# GETTLER-RYAN INC.

ENVIRONMENTAL PROTECTION
97 OCT 28 PM 3:35

October 20, 1997 Job #6395.80

Mr. Phill Briggs
Chevron Products Company
P.O. Box 6004
San Ramon, CA 94583

Re: Quarterly Groundwater Monitoring & Sampling Report
Chevron Service Station #9-9708
5910 MacArthur Boulevard
Oakland, California

Dear Mr. Briggs:

This report documents the quarterly groundwater sampling event performed by Gettler-Ryan Inc. (G-R). On September 16, 1997, field personnel were on-site to monitor and sample three wells (MW-1, MW-2 and MW-3) at Chevron Service Station #9-9708 located at 5910 MacArthur Boulevard in Oakland, California.

Static groundwater levels were measured on September 16, 1997. All wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any of the wells. Static water level data and groundwater elevations are presented in Table 1. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets for this event are also attached. The samples were analyzed by NEI/GTEL Environmental Laboratories, Inc. Analytical results are presented in Table 1. The chain of custody document and laboratory analytical reports are attached.

Thank you for allowing Gettler-Ryan Inc. to provide environmental services to Chevron. Please call if you have any questions or comments regarding this report.

Sincerely,

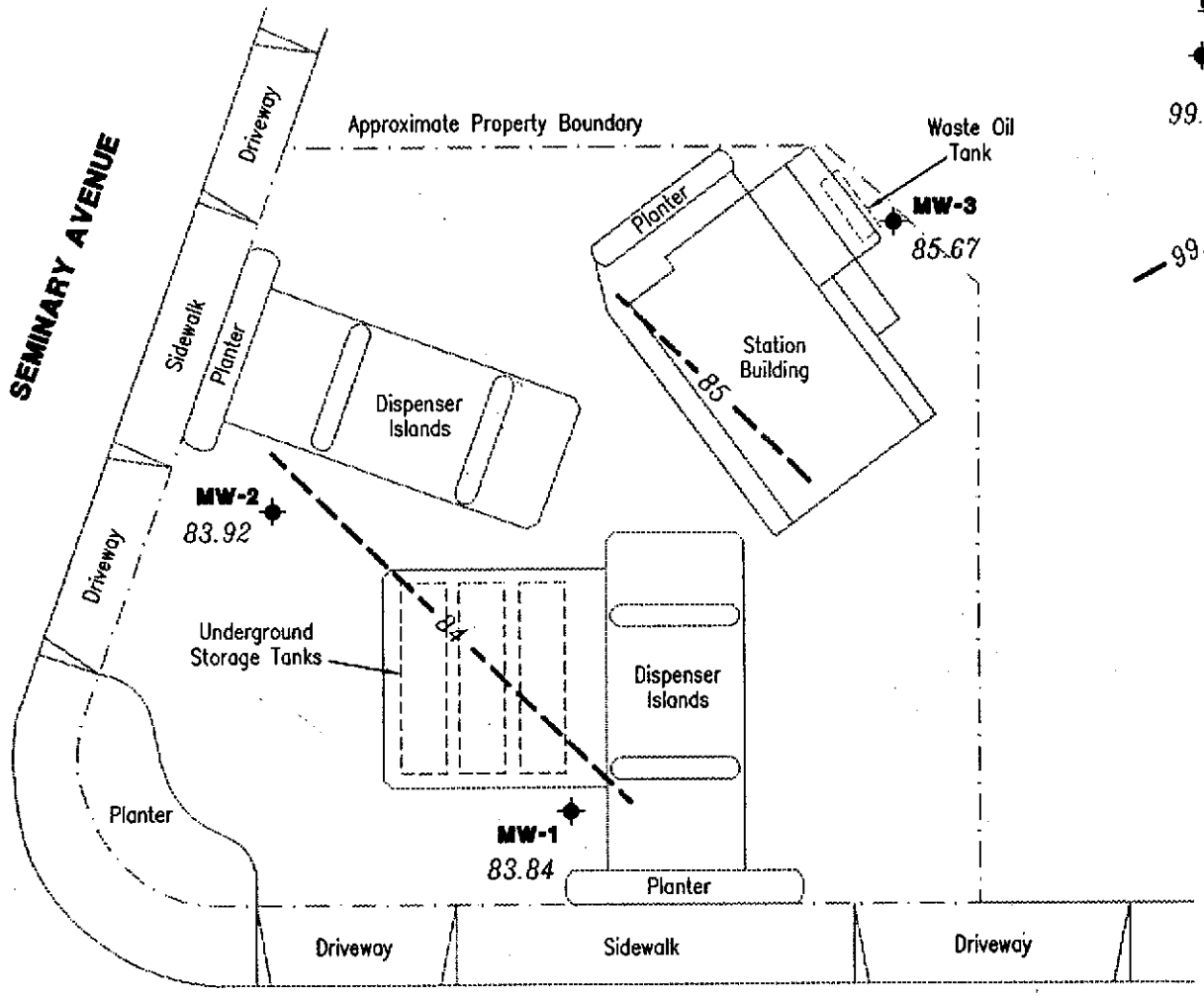
Deanna L. Harding
Project Coordinator

Stephen J. Carter
Senior Geologist, R.G. No. 5577

REGISTERED GEOLOGIST
STEPHEN J. CARTER
No. 5577
STATE OF CALIFORNIA

DLH/SJC/dlh
6395.QML

Figure 1: Potentiometric Map
Table 1: Water Level Data and Groundwater Analytical Results
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports




## EXPLANATION

- Groundwater monitoring well
- 99.99 — Groundwater elevation in feet referenced to Mean Sea Level (MSL)
- 99.99 — Groundwater elevation contour, dashed where inferred.

Approximate groundwater flow direction at a gradient of 0.02 Ft./Ft.

