows the water level elevation at 111.60 feet. The other results of this sampling event are consistent with the historical trend with the exception of C-3, MW-4, and MW-5 which shows an increase in dissolved hydrocarbons which appears to be coming from the former Shell station.

Please refer to the enclosed report from SES dated September 26, 1994. If you have any questions or comments, please call me at (510) 842-8752.

Sincerely,

Chevron U.S.A. Products Co.

Kenneth Kan
Site Assessment and Remediation Engineer

LKAN/MacFile 9-3864R26

cc: Dr. Ravi Arulanantham
RWQCB-San Francisco Bay Area
2101 Webster Street, Suite 500
Oakland, CA 94612

Ms. Bette Owen
Chevron U.S.A. Products Co.

SIERRA
Environmental Services

September 26, 1994

Kenneth Kan
Chevron USA Products Company
P.O. Box 5004
San Ramon, CA 94583

Re: Former Chevron Service Station #9-3864
5101 Telegraph Avenue
Oakland, California
SES Project #1-203-04

Dear Mr. Kan:

This report presents the results of ground water sampling at Former Chevron Service Station #9-3864, located at 5101 Telegraph Avenue in Oakland, California. Nine wells, C-1 through C-4 and MW-1 through MW-5, were sampled (Figure 1).

On August 29, 1994, SES personnel visited the site. Water level measurements were collected in all site wells and all wells were checked for the presence of free-phase hydrocarbons. Free-phase hydrocarbons were not present in any of the site wells. Water level data are shown in Table 1 and ground water elevation contours are included on Figure 1.

The water samples were collected on August 29, 1994 in accordance with SES Standard Operating Procedure - Ground Water Sampling (attached). The field water sampling forms for this event are included. All analyses were performed by Superior Precision Analytical, Inc. of San Francisco, California. Analytic results for ground water are presented in Table 1. The chain of custody document and laboratory analytic reports are attached. 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.

REGISTERED PROFESSIONAL ENGINEER
CHRIS J. BRAMER
C 048846
CIVIL
STATE OF CALIFORNIA

Sincerely,
Sierra Environmental Services

Argy Leyton
Staff Geologist

Chris J. Bramer
Professional Engineer #C48846

AML/CJB/lmo
20304QM.SE4

Attachments Figure
Table
SES Standard Operating Procedure
Field Water Sampling Forms
Chain of Custody Document and Laboratory Analytic Reports

