Chevron U.S.A. Inc.
2410 Camino Ramon, San Ramon, California • Phone (415) 842-9500
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

Marketing Operations

D. Moller
Manager, Operations
S. L. Patterson
Area Manager, Operations
C. G. Trimbach
Manager, Engineering

January 31, 1990

Mr. Rafat Shahid
Alameda County
Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Re: Chevron Service Station #9-3356
19201 Center Street
Castro Valley, CA

Dear Mr. Shahid:

Enclosed we are forwarding the Quarterly Groundwater Sampling Report dated January 25, 1990, conducted by our consultant Alton Geoscience, Inc., for the above referenced site. As indicated in the report, no detectable hydrocarbon contaminants were present in any of the monitoring wells.

Chevron will sample this site two additional quarters, which will complete one years worth of sampling, then evaluate the case for closure.

I declare under penalty of perjury that the information contained in the attached report is true and correct, and that any recommended actions are appropriate under the circumstances, to the best of my knowledge.

If you have any questions or comments please do not hesitate to call me at (415) 842 - 9625.

Very truly yours,

C. G. Trimbach

By John Randall

JMR/jmr
Enclosure

cc: Mr. Lester Feldman
RWQCB-Bay Area
1800 Harrison Street
Suite # 700
Oakland, CA 94612

ALTON GEOSCIENCE, INC.

JAN 10 '90 H.C.H.

QUARTERLY GROUND WATER MONITORING AND SAMPLING REPORT

for

Chevron Station Number 3356
19201 Center Street
Castro Valley, California

January 25, 1990

1170 Burnett Avenue, Suite S • Concord, CA 94520 • (415) 682-1582

QUARTERLY GROUND WATER MONITORING AND SAMPLING REPORT FOR CHEVRON STATION NUMBER 3356 19201 CENTER STREET CASTRO VALLEY, CALIFORNIA

JANUARY 25, 1990

PROJECT BACKGROUND

In March 1989, a consultant was retained by Chevron U.S.A. to perform a soil vapor study at the subject site. The soil vapor study identified elevated concentrations of total volatile hydrocarbons (TVH) in vapor phase near the southwest ends of both the gasoline tank cavity and dispenser island.

In August 1989, ground water monitoring wells were installed by Alton Geoscience, Inc., in the two areas exhibiting elevated concentrations of TVH in the vapor phase (MW-1 and MW-2). An additional monitoring well was installed adjacent to the waste oil tank (MW-3). Average depth to ground water in these monitoring wells is approximately 16.5 feet below grade. Ground water flow beneath the site was determined to be towards the south-southwest. Please see Figure 1 for the location of the underground storage tanks, monitoring wells, and selected site features.

Laboratory analysis of soil samples from soil borings B-1 and B-3 showed no detectable concentrations of total petroleum hydrocarbons (TPH), low boiling point, or benzene, toluene, ethylbenzene, or xylenes (BTEX). TPH was detected in two samples from Boring B-2, but at concentrations of less than 10 parts per million (ppm) each. BTEX were detected in one sample from Boring B-2, at a concentration of less than 1 ppm for each constituent. Detectable concentrations of TPH (high boiling point) were detected at less than 10 ppm in two samples collected from Boring B-3. No halogenated organic compounds were detected in the samples from Boring B-3. Soil samples in Boring B-3 were also analyzed for total recoverable hydrocarbons (TRPH). At 6.5 feet below grade 250 ppm TRPH was present. However, the concentration attenuated to 14 ppm in the sample retrieved at 11.5 feet below grade. This attenuation suggests that the adsorbed-phase contamination is limited in extent. Concentrations of TPH (high boiling point) detected in two samples from Boring B-3 were each less than 10 ppm.

Laboratory analysis of ground water samples collected from each of the monitoring wells on September 8, 1989, indicates that detectable concentrations of petroleum-range hydrocarbons are present in Monitoring Wells MW-2 and MW-3. Ground water samples from MW-2 contained detectable concentrations of TPH and BTEX, however, the concentrations do not exceed the established action levels for drinking water standards. The petroleum hydrocarbon constituents detected in Monitoring Well MW-2 are not considered to be pervasive under the site for the following reasons:

1. The concentrations detected adjacent to the tank cavity do not exceed drinking water standards.

2. Detectable concentrations of gasoline-range petroleum hydrocarbons were not present in the two downgradient wells.

3. The adsorbed-phase hydrocarbon concentrations detected in Boring B-2 were less than 10 ppm.

No detectable concentrations of TPH, BTEX, organic lead, or halogenated organic compounds were found in the sample from MW-3, but total oil and grease was detected at 1,000 ppb.