N

0 30

Scale in Feet

**Gettler - Ryan Inc.**

6747 Sierra Ct., Suite J
Dublin, CA 94568
(510) 551-7555

**POTENTIOMETRIC MAP**
Chevron Service Station No. 9-9708
5910 Mac Arthur Boulevard
Oakland, California

FIGURE 1

| JOB NUMBER | REVIEWED BY | DATE | REVISED DATE |
|---|---|---|---|
| 6395 | | September 16, 1997 | |

Table 1. Water Level Data & Groundwater Analytical Results - Chevron Service Station #9-9708, 5910 MacArthur Blvd., Oakland, California

| Well ID/ TOC | Date Sampled | Depth to Water (ft) | GWE (msl) | Product Thickness (ft) | TPH(D) | TPH(G) | B | T | E | X | MTBE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | <---------- | ppb | ---------- | | | | > |
| **MW-1** | | | | | | | | | | | |
| 96.61[1] | 05/29/97 | 12.20 | 84.41 | 0.00 | — | — | — | — | — | — | — |
| | 06/04/97 | 12.21 | 84.40 | 0.00 | — | 380 | 58 | 1.2 | 5.4 | 40 | 85 |
| | **09/16/97** | **12.77** | **83.84** | **0.00** | — | **420[3]** | **120** | **<0.5** | **19** | **2.7** | **28** |
| **MW-2** | | | | | | | | | | | |
| 96.91[1] | 05/29/97 | 13.06 | 83.85 | 0.00 | — | — | — | — | — | — | — |
| | 06/04/97 | 12.95 | 83.96 | 0.00 | — | 1,600 | 120 | 5.9 | 32 | 15 | 2,100 |
| | **09/16/97** | **12.99** | **83.92** | **0.00** | — | **1,100[3]** | **23** | **3.2** | **7.0** | **2.5** | **1,200** |
| **MW-3** | | | | | | | | | | | |
| 97.86[1] | 05/29/97 | 11.45 | 86.41 | 0.00 | — | — | — | — | — | — | — |
| | 06/04/97[2] | 11.28 | 86.58 | 0.00 | 1,200 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 |
| | **09/16/97** | **12.19** | **85.67** | **0.00** | **2,700[4]** | **<50** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<5.0** |
| **Trip Blank** | 06/04/97 | — | — | — | — | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 |
| | **09/16/97** | **—** | **—** | **—** | **—** | **<50** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<5.0** |

