

R 2438
BC



GETTLER-RYAN INC.

TRANSMITTAL

January 20, 2003
G-R #386911

TO: Mr. Robert Foss
Cambria Environmental Technology, Inc.
2680 Bishop Drive, Suite 290
San Ramon, CA 94583

CC: Ms. Karen Streich
Chevron Products Company
P.O. Box 6004
San Ramon, California 94583

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

Alameda County
FEB 07 2003
Environmental Health

RE: Chevron Service Station
#9-2029
890 West MacArthur Blvd.
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

| COPIES | DATED | DESCRIPTION |
|--------|------------------|---|
| 1 | January 17, 2003 | Groundwater Monitoring and Sampling Report Fourth Quarter - Event of December 13, 2002 |

COMMENTS:

This report is being sent for your review. Please provide any comments/changes and propose any groundwater monitoring modifications for the next event prior to **February 4, 2003**, at which time the final report will be distributed to the following:

cc: Mr. Don Hwang, Alameda County Health Care Services, Dept. of Environmental Health, 1153 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577

Enclosures

trans/9-2029-ks



GETTLER - RYAN INC.

January 17, 2003
G-R Job #386911

Ms. Karen Streich
Chevron Products Company
P.O. Box 6004
San Ramon, CA 94583

RE: Fourth Quarter Event of December 13, 2002
Groundwater Monitoring & Sampling Report
Chevron Service Station #9-2029
890 West MacArthur Boulevard
Oakland, California

Dear Ms. Streich:

This report documents the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

Static groundwater levels were measured and the wells were checked for the presence of separate-phase hydrocarbons. Static water level data, groundwater elevations, and separate-phase hydrocarbon thickness (if any) are presented in the attached Table 1. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells and submitted to a state certified laboratory for analyses. The field data sheets for this event are attached. Analytical results are presented in the table(s) listed below. The chain of custody document and laboratory analytical report are also attached.

Please call if you have any questions or comments regarding this report. Thank you.

Sincerely,

Deanna L. Harding
Project Coordinator

Hagop Kevork
P.E. No. C55734

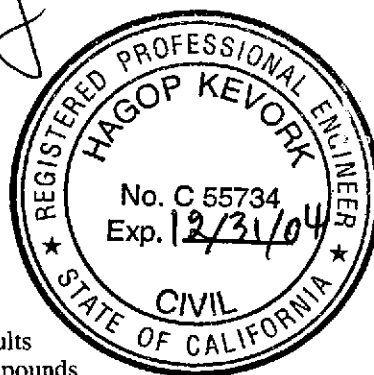
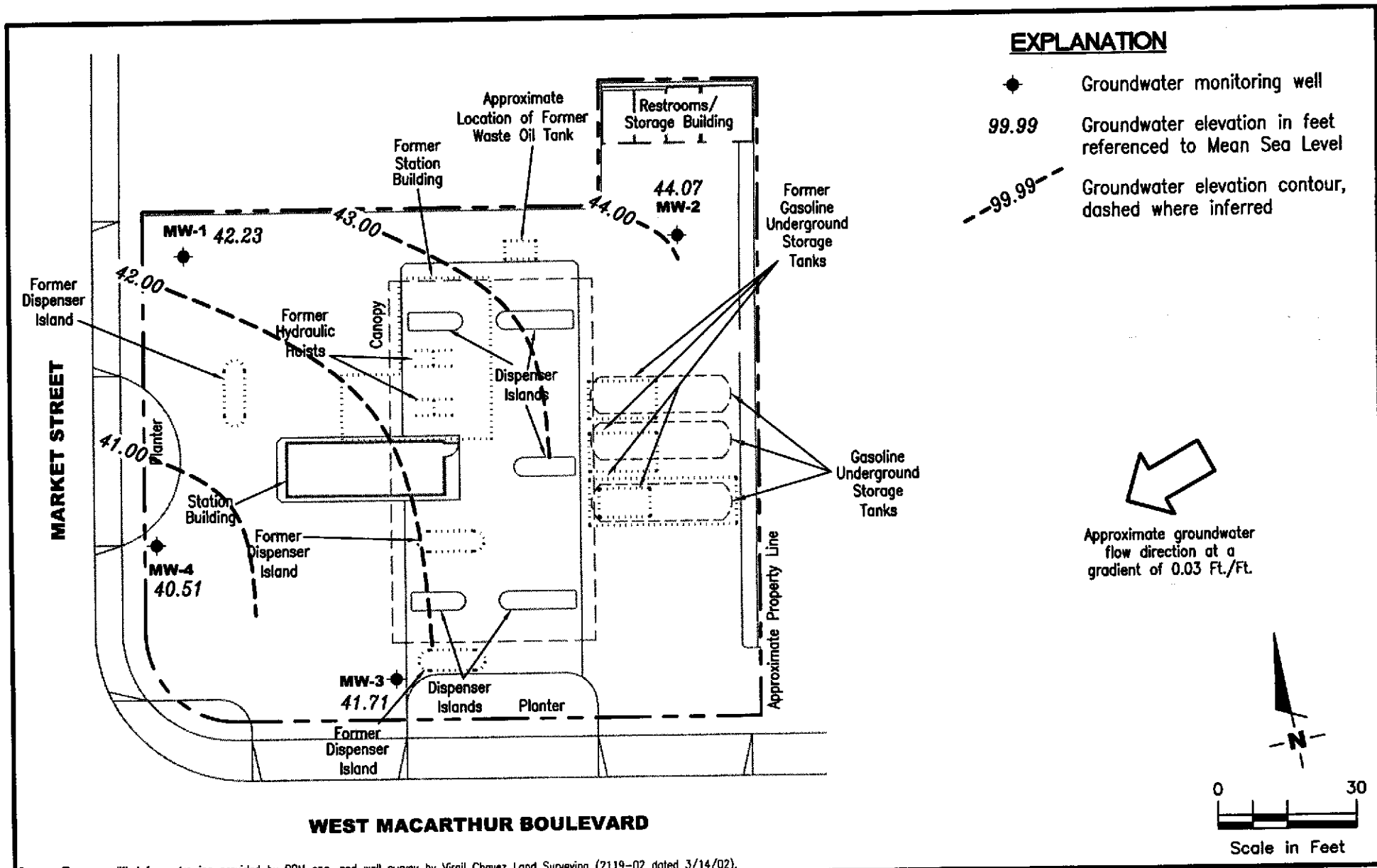


Figure 1: Potentiometric Map
Table 1: Groundwater Monitoring Data and Analytical Results
Table 2: Groundwater Analytical Results - Oxygenate Compounds
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports



Source: Figure modified from drawing provided by RRM eng. and well survey by Virail Chavez Land Surveying (2119-02 dated 3/14/02).

GETTLER - RYAN INC.
 6747 Sierra Ct., Suite J
 Dublin, CA 94568 (925) 551-7555

POTENTIOMETRIC MAP
 Chevron Service Station #9-2029
 890 West MacArthur Boulevard
 Oakland, California

FIGURE
1

| | | | |
|--------------------------|-------------|---------------------------|--------------|
| PROJECT NUMBER 386911 | REVIEWED BY | DATE December 13, 2002 | REVISED DATE |
|--------------------------|-------------|---------------------------|--------------|

Table 1
Groundwater Monitoring Data and Analytical Results
Chevron Service Station #9-2029
890 West MacArthur Blvd.
Oakland, California

| WELL ID/ TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | TPH-G (ppb) | B (ppb) | T (ppb) | E (ppb) | X (ppb) | MTBE (ppb) |
|-----------------------|-----------------------|--------------|--------------|----------------|------------|------------|------------|------------|----------------------|
| MW-1 50.71 | 03/12/02 ¹ | 6.50 | 44.21 | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5/<2 ² |
| | 06/07/02 | 8.69 | 42.02 | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5/<2 ² |
| | 09/13/02 | 9.28 | 41.43 | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5/<2 ² |
| | 12/13/02 | 8.48 | 42.23 | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5/<2 ² |
| MW-2 52.57 | 03/12/02 ¹ | 6.09 | 46.48 | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5/3 ² |
| | 06/07/02 | 8.65 | 43.92 | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5/<2 ² |
| | 09/13/02 | 9.58 | 42.99 | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5/<2 ² |
| | 12/13/02 | 8.50 | 44.07 | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5/<2 ² |
| MW-3 50.31 | 03/12/02 ¹ | 6.50 | 43.81 | 12,000 | 600 | 8.5 | 1,100 | 370 | 700/650 ² |
| | 06/07/02 | 7.74 | 42.57 | 14,000 | 630 | 8.8 | 1,200 | 160 | 520/490 ² |
| | 09/13/02 | 9.73 | 40.58 | 3,000 | 270 | 3.2 | 200 | 11 | 600/640 ² |
| | 12/13/02 | 8.60 | 41.71 | 24,000 | 1,100 | 14 | 2,400 | 220 | 650/540 ² |
| MW-4 49.93 | 03/12/02 ¹ | 5.34 | 44.59 | 9,700 | 360 | 5.3 | 1,100 | 150 | 170/170 ² |
| | 06/07/02 | 8.52 | 41.41 | 7,300 | 170 | 2.7 | 280 | 21 | 200/120 ² |
| | 09/13/02 | 9.86 | 40.07 | 5,800 | 92 | 4.5 | 80 | 14 | 190/160 ² |
| | 12/13/02 | 9.42 | 40.51 | 10,000 | 250 | 2.2 | 330 | 19 | 170/200 ² |

Table 1
Groundwater Monitoring Data and Analytical Results
Chevron Service Station #9-2029
890 West MacArthur Blvd.
Oakland, California

| WELL ID/ TOC*(ft.) | DATE | DTW (ft.) | GWE (msl) | TPH-G (ppb) | B (ppb) | T (ppb) | E (ppb) | X (ppb) | MTBE (ppb) |
|-----------------------|----------|--------------|--------------|----------------|------------|------------|------------|------------|---------------|
| TRIP BLANK | | | | | | | | | |
| QA | 03/12/02 | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5 |
| | 06/07/02 | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5 |
| | 09/13/02 | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5 |
| | 12/13/02 | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5 |

Table 1
Groundwater Monitoring Data and Analytical Results
Chevron Service Station #9-2029
890 West MacArthur Blvd.
Oakland, California

EXPLANATIONS:

TOC = Top of Casing

(ft.) = Feet

DTW = Depth to Water

GWE = Groundwater Elevation

(msl) = Mean sea level

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 Measured/Not Analyzed

QA = Quality Assurance/Trip Blank

* TOC elevations were surveyed on March 14, 2002, by Virgil Chavez Land Surveying. The benchmark for this survey was a USGS bronze disk located near the north end of the curb return at the Northwest corner of 38th Street and Broadway, (Benchmark Elevation = 85.41 feet, NGVD29).

¹ Well development performed.

² MTBE by EPA method 8260.

Table 2
Groundwater Analytical Results - Oxygenate Compounds
Chevron Service Station #9-2029
890 West MacArthur Blvd.
Oakland, California

| WELL ID | DATE | TBA (ppb) | MTBE (ppb) | DIPE (ppb) | ETBE (ppb) | TAME (ppb) | 1,2-DCA (ppb) | EDB (ppb) |
|---------|----------|--------------|---------------|---------------|---------------|---------------|------------------|--------------|
| MW-1 | 03/12/02 | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| | 06/07/02 | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| | 09/13/02 | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| | 12/13/02 | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| MW-2 | 03/12/02 | <100 | 3 | <2 | <2 | <2 | <2 | <2 |
| | 06/07/02 | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| | 09/13/02 | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| | 12/13/02 | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| MW-3 | 03/12/02 | <100 | 650 | <2 | <2 | 18 | <2 | <2 |
| | 06/07/02 | 230 | 490 | <5.0 | <5.0 | 11 | <5.0 | <5.0 |
| | 09/13/02 | 170 | 640 | <2 | <2 | 8 | <2 | <2 |
| | 12/13/02 | 240 | 540 | <2 | <2 | 29 | 31 | <2 |
| MW-4 | 03/12/02 | <100 | 170 | <2 | <2 | 13 | <2 | <2 |
| | 06/07/02 | <100 | 120 | <2 | <2 | 14 | <2 | <2 |
| | 09/13/02 | <100 | 160 | <2 | <2 | 14 | <2 | <2 |
| | 12/13/02 | <100 | 200 | <2 | <2 | 17 | <2 | <2 |

EXPLANATIONS:

TBA = tertiary-Butyl alcohol
MTBE = Methyl tertiary butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tertiary butyl ether
TAME = tertiary-Amyl methyl ether
1,2-DCA = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane
(ppb) = Parts per billion

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

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 an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

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 disposable 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 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.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #9-2029 Job Number: 386911
 Site Address: 890 West Macarthur Blvd. Event Date: 12.13.02 (inclusive)
 City: Oakland, CA Sampler: FT

Well ID: MW-1 Date Monitored: 12.13.02 Well Condition: OK

Well Diameter: 2 in.
 Total Depth: 24.20 ft.
 Depth to Water: 8.48 ft.
16.32 xVF .17 = 2.77 x3 (case volume) = Estimated Purge Volume: 8.32 gal.

