MAY 16 '94 J.M.M.

SIERRA
Environmental Services

May 9, 1994

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

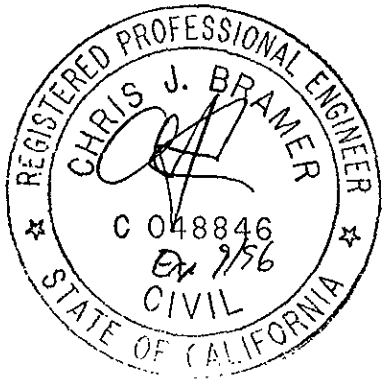
Dear Mr. Kan:

This report presents the results of quarterly ground water sampling 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 March 31, 1994, 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 March 31, 1994 in accordance with SES Standard Operating Procedure - Ground Water Sampling (attached). 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.



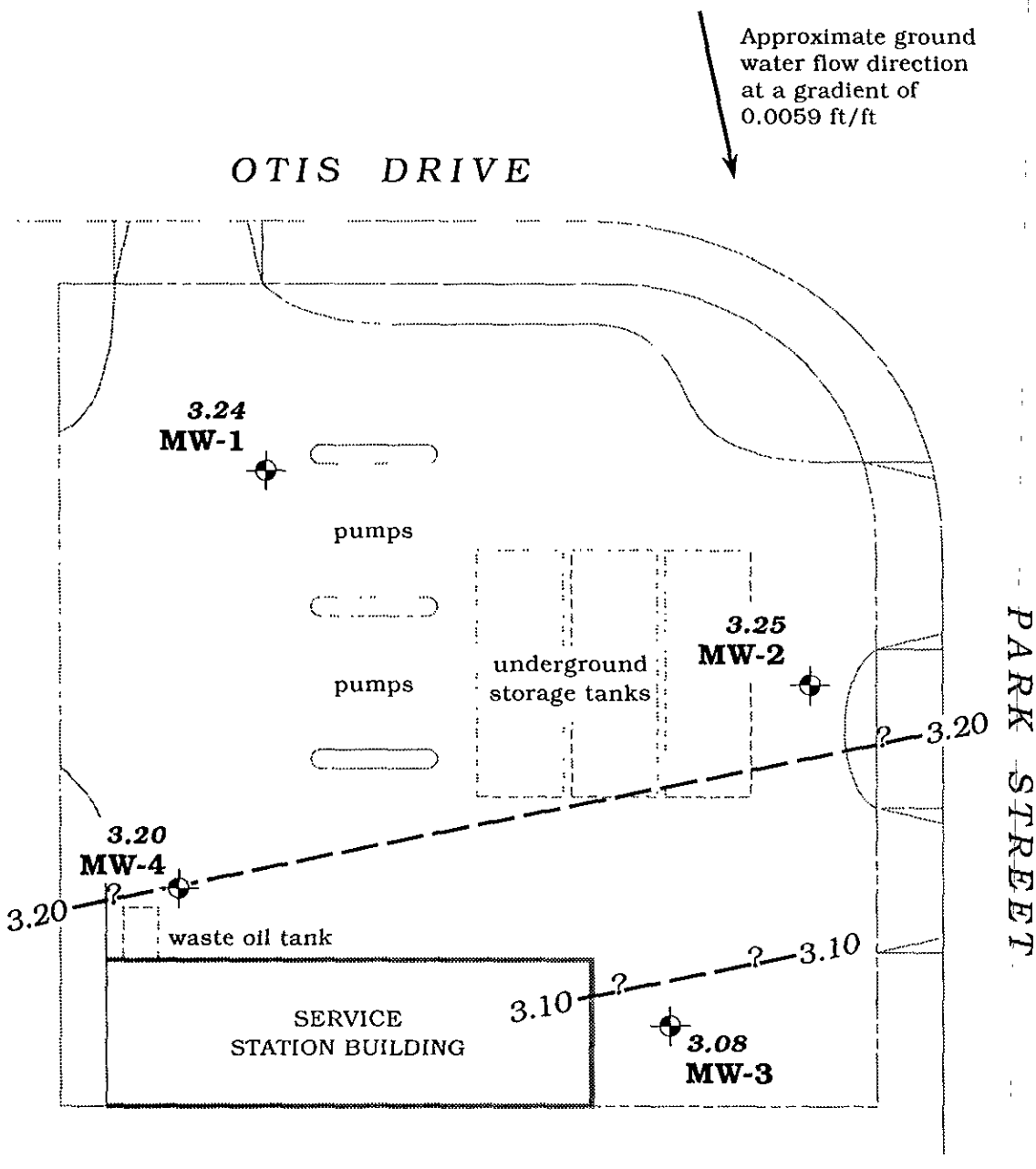

Sincerely,
Sierra Environmental Services

Argy Mena
Staff Geologist

Chris J. Bramer
Professional Engineer #C48846

AJM/CJB/wmc
29204QM.MY4

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




**EXPLANATION**

| | |
|---|---|
| MW-4 | Monitoring well |
| 3.08 | Ground water elevation, in feet |
| 3.20 | Ground water elevation contour, dashed where inferred, queried where uncertain |

N

0 30 ft.

*Base map after Geraghty & Miller, Inc.*

Figure 1. Monitoring Well Location and Ground Water Elevation Contour Map - March 30, 1994 - Chevron Service Station #9-6607, 2340 Otis Drive, Alameda, California

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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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | <---------- | | | 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** |
| 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** |
| 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 |
| | 7/14/93 | 5.29 | 2.78 | 0 | 8015/8020 | <50 | --- | --- | <0.5 | <0.5 | <0.5 | 2 |
| | 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** |

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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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | <---------- | | | ppb | | | ----------> |
| 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** |
| 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** |
| 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 |
| | 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** |

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

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
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

