



Chevron U.S.A. Inc.

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

Noted E. P. SO. JAN 7 1992

CALIFORNIA REGIONAL WATER

Marketing Department

January 2, 1992

JAN 8 - 1992

QUALITY CONTROL BOARD

01

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

Re: Former Chevron Service Station #9-3864
5101 Telegraph Avenue, Oakland

GWDP = 14.5'

LD = L

• 1/2 QIR

• station to be demolished

Dear Ms. Hugo:

Enclosed we are forwarding the results of the quarterly ground water sampling dated December 23, 1991, prepared by our consultant Sierra Environmental Services for the above referenced site. As indicated in the report, ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline and BTEX. Benzene was detected in all monitor wells at concentrations ranging from 6.5 to 120 ppb. Depth to ground water was measured at approximately 14.5 to 16.8 feet below grade, and the direction of flow is to the southwest.

Our consultant, Pacific Environmental Group, Inc. has been instructed to conduct an investigation to assess the existence of potential off-site sources. This is surmised based on historical elevated concentrations being detected in upgradient monitor well C-1 and significantly higher concentrations being detected in monitor wells C-2 and C-3 during the last two (2) sampling events. In addition, a review of our files indicated no tank failures or product losses of the former tank system. Upon completion of this investigation, all data will be evaluated and appropriate next actions recommended in regards to additional assessment work and possible remediation.

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

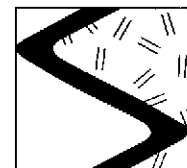
If you have any questions or comments, please do not hesitate to contact me at (510) 842-9581.

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

Nancy Vukelich
Environmental Engineer

✓ cc: Mr. Eddy So, RWQCB-Bay Area
Mr. W.T. Scudder
File (9-3864Q1)

Mr. Paul Eveloff
80 E. Sir Francis Drake Blvd.
Wood Island, Suite 3A
Larkspur, CA 94939



DEC 27 9 11 L.H.

December 23, 1991

Nancy Vukelich
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 Ms. Vukelich:

This report presents the results of the quarterly 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 4, 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).

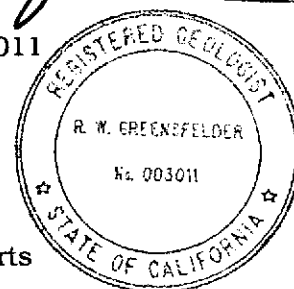
The water samples were collected on December 4, 1991 in accordance with SES Standard Operating Procedure - Ground Water Sampling (Appendix C). All analyses were performed by Superior Precision Analytical, Inc. of Martinez, California. Analytic results for ground water are presented in Table 2 (Appendix 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.

Sincerely,
Sierra Environmental Services

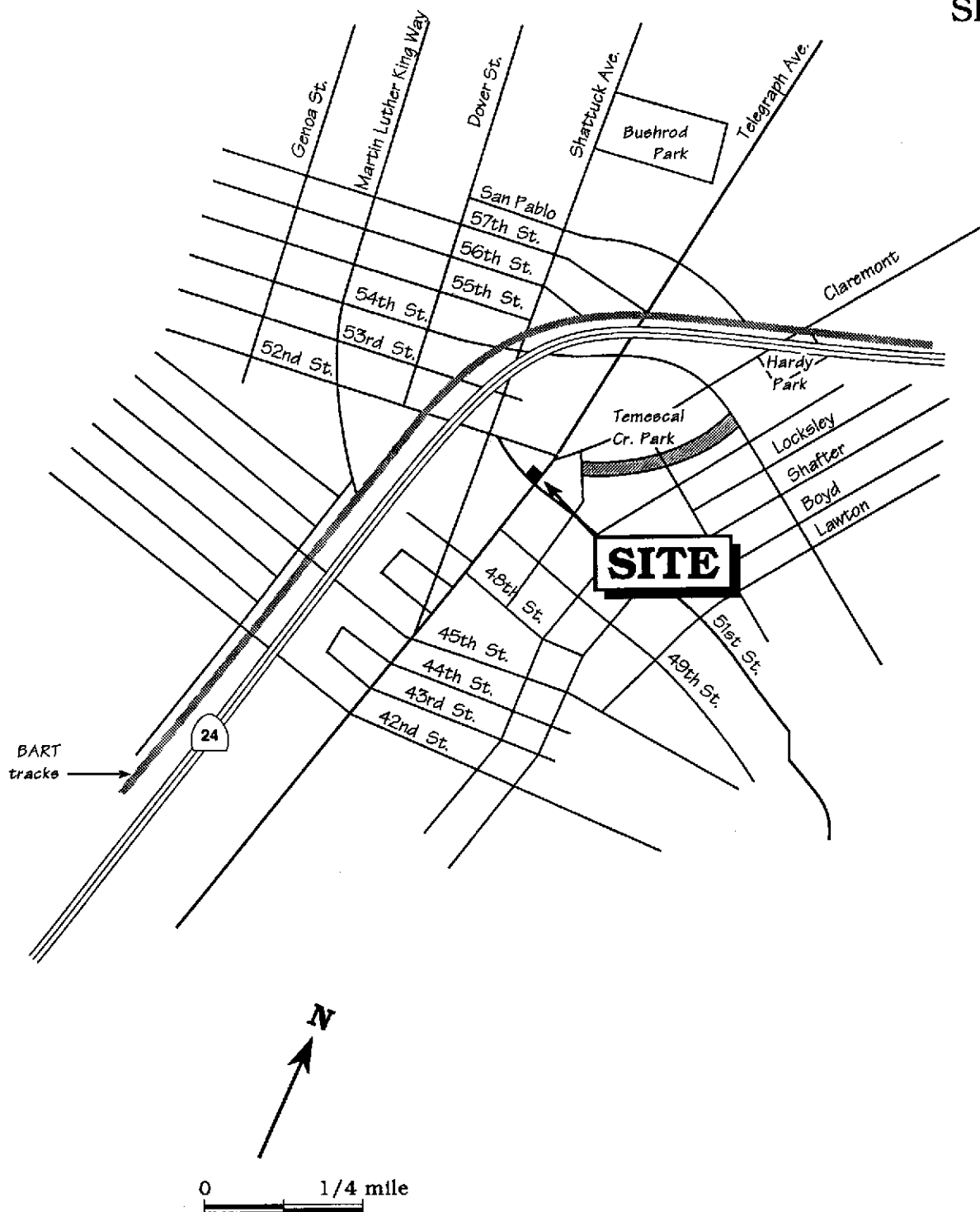
Argy Mena
Environmental Technician

Roger Greensfelder
Registered Geologist #003011



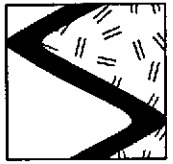
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Appendices A - Figures
B - Tables
C - SES Standard Operating Procedure
D - Chain of Custody Document and Laboratory Analytic Reports



Base map ref: California Automobile Association (AAA)

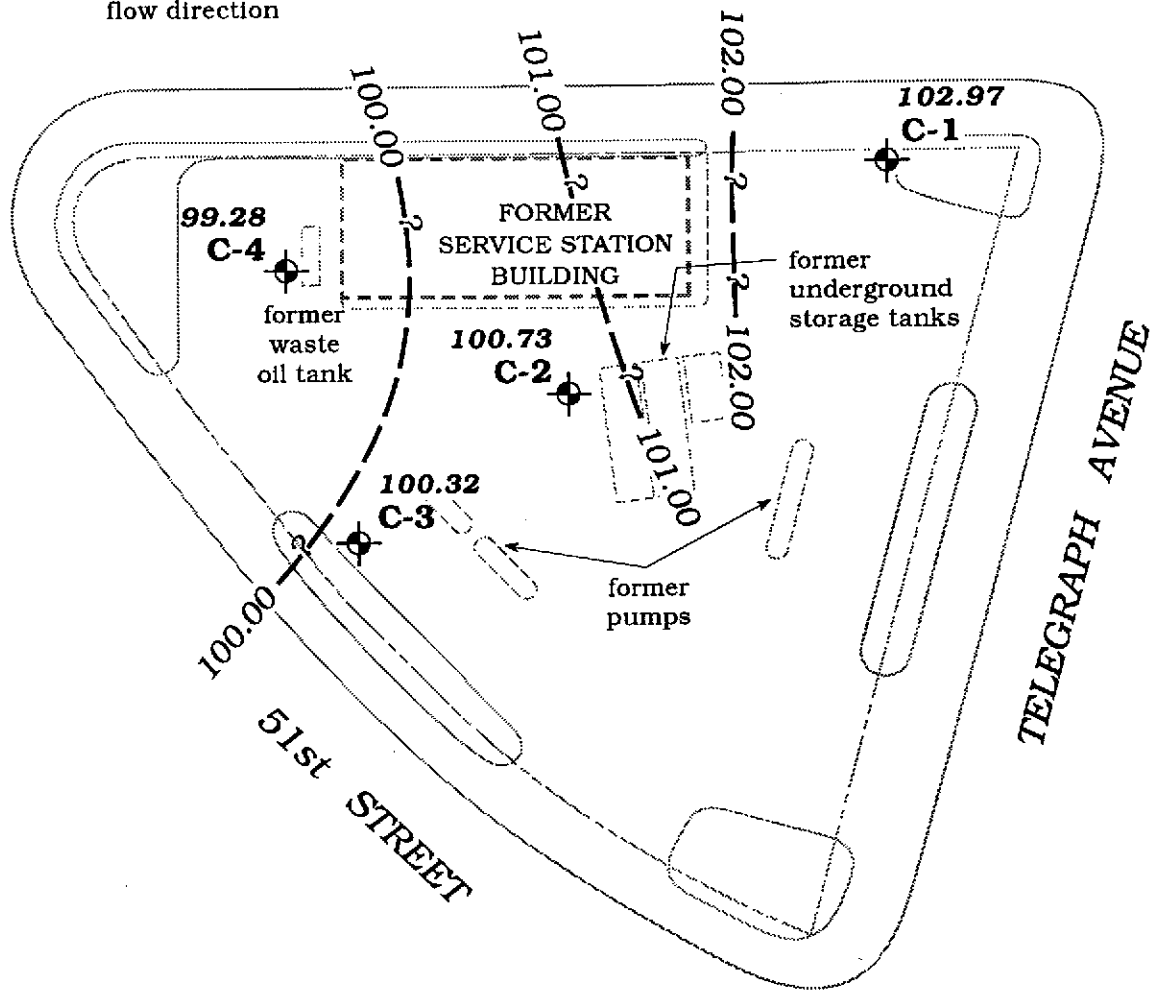
Figure 1. Site Location Map - Former Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California





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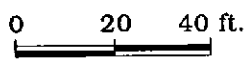
Approximate
ground water
flow direction

52nd STREET



EXPLANATION

-  **C-4** Monitoring well
- 99.28** Ground water elevation, in feet
-  **101.00** Ground water elevation contour, dashed where inferred, queried where uncertain



Base map after: GeoStrategies Inc.

Figure 2. Monitoring Well Location and Ground Water Contour Map - December 4, 1991 - 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-1	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			
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			
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			
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			

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 ID	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
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
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
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
Trip Blank (AA)	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
	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	
Baller 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



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

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 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

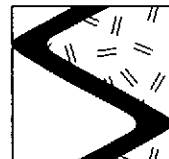
NOTES:

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, 0.18 ppm chromium, 0.25 ppm nickel and 0.23 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.



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APPENDIX C
SIERRA ENVIRONMENTAL SERVICES
STANDARD OPERATING PROCEDURES



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SES STANDARD OPERATING PROCEDURE GROUND WATER SAMPLING

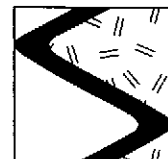
The following describes sampling procedures used by SES field personnel to collect and handle ground water samples. Before samples are collected, careful consideration is given to the type of analysis to be performed so that precautions are taken to prevent loss of volatile components or contamination 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 $\pm 0.5^{\circ}\text{F}$, 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.

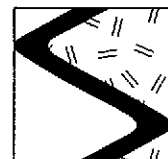


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The chain-of-custody form includes the project number, analysis requested, sample ID, date analysis and the SES field person's name. The form is signed and dated (with the transfer time) by each person who yields or receives the samples beginning with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

GWTRSAMP.SOP



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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

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

LABORATORY NO.: 84540
CLIENT: Sierra Environmental
CLIENT JOB NO.: 1-203-04

DATE RECEIVED: 12/04/91
DATE REPORTED: 12/11/91

Page 1 of 2

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
84540- 1	MW-AA	12/04/91	12/10/91
84540- 2	MW-BB	12/04/91	12/10/91
84540- 3	C-4	12/04/91	12/10/91
84540- 4	C-1	12/04/91	12/10/91
84540- 5	C-2	12/04/91	12/10/91
84540- 6	C-3	12/04/91	12/10/91

Laboratory Number:	84540	84540	84540	84540	84540
	1	2	3	4	5

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	ND<50	70	2700	3900
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	ND<0.5	ND<0.5	6.5	22	85
TOLUENE:	ND<0.5	ND<0.5	9.8	16	15
ETHYL BENZENE:	ND<0.5	ND<0.5	1.7	13	9.1
XYLENES:	ND<0.5	ND<0.5	8.6	23	15

Laboratory Number:	84540
	6

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)
OIL AND GREASE:	NA
TPH/GASOLINE RANGE:	5100
TPH/DIESEL RANGE:	NA
BENZENE:	120
TOLUENE:	18
ETHYL BENZENE:	17
XYLENES:	20



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

Page 2 of 2
QA/QC INFORMATION
SET: 84540

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 5520F:
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: 10/04/91

SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/L
Standard Reference: 10/11/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	10/04/91	200 ng	85/97	14	70-130
Benzene	12/02/91	200 ng	88/101	14	70-130
Toluene	12/02/91	200 ng	87/98	12	70-130
Ethyl Benzene	12/02/91	200 ng	85/95	11	70-130
Total Xylene	12/02/91	200 ng	92/104	12	70-130

Richard Srna, Ph.D.

James Salimovic
Laboratory Director

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 1-203-04
Consultant Name SIERRA ENVIRONMENTAL SERVICES
Address P.O. BOX 2546, MARTINEZ
Project Contact (Name) JEANNE WAHLER
(Phone) (510) 370-1280 (Fax Number) (510) 370-7959

Chevron Contact (Name) NANCY VUKELICH
(Phone) (510) 842-9581
Laboratory Name SUPERIOR PRECISION ANALYTICAL
Laboratory Release Number 4056670
Samples Collected by (Name) ARGY MENA
Collection Date 4 DEC 91
Signature Argy Mena

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed										Remarks	
								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)				
MW-AA		3	W	G	12:34	HCL	Y	✓											ANALYSIS IN ORDER
MW-BB					12:41														
C-4					12:45														
C-1					12:55														
C-2					13:10														
C-3					13:15														

Please Initial:
 Samples stored in ice
 Appropriate containers
 Samples preserved
 VOC's without headspace
 Comments:

Relinquished By (Signature) <u>Argy Mena</u>	Organization <u>SES</u>	Date/Time <u>15:36 4 DEC 91</u>	Received By (Signature) <u>[Signature]</u>	Organization	Date/Time	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. <input checked="" type="radio"/> 5 Days 10 Days As Contracted
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature) <u>[Signature]</u>		Date/Time <u>15:36 12/4/91</u>	

COC-3.DWG/03 91/RCH