Chevron

Chevron

Chevron U.S.A. Products Company
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San Ramon, CA 94583
PO Box 5004
San Ramon, CA 94583-0804

Marketing – Northwest Region
Phone 510 842 9500

February 17, 1995

Ms. Juliet Shin
Alameda County Department of Environmental Health
1131 Harbor Bay Pkwy, 2nd Floor
Alameda, CA 94502-6577

Re: Chevron Service Station No. 9-6607
2340 Otis Drive, Alameda, California

Dear Ms. Shin:

All wells were non-detect for total petroleum hydrocarbon as gasoline (TPH-G), benzene, toluene, ethylbenzene, and xylene (BTEX). Wells MW-1 and MW-2 detected methy-tertiary-butyl-ether (MTBE). During this sampling period, none of the wells were sampled polynuclear aromatic hydrocarbons (PNAH's) or oil and grease because the sampling event had occurred before our meeting on January 26, 1995.

Please refer to the enclosed report from Sierra Environmental Services dated February 9, 1995. If you have any questions or comments, please call me at (510) 842-8752.

Sincerely,

Chevron U.S.A. Products Co.

Kenneth Kan
Engineer

LKAN/MacFile 9-6607R16

Enclosure

cc: Mr. Kevin Graves
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

February 9, 1995

Kenneth Kan
Chevron USA Products Company
P.O. Box 5004
San Ramon, CA 94583

Re: Chevron Service Station #9-6607
2340 Otis Drive
Alameda, California
SES Project #1-292-04

Dear Mr. Kan:

This report presents the results of quarterly ground water sampling for the first quarter of 1995 at Chevron Service Station #9-6607, located at 2340 Otis Drive in Alameda, California. Four wells, MW-1 through MW-4, were sampled (Figure 1).

On January 11, 1995, 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 and ground water elevation contours are included on Figure 1.

The ground water samples were collected on January 11, 1995 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 GTEL of Concord, 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.

