Chevron U.S.A. Products Company
2410 Camino Ramon, San Ramon, California • Phone (510) 842-9500
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

Operations

January 20, 1993

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

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

Dear Ms. Hugo :

Enclosed is the quarterly monitoring and sampling report prepared by Sierra Environmental Services and dated January 13, 1993.

During this sampling event, total petroleum hydrocarbon as gasoline (TPH-G), benzene, toluene, ethylbenzene, and xylenes (BTEX) was detected in most of the monitoring wells. Wells C-1, C-2, and C-4 ranged as follow : ND<50 to 2200 ppb TPH-G, 0.6 to 21 ppb benzene, 0.7 to 12 ppb toluene, ND<0.5 to 7.1 ethylbenzene, and 1.5 to 15 ppb xylenes. Well C-3 had the highest concentration of dissolved hydrocarbon. The well will be resampled to verify the results. The results from this resampling event will be sent to your office. Depth to water during this period ranged from 13.37 to 15.36 feet.

If you have any questions or comments, please feel free to call me at (510) 842-8752.

Sincerely,

Chevron U.S.A. Products Co.

Kenneth Kan
Site Assessment and Remediation Engineer

LKAN/MacFile 9-3864R12

Enclosure

cc : Mr. Richard Hiett, RWQCB-San Francisco Bay Area
2101 Webster Street, Suite 500, Oakland, CA 94612

Dr. Ravi Arulananthum, Alameda County Health Care Services
80 Swan Way, Room 200, Oakland, CA 94621

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

SIERRA
Environmental Services

January 13, 1993

Kenneth Kan
Chevron USA
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 the quarterly ground water sampling at Former Chevron Service Station #9-3864, located at 5101 Telegraph Avenue in Oakland, California (Figure 1, Appendix A). Ground water samples from four wells, C-1 through C-4, were collected (Figure 2, Appendix A).

On December 21, 1992, 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 December 21, 1992 in accordance with SES Standard Operating Procedure - Ground Water Sampling (Appendix C). All analyses were performed by Superior Precision Analytical, Inc. of Martinez, California. Analytic results for ground water are presented in Table 2 (Appendix B). The chain of custody document 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.

REGISTERED PROFESSIONAL ENGINEER
CHRIS J. BRAMER
C 048846
Exp 9/96
CIVIL
STATE OF CALIFORNIA

Sincerely,
Sierra Environmental Services

Argy Mena
Staff Geologist

Chris J. Bramer
Professional Engineer #C48846

AJM/CJB/ly
20304QM.JA3

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

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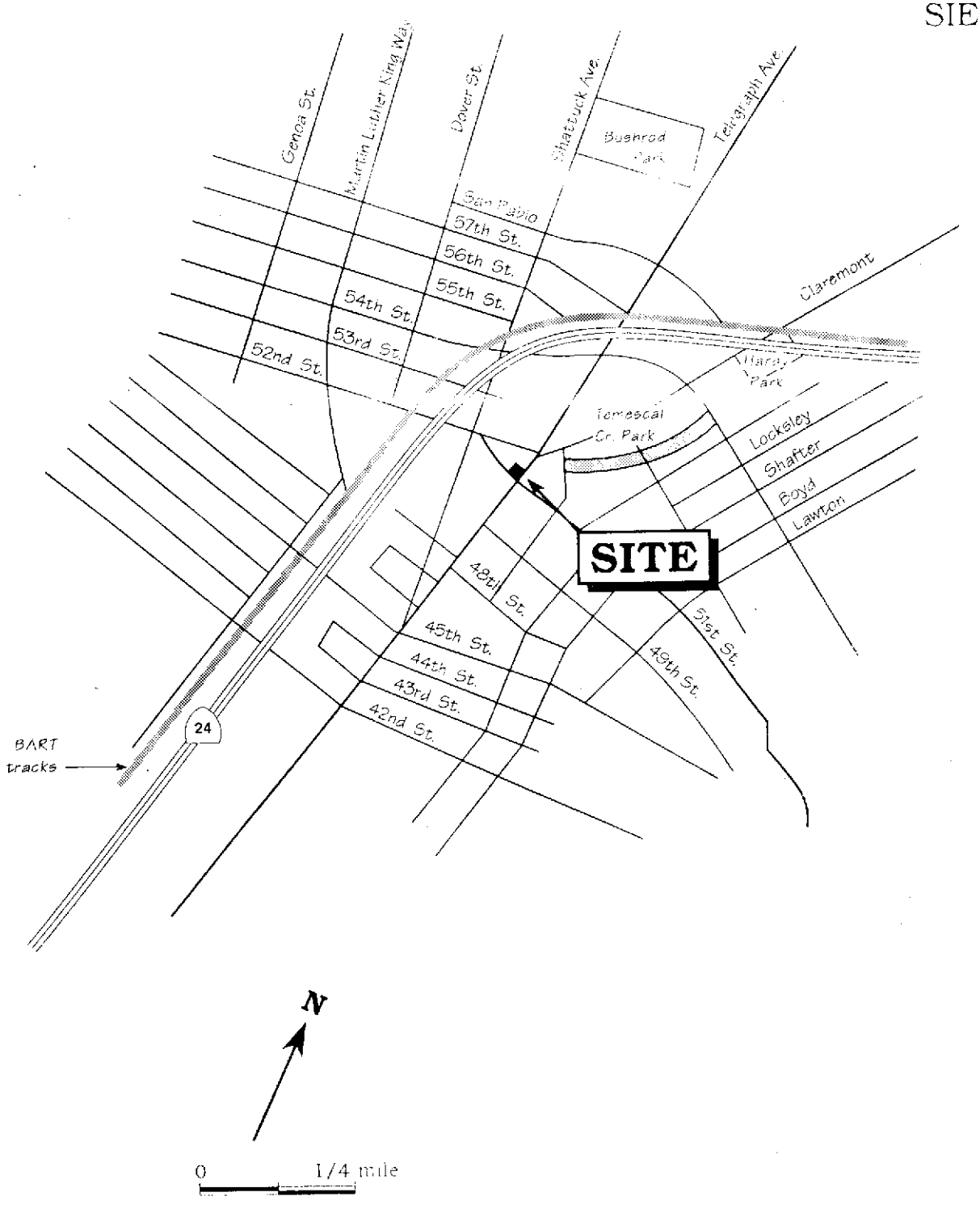