EXPLANATION:

TOC = Top of casing elevation
(ft) = feet
GWE = Groundwater elevation
(msl) = Mean Sea Level
TPH(D) = Total Petroleum Hydrocarbons as diesel
TPH(G) = Total Petroleum Hydrocarbons as gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl tertiary-butyl ether
ppb = Parts per billion
— = Not analyzed, not measured
ND = Not detected

NOTES:

1. MW-1 through MW-3 were surveyed on June 18, 1997, by Virgil Chavez Land Surveying (PLS #6323). Benchmark Elevation =95.88' (msl).
2. Sample also analyzed for the following: Total Oil & Grease by EPA Method 5520F was ND; Semivolatile Organics by EPA Method 8270B were ND; Volatile Organics by EPA Method 8010B were ND except 1,2-Dichloroethane was detected at 1 ppb.
3. Laboratory report indicates the concentration of MTBE has not been included in the reported concentration of TPH(G).
4. Laboratory report indicates the material present is qualitatively uncertain. Therefore, all material in the C9 to C22 range was quantitated against diesel fuel without respect to pattern. Chromatographic data indicates the presence of material, which is heavier than diesel fuel in this sample.

6395.tqm

STANDARD OPERATING PROCEDURE -
GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using a MMC flexi-dip interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using Chevron-designated disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Products Company, the purge water and decontamination water generated during sampling activities is transported by IWM to McKittrick Waste Management located in McKittrick, California.

# WELL MONITORING/SAMPLING
# FIELD DATA SHEET

Chevron Facility # 9-9708 Job#: 6395.80

Address: 5910 MacArthur Blvd. Date: 9-16-97

City: Oakland, CA Sampler: F.Cline

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Well ID MW- 1 Well Condition: okay

Well Diameter 2" in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): _____ (gal.)

Total Depth 20.2 ft.

Depth to Water 12.77 ft.

| Volume Factor (VF) | 2" = 0.17 | 3" = 0.38 | 4" = 0.66 |
|---|---|---|---|
| | 6" = 1.50 | 12" = 5.80 | |

7.43 X VF 0.17 = 1.26 X 3 (case volume) = Estimated Purge Volume: 3.8 (gal.)

Purge Equipment: (Disposable Bailer) ~~Bailer~~ Stack Suction Grundfos Other: _____

Sampling Equipment: (Disposable Bailer) ~~Bailer~~ Pressure Bailer Grab Sample Other: _____

---

Starting Time: 18:20 Weather Conditions: clear warm.

Sampling Time: 1829 Water Color: Clear Odor: Mild

Purging Flow Rate: _____ gpm. Sediment Description: Slight

Did well de-water? No If yes; Time: _____ Volume: _____ (gal.)

| Time | Volume (gal.) | pH | Conductivity µmhos/cm | Temperature °C | D.O. (mg/L) | ORP (mV) | Alkalinity (ppm) |
|---|---|---|---|---|---|---|---|
| 1822 | 1.3 | 6.97 | 237 | 22.8 | | | |
| 1824 | 2.6 | 7.07 | 234 | 22.6 | | | |
| 1826 | 3.9 | 7.17 | 235 | 21.9 | | | |
| | | | | | | | |
| | | | | | | | |

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## LABORATORY INFORMATION

| SAMPLE ID | (#) - CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW- 1 | 3 x 40m/VOA | Y | HCL | NEI/GTEL | TPH-Gas/BTEX/MTBE |
| ~~MW-~~ | 2 X Liter | Y | ~~NONE~~ | NEi/GTEL | ~~TPH-Diesel~~ |
| | | | | | |
| | | | | | |

COMMENTS: _____

9/97-fieldst.frm

# WELL MONITORING/SAMPLING
# FIELD DATA SHEET

Chevron Facility # 9-9708 Job#: 6395.80

Address: 5910 MacArthur Blvd. Date: 9-16-97

City: Oakland, CA Sampler: F.Cline

Well ID MW-2 Well Condition: Okay

Well Diameter 2" in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth 20.1 ft.