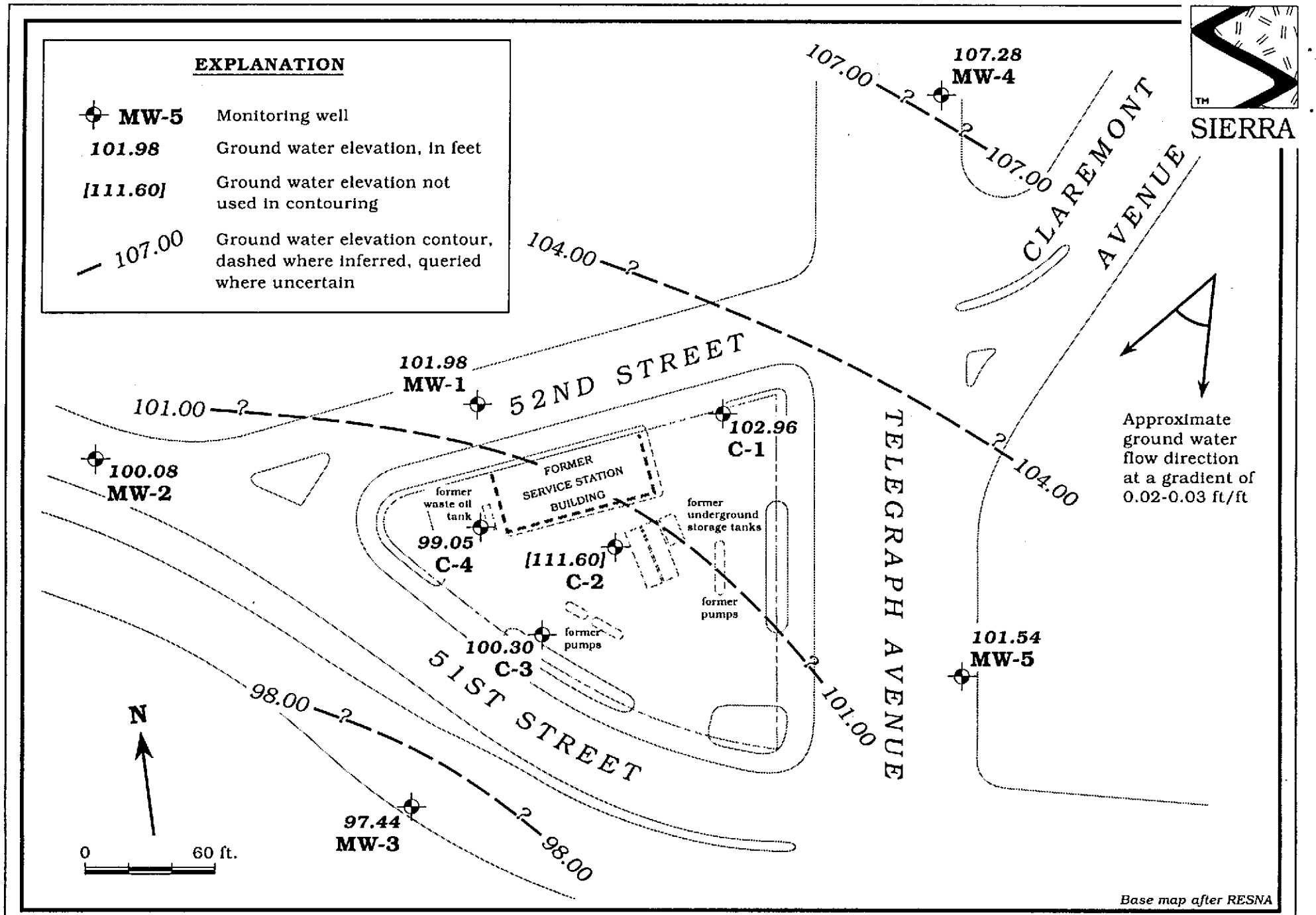

Figure 1. Monitoring Well Location and Ground Water Elevation Contour Map - August 29, 1994 - Former Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California

1-203-04 9/20/94

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Table 1. Water Level Data and Ground Water Analytic Results - Former Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G)	B	T	E	X
						<----------ppb---------->				
C-1/										
117.45	12/6/90	15.34	102.11	0	8015/8020	1,900	17	11	3	21
	6/6/91	14.62	102.83	0	8015/8020	3,400	21	15	11	18
	12/4/91	14.48	102.97	0	8015/8020	2,700	22	16	13	23
	6/2/92	14.53	102.92	0	8015/8020	1,900	170	170	13	83
	9/16/92	14.93	102.52	0	8015/8020	810	5.8	5.7	2.0	6.3
	12/21/92	13.73	103.72	0	8015/8020	75	2.4	2.9	1.4	4.7
	3/11/93	13.83	103.62	0	8015/8020	150	2.4	20	3.3	23
	6/11/93	14.19	103.26	0	8015/8020	400	4.3	2.3	1.0	3.5
	9/13/93	14.60	102.85	0	8015/8020	4,100	62	43	34	57
	12/14/93	13.78	103.67	0	8015/8020	3,100	9.5	4.5	1.2	11
	3/16/94	14.01	103.44	0	8015/8020	410	6.3	3.1	1.3	4.5
	6/17/94	14.55	102.90	0	8015/8020	3,700	100	42	30	91
	8/29/94	**14.49**	**102.96**	**0**	**8015/8020**	**2,600**	**15**	**<0.5**	**6.7**	**9.7**
C-2/										
116.16	12/6/90	15.34	100.82	0	8015/8020	210	140	9	2	11
	6/6/91	14.62	101.54	0	8015/8020	4,800	340	23	19	23
	12/4/91	15.43	100.73	0	8015/8020	3,900	85	15	9.1	15
	6/2/92	14.42	101.74	0	8015/8020	3,300	76	9.2	14	15
	9/16/92	14.81	101.35	0	8015/8020	3,000	16	15	3.4	7.5
	12/21/92	13.37	102.79	0	8015/8020	2,200	21	12	7.1	15
	3/11/93	13.47	102.69	0	8015/8020	2,200	33	24	12	25
	6/11/93	13.98	102.18	0	8015/8020	2,600	21	25	11	26
	9/13/93	14.55	101.61	0	8015/8020	2,100	31	25	18	39
	12/14/93	13.70	102.46	0	8015/8020	3,800	<2.5	24	12	20
	3/16/94	13.65	102.51	0	8015/8020	2,600	12	15	10	17
	6/17/94	13.29	102.87	0	8015/8020	2,400	17	19	28	71
	8/29/94	**4.56**	**111.60**	**0**	**8015/8020**	**3,000**	**29**	**15**	**20**	**4.2**
C-3/										
115.70	12/6/90	16.86	98.84	0	8015/8020	210	2	<0.5	<0.5	1
	(d) 12/6/90	---	---	---	8015/8020	220	2	0.6	<0.5	2
	6/6/91	15.69	100.01	0	8015/8020	6,400	310	21	16	21
	12/4/91	15.38	100.32	0	8015/8020	5,100	120	18	17	20
	6/2/92	15.40	100.30	0	8015/8020	6,700	140	44	17	37
	9/16/92	15.89	99.81	0	8015/8020	7,100	130	26	12	30
	12/21/92	13.91	101.79	0	8015/8020	13,000	390	360	100	410