| | | | | |
|-------------|------------|----------|----------|-----------|
| Volume | 3/4"= 0.02 | 1"= 0.04 | 2"= 0.17 | 3"= 0.38 |
| Factor (VF) | 4"= 0.66 | 5"= 1.02 | 6"= 1.50 | 12"= 5.80 |

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump
 Grundfos _____
 Other: _____

Sampling Equipment:

Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Bailed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Product Transferred to: _____

Start Time (purge): 9:06 Weather Conditions: RAIN
 Sample Time/Date: 9:18 / 12.13.02 Water Color: CLEAR Odor: NO
 Purging Flow Rate: 2.0 gpm. Sediment Description: _____
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (umhos/cm) | Temperature (°C) | D.O. (mg/L) | ORP (mV) |
|-----------------|---------------|-------------|-------------------------|------------------|-------------|----------|
| <u>9:07</u> | <u>2.5</u> | <u>7.08</u> | <u>74.2</u> | <u>19.3</u> | _____ | _____ |
| <u>9:08</u> | <u>5.0</u> | <u>7.07</u> | <u>72.6</u> | <u>19.3</u> | _____ | _____ |
| <u>9:10</u> | <u>8.0</u> | <u>7.05</u> | <u>62.2</u> | <u>18.9</u> | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |

LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|-------------|---------------------|------------|---------------|------------------|---|
| <u>MW-1</u> | <u>6</u> x vov vial | <u>YES</u> | <u>HCL</u> | <u>LANCASTER</u> | <u>TPH-G(8015)/BTEX+MTBE(8021)/ 7 Oxy's(8260)</u> |
| _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ |

COMMENTS: _____

Add/Replaced Lock: _____

Add/Replaced Plug: _____ Size: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #9-2029 Job Number: 386911
 Site Address: 890 West Macarthur Blvd. Event Date: 12.13.02 (inclusive)
 City: Oakland, CA Sampler: FT

Well ID: MW-2 Date Monitored: 12.13.02 Well Condition: OK
 Well Diameter: 2 in.
 Total Depth: 24.70 ft.
 Depth to Water: 8.50 ft.
 $16.20 \times VF .17 = 2.75 \times 3 \text{ (case volume)} = \text{Estimated Purge Volume: } 8.26 \text{ gal.}$

| | | | | |
|-------------|-------------|-----------|-----------|------------|
| Volume | 3/4" = 0.02 | 1" = 0.04 | 2" = 0.17 | 3" = 0.38 |
| Factor (VF) | 4" = 0.66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Bailed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Product Transferred to: _____

Start Time (purge): 9:28 Weather Conditions: RAIN
 Sample Time/Date: 9:51 / 12.13.02 Water Color: CLOUDY / BRN. Odor: NO
 Purging Flow Rate: / gpm. Sediment Description: SILTY
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (umhos/cm) | Temperature (C) | D.O. (mg/L) | ORP (mV) |
|-----------------|---------------|-------------|-------------------------|-----------------|-------------|----------|
| <u>9:31</u> | <u>2.5</u> | <u>7.14</u> | <u>53.5</u> | <u>18.1</u> | | |
| <u>9:36</u> | <u>5.0</u> | <u>7.13</u> | <u>56.2</u> | <u>18.4</u> | | |
| <u>9:42</u> | <u>8.0</u> | <u>7.10</u> | <u>60.1</u> | <u>18.8</u> | | |
| | | | | | | |

LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|-------------|--------------------|------------|---------------|------------------|---|
| <u>MW-2</u> | <u>6x vov vial</u> | <u>YES</u> | <u>HCL</u> | <u>LANCASTER</u> | <u>TPH-G(8015)/BTEX+MTBE(8021)/ 7 Oxy's(8260)</u> |
| | | | | | |
| | | | | | |

COMMENTS: _____

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Size: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #9-2029 Job Number: 386911
 Site Address: 890 West Macarthur Blvd. Event Date: 12.13.02 (inclusive)
 City: Oakland, CA Sampler: FT

Well ID: MW-3
 Well Diameter: 2 in.
 Total Depth: 24.53 ft.
 Depth to Water: 8.60 ft.
15.93

Date Monitored: 12.13.02 Well Condition: OK

| | | | | |
|-------------|-------------|-----------|-----------|------------|
| Volume | 3/4" = 0.02 | 1" = 0.04 | 2" = 0.17 | 3" = 0.38 |
| Factor (VF) | 4" = 0.66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

15.93 x VF .17 = 2.70 x3 (case volume) = Estimated Purge Volume: 8.12 gal.

Purge Equipment:
 Disposable Bailer:
 Stainless Steel Bailer:
 Stack Pump:
 Suction Pump:
 Grundfos:
 Other:

Sampling Equipment:
 Disposable Bailer:
 Pressure Bailer:
 Discrete Bailer:
 Other:

Time Started: _____ (2400 hrs)
 Time Bailed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Product Transferred to: _____

Start Time (purge): 10:00 Weather Conditions: RAIN
 Sample Time/Date: 10:24 / 12-13-02 Water Color: CLEAR Odor: YES / VERY STRONG
 Purging Flow Rate: / gpm. Sediment Description: _____
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (umhos/cm) | Temperature (°F) | D.O. (mg/L) | ORP (mV) |
|-----------------|---------------|-------------|-------------------------|------------------|-------------|----------|
| <u>10:05</u> | <u>2.5</u> | <u>6.96</u> | <u>121.2</u> | <u>18.5</u> | _____ | _____ |
| <u>10:10</u> | <u>5.0</u> | <u>6.95</u> | <u>117.4</u> | <u>18.7</u> | _____ | _____ |
| <u>10:15</u> | <u>8.0</u> | <u>6.92</u> | <u>109.2</u> | <u>18.6</u> | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |

LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|-------------|---------------------|------------|---------------|------------------|--|
| <u>MW-3</u> | <u>6 x voa vial</u> | <u>YES</u> | <u>HCL</u> | <u>LANCASTER</u> | <u>TPH-G(8015)/BTX+MTBE(8021)/ 7 Oxy's(8260)</u> |
| _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ |

COMMENTS: _____

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Size: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #9-2029 Job Number: 386911
 Site Address: 890 West Macarthur Blvd. Event Date: 12.13.02 (inclusive)
 City: Oakland, CA Sampler: FT