FIELD PROCEDURES

On November 20, 1989, Alton Geoscience personnel monitored and sampled the ground water in Monitoring Wells MW-1, MW-2, and MW-3 in accordance with the requirements and procedures of the Regional Water Quality Control Board (RWQCB). Prior to purging the wells, water levels were measured in each well from the top of casing to the nearest 0.01 foot using an electronic sounder. Ground water samples were collected with a hand bailer and observed for the presence of free product, color, and odor. The water sampling forms are included in Appendix A.

Water samples were collected after more than 4 casing volumes of ground water were purged from each well; the volume removed was sufficient to produce stable temperature, pH, and conductivity measurements using field instruments. The samples were collected in clean Teflon bailers (one dedicated bailer for each well), placed in clean containers, and delivered to a state-certified laboratory for analysis following proper chain of custody procedures.

DISCUSSION OF RESULTS

The results of the ground water monitoring and laboratory analyses of the ground water samples are summarized in Tables 1 and 2. Based on the previous wellhead elevation survey data and depth to water measurements collected during this monitoring event, ground water elevations and direction of ground water flow were determined as shown in Figure 1.

No free product or gasoline odor was noted in any of the ground water samples; ground water from MW-1, however, did exhibit a slight sewage odor. Laboratory analyses of the ground water samples from Monitoring Wells MW-1, MW-2, and MW-3 for this sampling event indicated that no detectable concentrations of TPH, BTEX, total oil and grease (TOG), organic lead, or purgeable halocarbons were present at this site. Copies of the official Laboratory Reports and Chain of Custody Records are included in Appendix A.

PROJECT SCHEDULE

The next quarterly sampling event is scheduled for February 1990. A report on the results of the field and analytical data is scheduled to be submitted to Chevron U.S.A. in March 1990.

TABLE 1

SURVEY AND WATER LEVEL MONITORING DATA

Well Number	Elevation* (feet)**	Depth to Water (feet)	Water Level Elevation (feet)**
	September 6, 1989 Data		
MW-1	285.22	18.30	266.92
MW-2	286.16	13.91	272.25
MW-3	284.46	18.73	265.73
	September 12, 1989 Data		
MW-1	285.22	18.39	266.83
MW-2	286.16	13.97	272.19
MW-3	284.46	17.78	266.68
	November 20, 1989 Data		
MW-1	285.22	18.06	267.16
MW-2	286.16	13.81	272.36
MW-3	284.46	17.65	266.81

Note: Elevation* = elevation in feet above mean sea level as measured at top of casing (NGVD-1929)
(feet)** = feet above mean sea level (NGVD-1929)