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Table 1. Water Level Data and Ground Water Analytic Results - Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G)	B	T	E	X
						<----------ppb---------->				
C-3 (cont)	3/11/93	13.75	101.95	0	8015/8020	5,100	86	20	12	23
	6/11/93	14.67	101.03	0	8015/8020	7,200	91	38	19	38
	9/13/93	15.53	100.17	0	8015/8020	6,800	100	52	41	75
	12/14/93	14.40	101.30	0	8015/8020	8,600	74	23	18	36
	3/16/94	14.26	101.44	0	8015/8020	6,000	100	42	27	30
	6/17/94	15.10	100.60	0	8015/8020	15,000	170	120	120	270
	8/29/94	**15.40**	**100.30**	**0**	**8015/8020**	**26,000**	**51**	**<0.5**	**58**	**107**
C-4/ 116.10	12/6/90	17.68	98.42	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	12/18/90[1]	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	6/6/91	16.49	99.61	0	8015/8020	<50	1.0	1.0	<0.5	0.7
	12/4/91	16.82	99.28	0	8015/8020	70	6.5	9.8	1.7	8.6
	6/2/92	16.92	99.18	0	8015/8020	70	3.0	4.4	1.8	9.0
	9/16/92	17.71	98.39	0	8015/8020	<50	1.4	1.8	<0.5	1.1
	12/21/92	15.36	100.74	0	8015/8020	<50	0.6	0.7	<0.5	1.5
	3/11/93	15.49	100.61	0	8015/8020	<50	<0.5	<0.5	<0.5	<1.5
	6/11/93	16.27	99.83	0	8015/8020	52	0.9	3.1	0.7	3.8
	9/13/93	17.18	98.92	0	8015/8020	64	0.9	1.0	<0.5	1.7
	12/14/93	15.07	101.03	0	8015/8020	<50	<0.5	0.8	<0.5	0.7
	3/16/94	15.91	100.19	0	8015/8020	<50	<0.5	1	<0.5	0.8
	6/17/94	16.64	99.46	0	8015/8020	230	0.6	2.2	2.2	11
	8/29/94	**17.05**	**99.05**	**0**	**8015/8020**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW-1/ 115.05[2]	9/20/93	12.68	102.37	0	8015/8020	<50	<0.5	<0.5	<0.5	<1.5
	12/14/93	10.04	105.01	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	3/16/94	11.95	103.10	0	8015/8020	<50	<0.5	1.7	<0.5	2.1
	6/17/94	12.54	102.51	0	8015/8020	350	1.2	3.7	2	12
	8/29/94	**13.07**	**101.98**	**0**	**8015/8020**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW-2/ 112.08[2]	9/20/93	12.15	99.93	0	8015/8020	<50	<0.5	<0.5	<0.5	<1.5
	12/14/93	14.72	97.36	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	3/16/94	11.16	100.92	0	8015/8020	<50	<0.5	1.1	<0.5	0.9
	6/17/94	11.67	100.41	0	8015/8020	330	1.4	3.3	1.9	11
	8/29/94	**12.00**	**100.08**	**0**	**8015/8020**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