Well ID: MW-4 Date Monitored: 12.13.02 Well Condition: o'k
 Well Diameter: 2 in.
 Total Depth: 24.64 ft.
 Depth to Water: 9.42 ft.
 $15.22 \times VF .17 = 2.58 \times 3 \text{ (case volume)} = \text{Estimated Purge Volume: } 7.76 \text{ gal.}$

| | | | | |
|-------------|------------|----------|----------|-----------|
| Volume | 3/4"= 0.02 | 1"= 0.04 | 2"= 0.17 | 3"= 0.38 |
| Factor (VF) | 4"= 0.66 | 5"= 1.02 | 6"= 1.50 | 12"= 5.80 |

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Bailed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Product Transferred to: _____

Start Time (purge): 10:30 Weather Conditions: RAIN, RAIN, RAIN!
 Sample Time/Date: 10:50 / 12.13.02 Water Color: CLOUDY / V.L. Condor: YES / VERY STRONG
 Purging Flow Rate: 7 gpm. Sediment Description: _____
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (umhos/cm) | Temperature (°F) | D.O. (mg/L) | ORP (mV) |
|-----------------|---------------|-------------|-------------------------|------------------|-------------|----------|
| <u>10:34</u> | <u>2.5</u> | <u>6.92</u> | <u>114.2</u> | <u>18.2</u> | _____ | _____ |
| <u>10:39</u> | <u>5.0</u> | <u>6.90</u> | <u>109.0</u> | <u>18.6</u> | _____ | _____ |
| <u>10:44</u> | <u>8.0</u> | <u>6.88</u> | <u>101.2</u> | <u>18.9</u> | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |

LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|-------------|---------------------|------------|---------------|------------------|---|
| <u>MW-4</u> | <u>6 x vva vial</u> | <u>YES</u> | <u>HCL</u> | <u>LANCASTER</u> | <u>TPH-G(8015)/BTEX+MTBE(8021)/ 7 Oxy's(8260)</u> |
| _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ |

COMMENTS: _____

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Size: _____

Chevron California Region Analysis Request/Chain of Custody



For Lancaster Laboratories use only
 Acct. #: 10905 Sample #: 3963134-38 SCR#: 834940

121602-012

Facility #: 9-2029 Job #386911 Global ID# _____
 Site Address: 890 West MacArthur Blvd., OAKLAND, CA
 Chevron PM: KS Lead Consultant: Delta/G-R
 Consultant/Office: G-R, Inc., 6747 Sierra Court, Dublin, Ca 94568
 Consultant Prj. Mgr.: Deanna J. Harding (Deanna@grinc.com)
 Consultant Phone #: 925-551-7555 Fax #: 925-551-7899
 Sampler: FRANK TERRINONI
 Service Order #: _____ Non SAR: _____

| Matrix | | Analyses Requested | | | | | | | | | |
|--------------------------|--------------------------|--------------------|--------------------------|------|--|--|--|--|--|--|--|
| | | Preservation Codes | | | | | | | | | |
| Potable | NPDES | H | H | | | | | | | | |
| <input type="checkbox"/> | <input type="checkbox"/> | BTEX + MTBE 8260 | <input type="checkbox"/> | 8021 | | | | | | | |
| <input type="checkbox"/> | <input type="checkbox"/> | TPH 8015 MOD | GRO | | | | | | | | |
| <input type="checkbox"/> | <input type="checkbox"/> | TPH 8015 MOD DR0 | Silica Gel Cleanup | | | | | | | | |
| <input type="checkbox"/> | <input type="checkbox"/> | 8260 full scan | | | | | | | | | |
| <input type="checkbox"/> | <input type="checkbox"/> | Oxygenates | 8260 | | | | | | | | |
| <input type="checkbox"/> | <input type="checkbox"/> | Lead 7420 | <input type="checkbox"/> | 7421 | | | | | | | |

112

Preservative Codes
 H = HCl T = Thiosulfate
 N = HNO₃ B = NaOH
 S = H₂SO₄ O = Other

J value reporting needed
 Must meet lowest detection limits possible for 8260 compounds

8021 MTBE Confirmation
 Confirm highest hit by 8260
 Confirm all hits by 8260
 Run ___ oxy s on highest hit
 Run ___ oxy s on all hits

| Sample Identification | Date Collected | Time Collected | Grab | Composite | Matrix | | | Total Number of Containers | Analyses Requested | | | | | | | | | | Comments / Remarks | | | | |
|-----------------------|----------------|----------------|------|-----------|--------|-------|-----|----------------------------|--------------------|---|--|--|--|--|--|--|--|--|--------------------|--|--|--|--|
| | | | | | Soil | Water | Oil | | H | H | | | | | | | | | | | | | |
| QA | 12-13-02 | | | | | | | 2 | X | X | | | | | | | | | | | | | |
| MW-1 | ↓ | 0918 | X | | | | | 6 | X | X | | | | | | | | | | | | | |
| MW-2 | ↓ | 0951 | X | | | | | 6 | X | X | | | | | | | | | | | | | |
| MW-3 | ↓ | 1024 | X | | | | | 6 | X | X | | | | | | | | | | | | | |
| MW-4 | ↓ | 1050 | X | | | | | 6 | X | X | | | | | | | | | | | | | |

Turnaround Time Requested (TAT) (please circle)
 STD. TAT 24 hour 72 hour 48 hour
 4 day 5 day

Data Package Options (please circle if required)
 QC Summary Type I — Full
 Type VI (Raw Data) Coelt Deliverable not needed
 WIP (RWQCB)
 Disk

| | | | | | | |
|---|-----------------------|-------------------|---|------------------------------------|-----------------------|-------------------|
| Relinquished by: <u>Frank Terrinoni</u> | Date: <u>12-13-02</u> | Time: _____ | Received by: <u>Steve</u> | Date: <u>12/16/02</u> | Time: <u>1400</u> | |
| Relinquished by: <u>Steve</u> | Date: <u>12/14/02</u> | Time: <u>1700</u> | Received by: <u>Andres Amaya</u> | Date: <u>12-16-02</u> | Time: <u>1400</u> | |
| Relinquished by: <u>Andres Amaya</u> | Date: <u>12-16-02</u> | Time: <u>1530</u> | Received by: <u>Airborne</u> | Date: <u>12-16-02</u> | Time: _____ | |
| Relinquished by Commercial Carrier: <u>Airborne</u> | UPS | FedEx | Other | Received by: <u>David Y. Beach</u> | Date: <u>12/17/02</u> | Time: <u>1010</u> |
| Temperature Upon Receipt: <u>21.0 C°</u> | | | Custody Seals Intact? <input checked="" type="radio"/> Yes <input type="radio"/> No | | | |



ANALYTICAL RESULTS

Prepared for:

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

925-842-8582

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 834940. Samples arrived at the laboratory on Tuesday, December 17, 2002. The PO# for this group is 99011184 and the release number is STREICH.

| <u>Client Description</u> | | <u>Lancaster Labs Number</u> |
|---------------------------|------------|------------------------------|
| QA-T-021213 | NA Water | 3963134 |
| MW-1-W-021213 | Grab Water | 3963135 |
| MW-2-W-021213 | Grab Water | 3963136 |
| MW-3-W-021213 | Grab Water | 3963137 |
| MW-4-W-021213 | Grab Water | 3963138 |

1 COPY TO

Delta C/O Gettler-Ryan

Attn: Deanna L. Harding

Questions? Contact your Client Services Representative
Teresa L Cunningham at (717) 656-2300.