REGISTERED PROFESSIONAL ENGINEER
CHRIS J. BRAMER
C 048846
CIVIL
STATE OF CALIFORNIA

Sincerely,
Sierra Environmental Services

Richard E. (Rick) Hilton
Staff Environmental Scientist

Chris J. Bramer
Professional Engineer #C48846

REH/CJB/wmc
29204QM.FE5

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

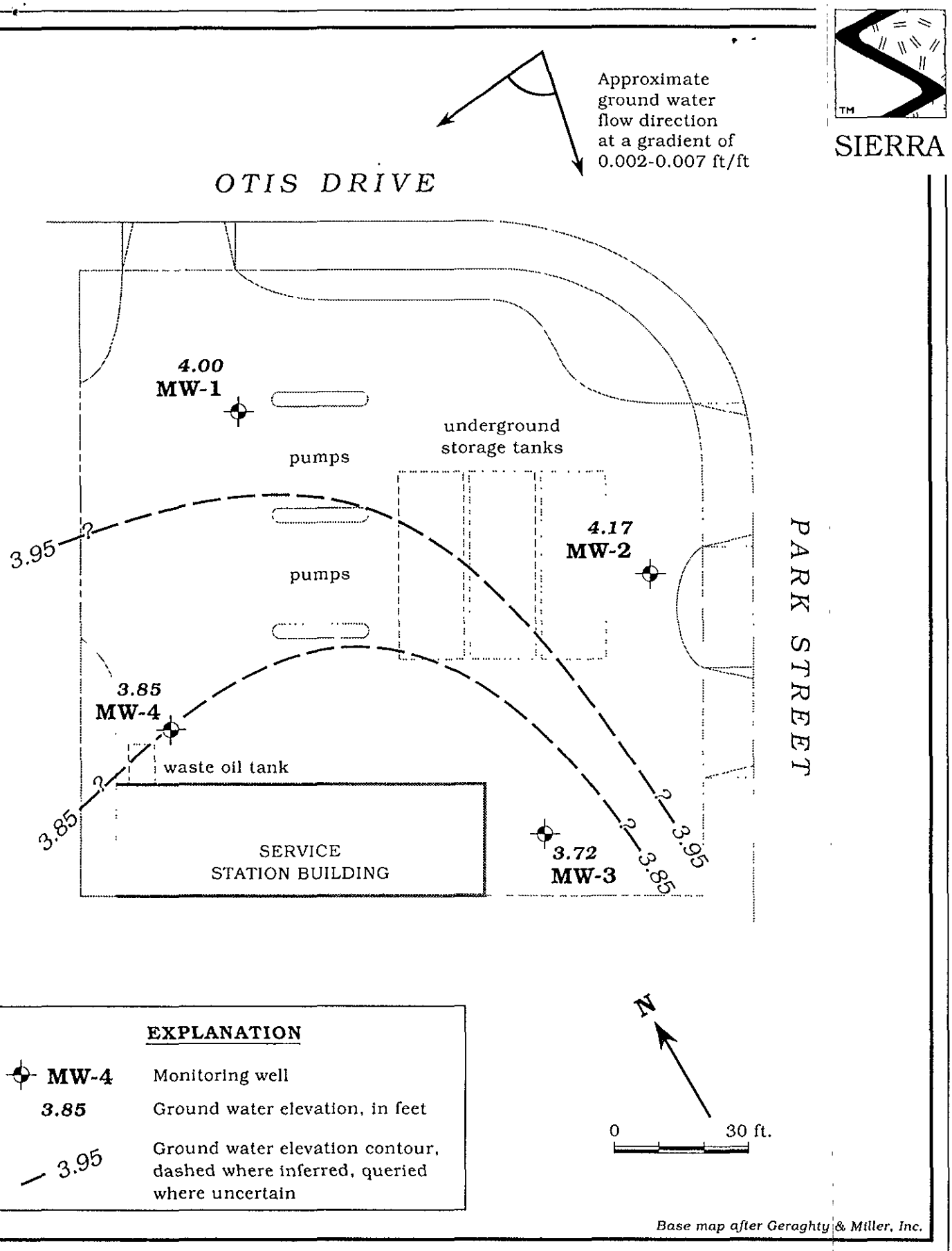

Figure 1. Monitoring Well Location and Ground Water Elevation Contour Map - January 11, 1995 - Chevron Service Station #9-6607, 2340 Otis Drive, Alameda, California

1-292-04 1/13/95

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Table 1. Water Level Data and Ground Water Analytic Results - Chevron Service Station #96607, 2340 Otis Drive, Alameda, California

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G)	TPH(D)	O&G	B	T	E	X	MTBE	Other VOCs
						<--------			ppb					-------->
MW-1/														
7.12	8/21/91	6.10	1.02	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	1/9/92	3.96	3.16	0	8015/8020/503E	<50	---	<5,000	<0.5	<0.5	<0.5	<0.5	---	---
	4/20/92	3.90	3.22	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	7/25/92	4.18	2.94	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/24/92	4.72	2.40	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	1/21/93	3.18	3.94	0	8015/8020	<50	---	---	<0.5	0.7	<0.5	1.0	---	---
	4/13/93	3.70	3.42	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	1.0	---	---
	7/14/93	4.21	2.91	0	8015/8020	<50[2]	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	10/26/93	4.28	2.84	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	1/11/94	4.16	2.96	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	3/31/94	3.88	3.24	0	8015/8020	<50	---	---	<0.5	0.6	<0.5	0.7	---	---
	7/14/94	3.00	4.12	0	8015/8020	<50[2]	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	10/12/94	4.25	2.87	0	8015/8020/8240	80	---	---	<0.5	<0.5	<0.5	<0.5	121	ND[3]
	1/11/95	**3.12**	**4.00**	**0**	**8015/8020/8240**	**<50[2]**	**---**	**---**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**130**	**---**
MW-2/														
7.43	8/21/91	6.40	1.03	0	8015/8020	430	---	---	170.0	0.9	1.0	3.6	---	---
	1/9/92	4.23	3.20	0	8015/8020/503E	58[1]	---	<5,000	16.0	<0.5	<0.5	<0.5	---	---
	4/20/92	4.17	3.26	0	8015/8020	180	---	---	9.6	<0.5	0.8	<0.5	---	---
	7/25/92	4.47	2.96	0	8015/8020	220	---	---	8.0	0.7	4.0	8.6	---	---
	11/24/92	5.82	1.61	0	8015/8020	72	---	---	3.2	<0.5	0.5	0.6	---	---
	1/21/93	3.35	4.08	0	8015/8020	<50	---	---	0.8	<0.5	<0.5	<0.5	---	---
	4/13/93	4.02	3.41	0	8015/8020	78	---	---	<0.5	<0.5	<0.5	0.6	---	---
	7/14/93	4.49	2.94	0	8015/8020	<50[2]	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	10/26/93	4.56	2.87	0	8015/8020	<50[2]	---	---	<0.5	0.9	<0.5	0.6	---	---
	1/11/94	4.39	3.04	0	8015/8020	<50[2]	---	---	<0.5	1	<0.5	<0.5	---	---
	3/31/94	4.18	3.25	0	8015/8020	<50	---	---	0.5	<0.5	<0.5	0.8	---	---
	7/14/94	4.90	2.53	0	8015/8020	<50[2]	---	---	<0.5	<0.5	<0.5	0.6	---	---
	10/12/94	4.54	2.89	0	8015/8020/8240	<50[2]	---	---	<0.5	<0.5	<0.5	<0.5	2,900	ND[4]
	1/11/95	**3.26**	**4.17**	**0**	**8015/8020/8240**	**<50[2]**	**---**	**---**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**2,500**	**---**
MW-3/														
8.07	8/21/91	7.10	0.97	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	1/9/92	5.03	3.04	0	8015/8020/503E	<50	---	<5,000	<0.5	<0.5	<0.5	<0.5	---	---
	4/20/92	4.91	3.16	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	7/25/92	5.34	2.73	0	8015/8020	<50	---	---	1.0	1.0	1.0	3.4	---	---
	11/24/92	5.00	3.07	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	1/21/93	4.34	3.73	0	8025/8020	<50	---	---	<0.5	0.5	<0.5	1.0	---	---
	4/13/93	4.84	3.23	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	0.6	---	---

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Table 1. Water Level Data and Ground Water Analytic Results - Chevron Service Station #96607, 2340 Otis Drive, Alameda, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G)	TPH(D)	O&G	B	T	E	X	MTBE	Other VOCs
						<---ppb--->								
MW-3	7/14/93	5.29	2.78	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	2	---	---
(cont)	10/26/93	5.36	2.71	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	1/11/94	5.22	2.85	0	8015/8020	<50	---	---	<0.5	1	<0.5	<0.5	---	---
	3/31/94	4.99	3.08	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	7/14/94	5.36	2.71	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	10/12/94	5.02	3.05	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	1/11/95	**4.35**	**3.72**	**0**	**8015/8020/8240**	**<50**	**---**	**---**	**<0.5**	**<0.5**	**<0.5**	**0.7**	**<5**	**---**
MW-4/														
7.85	8/21/91	6.85	1.00	0	8015/8020/503E	<50	---	<5,000	0.6	<0.5	<0.5	<0.5	---	---
	1/9/92	4.70	3.15	0	8015/8020/503E	<50	---	<5,000	<0.5	<0.5	<0.5	<0.5	---	---
	4/20/92	4.64	3.21	0	8015/8020/503E	<50	---	<5,000	<0.5	<0.5	<0.5	<0.5	---	---
	7/25/92	4.95	2.90	0	8015/8020	<50	78	---	0.5	1.1	<0.5	0.8	---	---
	11/24/92	5.42	2.43	0	8015/8020/503E	<50	---	<5,000	<0.5	<0.5	<0.5	1.0	---	---
	1/21/93	4.07	3.78	0	8015/8020	<50	<10	---	<0.5	0.5	<0.5	0.7	---	---
	4/13/93	4.45	3.40	0	8015/8020	<50	<10	---	<0.5	<0.5	<0.5	1.0	---	---
	7/14/93	4.90	2.95	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	10/26/93	4.95	2.90	0	8015/8020	<50[2]	---	---	2	3	2	3	---	---
	1/11/94	4.77	3.08	0	8015/8020	<50	---	---	<0.5	0.5	<0.5	<0.5	---	---
	3/31/94	4.65	3.20	0	8015/8020	<50	---	---	<0.5	<0.5	<0.5	1.0	---	---
	7/14/94	5.05	2.80	0	8015/8020	<50	---	---	0.9	1.2	<0.5	2.0	---	---
	10/12/94	4.88	2.97	0	8015/8020	<50	---	---	<0.5	0.9	<0.5	0.7	---	---
	1/11/95	**4.00**	**3.85**	**0**	**8015/8020/8240**	**<50**	**---**	**---**	**<0.5**	**0.8**	**0.7**	**1.5**	**<5**	**---**
Trip/Lab Blank														
TB-LB	1/21/93	---	---	---	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	4/13/93	---	---	---	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	7/14/93	---	---	---	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	10/26/93	---	---	---	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	1/11/94	---	---	---	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	3/31/94	---	---	---	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	7/14/94	---	---	---	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	10/12/94	---	---	---	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	1/11/95	**---**	**---**	**---**	**8015/8020**	**<50**	**---**	**---**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**---**	**---**
Bailer Blank														
BB	1/21/93	---	---	---	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	4/13/93	---	---	---	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---

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Table 1. Water Level Data and Ground Water Analytic Results - Chevron Service Station #96607, 2340 Otis Drive, Alameda, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G)	TPH(D)	O&G	B	T	E	X	MTBE	Other VOCs
						<--------			ppb					-------->
BB (cont)	7/14/93	---	---	---	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	10/26/93	---	---	---	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	1/11/94	---	---	---	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	3/31/94	---	---	---	8015/8020	<50	---	---	<0.5	<0.5	<0.5	<0.5	---	---

EXPLANATION:

DTW = Depth to water
GWE = Ground water elevation
msl = Measurements referenced relative to mean sea level
TPPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline
TPH(D) = Total Petroleum Hydrocarbons as Diesel
O&G = Oil and Grease
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methytertiary butylether
VOCs = Volatile Organic Compounds
ppb = Parts per billion
--- = Not analyzed/Not applicable

ANALYTIC METHODS:

8015 = EPA Method 8015/5030 for TPPH(G)
8015 = Modified EPA Method 8015/3510 for TPH(D)
8020 = EPA Method 8020 for BTEX
503E = Standard Methods Method 503E for O&G
8240 = EPA Method 8240 for VOCs

NOTES:

Top of casing elevations were compiled from the Quarterly Ground Water Monitoring Report prepared for Chevron by Geraghty & Miller, Inc., December 29, 1992.

Analytic data prior to January 2, 1993 compiled from the Quarterly Ground Water Monitoring Report prepared for Chevron by Geraghty & Miller, Inc., December 29, 1992.

* Product thickness was measured with an MMC flexi-dip interface probe on and after January 21, 1993.

[1] Chromatogram reported as having a single peak in the gasoline range.

[2] Uncategorized compound is not included in gasoline hydrocarbon total.

[3] VOCs not detected at detection limits ranging from 5 to 50 ppb.

[4] VOCs not detected at detection limits ranging from 50 to 500 ppb.

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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 2340 Otis Dr, Alameda
Job Number 1-292-04
Sampler TC
Well Number TB/LB
Date 1/11/95
Well Diameter 4"
Sample Point Location/Description
Well Depth (spec.)
Depth to Water (static)
Well Depth (sounded)
Initial height of water in casing
Volume gallons
Volume to be purged
gallons
Purged With Pump
Sampled With disp bailer
Pumped or Bailed Dry? Yes 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

SAMPLES COLLECTED Time
Total volume purged (gal.)
Water color
Odor
Description of sediments or material in sample:
Additional Comments:

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
TB/LB	2	1	—	HCl	Y	GTEL	G/BTEX
	2	1	—	HCl	Y	GTEL	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 2340 Otis Dr, Alameda Job Number 1-292-04 Sampler TIC

Well Number MW-1 Date 1/11/95 Well Diameter 4"

Sample Point Location/Description N. Corner site Well Depth (spec.) 25

Depth to Water (static) 3.12 Well Depth (sounded) _____

Initial height of water in casing 21.88 Volume 14.2 : gallons

Volume to be purged : : 42.8 gallons

Purged With 2 Pumps Sampled With disp 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
1342	1347	15	15	7.7	64	1660	
	1351	14	29	7.5	63.9	1740	
	1355	14	43	7.4	64	~~172~~ 1670	

SAMPLES COLLECTED Time 1405 Total volume purged (gal.) 43

Water color clear Odor ———

Description of sediments or material in sample: none

Additional Comments: X 10 HCl due to effervescence

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MW-1	2	1	—	~~HCl~~ X	Y	GTEL	G/BTEX
MW-1	2	1	—	~~HCl~~ X	Y	GTEL	MTBE

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 2340 Otis Dr, Alameda Job Number 1-292-04 Sampler TIC

Well Number MW-2 Date 1/11/95 Well Diameter 4"

Sample Point Location/Description E. side site Well Depth (spec.) 25

Depth to Water (static) 3.26 Well Depth (sounded) _____

Initial height of water in casing 21.74 Volume 14.1 gallons

Volume to be purged 42.5 gallons Sampled With clear bailer

Purged With 2 pumps Time _____ After _____ gallons

Pumped or Bailed Dry? ___ Yes ___ No Percent Recovery _____

Water level at sampling _____

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
1310	1315	15	15	7.1	62.3	680	
	1319	14	29	7.3	62.0	750	
	1325	14	43	7.4	63.1	730	

SAMPLES COLLECTED Time 1335 Total volume purged (gal.) 43

Water color clear Odor —

Description of sediments or material in sample: —

Additional Comments: _____

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MW-2	2	1	—	HCl	Y	GTEL	G/BTEX
MW-2	2	1	—	HCl	Y	GTEL	MTBE

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 _____

SIERRA

WATER SAMPLING DATA

Job Name 2340 Otis Dr, Alameda Job Number 1-292-04 Sampler TIC

Well Number MW-3 Date 1/11/95 Well Diameter 4"

Sample Point Location/Description S corner of Site Well Depth (spec.) 25'

Depth to Water (static) 4.35' Well Depth (sounded) _____

Initial height of water in casing 20.65' Volume 13.48 gallons

Volume to be purged 40.4 gallons

Purged With 2 Pumps Sampled With disp 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
1231	1236	14	14	7.5	62.5	1880	
	1241	14	28	7.7	63.0	1950	
	1246	13	41	7.8	63.8	1950	

SAMPLES COLLECTED Time 1256 Total volume purged (gal.) 41

Water color clear Odor _____

Description of sediments or material in sample: light, fine

Additional Comments: + 1:0 HCl clue to effervescence

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MW-3	2	1	—	~~HCl~~ X	Y	GTEL	G/BTEX
MW-3	2	1	—	HCl X	Y	GTEL	MTBE

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 _____

SIERRA

WATER SAMPLING DATA

Job Name 2340 Otis Dr., Alameda
Job Number 1-292-04
Sampler T.L.

Well Number MW-4
Date 1/11/95
Well Diameter 4"

Sample Point Location/Description W Corner of site
Well Depth (spec.) 21

Depth to Water (static) 4.00
Well Depth (sounded) ______

Initial height of water in casing 17
Volume 11.1 gallons

Volume to be purged 33.3 gallons

Purged With 2 Pumps
Sampled With clear bailer

Pumped or Bailed Dry? X Yes __No
Time 1206 After ~~1206~~ 18 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~~ F	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1200	1204	12	12	7.8	59.5	(1)	
	1206	11	23				
		11	34				

SAMPLES COLLECTED Time 1215
Total volume purged (gal.) 18

Water color Clear
Odor ______

Description of sediments or material in sample: light, fine

Additional Comments: (1) off scale

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MW-4	2	1	—	HCl	Y	GTEL	G/BTEX
MW-4	2	1	—	HCl	Y	GTEL	MTBE

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 ______

WATRSAM.FRM

Chain-of-Custody-Record

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

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

Chevron Facility Number: 9-6607
Facility Address: 2340 Otis Dr. Alameda
Consultant Project Number: 1-292-04
Consultant Name: Sierra Environmental Services
Address: P.O Box 2546, Martinez, CA 94553
Project Contact (Name): Ed Hamilton
(Phone): 510-370-1280 (Fax Number): 510-370-7959

Chevron Contact (Name): Kenneth Kan
(Phone): 842-8752
Laboratory Name: GTEL
Laboratory Release Number: 9-6607
Samples Collected by (Name): J. Lewis
Collection Date: 1/11/95
Signature:

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)	MTBE by EPA 8240				
TB/LB	01	2	W	G	—	HCl	Y	X												
MW-4	02	2			1215	HCl	Y	X								X				
↓	↓	2			1215	HCl	Y													
MW-3	03	2			1256	None	Y	X								X				
↓	↓	2			1256	None	Y													
MW-2	04	2			1335	HCl	Y	X								X				
↓	↓	2			1335	HCl	Y													
MW-1	05	2			1405	None	Y	X								X				
↓		2	↓	↓	1405	None	Y													
		X	100	HCl	Due	to	effervescence													

Note:
Do Not Bill
TB-LB Samples
(4°)

Remarks: Analyze ↓

C5010144

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	SES	12:00 1-12-95	John Weber	GTEL	12:00 1-12-95
Relinquished By (Signature) John Weber	Organization GTEL	Date/Time 15:00 1-12-95	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature) Kevin Alexander		Date/Time 1500 1/12/95

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

GPM 1/12/95

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Western Region
4080 Pike Lane, Suite C
Concord, CA 94520
(510) 685-7852
(800) 544-3422 Inside CA
FAX (510) 825-0720

January 19, 1995

Ed Morales
Sierra Environmental Services
P.O. Box 2546
Martinez, CA 94553

RE: GTEL Client ID: SIE01CHV08
Login Number: C5010144
Project ID (number): 1-292-04
Project ID (name): Chevron/#0096607/2340 Otis Dr., Alameda, CA

Dear Ed Morales:

Enclosed please find the analytical results for the samples received by GTEL Environmental Laboratories, Inc. on 01/12/95.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes.

If you have any questions regarding this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

Rashmi Shah
Laboratory Director

GTEL Client ID: SIE01CHV08
Login Number: C5010144
Project ID (number): 1-292-04
Project ID (name): Chevron/#0096607/2340 Otis Dr., Alameda, CA

ANALYTICAL RESULTS

Volatile Organics
Method: EPA 8020
Matrix: Aqueous

GTEL Sample Number	C5010144-01	C5010144-02	C5010144-03	C5010144-04
Client ID	TB/LB	MW-4	MW-3	MW-2
Date Sampled	01/11/95	01/11/95	01/11/95	01/11/95
Date Analyzed	01/14/95	01/15/95	01/14/95	01/14/95
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:			
Benzene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	ug/L	< 0.5	0.8	< 0.5	< 0.5
Ethylbenzene	0.5	ug/L	< 0.5	0.7	< 0.5	< 0.5
Xylenes (total)	0.5	ug/L	< 0.5	1.5	0.7	< 0.5
TPH as GAS	50.	ug/L	< 50.	< 50.	< 50.	< 50.
BFB (Surrogate)	--	%	106.	91.9	92.1	91.9

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020:

"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update 1. Acceptability limits for recovery in the Bromofluorobenzene (BFB) surrogate is 62-129%. Modification for TPH as gasoline as per California State Water Resources Board LUFT Manual protocols, May 1988 revision.

C5010144-04:

Uncategorized compound is not included in gasoline concentration.

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL Client ID: SIE01CHV08
Login Number: C5010144
Project ID (number): 1-292-04
Project ID (name): Chevron/#0096607/2340 Otis Dr., Alameda, CA

ANALYTICAL RESULTS

Volatile Organics
Method: EPA 8020
Matrix: Aqueous

GTEL Sample Number	C5010144-05	--	--	--
Client ID	MW-1	--	--	--
Date Sampled	01/11/95	--	--	--
Date Analyzed	01/15/95	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:			
Benzene	0.5	ug/L	< 0.5	--	--	--
Toluene	0.5	ug/L	< 0.5	--	--	--
Ethylbenzene	0.5	ug/L	< 0.5	--	--	--
Xylenes (total)	0.5	ug/L	< 0.5	--	--	--
TPH as GAS	50.	ug/L	< 50.	--	--	--
BFB (Surrogate)	--	%	93.4	--	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020:

"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update 1. Acceptability limits for recovery in the Bromofluorobenzene (BFB) surrogate is 62-129%. Modification for TPH as gasoline as per California State Water Resources Board LUFT Manual protocols, May 1988 revision.

C5010144-05:

Uncategorized compound is not included in gasoline concentration.

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL Client ID: SIE01CHV08
Login Number: C5010144
Project ID (number): 1-292-04
Project ID (name): Chevron/#0096607/2340 Otis Dr., Alameda, CA

QUALITY CONTROL RESULTS

Volatile Organics
Method: EPA 8020
Matrix: Aqueous

Method Blank Results

QC Batch No: M011495-1
Date Analyzed: 14-JAN-95

Analyte	Method: EPA 8020 Concentration: ug/L
Benzene	< 0.30
Toluene	< 0.30
Ethylbenzene	< 0.30
Xylenes (Total)	< 0.50
Chlorobenzene	< 1.0
1,3-Dichlorobenzene	< 1.0
1,4-Dichlorobenzene	< 1.0
1,2-Dichlorobenzene	< 1.0
MTBE	< 5.0
TPH as Gasoline	< 10.0

Notes:

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL Client ID: SIE01CHV08 QUALITY CONTROL RESULTS

Login Number: C5010144 Volatile Organics

Project ID (number): 1-292-04 Method: EPA 8020

Project ID (name): Chevron/#0096607/2340 Otis Dr., Alameda, CA Matrix: Aqueous

Matrix Spike and Matrix Spike Duplicate Results

Analyte	Original Concentration	Spike Amount	Matrix Spike Concentration	Matrix Spike Recovery, %	Matrix Spike Duplicate Concentration	Matrix Spike Duplicate Recovery, %	RPD, %	Acceptability Limits RPD, %	Acceptability Limits Recovery, %
EPA 8020	GTEL Sample ID:C5010104-08		Spike ID:M011495-5		Dup. ID:M011495-6				
Units: ug/L	Analysis Date:14-JAN-95		15-JAN-95		15-JAN-95		Client ID:Batch QC		
Benzene	< 0.30	20.0	20.3	102.	20.4	102.	0	34	57.3-138%
Toluene	< 0.30	20.0	20.3	102.	20.0	100.	1.9	31	63-134%
Ethylbenzene	< 0.30	20.0	20.5	103.	20.4	102.	0.9	38	59.3-137%
Xylenes (Total)	< 0.50	60.0	65.8	110.	64.0	107.	2.7	31	59.3-144%

Notes:

GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: SIE01CHV08
Consultant Project Number: 1-292-04
Facility Number: 9-6607
Project ID: 2340 Otis Dr.
Alameda
Work Order Number: C5-01-0144

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8240A[a]

GTEL Sample Number		02	03	04	05
Client Identification		MW-4	MW-3	MW-2	MW-1
Date Sampled		01/11/95	01/11/95	01/11/95	01/11/95
Date Analyzed		01/14/95	01/14/95	01/16/95	01/14/95
Analyte	Detection Limit, ug/L	Concentration, ug/L			
MTBE	5	<5	<5	2500	130
Detection Limit Multiplier		1	1	20	1
DCA surrogate, % recovery		97.0	96.4	101	94.9
Toluene-d8 surrogate, % recovery		110	110	112	110
BFB surrogate, % recovery		103	104	102	103

a. *Test Methods* for Evaluating Solid Waste, SW-846, Third Edition, including Update 1, US EPA July 1992. (method modified for additional compounds). Sample introduction by EPA Method 5030A.

Client Number: SIE01CHV08
Consultant Project Number: 1-292-04
Facility Number: 9-6607
Project ID: 2340 Otis Dr. Alameda
Work Order Number: C5-01-0144

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8240A[a]

GTEL Sample Number		011495 MSC	011695 MSC		
Client Identification		METHOD BLANK	METHOD BLANK		
Date Sampled		--	--		
Date Analyzed		01/14/95	01/16/95		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
MTBE	5	<5	<5		
Detection Limit Multiplier		1	1		
DCE surrogate, % recovery		102	101		
TOL surrogate, % recovery		110	112		
BFB surrogate, % recovery		97.2	94.4		

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, including Update 1, US EPA July 1992. (method modified for additional compounds). Sample introduction by EPA Method 5030A.

Client Number: SIE01CHV08
Consultant Project Number: 1-292-04
Facility Number: 9-6607
Project ID: 2340 Otis Dr. Alameda
Work Order Number: C5-01-0144

QC Matrix Spike and Duplicate Spike Results

Matrix: Water

Analyte	Sample ID	Spike Amount	Units	Recovery, %	Duplicate Recovery, %	RPD, %	Control Limits
EPA 8240:							
1,1-Dichloroethene	MS MD01015501	50	ug/L	87.4	79.6	9.3	61 - 145
Trichloroethene	MS MD01015501	50	ug/L	93.8	90.8	3.3	71 - 120
Benzene	MS MD01015501	50	ug/L	108	104	3.8	76 - 127
Toluene	MS MD01015501	50	ug/L	113	108	4.5	76 - 125
Chlorobenzene	MS MD01015501	50	ug/L	97.6	95.4	2.3	75 - 130