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Table 1. Water Level Data and Ground Water Analytic Results - Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G)	B	T	E	X
						<----------ppb---------->				
MW-3/ 113.67[2]	9/20/93	16.42	97.25	0	8015/8020	6,600	400	11	32	23
	12/14/93	14.72	98.95	0	8015/8020	8,400	390	9.4	13	<2.5
	3/16/94	15.22	98.45	0	8015/8020	6,900	260	30	32	27
	6/17/94	16.05	97.62	0	8015/8020	10,000	190	61	58	190
	8/29/94	**16.23**	**97.44**	**0**	**8015/8020**	**7,200**	**74**	**9.8**	**26**	**24**
MW-4/ 118.10[2]	9/20/93	10.93	107.17	0	8015/8020	5,800	16	4.2	35	48
	12/14/93	9.77	108.33	0	8015/8020	7,100	19	6.5	24	35
	3/16/94	10.11	107.99	0	8015/8020	8,500	83	43	60	70
	6/17/94	10.90	107.20	0	8015/8020	21,000	150	20	140	350
	8/29/94	**10.82**	**107.28**	**0**	**8015/8020**	**10,000**	**86**	**71**	**44**	**85**
MW-5/ 116.74[2]	9/20/93	15.31	101.43	0	8015/8020	590	25	1.8	0.6	2
	12/14/93	14.55	102.19	0	8015/8020	210	11	6.3	2.3	6.1
	3/16/94	14.97	101.77	0	8015/8020	270	12	16	4.8	17
	6/17/94	15.38	101.36	0	8015/8020	220	24	17	6.7	28
	8/29/94	**15.20**	**101.54**	**0**	**8015/8020**	**1,000**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
Trip Blank	12/6/90	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	12/18/90[3]	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
(AA)	6/6/91	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	12/4/91	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
TB-LB	6/2/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	9/16/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	3/11/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<1.5
	6/11/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<1.5
	9/13/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<1.5
	12/14/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	3/16/94	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	6/17/94	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	8/29/94	**---**	**---**	**---**	**8015/8020**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
Bailer Blank	6/6/91	---			8015/8020	<50	<0.5	<0.5	<0.5	<0.5
(BB)	12/4/91	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	6/2/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5

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Table 1. Water Level Data and Ground Water Analytic Results - Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G)	B	T	E	X
						<----------ppb---------->				
BB (cont)	9/16/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	3/11/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<1.5
	6/11/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<1.5
	9/13/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<1.5
	12/14/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	3/16/94	---	---	---	8015/8020	<50	<0.5	0.7	<0.5	0.7

EXPLANATION:

TPPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
ppb = Parts per billion
--- = Not analyzed/not applicable

ANALYTIC METHODS:

8015 = EPA Method 8015/5030 for TPPH(G)
8020 = EPA Method 8020 for BTEX

NOTES::

Depth to water data, top of casing elevations prior to June 6, 1991, and ground water analytic data from December 6 and 18, 1990 was compiled from the January 17, 1991 Site Update Reports prepared for this service station by GeoStrategies, Inc. of Hayward, California.

NOTES continued:

Analytic data for September 1993 sampling event for wells MW-1 through MW-5 were compiled from the Well Installation Report prepared for Chevron by Resna, September 1993.

* Product thickness was measured by GeoStrategies, Inc., on December 6, 1990 with an electronic oil-water interface probe. SES product thickness measurements after 12/6/90 were made with an MMC flexi-dip interface probe.

[1] C-4 was also analyzed for halogenated volatile organic compounds (HVOCs) by EPA Method 8010, and metals (Cd, Cr, Pb, Ni and Zn) by EPA-approved methods. Two ppb chloroform, 0.18 ppm chromium, 0.25 ppm nickel and 0.23 ppm zinc were detected. Other HVOCs, Cd and Pb were not detected.

[2] Top of casing elevations for wells MW-1 through MW-5 were compiled from the Well Installation Report prepared for Chevron by Resna, September 1993.

[3] The trip blank was also analyzed for HVOCs. HVOCs were not detected.

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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 three 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 taken to Chevron's Richmond Refinery for disposal.

Ground water samples are collected from the wells with Chevron designated disposable 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) 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 accompanies each sampling set, or 5% trip blanks are included for sets of greater than 20 samples. The trip blank is analyzed for some or all of the same compounds as the ground water samples.

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WATER SAMPLING DATA

Job Name 1-203-04 Job Number 1-203-04 Sampler B. H & L. C

Well Number C-1 Date 08/29/94 Well Diameter 2"

Sample Point Location/Description _____ Well Depth (spec.) _____

Depth to Water (static) 14.49 @ 1406 Well Depth (sounded) 29.11

Initial height of water in casing 14.62 Volume 2.38 gallons

Volume to be purged 7.15 gallons

Purged With D.B. Sampled With D.B.

Pumped or Bailed Dry? ___ Yes ✓ No Time ____ After ____ gallons

Water level at sampling _____ Percent Recovery _____

Formulas/Conversions
r = well radius in ft
h = ht of water col. in ft
vol. in cyl. = $\pi r^2 h$
7.48 gal/ft³
V_2" casing = 0.163 gal/ft
V_3" casing = 0.367 gal/ft
V_4" casing = 0.653 gal/ft
$V_{4.5}$" casing = 0.826 gal/ft
V_6" casing = 1.47 gal/ft
V_8" casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1408	1438	3	3	6.24	72.1	410	
		2	5	5.65	72.3	440	
		3	8	6.20	71.8	420	

SAMPLES COLLECTED Time 1445 Total volume purged (gal.) 8

Water color CLEAR Odor MINIMAL

Description of sediments or material in sample: MINIMAL, GREY

Additional Comments: GOOD CONDITION, CIGAR CAP. REPLACED J-PLUG. BAILED VAULT. PROBABLE CAUSE OF LOW PH READING FOR SECOND SAMPLE WAS LOOSE BNC CONNECTOR, AFTER ADJUSTMENT, PH RETURNED TO PREVIOUS LEVEL. HARD TO GET BAILER TOTALLY FULL.

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
C-1	3	1	—	HCL	Y	SPA	G/BTEX

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size); 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size); 5 = Other _____; 6 = Other _____

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WATER SAMPLING DATA

Job Name 1-203-04 Job Number 1-203-04 Sampler B.K & L.C

Well Number C-2 Date 08/29/94 Well Diameter 2"

Sample Point Location/Description CENTER OF LOT Well Depth (spec.)

Depth to Water (static) 14.56 @ 1246 Well Depth (sounded) 29.48 MODERATE HYDROCARBON ODOR

Initial height of water in casing 14.92 Volume 2.43 gallons

Volume to be purged 7.29 gallons

Purged With D.B. Sampled With D.B

Pumped or Bailed Dry? ___ Yes ✓ No Time ___ After ___ gallons

Water level at sampling ___ Percent Recovery ___

Formulas/Conversions
r = well radius in ft
h = ht of water col. in ft
vol. in cyl. = $\pi r^2 h$
7.48 gal/ft³
V_2" casing = 0.163 gal/ft
V_3" casing = 0.367 gal/ft
V_4" casing = 0.653 gal/ft
$V_{4.5}$" casing = 0.826 gal/ft
V_6" casing = 1.47 gal/ft
V_8" casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1251	1324	3	3	6.20	69.9	530	
		2	5	6.29	70.3	560	
		3	8	6.52	74.0	510	

SAMPLES COLLECTED Time 1330 Total volume purged (gal.) 8

Water color CLOUDY Odor MODERATE/STRONG HYDROCARBON

Description of sediments or material in sample: GREY, FINE

Additional Comments: VAULT DAMAGED, UPPER RING LID CASING LOOSE AND CRACKED & BROKEN CONCRETE FOUNDATION. CASING & J-PLUG OK. LOTS OF ANTS. BAILING WAS SLOW DUE TO BURRS TANGLING IN STRING.

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
C-2	3	1	—	HCL	Y	SPA	G/BTEX

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size); 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size); 5 = Other ___ ; 6 = Other ___

SIERRA

WATER SAMPLING DATA

Job Name 1-203-04 Job Number 1-203-04 Sampler B.H & L.C

Well Number C-3 Date 08/29/94 Well Diameter 2

Sample Point Location/Description ______ Well Depth (spec.) ______

Depth to Water (static) 15.40 @ 1151 Well Depth (sounded) 28.88 moderate hydrocarbon odor

Initial height of water in casing 13.48 Volume 2.20 gallons

Volume to be purged 6.59 gallons

Purged With ______ Sampled With ______

Pumped or Bailed Dry? ___ Yes ___ No Time ___ After ___ gallons

Water level at sampling ______ Percent Recovery ______

Formulas/Conversions
r = well radius in ft
h = ht of water col. in ft
vol. in cyl. = $\pi r^2 h$
7.48 gal/ft³
V_2" casing = 0.163 gal/ft
V_3" casing = 0.367 gal/ft
V_4" casing = 0.653 gal/ft
$V_{4.5}$" casing = 0.826 gal/ft
V_6" casing = 1.47 gal/ft
V_8" casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1154	1217	2		6.23	72.0	510	
		3		6.05	71.6	500	
		2		6.01	71.4	500	

SAMPLES COLLECTED Time 1220 Total volume purged (gal.) ______

Water color cloudy Odor moderate / strong hydrocarbon

Description of sediments or material in sample: dark brown/grey (fine)

Additional Comments: Well vault in bad shape. Lid & upper pin sitting loose on outer wall of vault which is not cemented in the ground. J-plug missing altogether. Replaced J-plug.

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
C-3	3	1	—	HCL	Y	SPA	G/BTEX

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa: 2 = Brown glass/teflon lined cap (specify size): 3 = Clear glass/teflon lined cap (specify size): 4 = Polyethylene/polyethylene cap (specify size): 5 = Other ______ : 6 = Other ______

WATERSAM.FRM

SIERRA

WATER SAMPLING DATA

Job Name 1-203-04 Job Number 1-203-04 Sampler B. H & L. C

Well Number C-4 Date 08/29/94 Well Diameter 2"

Sample Point Location/Description _____ Well Depth (spec.) _____

Depth to Water (static) 17.05 @ 1046 Well Depth (sounded) 29.59

Initial height of water in casing 12.54 Volume 2.04 gallons

Volume to be purged 6.13 gallons

Purged With D.B. Sampled With D.B.

Pumped or Bailed Dry? ___ Yes ✓ No Time _____ After _____ gallons

Water level at sampling _____ Percent Recovery _____

Formulas/Conversions
r = well radius in ft
h = ht of water col. in ft
vol. in cyl. = $\pi r^2 h$
7.48 gal/ft³
V_2" casing = 0.163 gal/ft
V_3" casing = 0.367 gal/ft
V_4" casing = 0.653 gal/ft
$V_{4.5}$" casing = 0.826 gal/ft
V_6" casing = 1.47 gal/ft
V_8" casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1050	1119	2	2	7.20	71.2	310	
		3	5	6.54	70.9	390	
		2	7	7.22	71.5	400	

SAMPLES COLLECTED Time 1121 Total volume purged (gal.) 7

Water color cloudy Odor none

Description of sediments or material in sample: fine DARK BROWN, ORGANIC MATTER

Additional Comments: _____

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
C-4	3	1	—	HCL	Y	SPA	G/BTEX

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size); 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size); 5 = Other _____; 6 = Other _____

SIERRA

WATER SAMPLING DATA

Job Name 1-203-04 Job Number 1-203-04 Sampler B.H & L.C

Well Number MW-1 Date 08/29/94 Well Diameter 2"

Sample Point Location/Description On 52nd Street Well Depth (spec.) _____

Depth to Water (static) 13.07 Well Depth (sounded) 24.27

Initial height of water in casing 11.2 Volume 1.82 gallons

Volume to be purged 9 gallons

Purged With Disp. Bailer Sampled With Disp. Bailer

Pumped or Bailed Dry? ___ Yes ✓ No Time ____ After _____ gallons

Water level at sampling _____ Percent Recovery _____

Formulas/Conversions
r = well radius in ft
h = ht of water col. in ft
vol. in cyl. = $\pi r^2 h$
7.48 gal/ft³
V_2" casing = 0.163 gal/ft
V_3" casing = 0.367 gal/ft
V_4" casing = 0.653 gal/ft
$V_{4.5}$" casing = 0.826 gal/ft
V_6" casing = 1.47 gal/ft
V_8" casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
10.35	11.00	3	3	6.9	72.9	320	
	11.20	3	6	6.8	73.0	340	
	11:40	3	9	6.8	73.2	330	

SAMPLES COLLECTED Time 11:45 Total volume purged (gal.) 9

Water color Cloudy Odor None

Description of sediments or material in sample: Brown fine sediments

Additional Comments: _____

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MW-1	3	1	—	HCL	Y	SPA	G/BTEX

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size); 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size); 5 = Other _____; 6 = Other _____

SIERRA

WATER SAMPLING DATA

Job Name 1-203-04 Job Number 1-203-04 Sampler B.H & L.C

Well Number MW-2 Date 08/29/94 Well Diameter 2"

Sample Point Location/Description On the 52nd Street Well Depth (spec.) _____

Depth to Water (static) 13.07 Well Depth (sounded) 24.27

Initial height of water in casing 11.2 Volume 1.8 gallons

Volume to be purged 9 gallons

Purged With Disp. Bailer Sampled With Disp. Bailer

Pumped or Bailed Dry? ___ Yes ___ No Time _____ After _____ gallons

Water level at sampling _____ Percent Recovery _____

Formulas/Conversions
r = well radius in ft
h = ht of water col. in ft
vol. in cyl. = $\pi r^2 h$
7.48 gal/ft³
V_2" casing = 0.163 gal/ft
V_3" casing = 0.367 gal/ft
V_4" casing = 0.653 gal/ft
$V_{4.5}$" casing = 0.826 gal/ft
V_6" casing = 1.47 gal/ft
V_8" casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
11.50	12.10	3	3	7.24	77.7	290	
	12.30	3	6	7.25	77.8	300	
	12:50	3	9	7.27	77.9	300	

SAMPLES COLLECTED Time 12:55 Total volume purged (gal.) 9

Water color Brown Odor None

Description of sediments or material in sample: Brown fine sediments.

Additional Comments: _____

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MW-2	3	1	—	HCL	Y	SPA	G/BTEX

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size); 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size); 5 = Other _____; 6 = Other _____

SIERRA

WATER SAMPLING DATA

Job Name 1-203-04 Job Number 1-203-04 Sampler B.H & L.C

Well Number MW-3 Date 08/29/94 Well Diameter 2"

Sample Point Location/Description On the 51st Street Well Depth (spec.) _____

Depth to Water (static) 16.23 Well Depth (sounded) 26.7

Initial height of water in casing 10.47 Volume 1.7 gallons

Volume to be purged 8.53 gallons

Purged With _____ Sampled With _____

Pumped or Bailed Dry? ___ Yes ___ No Time _____ After _____ gallons

Water level at sampling _____ Percent Recovery _____

Formulas/Conversions
r = well radius in ft
h = ht of water col. in ft
vol. in cyl. = $\pi r^2 h$
7.48 gal/ft³
V_2" casing = 0.163 gal/ft
V_3" casing = 0.367 gal/ft
V_4" casing = 0.653 gal/ft
$V_{4.5}$" casing = 0.826 gal/ft
V_6" casing = 1.47 gal/ft
V_8" casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
13.10	13:30	3	3	6.5	73	630	
	13:50	3	6	6.6	74	640	
	14:10	2	8	6.6	75	640	

SAMPLES COLLECTED Time 14:15 Total volume purged (gal.) 8.0

Water color Gray Odor Slight odor

Description of sediments or material in sample: Gray ; fine sediments

Additional Comments: _____

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MW-3	3	1	—	HCL	Y	SPA	G/BTEX

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size); 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size); 5 = Other _____; 6 = Other _____

SIERRA

WATER SAMPLING DATA

Job Name 1-203-04 Job Number 1-203-04 Sampler B.H & L.C

Well Number MW-4 Date 08/29/94 Well Diameter 2"

Sample Point Location/Description On Telegraph area Well Depth (spec.) _____

Depth to Water (static) 10.82 Well Depth (sounded) 21.00

Initial height of water in casing 10.18 Volume 1.6 gallons

Volume to be purged 8 gallons

Purged With Disp. Bailer Sampled With Disp Bailer

Pumped or Bailed Dry? ___ Yes ✓ No Time _____ After _____ gallons

Water level at sampling _____ Percent Recovery _____

Formulas/Conversions
r = well radius in ft
h = ht of water col. in ft
vol. in cyl. = $\pi r^2 h$
7.48 gal/ft³
V_2" casing = 0.163 gal/ft
V_3" casing = 0.367 gal/ft
V_4" casing = 0.653 gal/ft
$V_{4.5}$" casing = 0.826 gal/ft
V_6" casing = 1.47 gal/ft
V_8" casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
14:55	3:10	3	3	5.53	74.1	410	
	3:20	2	5	5.10	74.0	420	
	3:30	3	8	5.20	74.0	430	

SAMPLES COLLECTED Time 3:30 Total volume purged (gal.) 8

Water color Dark Gray Odor Mild

Description of sediments or material in sample: Fine Gray sediments

Additional Comments: _____

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MW-4	3	1	—	HCL	Y	SPA	G/BTEX

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size); 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size); 5 = Other _____; 6 = Other _____

SIERRA

WATER SAMPLING DATA

Job Name 1-203-04 Job Number 1-203-04 Sampler B. H & L. C

Well Number M-MW5 Date 08/29/94 Well Diameter 2"

Sample Point Location/Description on Telegraph Avenue Well Depth (spec.) _____

Depth to Water (static) 15.12 Well Depth (sounded) 21.4

Initial height of water in casing 6.2 Volume 1 gallons

Volume to be purged 5 gallons

Purged With Disp. Bailer Sampled With Disp Bailer

Pumped or Bailed Dry? ✓ Yes ___ No Time ____ After ____ gallons

Water level at sampling _____ Percent Recovery _____

Formulas/Conversions
r = well radius in ft
h = ht of water col. in ft
vol. in cyl. = $\pi r^2 h$
7.48 gal/ft³
V_2" casing = 0.163 gal/ft
V_3" casing = 0.367 gal/ft
V_4" casing = 0.653 gal/ft
$V_{4.5}$" casing = 0.826 gal/ft
V_6" casing = 1.47 gal/ft
V_8" casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
2:25	2:30	2		7.11	76	200	
	2:45	2		7.08	75	210	

SAMPLES COLLECTED Time 2:45 Total volume purged (gal.) 4

Water color Brown Odor Slight odor

Description of sediments or material in sample: Brown, fine sediments

Additional Comments: —

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
C-3	3	1	—	HCL	Y	SPA	G/BTEX

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size); 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size); 5 = Other _____; 6 = Other _____

1

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No

30732

Chain-of-Custody-Record

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

Chevron Facility Number 9-3864
Facility Address 5101 Telegraph ave
Consultant Project Number 1-203-04
Consultant Name Sierra Environmental Services
Address P.O Box 2546, martinez, CA 94553
Project Contact (Name) Ed Morales
(Phone) (510) 370-1280 (Fax Number) (510) 370-7959

Chevron Contact (Name) Ken Kan
(Phone) 842-8752
Laboratory Name SPA
Laboratory Release Number 405-6670
Samples Collected by (Name) L.C
Collection Date 08/29/94
Signature L. Aerufull

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
TB/LB		2	✓	G		HCL	Y	✓													Analyze
C-1		3			14:45																
C-2					13:30																
C-3					12:20																
C-4					11:21																
mw-1					11:45																
mw-2					12:55																
mw-3					14:15																
mw-4					3:30																
mw-5					2:45																

Analyses To Be Performed

Note: Do Not Bill TB-LB Samples

Stamp: ... ice YES; ...appropriate containers YES; ...ples preserved YES; ...s without headspace YES; 31-VOCLS RECEIVED

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
L. Aerufull	SES				
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Recieved For Laboratory By (Signature)		Date/Time
			[illegible]		[illegible] 5:00 PM. JG

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

Superior Precision Analytical, Inc.
A member of ESSCON Environmental Support Service Consortium

Sierra Environmental
Attn: ED MORALES

Project 1-203-04
Reported 09/07/94

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed	Matrix
30732- 1	TB-LB	08/29/94	09/02/94	Water
30732- 2	C-1	08/29/94	09/02/94	Water
30732- 3	C-2	08/29/94	09/02/94	Water
30732- 4	C-3	08/29/94	09/02/94	Water
30732- 5	C-4	08/29/94	09/02/94	Water
30732- 6	MW-1	08/29/94	09/02/94	Water
30732- 7	MW-2	08/29/94	09/02/94	Water
30732- 8	MW-3	08/29/94	09/02/94	Water
30732- 9	MW-4	08/29/94	09/02/94	Water
30732-10	MW-5	08/29/94	09/07/94	Water

RESULTS OF ANALYSIS

Laboratory Number:	30732- 1	30732- 2	30732- 3	30732- 4	30732- 5
Gasoline:	ND<50	2600	3000	26000	ND<50
Benzene:	ND<0.5	15	29	51	ND<0.5
Toluene:	ND<0.5	ND<0.5	15	ND<0.5	ND<0.5
Ethyl Benzene:	ND<0.5	6.7	20	58	ND<0.5
Total Xylenes:	ND<0.5	9.7	4.2	107	ND<0.5
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L

Laboratory Number:	30732- 6	30732- 7	30732- 8	30732- 9	30732-10
Gasoline:	ND<50	ND<50	7200	10000	1000
Benzene:	ND<0.5	ND<0.5	74	86	ND<0.5
Toluene:	ND<0.5	ND<0.5	9.8	71	ND<0.5
Ethyl Benzene:	ND<0.5	ND<0.5	26	44	ND<0.5
Total Xylenes:	ND<0.5	ND<0.5	24	85	ND<0.5
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L

Certified Laboratories
1555 Burke St., Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

Superior Precision Analytical, Inc.
A member of ESSCON Environmental Support Service Consortium

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: 30732

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

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

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

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

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

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	93/90	3%	70-130
Benzene:	120/121	1%	70-130
Toluene:	112/114	2%	70-130
Ethyl Benzene:	82/76	8%	70-130
Total Xylenes:	99/97	2%	70-130

Senior Chemist