Depth to Water 12.99 ft.

| Volume Factor (VF) | 2" = 0.17 | 3" = 0.38 | 4" = 0.66 |
|---|---|---|---|
| | 6" = 1.50 | 12" = 5.80 | |

7.11 X VF 0.17 = 1.21 X 3 (case volume) = Estimated Purge Volume: 3.63 (gal.)

Purge Equipment: ~~Disposable Bailer~~ Bailer, Stack, Suction, Grundfos, Other:

Sampling Equipment: Disposable Bailer, ~~Bailer~~, Pressure Bailer, Grab Sample, Other:

Starting Time: 18:37 Weather Conditions: clear warm

Sampling Time: 18:49 Water Color: Odor: Mild

Purging Flow Rate: gpm. Sediment Description:

Did well de-water? No If yes; Time: Volume: (gal.)

| Time | Volume (gal.) | pH | Conductivity µmhos/cm | Temperature °C | D.O. (mg/L) | ORP (mV) | Alkalinity (ppm) |
|---|---|---|---|---|---|---|---|
| 18:39 | 1.3 | 6.71 | 175 | 20.4 | | | |
| 18:41 | 2.6 | 7.01 | 162 | 19.9 | | | |
| 18:43 | 3.9 | 7.03 | 157 | 19.4 | | | |
| | | | | | | | |
| | | | | | | | |

## LABORATORY INFORMATION

| SAMPLE ID | (#) - CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-2 | 3 x 40m/VOA | Y | HCL | NEI/GTEL | TPH-Gas/BTEX/MTBE |
| ~~MW-~~ | ~~2 X Liter~~ | ~~Y~~ | ~~NONE~~ | NEI/GTEL | ~~TPH Diesel~~ |
| | | | | | |
| | | | | | |

COMMENTS:

# WELL MONITORING/SAMPLING
# FIELD DATA SHEET

Chevron Facility # 9-9708 Job#: 6395.80

Address: 5910 MacArthur Blvd. Date: 9/16-97

City: Oakland, CA Sampler: F.Cline

Well ID MW- 3 Well Condition: okay

Well Diameter 2" in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): _____ (gal.)

Total Depth 20.1 ft.

Depth to Water 12.19 ft.

| Volume Factor (VF) | 2" = 0.17 | 3" = 0.38 | 4" = 0.66 |
|---|---|---|---|
| | 6" = 1.50 | 12" = 5.80 | |

7.91 X VF 0.17 = 1.3 X 3 (case volume) = Estimated Purge Volume: 4.0 (gal.)

Purge Equipment: (Disposable Bailer) Bailer Stack Suction Grundfos Other: _____

Sampling Equipment: (Disposable Bailer) Bailer Pressure Bailer Grab Sample Other: _____

Starting Time: 1800 Weather Conditions: Clear warm

Sampling Time: 1809 Water Color: Clear Odor: None

Purging Flow Rate: _____ gpm. Sediment Description: None

Did well de-water? ~~No~~ If yes; Time: _____ Volume: _____ (gal.)

| Time | Volume (gal.) | pH | Conductivity µmhos/cm | Temperature °C | D.O. (mg/L) | ORP (mV) | Alkalinity (ppm) |
|---|---|---|---|---|---|---|---|
| 18:02 | 1.3 | 6.96 | 200 | 22.2 | | | |
| 18:04 | 2.6 | 6.87 | 193 | 21.7 | | | |
| 18:06 | 3.9 | 6.92 | 192 | 21.8 | | | |
| | | | | | | | |
| | | | | | | | |

## LABORATORY INFORMATION

| SAMPLE ID | (#) - CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW- 3 | 3 x 40m/VOA | Y | HCL | NEI/GTEL | TPH-Gas/BTEX/MTBE |
| MW- 3 | 2 X Liter | Y | NONE | NEi/GTEL | TPH-Diesel |
| | | | | | |
| | | | | | |

COMMENTS: _____

9/97-fieldat.frm

Fax copy of Lab Report and COC to Chevron Contact: ☐ 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 #9-9708
Facility Address 5910 MACARTHUR BLVD., OAKLAND, CA
Consultant Project Number 6395
Consultant Name Gettler-Ryan
Address 6747 Sierra Ct, Ste J, Dublin 94568
Project Contact (Name) Deanna Harding
(Phone) 551-7555 (Fax Number) 551-7888

Chevron Contact (Name) MR. PHIL BRIGGS
(Phone) (510) 842-9136
Laboratory Name NEI/GTEL Service Code: ZZ02790
Laboratory Service Order #9064504
Samples Collected by (Name) R. Chmb
Collection Date 9-16-97
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) | TPH Gas + BTEX w/MTBE (8020) | 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) | | | | | | DO NOT BILL TB-LB ANALYSIS ~~Confirm highest hit of (8020) = MTBE by 8260.~~ Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-LB | | 2 | W | TB | — | HCl | Y | X | | | | | | | | | | | | | |
| MW-3 | | 5 | | G | | HCl, None | Y | X | X | | | | | | | | | | | | |
| MW-1 | | 3 | | | | HCl | Y | X | | | | | | | | | | | | | |
| MW-2 | | 3 | | | | HCl | Y | X | | | | | | | | | | | | | |
| | 97-09-0313 | | | | | | | | | | | | | | | | | | | | |

| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time |
|---|---|---|---|---|---|
| D. Harding | G-R Inc. | 9-17-97 | D. Harding | G-R Inc. | 9/17/97 1430 |
| D. Harding | G-R | 9/18/97 1430 | Received By (Signature) | Organization | Date/Time |
| Relinquished By (Signature) | Organization | Date/Time | Received For Laboratory By (Signature) | | Date/Time |
| [illegible] | NEI/GTEL | 9/18/97 1700 | [illegible] | | 9/18/97 8AM |

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

**NEI/GTEL**
ENVIRONMENTAL LABORATORIES, INC.

**Midwest Region**
4211 May Avenue
Wichita, KS 67209
(316) 945-2624
(800) 633-7936
(316) 945-0506 (FAX)

October 2, 1997

Deanna Harding
GETTLER-RYAN
6747 Sierra Ct.
Suite J
Dublin, CA 94568

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RE: NEI/GTEL Client ID: GTR01CHV08
Login Number: W7090313
Project ID (number): 6395
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

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Dear Deanna Harding:

Enclosed please find the analytical results for the samples received by NEI/GTEL Environmental Laboratories, Inc. on 09/19/97.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by NEI/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. This report is to be reproduced only in full.

NEI/GTEL is certified by the California Department of Health Service under Certification Number 2147.

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

Sincerely,
NEI/GTEL Environmental Laboratories, Inc.

Justin Ward, Project Coordinator for
Terry R. Loucks
Laboratory Director

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7090313
Project ID (number): 6395
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: EPA 8020A
Matrix: Aqueous

| NEI/GTEL Sample Number | W7090313-01 | W7090313-02 | W7090313-03 | W7090313-04 |
|---|---|---|---|---|
| Client ID | TB-LB | MW-3 | MW-1 | MW-2 |
| Date Sampled | | 09/16/97 | 09/16/97 | 09/16/97 |
| Date Analyzed | 09/24/97 | 10/01/97 | 09/24/97 | 09/25/97 |
| Dilution Factor | 1.00 | 1.00 | 1.00 | 1.00 |

| Analyte | Reporting Limit | Units | Concentration: | | | |
|---|---|---|---|---|---|---|
| MTBE | 5.0 | ug/L | < 5.0 | < 5.0 | 28. | 1200 |
| Benzene | 0.5 | ug/L | < 0.5 | < 0.5 | 120 | 23. |
| Toluene | 0.5 | ug/L | < 0.5 | < 0.5 | < 0.5 | 3.2 |
| Ethylbenzene | 0.5 | ug/L | < 0.5 | < 0.5 | 19. | 7.0 |
| Xylenes (total) | 0.5 | ug/L | < 0.5 | < 0.5 | 2.7 | 2.5 |
| BTEX (total) | -- | ug/L | -- | -- | 140 | 35. |
| TPH as Gasoline | 50 | ug/L | < 50 | < 50 | 420 | 1100 |

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020A:

Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap and modified EPA Method 8015. Analyte list modified to include additional compounds. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update II.

W7090313-03:

The concentration of MTBE has NOT been included in the reported concentration of TPH-G.

W7090313-04:

The concentration of MTBE has NOT been included in the reported concentration of TPH-G.

ANALYTICAL RESULTS
Total Petroleum Hydrocarbons By GC

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7090313
Project ID (number): 6395 Method: GC
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

| | | | | |
|---|---|---|---|---|
| NEI/GTEL Sample Number | W7090313-02 | -- | -- | -- |
| Client ID | MW-3 | -- | -- | -- |
| Date Sampled | 09/16/97 | -- | -- | -- |
| Date Prepared | 09/22/97 | | | |
| Date Analyzed | 09/23/97 | -- | -- | -- |
| Dilution Factor | 1.00 | -- | -- | -- |

| Analyte | Reporting Limit | Units | Concentration: | | | |
|---|---|---|---|---|---|---|
| TPH as Diesel | 50 | ug/L | 2700 | -- | -- | -- |

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

GC:

Extraction by EPA Method 3510 (liquid/liquid). ASTM Method D3328(modified) is used for qualitative identification of fuel patterns. The method has been modified to include quantitation by applying calibration and quality assurance guidelines outlined in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update 1. This method is equivalent to the California LUFT manual DHS method for diesel fuel.

W7090313-02:

The material present is qualitatively uncertain. Therefore, all material in the C9 to C22 range was quantitated against diesel fuel without respect to pattern. Chromatographic data indicates the presence of material, which is heavier than diesel fuel, in this sample.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7090313 Volatile Organics
Project ID (number): 6395 Method: EPA 8020A
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Conformance/Non-Conformance Summary

(X = Requirements Met * = See Comments -- = Not Required NA = Not Applicable)

| Conformance Item | Volatile Organics | Semi-Volatile Organics | Inorganics (MT, WC) |
|---|---|---|---|
| GC/MS Tune | -- | -- | NA |
| Initial Calibration | -- | -- | -- |
| Continuing Calibration | -- | -- | -- |
| Surrogate Recovery | X | -- | NA |
| Holding Time | * | -- | -- |
| Method Accuracy | X | -- | -- |
| Method Precision | X | -- | -- |
| Blank Contamination | X | -- | -- |

Comments:

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7090313 Volatile Organics
Project ID (number): 6395 Method: EPA 8020A
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Surrogate Results

| QC Batch No. | Reference | Sample ID | TFT |
|---|---|---|---|
| Method: EPA 8020A | | Acceptability Limits: | 43-136% |
| 092497BG17-1 | BW092497GC17 | Method Blank Water | 99.8 |
| 092497BG17-2 | LW092497GC17 | Laboratory Control | 43.8 |
| 092497BG17-3 | LWD092497GC17 | LCS Water Duplicat | 99.2 |
| 092497BG17-4 | DP09030911 | Duplicate | 99.6 |
| 092497BG17-5 | MS09030910 | Matrix Spike | 104. |
| -- | 09031301 | TB-LB | 102. |
| -- | 09031302 | MW-3 | 118. |
| -- | 09031303 | MW-1 | 102. |
| -- | 09031304 | MW-2 | 101. |

Notes:
*: Indicates values outside of acceptability limits. See Sample Report.

Project ID (Number): 6395
Project ID (Name): Chevron SS #9-9708
5910 Macarthur Blvd.
Oakland, CA
Work Order Number: W7-09-0313
Date Reported: 10-02-97

# METHOD BLANK REPORT

## Volatile Organics in Water
## EPA Method 8020A

Date of Analysis: 24-SEP-97 QC Batch No: 092497BG17-1

| Analyte | Concentration, ug/L |
|---|---|
| MTBE | <5.0 |
| Benzene | <0.5 |
| Toluene | <0.5 |
| Ethylbenzene | <0.5 |
| Xylene (total) | <0.5 |
| TPH as Gasoline | <50 |

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7090313
Project ID (number): 6395
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Volatile Organics
Method: EPA 8020A
Matrix: Aqueous

## Duplicate Sample Results

| Analyte | Original Concentration | Duplicate Concentration | RPD, % | Acceptability Limits, % |
|---|---|---|---|---|
| EPA 8020A Units: ug/L | QC Batch: 092497BG17-4 | GTEL Sample ID: W7090309-11 | | Client ID: Batch QC |
| MTBE | 5170 | 5710 | 9.93 | 20 |
| Benzene | < 10.0 | < 10.0 | NA | 23.9 |
| Toluene | < 20.0 | < 20.0 | NA | 27.2 |
| Ethylbenzene | < 20.0 | < 20.0 | NA | 21.6 |
| Xylenes (Total) | < 40.0 | < 40.0 | NA | 22.0 |

Notes:
NA - The concentration of the analyte is less than the reporting limit.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7090313 Volatile Organics
Project ID (number): 6395 Method: EPA 8020A
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Matrix Spike(MS) Results

| GTEL Sample ID:W7090309-10 | | MS ID:MS09030910 | | | |
|---|---|---|---|---|---|
| Analysis Date: 24-SEP-97 | | | 24-SEP-97 | | |
| Units: ug/L | Sample | Spike | MS | MS | Acceptability Limits |
| Analyte | Conc. | Added | Conc. | % Rec. | %Rec. |
| Benzene | < 0.5 (0.0800) | 20.0 | 17.0 | 84.6 | 67-110 |
| Toluene | < 0.5 (0.000) | 20.0 | 16.1 | 80.5 | 68-115 |
| Ethylbenzene | < 0.5 (0.200) | 20.0 | 17.1 | 84.5 | 65-120 |
| Xylenes (Total) | < 0.5 (0.230) | 60.0 | 49.8 | 82.6 | 62-119 |

Notes:
Values in parentheses in the sample concentration column are used for % recovery calculations.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7090313 Volatile Organics
Project ID (number): 6395 Method: EPA 8020A
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Laboratory Control Sample (LCS) and Laboratory Control Duplicate Results

| Analyte | Spike Amount | LCS Concentration | LCS Recovery, % | LCS Duplicate Concentration | LCS Duplicate Recovery, % | RPD, % | Acceptability Limits RPD, % | Acceptability Limits Recovery, % |
|---|---|---|---|---|---|---|---|---|
| EPA 8020A Units: ug/L | QC Batch:092497BG17-3 | | | | | | | |
| Benzene | 20.0 | 17.9 | 89.5 | 19.6 | 98.0 | 9.07 | 20 | 39-150% |
| Toluene | 20.0 | 16.9 | 84.5 | 18.5 | 92.5 | 9.04 | 20 | 46-148% |
| Ethylbenzene | 20.0 | 17.3 | 86.5 | 18.3 | 91.5 | 5.62 | 20 | 32-160% |
| Xylenes (Total) | 60.0 | 52.8 | 88.0 | 56.9 | 94.8 | 7.44 | 20 | 51-145% |

Notes:

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7090313
Project ID (number): 6395
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Total Petroleum Hydrocarbons By GC
Method: GC
Matrix: Aqueous

Conformance/Non-Conformance Summary

(X = Requirements Met * = See Comments -- = Not Required NA = Not Applicable)

| Conformance Item | Volatile Organics | Semi-Volatile Organics | Inorganics (MT, WC) |
|---|---|---|---|
| GC/MS Tune | -- | -- | NA |
| Initial Calibration | -- | -- | -- |
| Continuing Calibration | -- | -- | -- |
| Surrogate Recovery | -- | X | NA |
| Holding Time | -- | X | -- |
| Method Accuracy | -- | X | -- |
| Method Precision | -- | X | -- |
| Blank Contamination | -- | X | -- |

Comments:

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7090313
Project ID (number): 6395
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Total Petroleum Hydrocarbons By GC
Method: GC
Matrix: Aqueous

Surrogate Results

| QC Batch No. | Reference | Sample ID | OTP |
|---|---|---|---|
| Method: GC | | Acceptability Limits: | 50.2-115% |
| 092297TPHW-1 | BW092297TPH | Method Blank Water | 75.1 |
| 092297TPHW-2 | LW092297TPH | Laboratory Control | 80.4 |
| 092297TPHW-3 | LWD092297TPH | LCS Water Duplicat | 75.3 |
| 092297TPHW-4 | MS09031302 | Matrix Spike | 79.8 |
| 092297TPHW-5 | MD09031302 | Matrix Spike Dupli | 74.7 |
| -- | 09031302 | MW-3 | 83.5 |

Notes:
*: Indicates values outside of acceptability limits. See Sample Report.
Acceptability limits are derived from statistical analysis of laboratory samples.

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7090313
Project ID (number): 6395
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Total Petroleum Hydrocarbons By GC
Method: GC
Matrix: Aqueous

Method Blank Results

QC Batch No: 092297TPHW-1
Date Analyzed: 23-SEP-97

| Analyte | Method:GC | Concentration: ug/ml |
|---|---|---|
| Diesel Range Organics | < 50.0 | |

Notes:

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7090313 Total Petroleum Hydrocarbons By GC
Project ID (number): 6395 Method: GC
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Matrix Spike(MS) and Matrix Spike Duplicate(MSD) Results

GTEL Sample ID:W7090313-02 MS ID:MS09031302 MSD ID:MD09031302
Analysis Date: 23-SEP-97 23-SEP-97 24-SEP-97

| Units: ug/L | Sample | Spikes Added | | MS | MS | MSD | MSD | | Acceptability Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Conc. | MS | MSD | Conc. | % Rec. | Conc. | % Rec. | RPD | RPD | %Rec. |
| Diesel Range Organics | 3240 (3240) | 4000 | 4000 | 5440 | 55.0 | 4920 | 42.0 | 26.8 | 40.9 | 35.9-115 |

Notes:
Values in parentheses in the sample concentration column are used for % recovery calculations.
Acceptability limits are derived from statistical analysis of laboratory samples.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7090313 Total Petroleum Hydrocarbons By GC
Project ID (number): 6395 Method: GC
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Laboratory Control Sample (LCS) and Laboratory Control Duplicate Results

| Analyte | Spike Amount | LCS Concentration | LCS Recovery, % | LCS Duplicate Concentration | LCS Duplicate Recovery, % | RPD, % | Acceptability Limits RPD, % | Acceptability Limits Recovery, % |
|---|---|---|---|---|---|---|---|---|
| GC Units: ug/L | | QC Batch:092297TPHW-3 | | | | | | |
| Diesel Range Organics | 2000 | 875. | 43.8 | 1040 | 52.0 | 17.1 | 25.4 | 34.5-105% |

Notes:
Acceptability limits are derived from statistical analysis of laboratory samples.

Sample:
Acquired:
Amount:

Channel:
Method:

Filename:
Operator: