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

STID 1143

January 26, 1993

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

Re: Chevron Service Station No. 9-0329
340 Highland Avenue, Piedmont, California

Dear Mr. Seto :

Enclosed is the quarterly groundwater monitoring and sampling report from Sierra Environmental Services dated January 22, 1993.

Samples from monitoring well C-4 was nondetect for total petroleum hydrocarbon as gasoline (TPH-G), benzene, toluene, ethylbenzene, and xylenes (BTEX). Sample from C-3 contained only 0.7 ppb benzene. This is probably anomaly since the level is close to the detection limit and the last six quarters were ND<0.5 ppb. A sample from well C-2 contained : 5500 ppb TPH-G, 190 ppb benzene, 32 ppb toluene, 41 ppb ethylbenzene, and 54 ppb xylenes. Again, a sheen was not observed in monitoring well C-2. During this sampling event, depth to water ranged from 3.41 feet to 4.29 feet.

The consultant will be provided with monitoring well information as well as the name of the laboratory that analyzed the previous samples.

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

Sincerely,

Chevron U.S.A. Products Co.

Kenneth Kan
Engineer

LKAN/MacFile 9-0329R4

Enclosure

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

Mr. Steve Willer, Chevron U.S.A. Products Co.

SIERRA
Environmental Services

January 22, 1993

Ken Kan
Chevron USA
P.O. Box 5004
San Ramon, CA 94583

Re: Chevron Service Station #9-0329
340 Highland Avenue
Piedmont, California
SES Project #1-294-04

Dear Mr. Kan:

This report presents the results of the quarterly ground water sampling at Chevron Service Station #9-0329, located at 340 Highland Avenue in Piedmont, California (Figure 1, Appendix A). Three wells, C-2, C-3 and C-4 were sampled (Figure 2, Appendix A).

On January 6, 1993, SES personnel visited the site. Water levels were measured in all 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 (Appendix B) and a ground water elevation contour map is included as Figure 2 (Appendix A).

The ground water samples were collected on January 6, 1993 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 laboratory analytic reports are included in Appendix D. SES is not responsible for laboratory omissions or errors.

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

Sincerely,
Sierra Environmental Services

Argy Mena
Staff Geologist

Chris J. Bramer
Professional Engineer #C48846

AJM/CJB/dcp
29404QMJA3

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

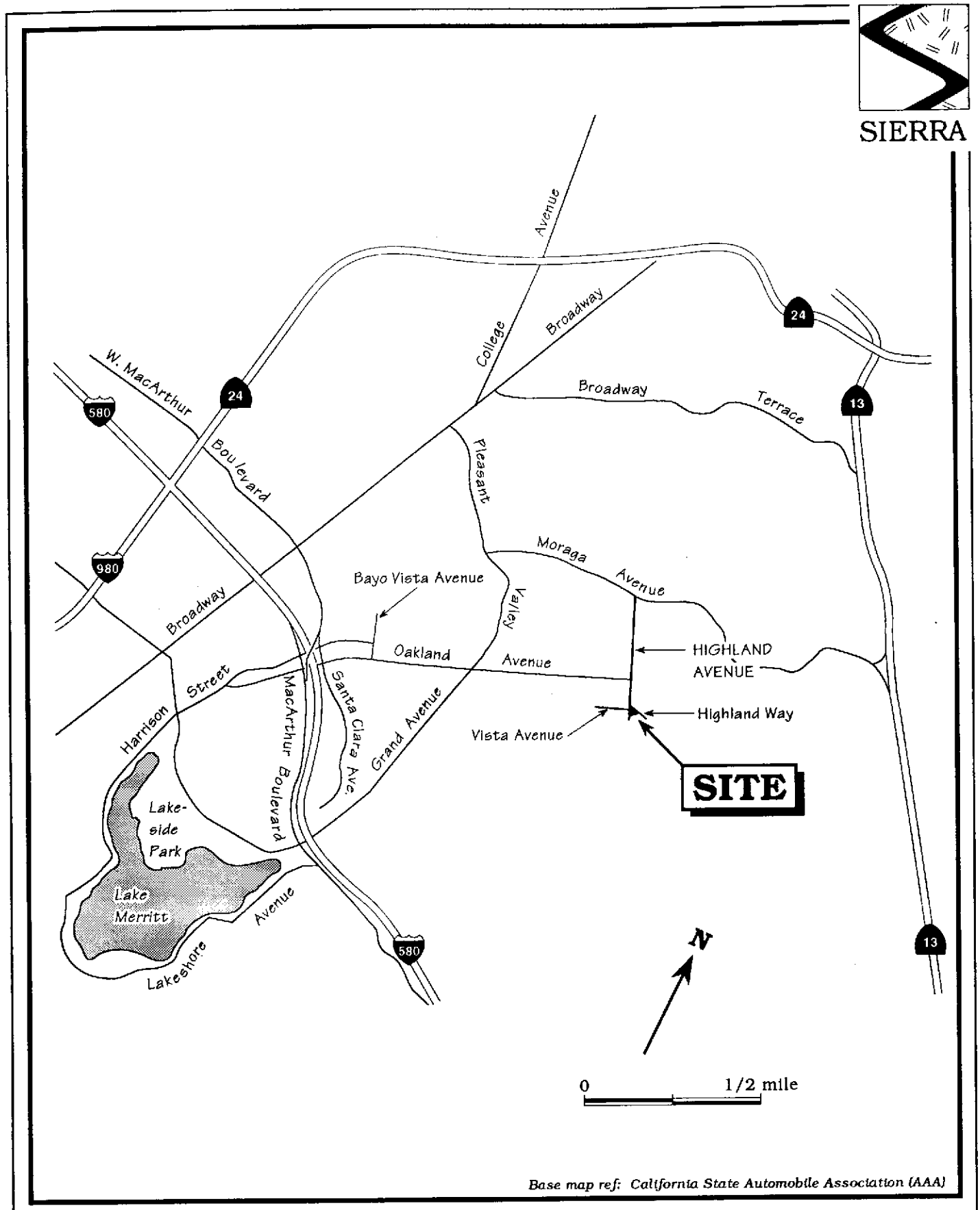

Figure 1. Site Location Map – Chevron Service Station #9-0329, 340 Highland Avenue, Piedmont, California

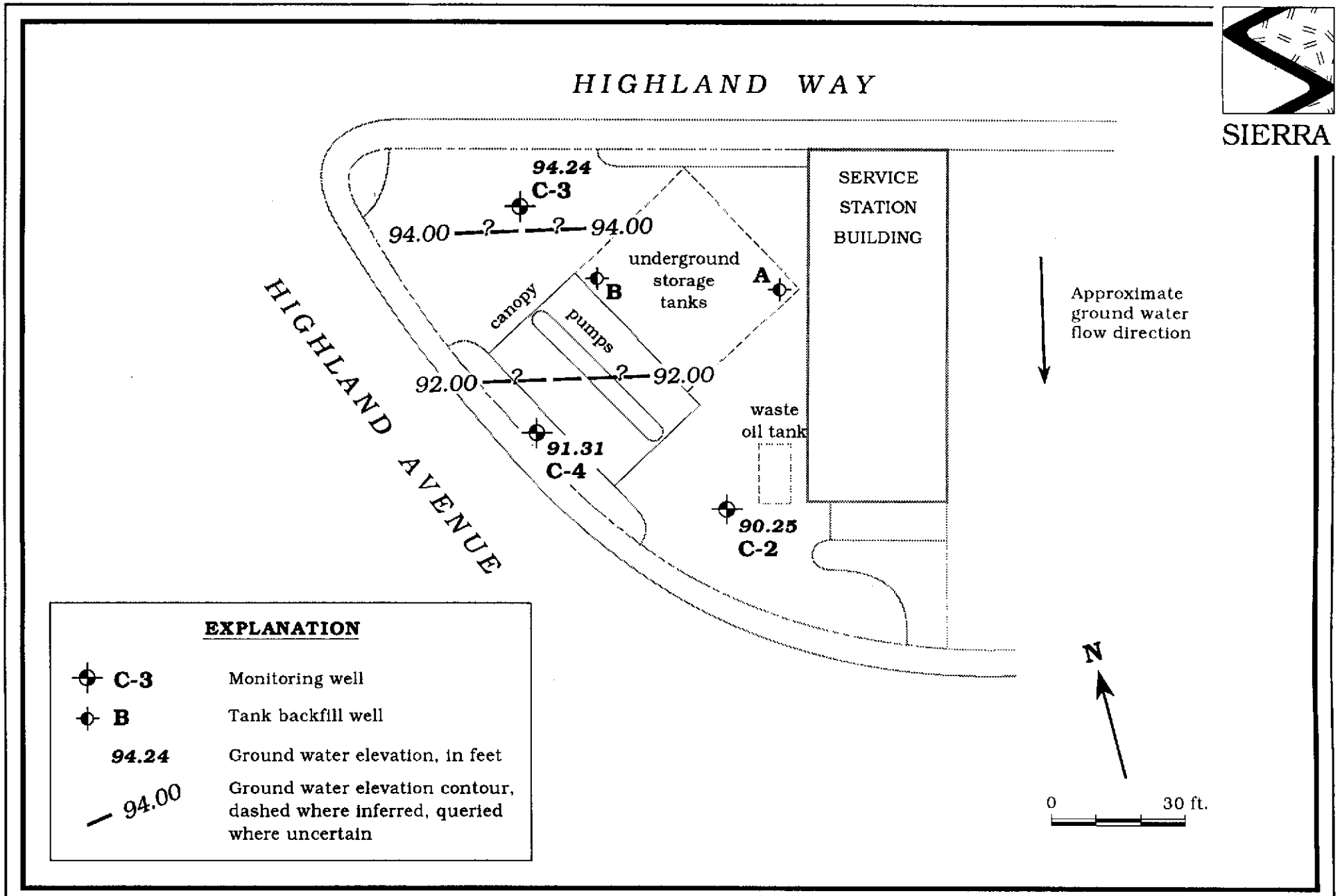

Figure 2. Monitoring Well Locations and Ground Water Elevation Contour Map – January 6, 1993 – Chevron Service Station #9-0329, 340 Highland Avenue, Piedmont, California

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Table 1. Water Level Data and Well Construction Details - Chevron Service Station #9-0329, 340 Highland Avenue, Piedmont, 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-2	8/7/89	2.88	94.19	91.33	0.00	UNK	UNK	UNK
	11/15/89	2.80		91.39	0.00			
	2/1/91	3.75		90.41	0.00			
	4/16/91	2.55		91.64	0.00			
	10/16/91	3.52		90.67	0.00			
	1/8/92	4.15		90.04	SHEEN			
	4/10/92	2.96		91.23	SHEEN			
	7/14/92	2.83		91.36	SHEEN			
	10/5/92	4.38		89.81	0.00			
	1/6/93	**3.94**		**90.25**	**0**			
C-3	8/7/89	4.29	97.65	93.36	0.00	UNK	UNK	UNK
	11/15/89	5.17		92.48	0.00			
	2/1/91	6.38		91.27	0.00			
	4/16/91	3.72		93.93	0.00			
	10/16/91	8.20		89.45	0.00			
	1/8/92	6.68		90.97	0.00			
	4/10/92	4.50		93.15	0.00			
	7/14/92	6.21		91.44	0.00			
	10/5/92	9.31		88.34	0.00			
	1/6/93	**3.41**		**94.24**	**0**			
C-4	8/7/89	DRY	95.60	---	---	UNK	UNK	UNK
	11/15/89	4.95		90.65	0.00			
	2/1/91	4.78		90.82	0.00			
	4/16/91	4.83		95.60	0.00			
	10/16/91	4.23		91.37	0.00			
	1/8/92	4.81		90.79	0.00			
	4/10/92	4.26		91.34	0.00			
	7/14/92	4.28		91.32	0.00			
	10/5/92	4.29		91.31	0.00			
	1/6/93	**4.29**		**91.31**	**0**			

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Table 1. Water Level Data and Well Construction Details - Chevron Service Station #9-0329, 340 Highland Avenue, Piedmont, California (continued)

Well ID	Date Measured	DTW (ft)	TOC (ft)	GWE (msl)	Product Thickness*	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval
						(ft)<----------*feet below grade*---------->		
A[1]	8/7/89	2.10	---	---	0.0	UNK	UNK	UNK
	11/15/89	2.04		---	0.0			
	2/1/91	3.05		---	0.0			
	4/16/91	2.01		---	0.0			
	10/16/91	4.15		---	0.0			
B[1]	8/7/89	4.12	---	---	0.0	UNK	UNK	UNK
	11/15/89	---		---	---			
	2/1/91	5.03		---	0.0			
	4/16/91	4.00		---	0.0			
	10/16/91	6.24		---	0.0			

EXPLANATION:

DTW = Depth to water
TOC = Top of casing elevation
GWE = Ground water elevation
msl = Measurements referenced relative to mean sea level
UNK = Unknown
--- = Not applicable/not measured

NOTES:

All top of casing elevations were compiled from Quarterly Groundwater Monitoring Report prepared for Chevron by Groundwater Technology, Inc., December 2, 1992.

Well construction details unavailable for inclusion in this report.

* Product thickness was measured on and after January 6, 1993 with an MMC flexi-dip interface probe.

[1] Tank backfill wells

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Table 2. Analytic Results for Ground Water - Chevron Service Station #9-0329, 340 Highland Avenue, Piedmont, California

Well ID	Date Sampled	Analytic Lab	Analytic Method	TPPH(G)	TOG	B	T	E	X
				<----------		ppb			---------->
C-2	8/7/89	UNK	NS	34,000	12,000	580	60	170	270
	11/15/89	UNK	NS	8,100	<5,000	500	36	420	180
	2/1/91	UNK	NS	6,800	7,000	490	21	310	86
	4/16/91	UNK	NS	9,600	<5,000	810	43	550	270
	10/16/91	UNK	NS	7,100	<5,000	320	23	200	60
	1/8/92	UNK	NS	2,400	---	190	9	83	22
	4/10/92	UNK	NS	6,600	---	550	33	340	170
	7/14/92	UNK	NS	9,000	---	680	330	580	690
	10/5/92	UNK	NS	5,500	---	250	17	130	82
	1/6/93	**SPA**	**8015/8020**	**5,500**	**---**	**190**	**32**	**41**	**54**
C-3	8/7/89	UNK	NS	<50	---	<0.5	<1	<1	<3
	11/15/89	UNK	NS	<500	<5,000	<0.5	2.8	<0.5	1.1
	2/1/91	UNK	NS	<50	---	<0.5	<0.5	<0.5	<0.5
	4/16/91	UNK	NS	<50	---	<0.5	<0.5	<0.5	<0.5
	10/16/91	UNK	NS	<50	---	<0.5	<0.5	<0.5	<0.5
	1/8/92	UNK	NS	<50	---	<0.5	<0.5	<0.5	<0.5
	4/10/92	UNK	NS	<50	---	<0.5	<0.5	<0.5	<0.5
	7/14/92	UNK	NS	<50	---	<0.5	<0.5	<0.5	<0.5
	10/5/92	UNK	NS	<50	---	<0.5	<0.5	<0.5	<0.5
	1/6/93	**SPA**	**8015/8020**	**<50**	**---**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
C-4	8/7/89	UNK	NS	---	---	---	---	---	---
	11/15/89	UNK	NS	1,300	<5,000	2.9	310	0.5	2.9
	2/1/91	UNK	NS	72	---	9	<0.5	<0.5	<0.5
	4/16/91	UNK	NS	<50	---	<0.5	<0.5	<0.5	<0.5
	10/16/91	UNK	NS	<50	---	<0.5	<0.5	<0.5	<0.5
	1/8/92	UNK	NS	<50	---	<0.5	<0.5	<0.5	<0.5
	4/10/92	UNK	NS	<50	---	<0.5	<0.5	<0.5	<0.5
	7/14/92	UNK	NS	<50	---	<0.5	3.8	<0.5	<0.5
	10/5/92	UNK	NS	<50	---	<0.5	<0.5	<0.5	<0.5
	1/6/93	**SPA**	**8015/8020**	**<50**	**---**	**0.7**	**<0.5**	**<0.5**	**<0.5**

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Table 2. Analytic Results for Ground Water - Chevron Service Station #9-0329, 340 Highland Avenue, Piedmont, California (continued)

Well ID	Date Sampled	Analytic Lab	Analytic Method	TPPH(G)	TOG	B	T	E	X
				<----------		ppb			---------->
A[1]	8/7/89	UNK	NS	1,000	---	50	6	5	22
	11/15/89	UNK	NS	3,700	<5,000	98	2.1	4.3	55
	2/1/91	UNK	NS	36,000	---	1,100	750	130	6,100
	4/16/91	UNK	NS	8,000	---	370	6	86	750
	10/16/91	UNK	NS	---	---	---	---	---	---
B[1]	8/7/89	UNK	NS	---	---	---	---	---	---
	11/15/89	UNK	NS	---	---	---	---	---	---
	2/1/91	UNK	NS	---	---	---	---	---	---
	4/16/91	UNK	NS	---	---	---	---	---	---
	10/16/91	UNK	NS	---	---	---	---	---	---

EXPLANATION:

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

ANALYTIC METHODS:

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

ANALYTIC LABORATORIES:

UNK = Unknown
SPA = Superior Precision Analytical, Inc., of Martinez, California

NOTES:

Analytic data prior to January 6, 1993 compiled from Quarterly Groundwater Monitoring Report prepared for Chevron by Groundwater Technology, Inc., December 2, 1992.

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APPENDIX C
SIERRA ENVIRONMENTAL SERVICES
STANDARD OPERATING PROCEDURE

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SES STANDARD OPERATING PROCEDURE

GROUND WATER SAMPLING

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

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

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

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

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

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APPENDIX D
CHAIN OF CUSTODY DOCUMENT AND
LABORATORY ANALYTIC REPORTS

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

Sierra Environmental
Attn: ARGY MENA

Project 1-294-04
Reported 01/13/93

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed	Matrix
87560- 1	TB-LB	01/06/93	01/08/93	Water
87560- 2	BB	01/06/93	01/11/93	Water
87560- 3	C-3	01/06/93	01/08/93	Water
87560- 4	C-4	01/06/93	01/11/93	Water
87560- 5	C-2	01/06/93	01/08/93	Water

RESULTS OF ANALYSIS

Laboratory Number:	87560- 1	87560- 2	87560- 3	87560- 4	87560- 5
Gasoline:	ND<50	ND<50	ND<50	ND<50	5500
Benzene:	ND<0.5	ND<0.5	ND<0.5	0.7	190
Toluene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	32
Ethyl Benzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	41
Xylenes:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	54
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

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

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

QA/QC INFORMATION
SET: 87560

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	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	200 ng	90/84	7%	70-130
Benzene:	200 ng	77/89	14%	70-130
Toluene:	200 ng	94/95	1%	70-130
Ethyl Benzene:	200 ng	103/100	3%	70-130
Xylenes:	600 ng	101/99	2%	70-130

Richard Srna, Ph.D.
Laboratory Director

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No 87560

Chain-of-Custody-Record

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

Chevron Facility Number 9-0329
Facility Address 340 Highland Ave. Piedmont
Consultant Project Number 1-294-04
Consultant Name Sierra Environmental Services
Address PO BOX 2546 MARTINEZ
Project Contact (Name) ARGY MENA
(Phone) 370-1280 (Fax Number) 370-7958

Chevron Contact (Name) Kenneth Kan
(Phone) 842-8752
Laboratory Name Superior Precision Analytical
Laboratory Release Number 861831
Samples Collected by (Name) Jim Green
Collection Date 1-6-93
Signature Jim Green

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)	Analyses To Be Performed: BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	Remarks
TB-LB	1	3	W	G		HCL	Y	✓								analyze only 1
BB	2	↓	↓	↓		↓	↓	✓								↓
C-3	3							✓								
C-4	4							✓								
C-2	5	↓	↓	↓		↓	↓	✓								

Note:
Do Not Bill
TB-LB Samples

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

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Jim Green	SES	1-6-93 2:50 PM			
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 1/6/93 1450

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted
1/6/93

COC-3.DWG/03 91/HCH