Chevron

August 15, 1994

Chevron U.S.A. Products Company
2410 Camino Ramon
San Ramon, CA 94583
P.O. Box 5004
San Ramon, CA 94583-0804

Marketing Department
Phone 510 842 9500

Ms. Jennifer Eberle
Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Former Gulf Service Station #0006
460 Grand Avenue, Oakland, CA

Dear Ms. Eberle:

Enclosed is the quarterly Ground Water Sampling report dated July 25, 1994, 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 ground water monitor wells C-2 and C-3 at concentrations of 2.8 and 5.6 ppb, respectively. Depth to ground water was measured at approximately 5.1 to 5.6 feet below grade and the direction of flow is to the south.

Chevron will continue to monitor and sample this site quarterly. I will contact you by telephone during the next week to discuss the results of this sampling event and pending future work for this site. If you have any questions or comments, please do not hesitate to call me at (510) 842-8134.

Sincerely,
CHEVRON U.S.A. PRODUCTS COMPANY

Mark A. Miller
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Kevin Graves, RWQCB - Bay Area
Mr. Jon Robbins - CHVPKV/V1156
Ms. B.C. Owen

Mr. John C. Gibson
Adams, Gibson & MacPhee
22 Battery Street, 10th Floor
San Francisco, CA 94111

Mr. Robert Falashi
3080 Frye Street
Oakland, CA 94602

File: GULF6 QM1

SIERRA
Environmental Services

July 25, 1994

Mark Miller
Chevron USA Products Company
P.O. Box 5004
San Ramon, CA 94583

Re: Former Gulf Service Station #0006
460 Grand Avenue
Oakland, California
SES Project #1-382-04

Dear Mr. Miller:

This report presents the results of the quarterly ground water sampling at former Gulf Service Station #0006, located at 460 Grand Avenue in Oakland, California. Three wells, C-1, C-2 and C-3 were sampled (Figure 1).

On June 22, 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 ground water samples were collected on June 22, 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 Martinez, 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.

Sincerely,
Sierra Environmental Services

Argy Mena
Staff Geologist

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

Chris J. Bramer
Professional Engineer #C48846

AJM/CJB/lo
38204QM.JL4

cc: Sheldon Nelson, CRTC

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

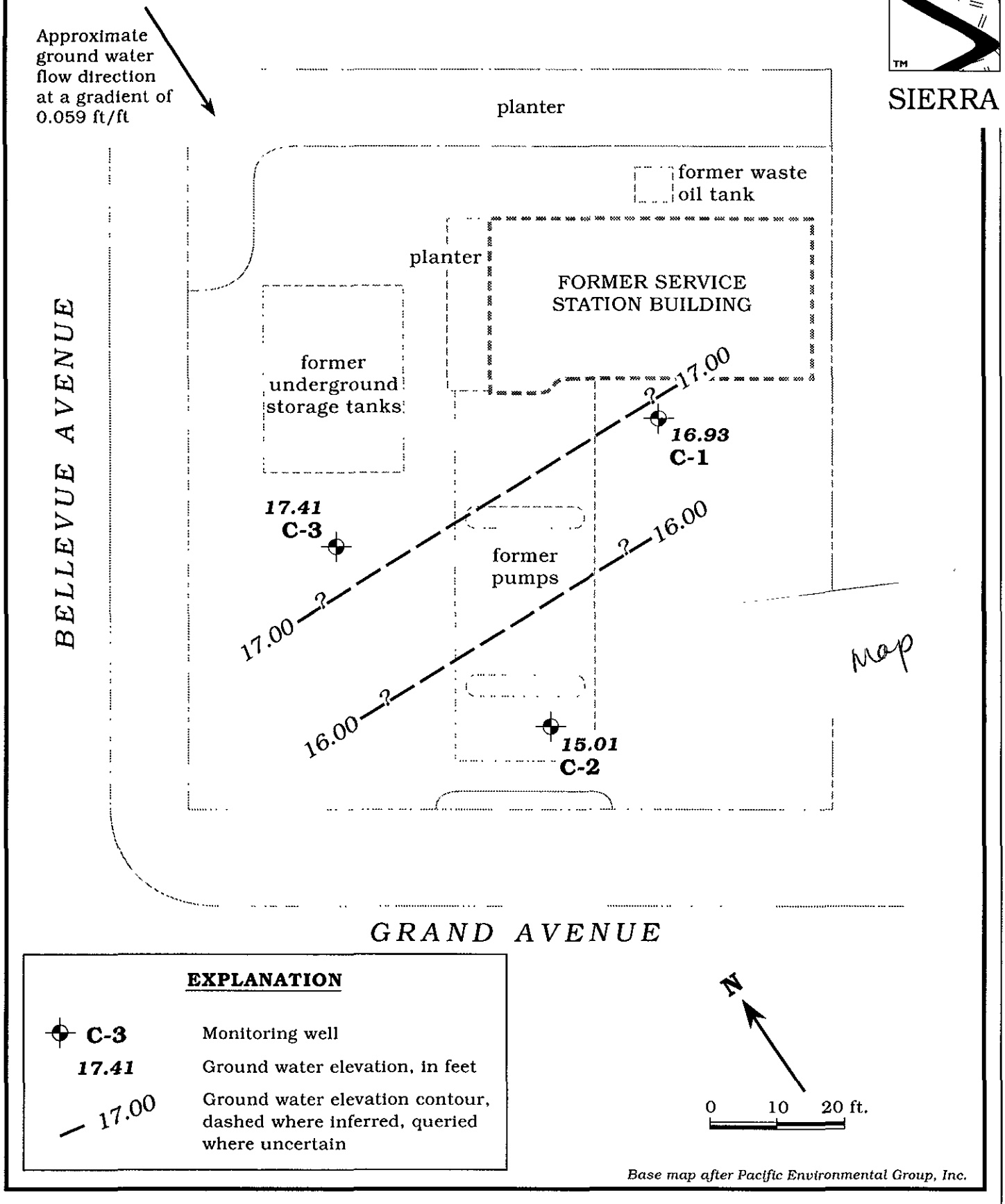

Figure 1. Monitoring Well Locations and Ground Water Elevation Contour Map - June 22, 1994 - Former Gulf Service Station #0006, 460 Grand Avenue, Oakland, California

1-382-04 7/20/94

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Table 1. Water Level Data and Ground Water Analytic Results - Former Gulf Service Station #0006, 460 Grand 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/ 22.48[1]	12/16/92	5.68	16.80	0	8015/8020[2,3,4]	<50	<0.5	<0.3	<0.3	<0.4
	6/22/94	**5.55**	**16.93**	**0**	**8015/8020**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
C-2/ 20.49[1]	12/16/92	7.49	13.00	0	8015/8020[2,3,5]	640	63	83	37	90
	6/22/94	**5.48**	**15.01**	**0**	**8015/8020**	**200**	**2.8**	**4.5**	**1.5**	**15**
C-3/ 22.51[1]	12/16/92	5.17	17.34	0	8015/8020[2,3,6]	<50	<0.4	<0.3	<0.3	<0.4
	6/22/94	**5.10**	**17.41**	**0**	**8015/8020**	**140**	**5.6**	**3**	**4.2**	**4.4**
Trip Blank TB-LB	**6/22/94**	---	---	---	**8015/8020**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

data

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Table 1. Water Level Data and Ground Water Analytic Results - Former Gulf Service Station #0006, 460 Grand Avenue, Oakland, California (continued)

EXPLANATION:

DTW = Depth to water
TOC = Top of casing elevation
GWE = Ground water elevation
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:

Water level data and analytic results prior to June 22, 1994 were compiled from the subsurface investigation report prepared for Chevron by Pacific Environmental Group, January 15, 1993.

NOTES: (continued)

Analytic Methods prior to 1994 are assumed to be 8015/8020.

* Product thickness was measured with an MMC flexi-dip interface probe on and after June 22, 1994.

[1] TOC elevation is actually top of box elevation.
[2] TPH(D) was also analyzed but not detected at detection limits of 50 ppb.
[3] Motor oil was also analyzed but not detected at detection limits of 200 ppb.
[4] Cadmium, chromium, lead, nickel and zinc were also analyzed but not detected at detection limits of 0.005, 0.01, 0.05, 0.02, and 0.01 ppm, respectively.
[5] Cadmium, chromium, lead, nickel and zinc were also analyzed. Chromium, Nickel and zinc were detected at 0.05, 0.08 and 0.08 ppm, respectively. Other metals not detected.
[6] Cadmium, chromium, lead, nickel and zinc were also analyzed. Chromium, lead, nickel and zinc were detected at 0.19, 0.07, 0.36 and 0.38 ppm, respectively. Cadmium was not detected at detection limits of 0.005 ppm.

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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 W. BRAND | Job Number 1-382-04 | Sampler JOE CARTER
Well Number C-1 | Date 6/22/94 | Well Diameter 2"
Sample Point Location/Description ON SITE EAST of GRAND AVE. & Mid. Lot | Well Depth (spec.) ____
Depth to Water (static) 5.55 | Well Depth (sounded) 14.86
Initial height of water in casing 9.31 | Volume 1.5 gallons
Volume to be purged 5 gallons
Purged With Sub pump | Sampled With DISPOSABLE BAILER
Pumped or Bailed Dry? ___ Yes X 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
150	151	1	1	7.4	78	470	
	153	2	3	7.3	72	410	
	155	2	5	7.2	70	400	

SAMPLES COLLECTED Time 225 | Total volume purged (gal.) 5
Water color Cloudy | Odor NONE
Description of sediments or material in sample: NONE
Additional Comments: —

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Inst)	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 W. BRAND Job Number 1-382-04 Sampler JOE CARTER

Well Number C-2 Date 6/22/94 Well Diameter 2 "

Sample Point Location/Description ON SITE EAST of BRAND AVE NEAR PLANTER Well Depth (spec.) ____

Depth to Water (static) 5.48 Well Depth (sounded) 14.50

Initial height of water in casing 9.02 Volume 1.4 gallons

Volume to be purged 4 gallons

Purged With Sub pump Sampled With DISPOSABLE BAILER

Pumped or Bailed Dry? X Yes ___ No Time 216 After 1 gallons

Water level at sampling 7.75 Percent Recovery 80 %

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
214	215	1	1	7.6	74	360	
DRY →	217	2	3	DRY →	→	→	
↓	"	1	4	↓	↓	↓	

SAMPLES COLLECTED Time 245 Total volume purged (gal.) 1

Water color Cloudy Odor NONE

Description of sediments or material in sample: NONE

Additional Comments: ____

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 ____

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WATER SAMPLING DATA

Job Name W. BRAND | Job Number 1-382-04 | Sampler JOE CARTER
Well Number C-3 | Date 6/20/94 | Well Diameter 2 "
Sample Point Location/Description ON SITE South of BELLEVUE | Well Depth (spec.) ____
Depth to Water (static) 5.10 | Well Depth (sounded) 14.79
Initial height of water in casing 9.69 | Volume 1.5 gallons
Volume to be purged 5 gallons
Purged With Sub pump | Sampled With DISPOSABLE BAILER
Pumped or Bailed Dry? X Yes ___ No | Time 202 After 1 gallons
Water level at sampling 5.02 | Percent Recovery 90%

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
200	201	1	1	7.3	74	499	
DRY→	203	2	3	DRY→			
DRY→	205	2	5	↓			

SAMPLES COLLECTED Time 234 | Total volume purged (gal.) 1
Water color Cloudy White | Odor NONE
Description of sediments or material in sample: NONE
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	8/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 ____

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

Chain-of-Custody-Record

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

Chevron Facility Number: 0006
Facility Address: 460 Grand Ave, Oakland
Consultant Project Number: 1-382-04
Consultant Name: Sierra Environmental Services
Address: P.O. Box 2546, Martinez, CA
Project Contact (Name): Ed Morales
(Phone) 370-1280 (Fax Number) 370-7959

Chevron Contact (Name): Mark Miller
(Phone) 842-8134
Laboratory Name: SPA
Laboratory Release Number: 8499660
Samples Collected by (Name): Joe Carter
Collection Date: 6/22/94
Signature: Joe Carter

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)	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
								Analyses To Be Performed												
TB-LB		2	W	G	—	HCl	Y	✓												Analyze
C-1		3			225			✓												
C-3					234			✓												
C-2					245			✓												

Please initial:
Samples Stored
Appropriate
Samples
VOA's
Comments:

F
6°C
✓
✓
✓
✓
11 6088

Note:
Do Not Bill
TB-LB Samples

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Joe Carter	SES	6/22/94			
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Joe Carter					
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
			F Langner		6-22-94

4:35 PM

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

OK 6/23/94 BS

COC-3.DWG/03 91/HCH

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

Sierra Environmental
Attn: ED MORALES

Project 1-382-04
Reported 07/05/94

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed	Matrix
30604- 1	TB-LB	06/22/94	06/28/94	Water
30604- 2	C-1	06/22/94	06/28/94	Water
30604- 3	C-3	06/22/94	06/28/94	Water
30604- 4	C-2	06/22/94	06/28/94	Water

RESULTS OF ANALYSIS

Laboratory Number:	30604- 1	30604- 2 (C-1)	30604- 3 (C-3)	30604- 4 (C-2)
Gasoline:	ND<50	ND<50	140	200
Benzene:	ND<0.5	ND<0.5	5.6	2.8
Toluene:	ND<0.5	ND<0.5	3	4.5
Ethyl Benzene:	ND<0.5	ND<0.5	4.2	1.5
Total Xylenes:	ND<0.5	ND<0.5	4.4	15
Concentration:	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: 30604

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:	120/128	6%	70-130
Benzene:	118/122	3%	70-130
Toluene:	123/128	4%	70-130
Ethyl Benzene:	110/116	5%	70-130
Total Xylenes:	121/126	4%	70-130

Michael R. Vuono
Senior Chemist