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

91 NOV 19 AM 10:41

Marketing Department

November 11, 1991

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

Re: Chevron Service Station #9-0329
340 Highland Avenue, Piedmont

Dear Mr. Seto:

Enclosed we are forwarding the Quarterly Ground Water Sampling Report dated October 30, 1991 prepared by our consultant Groundwater Technology, Inc. for the above referenced site. As indicated in the report, ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline, BTEX and total oil & grease (TOG) from monitor well C-2 only. Benzene was detected in monitor well C-2 only at a concentration of 320 ppb. TOG was not detected in monitor well C-2, therefore, we will discontinue sampling C-2 for this constituent. Depth to ground water was measured at approximately 4 to 8-feet below grade on site, and gradient was calculated to flow in a northeasterly direction. Monitor well C-3 may reflect an anomalous point based on the depth to ground water measurement. The ground water depth of well C-3 will be confirmed in subsequent monitoring events.

As per your request, copies of the well installation reports for the installation of the 3/4-inch diameter wells at two (2) other Chevron sites within Alameda County will be forwarded to you upon receipt for your evaluation and approval for installation. The Alameda County Hazardous Materials Specialists for these sites are Mr. Paul Smith and Mr. Scott Seery. Based on the gradient calculated this sampling event, we recommend collecting two (2) more rounds of data to confirm ground water flow direction as gradient has historically flowed in a southwesterly direction. Our work plan previously submitted to Alameda County Health Care Services proposed the additional wells in what was the surmised down gradient direction, southwesterly. Once gradient is confirmed, if applicable, a revised work plan will be submitted for your review.

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

Enclosure

cc: Mr. Eddie So, RWQCB-Bay Area
Ms. S. A. Willer
File (9-0329Q1)

GROUNDWATER TECHNOLOGY, INC.

4057 Port Chicago Highway, Concord, CA 94520 (415) 671-2387
FAX: (415) 685-9148

October 30, 1991

Project No. 020301441

Ms. Nancy Vukelich
Chevron U.S.A., Inc.
2410 Camino Ramon
Bishop Ranch #6
San Ramon, CA 94583

RE: Groundwater Monitoring Report
Chevron Facility No. 9-0329
340 Highlands Avenue
Piedmont, California

Dear Ms. Vukelich:

This letter report has been prepared for Chevron U.S.A., Inc. (Chevron) and summarizes the results of the groundwater monitoring and sampling conducted by Groundwater Technology at the above-referenced site.

The five monitoring wells at this site were monitored on October 16, 1991, to determine depth-to-groundwater, establish hydraulic gradient and check for the possible presence of separate-phase hydrocarbons within the wells. Well C-1 could not be located. A grouted hole, approximately where well C-1 was shown on the maps provided by Chevron, indicates that well C-1 may have been abandoned. Table 1 presents the current groundwater monitoring data. Figure 1 presents groundwater potentiometric surface contour lines constructed using data collected on October 16, 1991. The hydraulic gradient was calculated to be approximately 0.05 and slopes toward th[redacted].

After measuring the depth-to-groundwater, groundwater samples were collected from the three monitoring wells, C-2, C-3, and C-4. The samples were analyzed for the presence of benzene, toluene, ethylbenzene, xylenes (BTEX), and total petroleum hydrocarbons (TPH)-as-gasoline. The sample from well C-2 was also analyzed for total oil and grease (TOG). Analytical results are summarized in Table 2. Figure 2 depicts the distribution of TPH-as-gasoline concentrations. A copy of the laboratory report and chain-of-custody record is attached.

The purge water from all wells was put in one, 55-gallon steel drum, labeled and stored on site. A Chevron representative was notified so the disposal of this water could be arranged. The water should be removed in November 1991.

Copies of this monitoring and sampling report should be submitted to:

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

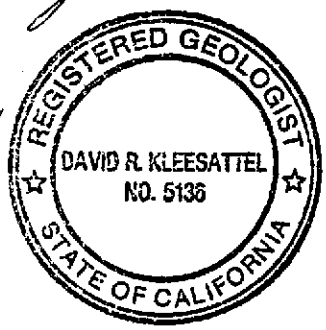
If you have any questions or require additional information, please contact our Concord Office at (510) 671-2387.

Sincerely,
GROUNDWATER TECHNOLOGY, INC.

Gregory A. Mishcel
Project Geologist

Sandra L. Lindsey
Project Manager

David R. Kleesattel
Registered Geologist



GAM:SLL:DRK:sd

Attachments

LR1441A1.GM
(061022)

TABLE 1
HISTORICAL GROUNDWATER ELEVATION AND SEPARATE-PHASE HYDROCARBON THICKNESS DATA
(All measurements are in feet)

WELL ELEVATION	C-2 94.19	C-3 97.65	C-4 95.60	A NA	B NA
Date 08/07/89					
DTW	2.88	4.29	DRY	2.10	4.12
Water Elev.	91.33	93.36	--	--	--
P.T.	Sheen	Sheen	--	--	--
Date 11/15/89					
DTW	2.80	5.17	4.95	2.04	--
Water Elev.	91.39	92.48	90.65	NA	--
P.T.	ND	ND	ND	ND	--
Date 02/01/91					
DTW	3.75	6.38	4.78	3.05	5.03
Water Elev.	90.41	91.27	90.82	NA	NA
P.T.	ND	ND	ND	ND	ND
Date 04/16/91					
DTW	2.55	3.72	4.83	2.01	4.00
Water Elev.	91.64	93.93	95.60	NA	NA
P.T.	ND	ND	ND	ND	ND
Date 10/16/91					
DTW	3.52	8.20	4.23	4.15	6.24
Water Elev.	90.67	89.45	91.37	NA	NA
P.T.	ND	ND	ND	ND	ND

Note:
DTW = Depth to Water
P.T. = Product Thickness
NA = Not Applicable/Not Available
ND = Not Detected
-- = Not Measured

TABLE 2
HISTORICAL RESULTS OF GROUNDWATER ANALYSES
(Concentrations in parts per billion)

WELL NO.	DATE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	TPH-AS-GASOLINE	TOG
C-2	08/07/89	580	60	170	270	[redacted]	[redacted]
	11/15/89	500	36	420	180	8,100	<5,000
	02/01/91	490	21	310	86	6,800	7,000
	04/16/91	810	43	550	270	9,600	<5,000
	10/16/91	320	23	200	60	7,100	<5,000
C-3	08/07/89	<0.5	<1	<1	<3	<50	NA
	11/15/89	<0.5	2.8	<0.5	1.1	<500	<5,000
	02/01/91	<0.5	<0.5	<0.5	<0.5	<50	NA
	04/16/91	<0.5	<0.5	<0.5	<0.5	<50	NA
	10/16/91	<0.5	<0.5	<0.5	<0.5	<50	NA
C-4	08/07/89	NS	NS	NS	NS	NS	<5,000
	11/15/89	2.9	310	0.5	2.9	1300	NA
	02/01/91	<0.5	9	<0.5	<0.5	72	NA
	04/16/91	<0.5	<0.5	<0.5	<0.5	<50	NA
	10/16/91	<0.5	<0.5	<0.5	<0.5	<50	
A	08/07/89	50	6	5	22	1,000	NA
	11/15/89	98	2.1	4.3	55	3,700	<5,000
	02/01/91	1,100	750	130	6100	36,000	NA
	04/16/91	370	6	86	750	[redacted]	NA
	10/16/91	NS	NS	NS	NS	NS	NS

Note:
NS = Not Sampled

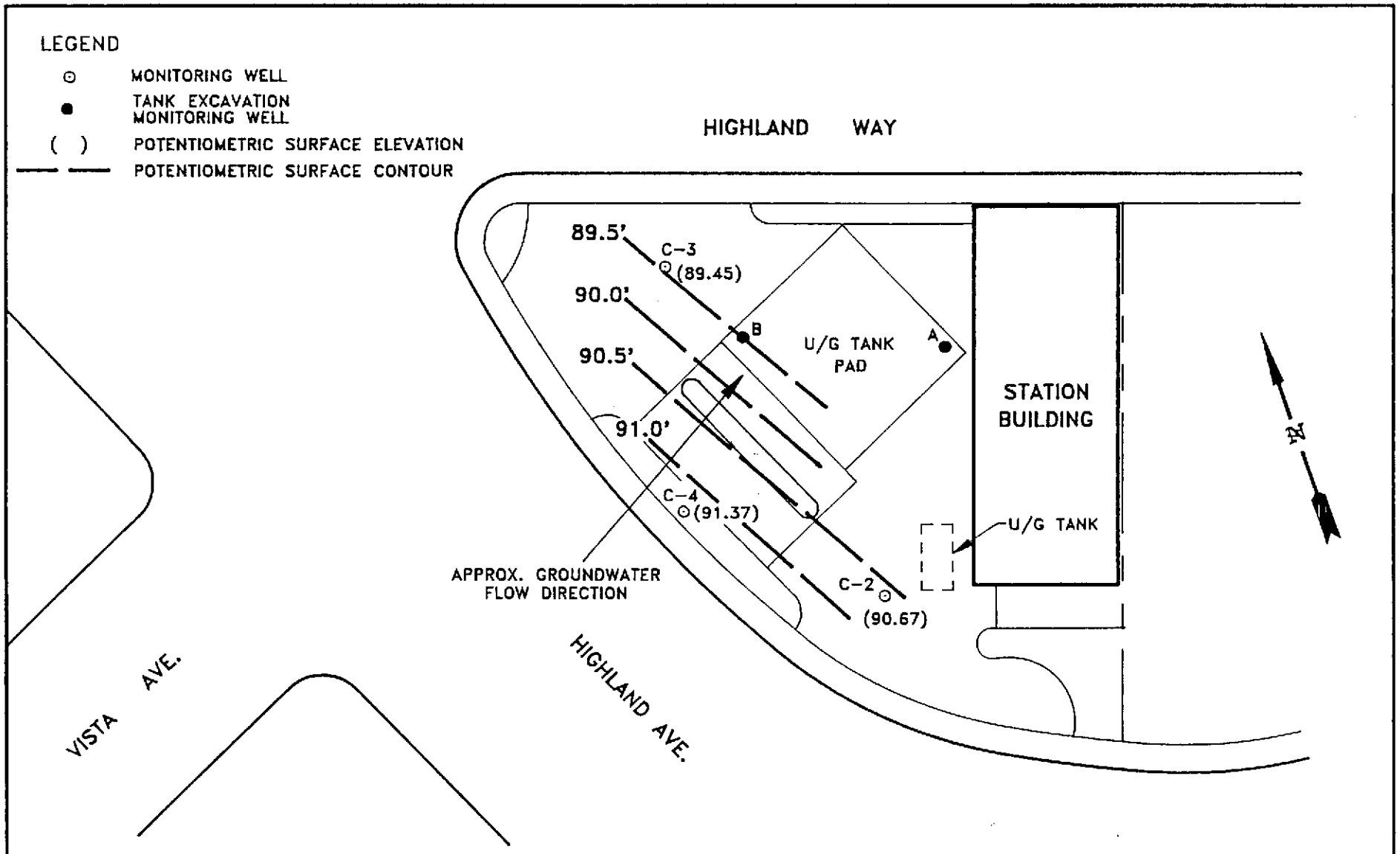


FIGURE 1
POTENTIOMETRIC SURFACE MAP
(10/16/91)

CHEVRON U.S.A, Inc.
SERVICE STATION #9-0329
340 HIGHLAND AVENUE
PIEDMONT, CALIFORNIA

DRAWN BY: ML 10/28/91

GROUNDWATER TECHNOLOGY, INC.

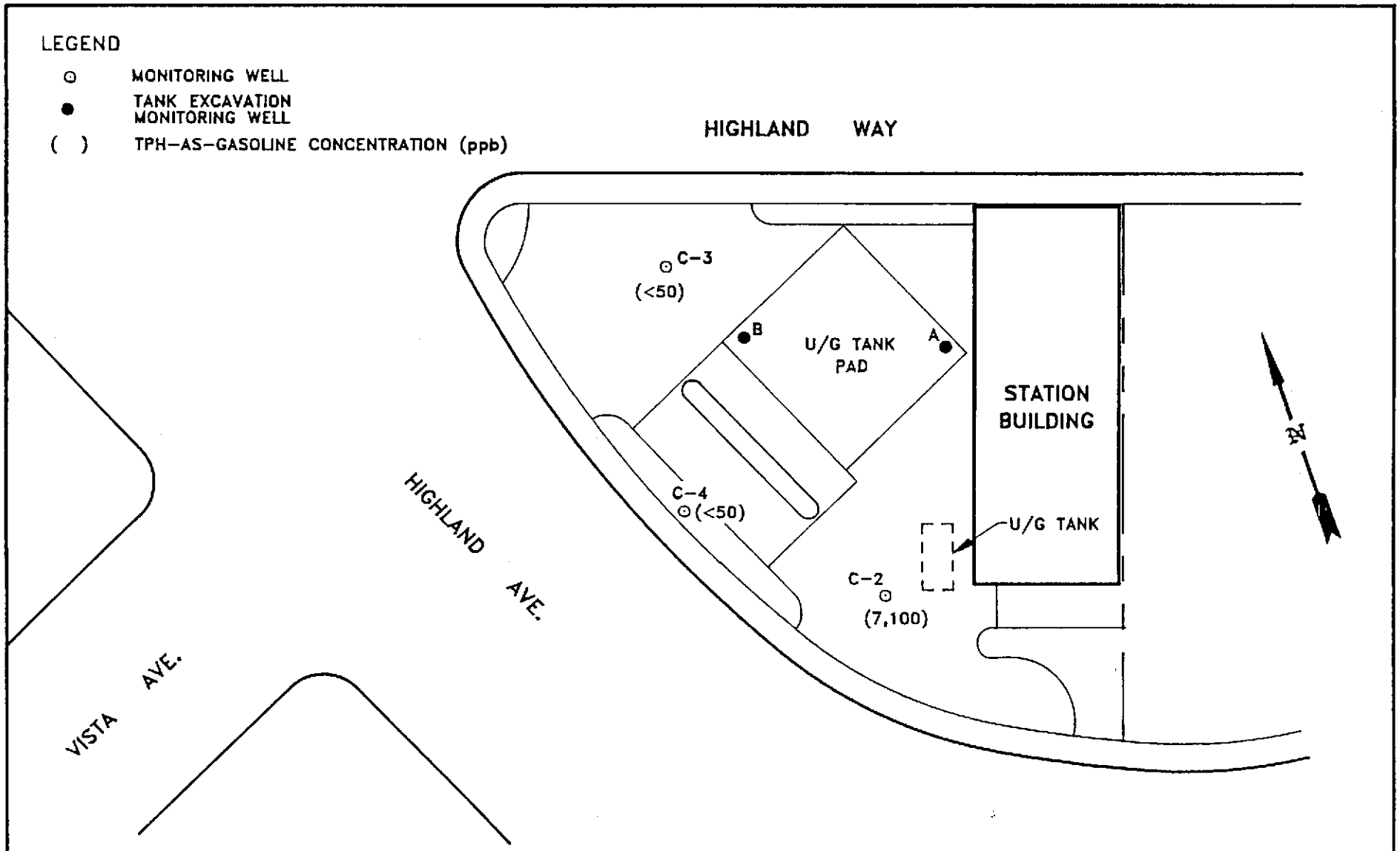


FIGURE 2
DISSOLVED TOTAL PETROLEUM HYDROCARBONS
(TPH)-AS-GASOLINE CONCENTRATION MAP
(10/16/91)

0 FEET 30
SCALE

CHEVRON U.S.A, Inc.
SERVICE STATION #9-0329
340 HIGHLAND AVENUE
PIEDMONT, CALIFORNIA

DRAWN BY: ML 10/28/91

GROUNDWATER TECHNOLOGY, INC.

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • 510 229-1512 • fax 510 229-1626

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 84138
CLIENT: GROUNDWATER TECHNOLOGIES INC.
CLIENT JOB NO.: 020301441 061004

DATE RECEIVED: 10/16/91
DATE REPORTED: 10/24/91

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
84138- 1	RBC-2	10/16/91	/ /
84138- 2	C-2	10/16/91	10/21/91
84138- 3	RBC-4	10/16/91	10/23/91
84138- 4	C-4	10/16/91	10/24/91
84138- 5	RBC-3	10/16/91	/ /
84138- 6	C-3	10/16/91	10/24/91

Laboratory Number:	84138 1	84138 2	84138 3	84138 4	84138 5
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	ND<5000	NA	NA	NA
TPH/GASOLINE RANGE:	NA	7100	ND <50	ND <50	NA
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	NA	320	ND <0.5	ND <0.5	NA
TOLUENE:	NA	23	ND <0.5	ND <0.5	NA
ETHYL BENZENE:	NA	200	ND <0.5	ND <0.5	NA
XYLENES:	NA	60	0.8	ND <0.5	NA

Laboratory Number:	84138 6
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)
OIL AND GREASE:	NA
TPH/GASOLINE RANGE:	ND <50
TPH/DIESEL RANGE:	NA
BENZENE:	ND <0.5
TOLUENE:	ND <0.5
ETHYL BENZENE:	ND <0.5
XYLENES:	ND <0.5

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: 84138

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 503E:
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	09/10/91	20 ppm	92/96	4	56-106
Diesel	NA	NA	NA	NA	NA
Gasoline	10/04/91	200 ng	97/88	10	70-130
Benzene	10/11/91	200 ng	108/102	5	70-130
Toluene	10/11/91	200 ng	104/101	3	70-130
Ethyl Benzene	10/11/91	200 ng	104/100	3	70-130
Total Xylenes	10/11/91	200 ng	107/104	2	70-130

Richard Srna, Ph.D.
Laboratory Director

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No 84138 **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, CA
Consultant Project Number 020301441 06 1004
Consultant Name Groundwater Technology
Address 4057 Port Chicago Hwy; Concord, CA
Project Contact (Name) Greg Mischel
(Phone) 671-2387 (Fax Number) 658-9148

Chevron Contact (Name) Nancy Vukelich
(Phone) 842-9581
Laboratory Name Superior Precision Analytical
Laboratory Release Number
Samples Collected by (Name) Brewen Fleener
Collection Date 10-16-91
Signature

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: 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
RB C-2	1	1 V	W	G	1:27	HCL	Y	✓								Hold
C-2	2	2 V	W	G	1:30	HCl	Y	✓								Hot well
C-2	4	1 L	W	G	1:30	[redacted]	Y			✓						
RB C-4	5	1 V	W	G	1:34	HCl	Y	✓								
C-4	6	2 V	W	G	1:36	HCl	Y	✓								
RB C-3	7	1 V	W	G	1:42	HCl	Y	✓								Hold
C-3	8	2 V	W	G	1:47	HCl	Y	✓								

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
	GTI	10/16/91 3:05	Gregory A Mischel	GTI	10/16/91 3:00
Relinquished By (Signature) Gregory A. Mischel	Organization GTI	Date/Time 10/16/91 3:15	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time 1545 10/16/91

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

COC-3.DWG/03 91/HCH