NOTES:

Top of casing elevations and well construction details were compiled from boring logs prepared for Chevron by Geraghty & Miller, Inc., August 6 & 7, 1991.

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.

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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 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) 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 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.

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

Client Number: SIE01CHV08
Consultant Project Number: 1-292-04
Facility Number: 9-6007
Project ID: 2340 Otis Dr. Alameda
Work Order Number: C4-04-0029

April 8, 1994

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

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 04/01/94.

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.

GTEL is certified by the California State Department of Health Services, Laboratory certification number E1075, to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

If you have any questions concerning 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

Client Number: SIE01CHV08
Consultant Project Number: 1-292-04
Facility Number: 9-6007
Project ID: 2340 Otis Dr. Alameda
Work Order Number: C4-04-0029

# ANALYTICAL RESULTS

## Aromatic Volatile Organics and

## Total Petroleum Hydrocarbons as Gasoline in Water

## EPA Methods 5030, 8020, and Modified 8015[a]

| GTEL Sample Number | | 01 | 02 | 03 | 04 |
|---|---|---|---|---|---|
| Client Identification | | TB-LB | BB | MW-1 | MW-2 |
| Date Sampled | | 03/31/94 | 03/31/94 | 03/31/94 | 03/31/94 |
| Date Analyzed | | 04/05/94 | 04/05/94 | 04/06/94 | 04/06/94 |
| Analyte | Detection Limit, ug/L | Concentration, ug/L | | | |
| Benzene | 0.5 | <0.5 | <0.5 | <0.5 | 0.5 |
| Toluene | 0.5 | <0.5 | <0.5 | 0.6 | <0.5 |
| Ethylbenzene | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Xylene, total | 0.5 | <0.5 | <0.5 | 0.7 | 0.8 |
| TPH as Gasoline | 50 | <50 | <50 | <50 | <50 |
| Detection Limit Multiplier | | 1 | 1 | 1 | 1 |
| BFB surrogate, % recovery | | 81.3 | 80.5 | 80.6 | 81.4 |

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Board LUFT Manual procedures. Bromofluorobenzene surrogate recovery acceptability limits are 70-130%.

Client Number: SIE01CHV08
Consultant Project Number: 1-292-04
Facility Number: 9-6007
Project ID: 2340 Otis Dr. Alameda
*Work Order Number:* C4-04-0029

# ANALYTICAL RESULTS

## Aromatic Volatile Organics and

## *Total Petroleum Hydrocarbons* as Gasoline in Water

## EPA Methods 5030, 8020, and Modified 8015[a]

| GTEL Sample Number | | 05 | 06 | G040594 | |
|---|---|---|---|---|---|
| Client Identification | | MW-3 | MW-4 | METHOD BLANK | |
| Date Sampled | | 03/31/94 | 03/31/94 | -- | |
| Date Analyzed | | 04/06/94 | 04/06/94 | 04/05/94 | |
| Analyte | Detection Limit, ug/L | Concentration, ug/L | | | |
| Benzene | 0.5 | <0.5 | <0.5 | <0.5 | |
| Toluene | 0.5 | <0.5 | <0.5 | <0.5 | |
| Ethylbenzene | 0.5 | <0.5 | <0.5 | <0.5 | |
| Xylene, total | 0.5 | <0.5 | 1.0 | <0.5 | |
| TPH as Gasoline | 50 | <50 | <50 | <50 | |
| Detection Limit Multiplier | | 1 | 1 | 1 | |
| BFB surrogate, % recovery | | 95.0 | 91.2 | 97.4 | |

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Board LUFT Manual procedures. Bromofluorobenzene surrogate recovery acceptability limits are 70-130%.

Client Number: SIE01CHV08
Consultant Project Number: 1-292-04
Facility Number: 9-6007
Project ID: 2340 Otis Dr. Alameda
Work Order Number: C4-04-0029

## QC Matrix Spike and Duplicate Spike Results

Matrix: Water

| Analyte | Sample ID | Spike Amount | Units | Recovery, % | Duplicate Recovery, % | RPD, % | Control Limits |
|---|---|---|---|---|---|---|---|
| **Modified EPA 8020:** | | | | | | | |
| Benzene | C4040026-03 | 20.0 | ug/L | 91.5 | 91.0 | 0.5 | 57.3 - 138 |
| Toluene | C4040026-03 | 20.0 | ug/L | 103 | 98.5 | 4.0 | 63.0 - 134 |
| Ethylbenzene | C4040026-03 | 20.0 | ug/L | 102 | 101 | 1.0 | 59.3 - 137 |
| Xylene, total | C4040026-03 | 60.0 | ug/L | 103 | 99 | 3.5 | 59.3 - 144 |

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

# Chain-of-Custody-Record

hevron U.S.A. Inc.
.O. BOX 5004
in Ramon, CA 94583
X (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 Morales
(Phone) 510-370-7280 (Fax Number) 510-370-7959

Chevron Contact (Name) Ken Kan
(Phone) 842-9757
Laboratory Name GTEL
Laboratory Release Number 861731
Samples Collected by (Name) Jim Green
Collection Date 3/31/94
Signature

| Sample Number | Lab Sample Number | Number of Containers | Matrix S = Soil A = Air W = Water C = Charcoal | Type C = 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 | 01 | 3 | W | G | — | HCL | Y | ✓ | | ✓ | | | | | | | | | | ANALYZE |
| BB | 02 | | | | 1:15 | | | ✓ | | | | | | | | | | | | |
| MW-1 | 03 | | | | 2:37 | | | ✓ | | | | | | | | | | | | |
| MW-2 | 04 | | | | 2:45 | | | ✓ | | | | | | | | | | | | |
| MW-3 | 05 | | | | 3:10 | | | ✓ | | | | | | | | | | | | |
| MW-4 | 06 | ↓ | ↓ | ↓ | 2:55 | ↓ | ↓ | ✓ | | | | | | | | | | | | |

Note: 4°
Do Not Bill
TB-LB Samples
Seals intact

F-2
C4040029

| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time |
|---|---|---|---|---|---|
| | JES | 4/1/94 1255 | | | |
| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time |
| | GTEL | 4-1-94 1630 | | | |
| Relinquished By (Signature) | Organization | Date/Time | Received For Laboratory By (Signature) | | Date/Time |
| | | | | | 4/1/94 1630 |

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

4/1/94