Respectfully Submitted,

Steven A. Skiles
Steven A. Skiles
Sr. Chemist



Lancaster Laboratories Sample No. WW 3963134

Collected: 12/13/2002 00:00

Account Number: 10905

Submitted: 12/17/2002 10:10
 Reported: 12/30/2002 at 21:04
 Discard: 01/30/2003

ChevronTexaco
 6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

QA-T-021213 NA Water GRD
 Facility# 92029 Job# 386911
 890 W MacArthur-Oakland NA QA

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Units | Dilution Factor |
|---|-------------------------|------------|--------------------|------------------------------------|-------|-----------------|
| 01729 | TPH-GRO - Waters | | | | | |
| 01730 | TPH-GRO - Waters | n.a. | N.D. | 50. | ug/l | 1 |
| The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time. A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level. | | | | | | |
| 08214 | BTEX, MTBE (8021) | | | | | |
| 00776 | Benzene | 71-43-2 | N.D. | 0.50 | ug/l | 1 |
| 00777 | Toluene | 108-88-3 | N.D. | 0.50 | ug/l | 1 |
| 00778 | Ethylbenzene | 100-41-4 | N.D. | 0.50 | ug/l | 1 |
| 00779 | Total Xylenes | 1330-20-7 | N.D. | 1.5 | ug/l | 1 |
| 00780 | Methyl tert-Butyl Ether | 1634-04-4 | N.D. | 2.5 | ug/l | 1 |
| A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level. | | | | | | |

State of California Lab Certification No. 2116

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-------------------|----------------------------|--------|------------------------|-----------------|-----------------|
| 01729 | TPH-GRO - Waters | N. CA LUFT Gasoline Method | 1 | 12/22/2002 15:46 | K. Robert James | 1 |
| 08214 | BTEX, MTBE (8021) | SW-846 8021B | 1 | 12/22/2002 15:46 | K. Robert James | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 12/22/2002 15:46 | K. Robert James | n.a. |

#=Laboratory Method Detection Limit exceeded target detection limit
 N.D.=Not detected above the Reporting Limit



Analysis Report



Lancaster Laboratories Sample No. WW 3963135

Collected: 12/13/2002 09:18 by FT

Account Number: 10905

Submitted: 12/17/2002 10:10
 Reported: 12/30/2002 at 21:04
 Discard: 01/30/2003

ChevronTexaco
 6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

MW-1-W-021213 Grab Water
 Facility# 92029 Job# 386911 GRD
 890 W MacArthur-Oakland NA MW-1

WMO01

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Units | Dilution Factor |
|---|-------------------------|------------|--------------------|------------------------------------|-------|-----------------|
| 01729 | TPH-GRO - Waters | | | | | |
| 01730 | TPH-GRO - Waters | n.a. | N.D. | 50. | ug/l | 1 |
| The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time. A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level. | | | | | | |
| 08214 | BTEX, MTBE (8021) | | | | | |
| 00776 | Benzene | 71-43-2 | N.D. | 0.50 | ug/l | 1 |
| 00777 | Toluene | 108-88-3 | N.D. | 0.50 | ug/l | 1 |
| 00778 | Ethylbenzene | 100-41-4 | N.D. | 0.50 | ug/l | 1 |
| 00779 | Total Xylenes | 1330-20-7 | N.D. | 1.5 | ug/l | 1 |
| 00780 | Methyl tert-Butyl Ether | 1634-04-4 | N.D. | 2.5 | ug/l | 1 |
| A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level. | | | | | | |
| 01595 | Oxygenates by 8260B | | | | | |
| 02010 | Methyl t-butyl ether | 1634-04-4 | N.D. | 2. | ug/l | 1 |
| 02011 | di-Isopropyl ether | 108-20-3 | N.D. | 2. | ug/l | 1 |
| 02013 | Ethyl t-butyl ether | 637-92-3 | N.D. | 2. | ug/l | 1 |
| 02014 | t-Amyl methyl ether | 994-05-8 | N.D. | 2. | ug/l | 1 |
| 02015 | t-Butyl alcohol | 75-65-0 | N.D. | 100. | ug/l | 1 |
| 05402 | 1,2-Dichloroethane | 107-06-2 | N.D. | 2. | ug/l | 1 |
| 05412 | 1,2-Dibromoethane | 106-93-4 | N.D. | 2. | ug/l | 1 |

State of California Lab Certification No. 2116

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|----------------------------|--------|------------------------|-----------------|-----------------|
| 01729 | TPH-GRO - Waters | N. CA LUFT Gasoline Method | 1 | 12/22/2002 23:35 | K. Robert James | 1 |
| 08214 | BTEX, MTBE (8021) | SW-846 8021B | 1 | 12/22/2002 23:35 | K. Robert James | 1 |
| 01595 | Oxygenates by 8260B | SW-846 8260B | 1 | 12/27/2002 08:13 | Marla S Lord | 1 |

#=Laboratory Method Detection Limit exceeded target detection limit

N.D.=Not detected above the Reporting Limit



2425 New Holland Pike
 PO Box 12425
 Lancaster, PA 17605-2425
 717.656.2300 Fax: 717.656.2681



Lancaster Laboratories Sample No. WW 3963135

Collected: 12/13/2002 09:18 by FT

Account Number: 10905

Submitted: 12/17/2002 10:10
Reported: 12/30/2002 at 21:04
Discard: 01/30/2003

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

MW-1-W-021213 Grab Water GRD
Facility# 92029 Job# 386911
890 W MacArthur-Oakland NA MW-1

| | | | | | | | |
|-------|----------------------|--------------|---|------------------|-----------------|------|--|
| WMO01 | | | | | | | |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 12/22/2002 23:35 | K. Robert James | n.a. | |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | 12/27/2002 08:13 | Marla S Lord | n.a. | |

#=Laboratory Method Detection Limit
N.D.=Not detected above the Reporting Limit



2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717 655 2200 Fax 717 655 2681

Analysis Report



Lancaster Laboratories Sample No. WW 3963136

Collected: 12/13/2002 09:51 by FT

Account Number: 10905

Submitted: 12/17/2002 10:10
 Reported: 12/30/2002 at 21:04
 Discard: 01/30/2003

ChevronTexaco
 6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

MW-2-W-021213 Grab Water
 Facility# 92029 Job# 386911 GRD
 890 W MacArthur-Oakland NA MW-2

WMO02

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Units | Dilution Factor |
|---|-------------------------|------------|--------------------|------------------------------------|-------|-----------------|
| 01729 | TPH-GRO - Waters | | | | | |
| 01730 | TPH-GRO - Waters | n.a. | N.D. | 50. | ug/l | 1 |
| The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time. A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level. | | | | | | |
| 08214 | BTEX, MTBE (8021) | | | | | |
| 00776 | Benzene | 71-43-2 | N.D. | 0.50 | ug/l | 1 |
| 00777 | Toluene | 108-88-3 | N.D. | 0.50 | ug/l | 1 |
| 00778 | Ethylbenzene | 100-41-4 | N.D. | 0.50 | ug/l | 1 |
| 00779 | Total Xylenes | 1330-20-7 | N.D. | 1.5 | ug/l | 1 |
| 00780 | Methyl tert-Butyl Ether | 1634-04-4 | N.D. | 2.5 | ug/l | 1 |
| A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level. | | | | | | |
| 01595 | Oxygenates by 8260B | | | | | |
| 02010 | Methyl t-butyl ether | 1634-04-4 | N.D. | 2. | ug/l | 1 |
| 02011 | di-Isopropyl ether | 108-20-3 | N.D. | 2. | ug/l | 1 |
| 02013 | Ethyl t-butyl ether | 637-92-3 | N.D. | 2. | ug/l | 1 |
| 02014 | t-Amyl methyl ether | 994-05-8 | N.D. | 2. | ug/l | 1 |
| 02015 | t-Butyl alcohol | 75-65-0 | N.D. | 100. | ug/l | 1 |
| 05402 | 1,2-Dichloroethane | 107-06-2 | N.D. | 2. | ug/l | 1 |
| 05412 | 1,2-Dibromoethane | 106-93-4 | N.D. | 2. | ug/l | 1 |

State of California Lab Certification No. 2116

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|----------------------------|--------|------------------------|-----------------|-----------------|
| 01729 | TPH-GRO - Waters | N. CA LUFT Gasoline Method | 1 | 12/23/2002 00:08 | K. Robert James | 1 |
| 08214 | BTEX, MTBE (8021) | SW-846 8021B | 1 | 12/23/2002 00:08 | K. Robert James | 1 |
| 01595 | Oxygenates by 8260B | SW-846 8260B | 1 | 12/27/2002 01:15 | Marla S Lord | 1 |

#=Laboratory Method Detection Limit exceeded target detection limit
 N.D.=Not detected above the Reporting Limit



Analysis Report



Lancaster Laboratories Sample No. **WW 3963137**

Collected: 12/13/2002 10:24 by FT

Account Number: 10905

Submitted: 12/17/2002 10:10
 Reported: 12/30/2002 at 21:05
 Discard: 01/30/2003

ChevronTexaco
 6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

MW-3-W-021213 Grab Water
 Facility# 92029 Job# 386911 GRD
 890 W MacArthur-Oakland NA MW-3

WMO03

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Units | Dilution Factor |
|---|-------------------------|------------|--------------------|------------------------------------|-------|-----------------|
| 01729 | TPH-GRO - Waters | | | | | |
| 01730 | TPH-GRO - Waters | n.a. | 24,000. | 500. | ug/l | 10 |
| The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time. A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level. | | | | | | |
| 08214 | BTEX, MTBE (8021) | | | | | |
| 00776 | Benzene | 71-43-2 | 1,100. | 2.0 | ug/l | 10 |
| 00777 | Toluene | 108-88-3 | 14. | 2.0 | ug/l | 10 |
| 00778 | Ethylbenzene | 100-41-4 | 2,400. | 2.0 | ug/l | 10 |
| 00779 | Total Xylenes | 1330-20-7 | 220. | 6.0 | ug/l | 10 |
| 00780 | Methyl tert-Butyl Ether | 1634-04-4 | 650. | 3.0 | ug/l | 10 |
| A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level. | | | | | | |
| 01595 | Oxygenates by 8260B | | | | | |
| 02010 | Methyl t-butyl ether | 1634-04-4 | 540. | 2.0 | ug/l | 2.5 |
| 02011 | di-Isopropyl ether | 108-20-3 | N.D. | 2. | ug/l | 1 |
| 02013 | Ethyl t-butyl ether | 637-92-3 | N.D. | 2. | ug/l | 1 |
| 02014 | t-Amyl methyl ether | 994-05-8 | 29. | 2. | ug/l | 1 |
| 02015 | t-Butyl alcohol | 75-65-0 | 240. | 100. | ug/l | 1 |
| 05402 | 1,2-Dichloroethane | 107-06-2 | 31. | 2. | ug/l | 1 |
| 05412 | 1,2-Dibromoethane | 106-93-4 | N.D. | 2. | ug/l | 1 |

State of California Lab Certification No. 2116

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|----------------------------|--------|------------------------|--------------|-----------------|
| 01729 | TPH-GRO - Waters | N. CA LUFT Gasoline Method | 1 | 12/23/2002 02:22 | Linda C Pape | 10 |
| 08214 | BTEX, MTBE (8021) | SW-846 8021B | 1 | 12/23/2002 02:22 | Linda C Pape | 10 |
| 01595 | Oxygenates by 8260B | SW-846 8260B | 1 | 12/27/2002 06:55 | Marla S Lord | 2.5 |

#=Laboratory Method Detection Limit exceeded target detection limit
 N.D.=Not detected above the Reporting Limit



2425 New Holland Pike
 Lancaster, PA 17605-2425
 717-656-2300 Fax: 717-656-2681



Lancaster Laboratories Sample No. WW 3963137

Collected: 12/13/2002 10:24 by FT

Account Number: 10905

Submitted: 12/17/2002 10:10
Reported: 12/30/2002 at 21:05
Discard: 01/30/2003

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

MW-3-W-021213 Grab Water GRD
Facility# 92029 Job# 386911
890 W MacArthur-Oakland NA MW-3

| WMO03 | | | | | | | |
|-------|----------------------|--------------|---|------------------|--------------|------|--|
| 01595 | Oxygenates by 8260B | SW-846 8260B | 1 | 12/27/2002 10:00 | Marla S Lord | 1 | |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 12/23/2002 02:22 | Linda C Pape | n.a. | |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | 12/27/2002 06:55 | Marla S Lord | n.a. | |

#=Laboratory Method Detection Limit exceeded target detection limit
N.D.=Not detected above the Reporting Limit

Analysis Report



Lancaster Laboratories Sample No. WW 3963138

Collected: 12/13/2002 10:50 by FT

Account Number: 10905

Submitted: 12/17/2002 10:10
 Reported: 12/30/2002 at 21:05
 Discard: 01/30/2003

ChevronTexaco
 6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

MW-4-W-021213 Grab Water
 Facility# 92029 Job# 386911 GRD
 890 W MacArthur-Oakland NA MW-4

WMO04

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Units | Dilution Factor |
|---|-------------------------|------------|--------------------|------------------------------------|-------|-----------------|
| 01729 | TPH-GRO - Waters | | | | | |
| 01730 | TPH-GRO - Waters | n.a. | 10,000. | 500. | ug/l | 10 |
| The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time. A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level. | | | | | | |
| 08214 | BTEX, MTBE (8021) | | | | | |
| 00776 | Benzene | 71-43-2 | 250. | 0.50 | ug/l | 2 |
| 00777 | Toluene | 108-88-3 | 2.2 | 0.50 | ug/l | 2 |
| 00778 | Ethylbenzene | 100-41-4 | 330. | 0.50 | ug/l | 2 |
| 00779 | Total Xylenes | 1330-20-7 | 19. | 1.5 | ug/l | 2 |
| 00780 | Methyl tert-Butyl Ether | 1634-04-4 | 170. | 2.5 | ug/l | 2 |
| A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level. | | | | | | |
| 01595 | Oxygenates by 8260B | | | | | |
| 02010 | Methyl t-butyl ether | 1634-04-4 | 200. | 2. | ug/l | 1 |
| 02011 | di-Isopropyl ether | 108-20-3 | N.D. | 2. | ug/l | 1 |
| 02013 | Ethyl t-butyl ether | 637-92-3 | N.D. | 2. | ug/l | 1 |
| 02014 | t-Amyl methyl ether | 994-05-8 | 17. | 2. | ug/l | 1 |
| 02015 | t-Butyl alcohol | 75-65-0 | N.D. | 100. | ug/l | 1 |
| 05402 | 1,2-Dichloroethane | 107-06-2 | N.D. | 2. | ug/l | 1 |
| 05412 | 1,2-Dibromoethane | 106-93-4 | N.D. | 2. | ug/l | 1 |

State of California Lab Certification No. 2116

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|----------------------------|--------|------------------------|-----------------|-----------------|
| 01729 | TPH-GRO - Waters | N. CA LUFT Gasoline Method | 1 | 12/23/2002 02:57 | Linda C Pape | 10 |
| 08214 | BTEX, MTBE (8021) | SW-846 8021B | 1 | 12/27/2002 02:25 | Martha L Seidel | 2 |
| 01595 | Oxygenates by 8260B | SW-846 8260B | 1 | 12/27/2002 07:21 | Marla S Lord | 1 |

#=Laboratory Method Detection Limit exceeded target detection limit
 N.D.=Not detected or above the Reporting Limit



Lancaster, PA 17605-2425
 717-656-2300 Fax: 717-656-2681



Lancaster Laboratories Sample No. WW 3963138

Collected: 12/13/2002 10:50 by FT

Account Number: 10905

Submitted: 12/17/2002 10:10
Reported: 12/30/2002 at 21:05
Discard: 01/30/2003

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

MW-4-W-021213 Grab Water GRD
Facility# 92029 Job# 386911
890 W MacArthur-Oakland NA MW-4

| | | | | | | | |
|-------|----------------------|--------------|---|------------------|--------------|------|--|
| WMO04 | | | | | | | |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 12/23/2002 02:57 | Linda C Pape | n.a. | |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | 12/27/2002 07:21 | Marla S Lord | n.a. | |

#=Laboratory Method Detection Limit exceeded target detection limit
N.D.=Not detected above the Reporting Limit



2415 Bollinger Canyon Rd
PO Box 12425
Lancaster, PA 17605-2425
717.656.2200 Fax: 717.656.2681



Quality Control Summary

Client Name: ChevronTexaco
Reported: 12/30/02 at 09:05 PM

Group Number: 834940

Laboratory Compliance Quality Control

| <u>Analysis Name</u> | <u>Blank Result</u> | <u>Blank MDL</u> | <u>Report Units</u> | <u>LCS %REC</u> | <u>LCSD %REC</u> | <u>LCS/LCSD Limits</u> | <u>RPD</u> | <u>RPD Max</u> |
|-------------------------|-----------------------------------|------------------|---------------------|-----------------|------------------|------------------------|------------|----------------|
| Batch number: 02355A16A | Sample number(s): 3963134-3963138 | | | | | | | |
| Benzene | N.D. | .2 | ug/l | 94 | 100 | 80-118 | 7 | 30 |
| Toluene | N.D. | .2 | ug/l | 88 | 94 | 82-119 | 7 | 30 |
| Ethylbenzene | N.D. | .2 | ug/l | 86 | 92 | 81-119 | 8 | 30 |
| Total Xylenes | N.D. | .6 | ug/l | 88 | 94 | 82-120 | 7 | 30 |
| Methyl tert-Butyl Ether | N.D. | .3 | ug/l | 90 | 95 | 79-127 | 6 | 30 |
| TPH-GRO - Waters | N.D. | 50. | ug/l | 102 | 110 | 74-116 | 8 | 30 |
| Batch number: 02358A16A | Sample number(s): 3963138 | | | | | | | |
| Benzene | N.D. | .2 | ug/l | 95 | 92 | 80-118 | 4 | 30 |
| Toluene | N.D. | .2 | ug/l | 88 | 85 | 82-119 | 3 | 30 |
| Ethylbenzene | N.D. | .2 | ug/l | 86 | 83 | 81-119 | 4 | 30 |
| Total Xylenes | N.D. | .6 | ug/l | 88 | 85 | 82-120 | 4 | 30 |
| Methyl tert-Butyl Ether | N.D. | .3 | ug/l | 93 | 90 | 79-127 | 4 | 30 |
| Batch number: N023601AB | Sample number(s): 3963136-3963138 | | | | | | | |
| Methyl t-butyl ether | N.D. | .5 | ug/l | 107 | | 77-127 | | |
| di-Isopropyl ether | N.D. | .5 | ug/l | 106 | | 74-125 | | |
| Ethyl t-butyl ether | N.D. | .5 | ug/l | 102 | | 74-120 | | |
| t-Amyl methyl ether | N.D. | .5 | ug/l | 101 | | 71-114 | | |
| t-Butyl alcohol | N.D. | .5 | ug/l | 102 | | 59-139 | | |
| 1,2-Dichloroethane | N.D. | .5 | ug/l | 106 | | 77-132 | | |
| 1,2-Dibromoethane | N.D. | .5 | ug/l | 100 | | 81-114 | | |
| Batch number: N023602AA | Sample number(s): 3963135 | | | | | | | |
| Methyl t-butyl ether | N.D. | .5 | ug/l | 106 | | 77-127 | | |
| di-Isopropyl ether | N.D. | .5 | ug/l | 105 | | 74-125 | | |
| Ethyl t-butyl ether | N.D. | .5 | ug/l | 103 | | 74-120 | | |
| t-Amyl methyl ether | N.D. | .5 | ug/l | 101 | | 71-114 | | |
| t-Butyl alcohol | N.D. | .5 | ug/l | 101 | | 59-139 | | |
| 1,2-Dichloroethane | N.D. | .5 | ug/l | 104 | | 77-132 | | |
| 1,2-Dibromoethane | N.D. | .5 | ug/l | 97 | | 81-114 | | |

Sample Matrix Quality Control

| <u>Analysis Name</u> | <u>MS %REC</u> | <u>MSD %REC</u> | <u>MS/MSD Limits</u> | <u>RPD</u> | <u>BKG MAX</u> | <u>DUP Conc</u> | <u>DUP RPD</u> | <u>Dup RPD Max</u> |
|-------------------------|-----------------------------------|-----------------|----------------------|------------|----------------|-----------------|----------------|--------------------|
| Batch number: 02355A16A | Sample number(s): 3963134-3963138 | | | | | | | |
| Benzene | 101 | | 83-130 | | | | | |
| Toluene | 95 | | 87-129 | | | | | |
| Ethylbenzene | 94 | | 86-133 | | | | | |
| Total Xylenes | 95 | | 86-132 | | | | | |
| Methyl tert-Butyl Ether | 94 | | 66-140 | | | | | |
| TPH-GRO - Waters | 113 | | 74-132 | | | | | |
| Batch number: 02358A16A | Sample number(s): 3963138 | | | | | | | |
| Benzene | 100 | | 83-130 | | | | | |
| Toluene | 94 | | 87-129 | | | | | |
| Ethylbenzene | 92 | | 86-133 | | | | | |
| Total Xylenes | 94 | | 86-132 | | | | | |
| Methyl tert-Butyl Ether | 93 | | 66-140 | | | | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.





Quality Control Summary

Client Name: ChevronTexaco
 Reported: 12/30/02 at 09:05 PM

Group Number: 834940

Sample Matrix Quality Control

| Analysis Name | MS | MSD | MS/MSD | RPD | BKG | DUP | DUP | Dup RPD Max |
|--|-------------|-------------|---------------|------------|------------|-------------|-------------|-------------------|
| | <u>%REC</u> | <u>%REC</u> | <u>Limits</u> | <u>RPD</u> | <u>MAX</u> | <u>Conc</u> | <u>Conc</u> | <u>RPD</u> |
| Batch number: N023601AB Sample number(s): 3963136-3963138 | | | | | | | | |
| Methyl t-butyl ether | 101 | 102 | 69-134 | 0 | 30 | | | |
| di-Isopropyl ether | 104 | 104 | 68-133 | 0 | 30 | | | |
| Ethyl t-butyl ether | 99 | 101 | 73-123 | 2 | 30 | | | |
| t-Amyl methyl ether | 99 | 98 | 69-118 | 0 | 30 | | | |
| t-Butyl alcohol | 73 | 72 | 51-148 | 2 | 30 | | | |
| 1,2-Dichloroethane | 109 | 108 | 73-136 | 1 | 30 | | | |
| 1,2-Dibromoethane | 98 | 97 | 78-120 | 2 | 30 | | | |
| Batch number: N023602AA Sample number(s): 3963135 | | | | | | | | |
| Methyl t-butyl ether | 105 | 106 | 69-134 | 1 | 30 | | | |
| di-Isopropyl ether | 107 | 107 | 68-133 | 1 | 30 | | | |
| Ethyl t-butyl ether | 103 | 103 | 73-123 | 0 | 30 | | | |
| t-Amyl methyl ether | 100 | 100 | 69-118 | 0 | 30 | | | |
| t-Butyl alcohol | 98 | 99 | 51-148 | 1 | 30 | | | |
| 1,2-Dichloroethane | 107 | 106 | 73-136 | 1 | 30 | | | |
| 1,2-Dibromoethane | 99 | 99 | 78-120 | 0 | 30 | | | |

Surrogate Quality Control

Analysis Name: BTEX, MTBE (8021)
 Batch number: 02355A16A

| | Trifluorotoluene-F | Trifluorotoluene-P |
|---------|--------------------|--------------------|
| 3963134 | 107 | 107 |
| 3963135 | 108 | 106 |
| 3963136 | 109 | 106 |
| 3963137 | 129 | 117 |
| 3963138 | 125 | |
| Blank | 107 | 107 |
| LCS | 112 | 106 |
| LCSD | 118 | 106 |
| MS | 117 | 105 |
| Limits: | 57-146 | 71-130 |

Analysis Name: BTEX, MTBE (8021)
 Batch number: 02358A16A

| | Trifluorotoluene-F | Trifluorotoluene-P |
|---------|--------------------|--------------------|
| 3963138 | | 122 |
| Blank | 105 | 106 |
| LCS | 110 | 105 |
| LCSD | 110 | 106 |
| MS | 113 | 105 |
| Limits: | 57-146 | 71-130 |

Analysis Name: Oxygenates by 8260B
 Batch number: N023601AB

- *- Outside of specification
- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.





Quality Control Summary

Client Name: ChevronTexaco
Reported: 12/30/02 at 09:05 PM

Group Number: 834940

Surrogate Quality Control

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 3963136 | 101 | 96 | 95 | 94 |
| 3963137 | 96 | 93 | 97 | 99 |
| 3963138 | 95 | 93 | 99 | 99 |
| Blank | 100 | 97 | 95 | 93 |
| LCS | 96 | 96 | 98 | 97 |
| MS | 97 | 93 | 97 | 97 |
| MSD | 97 | 96 | 97 | 98 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

Analysis Name: Oxygenates by 8260B
Batch number: N023602AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 3963135 | 97 | 95 | 96 | 95 |
| Blank | 100 | 97 | 95 | 93 |
| LCS | 96 | 94 | 97 | 98 |
| MS | 96 | 95 | 97 | 98 |
| MSD | 96 | 94 | 98 | 99 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



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