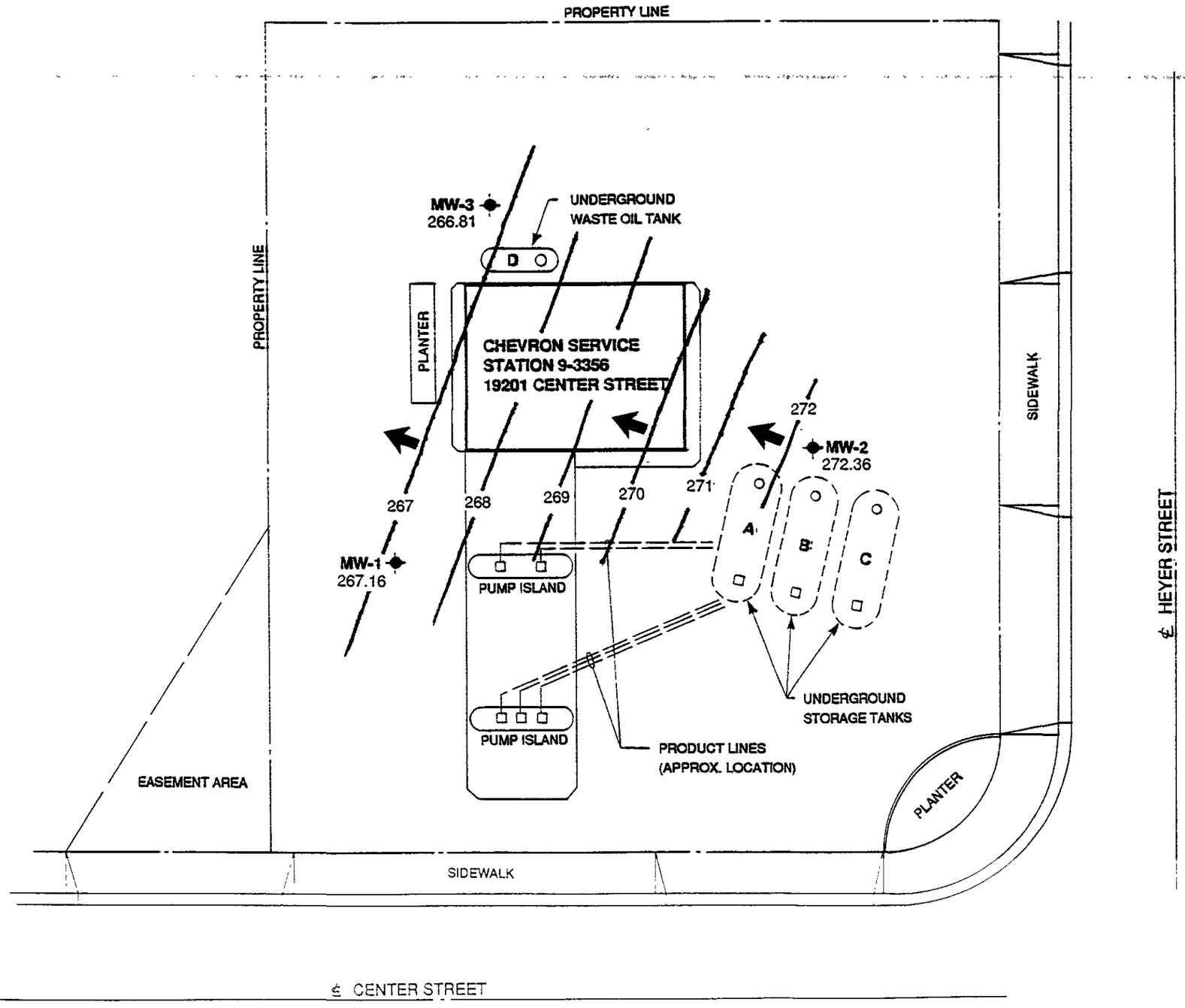
TABLE 2

RESULTS OF
LABORATORY ANALYSIS OF GROUND WATER SAMPLES

Well No.	TO&G	HOC	TPH	B	T	E	X	Pb
	(Concentrations in parts per billion)							
	Analytical Results (September 8, 1989)							
MW-1	---	---	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<50
MW-2	---	---	23	1	4	1	4	ND<50
MW-3	1,000	ND*	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<50
	Analytical Results (November 20, 1989)							
MW-1	---	---	ND<500	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<50
MW-2	---	---	ND<500	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<50
MW-3	ND<1,000	ND*	ND<500	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<50
	MCL or Action Level							
	NA	Var.	NA	1.0	100	680	1,750	50

Notes:
TO&G = total oil and grease
HOC = halogenated organic compounds
TPH = total petroleum hydrocarbons
B = benzene
T = toluene
E = ethylbenzene
X = xylenes
Pb = organic lead
ND = not detected at detection limit shown
ND* = see lab sheet for various detection limits
ppb = parts per billion
--- = not analyzed
MCL = maximum contaminant level
NA = not applicable
Var. = various

FIGURE



N

20 10 0 20

SCALE IN FEET

LEGEND

GROUND WATER MONITORING WELL

UNDERGROUND TANK
SIZE & CONTENT

A: 10,000 gal. Unleaded Regular

B: 10,000 gal. Leaded Regular

C: 10,000 gal. Supreme Unleaded

D: 500 gal. Waste Oil

CONTOUR INTERVAL = 1.0 FEET

271 GROUND WATER ELEVATION CONTOUR

DIRECTION OF GROUND WATER FLOW

Figure 1. Ground Water Elevation Contour Map

Source: Chevron U.S.A.