Base map ref: California Automobile Association (AAA)

Figure 1. Site Location Map – Former Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California

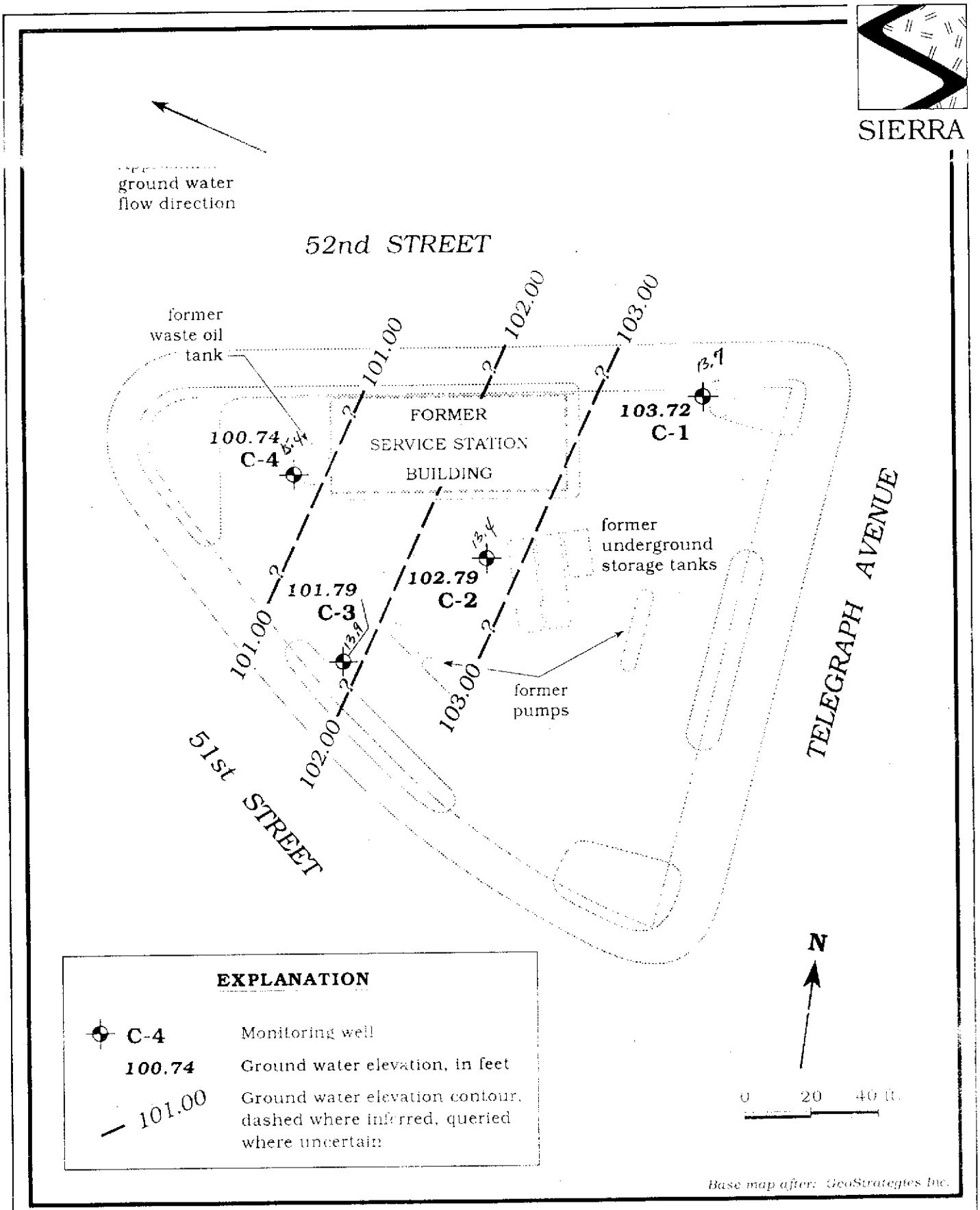

Figure 2. Monitoring Well Location and Ground Water Contour Map – December 21, 1992 – Former Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California

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Table 1. Water Level Data and Well Construction Details - Chevron Service Station #9-3864, 5101 Telegraph Avenue, 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*---------->		
C	12/6/90	15.34	117.45	102.11	0	10 - 29.5	8 - 30	0 - 8
	6/6/91	14.62		102.83	0			
	12/4/91	14.48		102.97	0			
	6/2/92	14.53		102.92	0			
	9/16/92	14.93		102.52	0			
	12/21/92	**13.73**		**103.72**	**0**			
C-2	12/6/90	15.34	116.16	100.82	0	10 - 29.5	8 - 30	0 - 8
	6/6/91	14.62		101.54	0			
	12/4/91	15.43		100.73	0			
	6/2/92	14.42		101.74	0			
	9/16/92	14.81		101.35	0			
	12/21/92	**13.37**		**102.79**	**0**			
C-3	12/6/90	16.86	115.70	98.84	0	10 - 29.5	8 - 30	0 - 8
	6/6/91	15.69		100.01	0			
	12/4/91	15.38		100.32	0			
	6/2/92	15.40		100.30	0			
	9/16/92	15.89		99.81	0			
	12/21/92	**13.91**		**101.79**	**0**			
C-4	12/6/90	17.68	116.10	98.42	0	10 - 29.5	8 - 30	0 - 8
	6/6/91	16.49		99.61	0			
	12/4/91	16.82		99.28	0			
	6/2/92	16.92		99.18	0			
	9/16/92	17.71		98.39	0			
	12/21/92	**15.36**		**100.74**	**0**			

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Table 1. Water Level Data and Well Construction Details - Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California (continued)

EXPLANATION:

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

NOTES:

Depth to water measurements and top of casing elevations prior to June 6, 1991 were compiled from the January 17, 1991 Site Update Report prepared for this service station by GeoStrategies, Inc. of Hayward, California.

Well construction details were compiled from November 14 and 15, 1990 boring logs by GeoStrategies, Inc.

* 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.

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Table 2. Analytic Results for Ground Water - Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California

Well	Date Sampled	Analytic Lab	Analytic Method	TPPH(G)	B	T	E	X
				<----------	ppb	----------	----------	----------
C-1	12/6/90	SAL	8015/8020	1,900	17	11	3	21
	6/6/91	SAL	8015/8020	3,400	21	15	11	18
	12/4/91	SPA	8015/8020	2,700	22	16	13	23
	6/2/92	SPA	8015/8020	1,900	170	170	13	83
	9/16/92	SPA	8015/8020	810	5.8	5.7	2.0	6.3
	12/21/92	**SPA**	**8015/8020**	**75**	**2.4**	**2.9**	**1.4**	**4.7**
C-2	12/6/90	SAL	8015/8020	210	140	9	2	11
	6/6/91	SAL	8015/8020	4,800	340	23	19	23
	12/4/91	SPA	8015/8020	3,900	85	15	9.1	15
	6/2/92	SPA	8015/8020	3,300	76	9.2	14	15
	9/16/92	SPA	8015/8020	3,000	16	15	3.4	7.5
	12/21/92	**SPA**	**8015/8020**	**2,200**	**21**	**12**	**7.1**	**15**
C-3	12/6/90	SAL	8015/8020	210	2	<0.5	<0.5	1
	12/6/90[1]	SAL	8015/8020	220	2	0.6	<0.5	2
	6/6/91	SAL	8015/8020	6,400	310	21	16	21
	12/4/91	SPA	8015/8020	5,100	120	18	17	20
	6/2/92	SPA	8015/8020	6,700	140	44	17	37
	9/16/92	SPA	8015/8020	7,100	130	26	12	30
	12/21/92 1/20/93	**SPA**	**8015/8020**	**13,000** ✓ 4,800	**390** 1.20	**360** 32	**100** 15	**410** 58
C-4	12/6/90	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	12/18/90[2]	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	6/6/91	SAL	8015/8020	<50	1.0	1.0	<0.5	0.7
	12/4/91	SPA	8015/8020	70	6.5	9.8	1.7	8.6
	6/2/92	SPA	8015/8020	70	3.0	4.4	1.8	9.0
	9/16/92	SPA	8015/8020	<50	1.4	1.8	<0.5	1.1
	12/21/92 N.D. 1/13	**SPA**	**8015/8020**	**<50**	**0.6**	**0.7**	**<0.5**	**1.5**
Trip Blank	12/6/90	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	12/18/90[3]	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
(A-1)	6/6/91	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	12/4/91	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
TB-LB	6/2/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	9/16/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	**SPA**	**8015/8020**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

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Table 2. Analytic Results for Ground Water - Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California (continued)

Well ID	Date Sampled	Analytic Lab	Analytic Method	TPPH(G)	B	T	E	X
				<----------ppb---------->				
Bailer Blank (BB)	6/6/91	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	12/4/91	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	6/2/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	9/16/92	SPA	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	**SPA**	**8015/8020**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

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

ANALYTIC LABORATORIES:

SAL = Superior Analytical Laboratory of Martinez and San Francisco, California
SPA = Superior Precision Analytical, Inc. of Martinez, California

NOTES:

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.

1 Duplicate sample.

2 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, 0.15 ppm chromium, 0.25 ppm nickel and 0.2 ppm zinc were detected. Other HVOCs, Cd and Pb were not detected.

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

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 taken to Chevron's Richmond Refinery for disposal.

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 [illegible] 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.

APPENDIX D
CHAIN OF CUSTODY DOCUMENT AND
LABORATORY ANALYTIC REPORTS

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

S7483

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., Oakland
Consultant Project Number 1-205.04
Consultant Name Sierra Environmental Services
Address P.O. Box 2546, Martinez, CA
Project Contact (Name) Chris Bramer
(Phone) 370-1280 (Fax Number) 370-7959

Chevron Contact (Name) [illegible]
(Phone) [illegible]
Laboratory Name Superior Analytical
Laboratory Release Number [illegible]
Samples Collected by (Name) [illegible]
Collection Date 12/21/92
Signature [signature]

Analyses To Be Performed

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	1	3	W	G	12:05	HCl	Y	✓												[illegible]
BB	2	↓	↓	↓	12:10	↓	↓	✓												[illegible]
C-4	3				12:30			✓												
C-1	4				12:15			✓												
C-2	5				12:20			✓												
C-3	6				12:45			✓												↓

Note:
Do Not Bill
TB-LB Samples

Please Initial:
Samples Stored in ice
Appropriate containers
Samples preserved
VOA's without headspace
Comments:

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
[signature]	SES	12/21/92 3:04 pm			
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
			[signature]		12-21-92 / 15[illegible]

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

Superior Precision Analytical, Inc.

[illegible]

Sierra Environmental
Attn: Dale Brane

Project I-203.04
Reported [illegible]
Revised 01/11/93

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed	Matrix
87483- 1	TB-LB	12/21/92	01/04/93	Water
87483- 2	BB	12/21/92	01/04/93	Water
87483- 3	C-4	12/21/92	01/04/93	Water
87483- 4	C-1	12/21/92	12/31/92	Water
87483- 5	C-2	12/21/92	01/04/93	Water
87483- 6	C-3	12/21/92	12/31/92	Water

RESULTS OF ANALYSIS

Laboratory Number:	87483- 1	87483- 2	87483- 3	87483- 4	87483- 5
Gasoline:	ND<50	ND<50	ND<50	75	2200
Benzene:	ND<0.5	ND<0.5	0.6	2.4	21
Toluene:	ND<0.5	ND<0.5	0.7	2.9	12
Ethyl Benzene:	ND<0.5	ND<0.5	ND<0.5	1.4	7.1
Xylenes:	ND<0.5	ND<0.5	1.5	4.7	15
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L

Laboratory Number:	87483- 6
Gasoline:	13000
Benzene:	390
Toluene:	360
Ethyl Benzene:	100
Xylenes:	410
Concentration:	ug/L

Superior Precision Analytical, Inc.
[illegible]

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

Quote Information
SET: 87483

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 [illegible]
Minimum Detection Limit in Water: 5000ug/L

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

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

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

ANALYTE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	200 ng	93/93	0	70-130
Benzene:	200 ng	91/91	0	70-130
Toluene:	200 ng	97/97	0	70-130
Ethyl Benzene:	200 ng	105/106	1	70-130
Xylenes:	600 ng	110/110	0	70-130

Richard Srna, Ph.D.
Laboratory Director