PROJECT NO. 30-030

APPENDIX A

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30-030 Site: Chevron Date: 11/20/89

Well: MW-1 Sampling Team: W. Shipp

Well Development Method: Bailer

Sampling Method: 4" Bailer

Describe Equipment Decon Before Sampling This Well: TSP, Tap Water, and Deionized Water.

Well Development Data

Total Well Depth: 35.17 feet Time: 1:25 Water level Before Pumping: 18.06'

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
17.11	feet x	0.16	(0.65)	11.12	4	44.5

Depth Purging From: 17 -35 feet. Time Purging Begins: 1:30

Notes on Initial Discharge:

Time	GAL Volume	pH	X1000 Conductivity	T	Notes
1:35	10	7.38	3.95	75.1	Light gray, turbid
1:50	20	7.59	3.45	71.5	Gray, turbid, slight sewage odor.
2:05	30	7.25	3.42	71.4	Gray, turbid, slight sewage odor.
3:10	40	7.18	3.39	71.9	Gray, turbid

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey
(Continued)

Project # 30-030 Site: Chevron Well: MW-1
Date:

Well Sampling Data

Total Well Depth: 35.17' feet Time: 1:25 Water level Before Pumping: 18.06'

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
17.11	feet x	0.16	(0.65)	11.12	4	44.5

Time Field Parameter Measurement Begins: 3:20

	Rep #1	Rep #2	Rep #3	Rep #4
pH	7.18	7.13	7.09	6.96
Conductivity	3.39	3.35	3.37	3.38
Temperature (F)	71.9	71.0	70.7	7.08

Presample Collection Gallons Purged: 44

Time Sample Collection Begins: 3:20

Time Sample Collection Ends: 3:35

Total Gallons Purged: 45.5

Comments:

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30-030 Site: Chevron Date: 11/20/89

Well: MW-2 Sampling Team: W. Shipp

Well Development Method: Bailing

Sampling Method: 4" Bailer

Describe Equipment Decon Before Sampling This Well: TSP, Tap Water, and Deionized Water.

Well Development Data

Total Well Depth: 30.35 feet Time: 11:10 Water level Before Pumping: 13.81'

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
16.54	feet x	0.16	(0.65)	10.75	4	43

Depth Purging From: 16.5-30 feet. Time Purging Begins: 11:30

Notes on Initial Discharge:

Time	GAL Volume	pH	X1000 Conductivity	T	Notes
11:35	6	7.80	3.45	74.2	Sewer odor, clear.
11:45	15	7.41	3.13	70.1	Gray, turbid
11:55	25	7.49	2.95	67.7	Gray, turbid
12:10	35	7.39	3.15	68.4	Gray, turbid
12:20	40	7.35	3.15	67.6	Gray, turbid

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey
(Continued)

Project # 30-030 Site: Chevron Well: MW-2
Date:

Well Sampling Data

Total Well Depth: 30.35 feet Time: 11:10 Water level Before Pumping: 13.81'

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
16.54	feet x	0.16	(0.65)	10.75	4	43

Time Field Parameter Measurement Begins: 11:30

	Rep #1	Rep #2	Rep #3	Rep #4
pH	7.39	7.35	7.20	7.25
Conductivity	3.15	3.15	3.10	3.10
Temperature (F)	68.4	67.6	68.0	68.1

Presample Collection Gallons Purged: 43

Time Sample Collection Begins: 12:35

Time Sample Collection Ends: 12:40

Total Gallons Purged: 44

Comments:

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30-030 Site: Chevron Date: 11/20/89

Well: MW-3 Sampling Team: W. Shipp

Well Development Method: Bailer

Sampling Method: 4" Bailer

Describe Equipment Decon Before Sampling This Well: TSP, Tap Water, and Deionized Water.

Well Development Data

Total Well Depth: 39.77 feet Time: 4:10 Water level Before Pumping: 17.65'

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
22.12	feet x	0.16	0.65	14.38	4	57.52

Depth Purging From: 17.5'-25' feet. Time Purging Begins: 4:10

Notes on Initial Discharge: _____

Time	GAL Volume	pH	X1000 Conductivity	T	Notes
4:20	10	6.89	2.15	71.8	Gray, turbid
4:30	20	7.03	2.11	69.4	Light brown, turbid
4:40	30	7.01	2.13	68.7	Light brown, turbid
4:50	40	7.03	2.09	68.0	Light brown, turbid
5:00	50	7.09	2.05	67.5	Light brown, turbid

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey
(Continued)

Project # 30-030 Site: Chevron Well: MW-3
Date:

Well Sampling Data

Total Well Depth: 39.77 feet Time: 4:10 Water level Before Pumping: 17.65'

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
22.12	feet x	0.16	(0.65)	14.38	4	57.52

Time Field Parameter Measurement Begins: 5:00pm

	Rep #1	55 GAL Rep #2	Rep #3	Rep #4
pH	7.09	7.15	7.10	7.14
Conductivity	2.05	2.13	2.15	2.18
Temperature (F)	67.2	68.2	68.7	68.4

Presample Collection Gallons Purged: 57

Time Sample Collection Begins: 5:05

Time Sample Collection Ends: 5:20

Total Gallons Purged: 58

Comments:

Project Number: SFB-175-0204.72-128
Consultant Project Number 30-030
Contract Number: N46CWC0244-9-X
Facility Number: CHEVRON CASTRO VALLEY
Work Order Number: C911565
Report Issue Date: December 1, 1989

Table 1

ANALYTICAL RESULTS

Purgeable Halocarbons in Water
EPA Method 601

Date Sampled		11/20/89
Date Analyzed		11/28/89
Client Identification		MW-3
GTEL Sample Number		01
Analyte	Detection Limit, ug/L	Concentration, ug/L
Chloromethane	0.5	<0.5
Bromomethane	0.5	<0.5
Dichlorodifluoromethane	0.5	<0.5
Vinyl chloride	1.0	<1.0
Chloroethane	0.5	<0.5
Methylene chloride	0.5	<0.5
Trichlorofluoromethane	0.5	<0.5
1,1-Dichloroethene	0.5	<0.5
1,1-Dichloroethane	0.5	<0.5
trans-1,2-Dichloroethene	0.5	<0.5
Chloroform	0.5	<0.5
1,2-Dichloroethane	0.5	<0.5
1,1,1-Trichloroethane	0.5	<0.5
Carbon tetrachloride	0.5	<0.5
Bromodichloromethane	0.5	<0.5
1,2-Dichloropropane	0.5	<0.5
trans-1,3-Dichloropropene	0.5	<0.5
Trichloroethene	0.5	<0.5
Dibromochloromethane	0.5	<0.5
1,1,2-Trichloroethane	0.5	<0.5
cis-1,3-Dichloropropene	0.5	<0.5
2-Chloroethylvinyl ether	1.0	<1.0
Bromoform	0.5	<0.5
1,1,2,2-Tetrachloroethane	0.5	<0.5
Tetrachloroethene	0.5	<0.5
Chlorobenzene	0.5	<0.5
1,3-Dichlorobenzene	0.5	<0.5
1,2-Dichlorobenzene	0.5	<0.5
1,4-Dichlorobenzene	0.5	<0.5

1 = Extraction by EPA Method 5030

Project Number: SFB-175-0204.72-129
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: CHEVRON CASTRO VALLEY
Work Order Number: C911566
Report Issue Date: December 1, 1989

Table 1

ANALYTICAL RESULTS

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Water
EPA Method 8020/8015[1]

GTEL Sample Number		01	02	03
Client Identification		MW-1	MW-2	MW-3
Date Sampled		11/20/89	11/20/89	11/20/89
Date Analyzed		11/29/89	11/29/89	11/29/89
Analyte	Detection Limit, ug/L	Concentration, ug/L		
Benzene	0.3	<0.3	<0.3	<0.3
Toluene	0.3	<0.3	<0.3	<0.3
Ethylbenzene	0.3	<0.3	<0.3	<0.3
Xylene (total)	0.6	<0.6	<0.6	<0.6
TPH as Gasoline	500	<500	<500	<500

1 = Extraction by EPA Method 5030

GTEL ENVIRONMENTAL LABORATORIES, INC

Project Number: SF8-175-0204.72-131
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: CHEVRON CASTRO VALLEY
Work Order Number: C911568
Report Issue Date: December 6, 1989

Table 1

ANALYTICAL RESULTS

Recoverable Oil and Grease in Water by Gravimetric Analysis
EPA Method 413.1

Sample Identification		Date Sampled	Date Extracted	Date Analyzed	Concentration, mg/L[1]
GTEL No.	Client ID				
01	MW-3	11/20/89	12/01/89	12/01/89	<1

1 = Method detection limit = 1.0 mg/L; analyte below this level would not be detected.

GTEL ENVIRONMENTAL LABORATORIES, INC

Consultant Project Number: 30-030
Project Number: SFB-175-0204.72-130
Contract Number: N46CWC0244-9-X
Facility Number: CHEVRON-CASTRO VALLEY
Work Order Number: C911567
Report Issue Date: November 22, 1989

Table 1

ANALYTICAL RESULTS

Organic Lead in Water by Flame AA
EPA Method 7420[1]

Sample Identification		Date Extracted	Date Analyzed	Concentration mg/L
GTEL No.	Client ID			
01	MW-1	11/22/89	11/22/89	<0.05
02	MW-2	11/22/89	11/22/89	<0.05
03	MW-3	11/22/89	11/22/89	<0.05

1 = Extraction by DHS method; LUFT Manual, 12/87 rev.: 250 mL sample extracted with 50 mL Xylene/MIBK mixture, Aliquat 336.
2 = Method detection limit = 0.05 mg/L; analyte below this level would not be detected.

GTEL ENVIRONMENTAL LABORATORIES, INC

ALTON GEOSCIENCE
16510 ASTON ST.
IRVINE, CA. (714) 261-0674

CHAIN of CUSTODY RECORD

PAGE 1 of 1

DATE: 11-21-89

RESULTS DUE BY:

PROJECT NUMBER: 30-030

PROJECT NAME AND ADDRESS: CHEVRON — CASTRO VALLEY

PROJECT MANAGER: STEPHAN ROSEN

SAMPLER'S SIGNATURE: Stephan Rosen for Will Shipp

LABORATORY: GTEL

REMARKS OR SPECIAL INSTRUCTIONS: BILL DIRECTLY TO CHEVRON REL # 2612520

NOTE: FOR TPH ANALYSES - PLEASE RUN TPH AS GASOLINE AND TPH AS DIESEL!

NOTE: PLEASE INDICATE VERBAL REQUESTS FOR ADDITIONAL ANALYSES IN THIS BOX.

SAMPLE NUMBER	SAMPLE DATE/TIME	LOCATION/ DESCRIPTION	SAMPLE MATERIAL	SAMPLE TYPE: GRAB	SAMPLE TYPE: COMP.	NUMBER OF CONTAINERS	SAMPLE PREP. 3510: SOLV. EXTR.	SAMPLE PREP. 3810: HEAD SPACE	SAMPLE PREP. 5030: PURGE & TRAP	SOIL ANALYSIS 418.1: TPHC (IR)	SOIL ANALYSIS 8010: HALOCARBONS	SOIL ANALYSIS 8020: BTXE	SOIL ANALYSIS DHS METHOD: TPHC (GC)	SOIL ANALYSIS 7420: TOTAL Pb	WATER ANALYSIS 418.1: TPHC (IR)	WATER ANALYSIS 601: HALOCARBONS	WATER ANALYSIS 602: BTXE	WATER ANALYSIS DHS METHOD: TPHC (GC)	WATER ANALYSIS 7420: TOTAL Pb - ORGANIC	503 A&E: Oil & Grease
01	11/20/89 pm	MW-1	Water	X		5											X	X	X	
02	11/20/89 pm	MW-2	Water	X		5											X	X	X	
03	11/20/89 pm	MW-3	Water	X		5										X	X	X	X	X
						TOTAL NO. OF CONTAINERS:														

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:	METHOD OF SHIPMENT:
Stephan Rosen for Will Shipp	11-20 pm	Stephan Rosen	11-20 pm	
Stephan Rosen	11-21 10:15 AM	[illegible]	11/21 10:15 AM	SHIPPED BY:
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:	COURIER: