



# GETTLER-RYAN INC.

March 23, 2007  
Job #387100

Mr. Brett Hunter  
Chevron Environmental Management Company  
P.O. Box 6012, Room K2252  
San Ramon, CA 94583

**RE: Event of January 15, 2007**  
Groundwater Monitoring & Sampling Report  
Former Chevron Service Station #305192  
9816 271<sup>st</sup> Street Northwest  
Stanwood, Washington

Dear Mr. Hunter:


This report documents the 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).

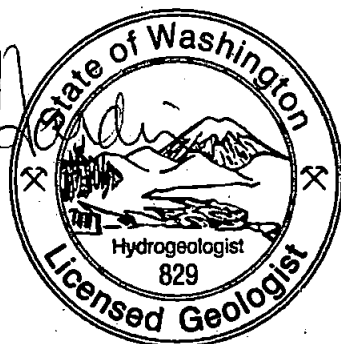
Static groundwater levels were measured and the wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any wells. Static water level data and groundwater elevations are presented in Table 1. A Potentiometric Map is included as Figure 1.


Groundwater samples were collected from the monitoring wells 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. Purge water was treated by filtering the water through granular activated carbon and was subsequently discharged. The chain of custody document and laboratory analytical reports are attached.

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

Sincerely,

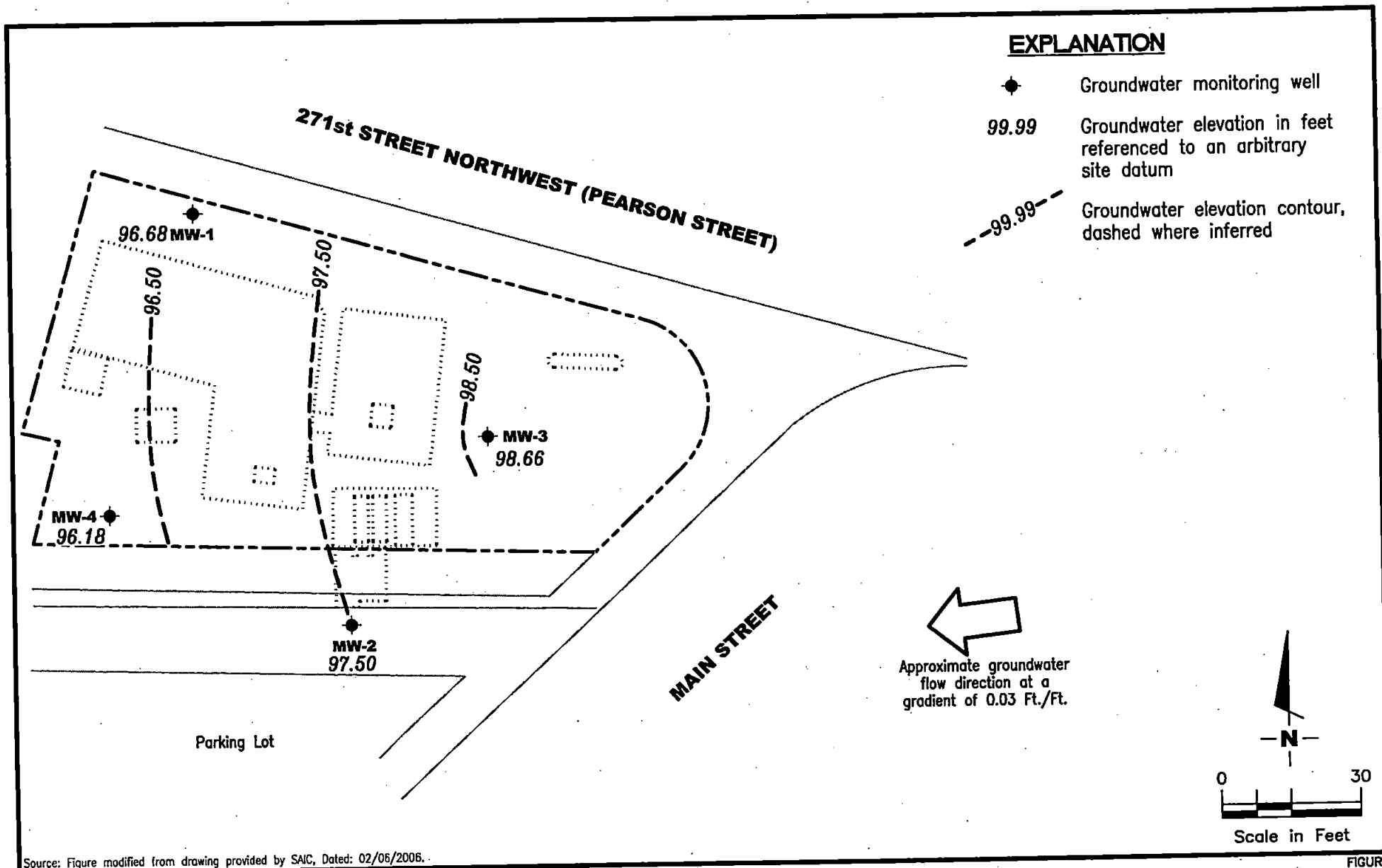
  
Deanna L. Harding  
Project Coordinator



  
Robert A. Lauritzen  
Senior Geologist, L.G. No. 829

**Robert A. Lauritzen**

Figure 1: Potentiometric Map – January 15, 2007  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Groundwater Analytical Results  
Table 3: Field Measurements  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets  
Chain of Custody Document and Laboratory Analytical Reports



Source: Figure modified from drawing provided by SAIC, Dated: 02/06/2006.

**GETTLER - RYAN INC.**  
 6747 Sierra Court, Suite J  
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**POTENTIOMETRIC MAP**  
 Former Chevron Service Station #305192  
 9816 271st Street Northwest  
 Stanwood, Washington

FIGURE

1

PROJECT NUMBER  
 387100

REVIEWED BY

DATE  
 January 15, 2007

REVISED DATE

FILE NAME: P:\Enviro\Chevron\305192\Q07-305192.dwg | Layout Tab: Pot1

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #305192  
9816 271st Street Northwest  
Stanwood, Washington

| WELL ID/<br>DATE  | TOC*<br>(ft.) | DTW<br>(ft.) | GWE<br>(ft.) | TPH-D<br>(ppb)     | TPH-O<br>(ppb)      | TPH-G<br>(ppb) | B<br>(ppb) | T<br>(ppb) | E<br>(ppb) | X<br>(ppb) | MTBE<br>(ppb) | D. LEAD<br>(ppb) |
|-------------------|---------------|--------------|--------------|--------------------|---------------------|----------------|------------|------------|------------|------------|---------------|------------------|
| <b>MW-1</b>       |               |              |              |                    |                     |                |            |            |            |            |               |                  |
| 04/10/06          | 98.32         | 1.81         | 96.51        | --                 | --                  | --             | --         | --         | --         | --         | --            | --               |
| 05/03/06          | 98.32         | --           | --           | 310 <sup>1</sup>   | 120 <sup>1</sup>    | <240           | <2.5       | <2.5       | 4.7        | 11         | <13           | <0.87            |
| 08/02/06          | PER 98.32     | 2.96         | 95.36        | 260 <sup>1</sup>   | 330 <sup>1</sup>    | <48            | <0.5       | <0.5       | <0.5       | <1.5       | <2.5          | --               |
| 10/10/06          | PER 98.32     | 2.55         | 95.77        | 150 <sup>1</sup>   | <100 <sup>1</sup>   | <48            | <0.5       | <0.5       | <0.5       | <1.5       | <2.5          | --               |
| 01/15/07          | PER 98.32     | 1.64         | 96.68        | <160 <sup>1</sup>  | <200 <sup>1</sup>   | <240           | <2.5       | <2.5       | <2.5       | <7.5       | <13           | --               |
| <b>MW-2</b>       |               |              |              |                    |                     |                |            |            |            |            |               |                  |
| 04/10/06          | 99.58         | 2.29         | 97.29        | --                 | --                  | --             | --         | --         | --         | --         | --            | --               |
| 05/03/06          | 99.58         | --           | --           | 1,400 <sup>1</sup> | 560 <sup>1</sup>    | <240           | 13 ✓       | <2.5       | <2.5       | <7.5       | <13           | <0.87            |
| 08/02/06          | PER 99.58     | 2.98         | 96.60        | 2,000 <sup>1</sup> | 1,800 <sup>1</sup>  | 220            | 20 ✓       | <0.5       | <0.5       | 1.6        | <2.5          | --               |
| 10/10/06          | PER 99.58     | 3.64         | 95.94        | 1,400 <sup>1</sup> | 790 <sup>1</sup>    | <240           | 16 ✓       | <2.5       | <2.5       | <7.5       | <13           | --               |
| 01/15/07          | PER 99.58     | 2.08         | 97.50        | 810 <sup>1</sup>   | 270 <sup>1</sup>    | <240           | 9.3 ✓      | <2.5       | <2.5       | <7.5       | <13           | --               |
| <b>MW-3</b>       |               |              |              |                    |                     |                |            |            |            |            |               |                  |
| 04/10/06          | 99.16         | 0.40         | 98.76        | --                 | --                  | --             | --         | --         | --         | --         | --            | --               |
| 05/03/06          | 99.16         | --           | --           | 580 <sup>1</sup>   | 240 <sup>1</sup>    | <240           | <2.5       | <2.5       | <2.5       | <7.5       | <13           | <0.87            |
| 08/02/06          | PER 99.16     | 2.61         | 96.55        | 350 <sup>1</sup>   | 380 <sup>1</sup>    | <48            | <0.5       | <0.5       | <0.5       | <1.5       | <2.5          | --               |
| 10/10/06          | PER 99.16     | 2.75         | 96.41        | 310 <sup>1</sup>   | 140 <sup>1</sup>    | <48            | <0.5       | <0.5       | <0.5       | <1.5       | <2.5          | --               |
| 01/15/07          | PER 99.16     | 0.50         | 98.66        | 250 <sup>1</sup>   | <100 <sup>1</sup>   | <240           | <2.5       | <2.5       | <2.5       | <7.5       | <13           | --               |
| <b>MW-4</b>       |               |              |              |                    |                     |                |            |            |            |            |               |                  |
| 04/10/06          | 100.00        | 2.08         | 97.92        | --                 | --                  | --             | --         | --         | --         | --         | --            | --               |
| 05/03/06          | 100.00        | --           | --           | 7,900 <sup>1</sup> | <1,000 <sup>1</sup> | <240           | <2.5       | <2.5       | <2.5       | <7.5       | <13           | <0.87            |
| 08/02/06          | PER 99.16     | 3.57         | 95.59        | 7,300 <sup>1</sup> | <1,000 <sup>1</sup> | 73             | <0.5       | <0.5       | <0.5       | 2.8        | <2.5          | --               |
| 10/10/06          | PER 99.16     | 4.28         | 94.88        | 7,900 <sup>1</sup> | 2,200 <sup>1</sup>  | <48            | <0.5       | <0.5       | <0.5       | <1.5       | <2.5          | --               |
| 01/15/07          | PER 99.16     | 2.98         | 96.18        | 8,300 <sup>1</sup> | 3,000 <sup>1</sup>  | <240           | <2.5       | <2.5       | <2.5       | <7.5       | <13           | --               |
| <b>TRIP BLANK</b> |               |              |              |                    |                     |                |            |            |            |            |               |                  |
| <b>QA</b>         |               |              |              |                    |                     |                |            |            |            |            |               |                  |
| 05/03/06          | --            | --           | --           | --                 | --                  | <48            | <0.5       | <0.5       | <0.5       | <1.5       | <2.5          | --               |
| 08/02/06          | --            | --           | --           | --                 | --                  | <48            | <0.5       | <0.5       | <0.5       | <1.5       | <2.5          | --               |

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Former Chevron Service Station #305192  
 9816 271st Street Northwest  
 Stanwood, Washington

| WELL ID/<br>DATE | TOC*<br>(ft.) | DTW<br>(ft.) | GWE<br>(ft.) | TPH-D<br>(ppb) | TPH-O<br>(ppb) | TPH-G<br>(ppb) | B<br>(ppb) | T<br>(ppb) | E<br>(ppb) | X<br>(ppb) | MTBE<br>(ppb) | D. LEAD<br>(ppb) |
|------------------|---------------|--------------|--------------|----------------|----------------|----------------|------------|------------|------------|------------|---------------|------------------|
|------------------|---------------|--------------|--------------|----------------|----------------|----------------|------------|------------|------------|------------|---------------|------------------|

QA (cont)

|          |    |    |    |    |    |     |      |      |      |      |      |    |
|----------|----|----|----|----|----|-----|------|------|------|------|------|----|
| 10/10/06 | -- | -- | -- | -- | -- | <48 | <0.5 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 01/15/07 | -- | -- | -- | -- | -- | <48 | <0.5 | <0.5 | <0.5 | <1.5 | <2.5 | -- |

|                                       | TPH-D              | TPH-O | TPH-G                 | B   | T     | E   | X     | MTBE | D. LEAD  |
|---------------------------------------|--------------------|-------|-----------------------|-----|-------|-----|-------|------|----------|
| Standard Laboratory Reporting Limits: | 250                | 250   | 48                    | 0.5 | 0.5   | 0.5 | 1.5   | 2.5  | 0.001    |
| MTCA Method A Cleanup Levels:         | 500                | 500   | 800/1,000             | 5   | 1,000 | 700 | 1,000 | 20   | --       |
| Current Method:                       | NWTPH-D + Extended |       | NWTPH-G and EPA 8021B |     |       |     |       |      | EPA 7421 |

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #305192  
9816 271st Street Northwest  
Stanwood, Washington

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**EXPLANATIONS:**

TOC = Top of Casing

(ft.) = Feet

DTW = Depth to Water

GWE = Groundwater Elevation

TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH-O = Total Petroleum Hydrocarbons as Oil

TPH-G = Total Petroleum Hydrocarbons as Gasoline

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

MTBE = Methyl tertiary butyl ether

D. LEAD = Dissolved Lead

(ppb) = Parts per billion

-- = Not Measured/Not Analyzed

PER = Peristaltic Pump used for Purging

QA = Quality Assurance/Trip Blank

MTCA = Model Toxics Control Act Cleanup Regulations

[WAC 173-340-720(2)(a)(I), as amended 02/01].

\* TOC elevations are expressed in feet relative to an arbitrary datum.

! TPH-D and TPH-O with silica gel cleanup.

**Table 2**  
**Groundwater Analytical Results**  
Former Chevron Service Station #305192  
9816 271st Street Northwest  
Stanwood, Washington

| WELL ID | DATE     | ETHANOL<br>(ppb) | TBA<br>(ppb) | MTBE<br>(ppb) | DIPE<br>(ppb) | ETBE<br>(ppb) | TAME<br>(ppb) | FULL SCAN<br>EPA 8260<br>(ppb) |
|---------|----------|------------------|--------------|---------------|---------------|---------------|---------------|--------------------------------|
| MW-4    | 05/03/06 | <500             | <50          | <5            | <5            | <5            | <5            | <5 - <60                       |

**EXPLANATIONS:**

TBA = Tertiary butyl alcohol  
MTBE = Methyl tertiary butyl ether  
DIPE = Di-isopropyl ether  
ETBE = Ethyl tertiary butyl ether  
TAME = Tertiary amyl methyl ether  
(ppb) = Parts per billion

**ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds

**Table 3**  
**Field Measurements**  
Former Chevron Service Station #305192  
9816 271st Street Northwest  
Stanwood, Washington

| WELL ID | DATE     | Time (2400 hr.) | pH   | Conductivity ( $\mu$ mhos/cm) | Temperature ( $^{\circ}$ C/ $^{\circ}$ F) | Turbidity (NTU) |
|---------|----------|-----------------|------|-------------------------------|---|-----------------|
| MW-1    | 08/02/06 | 1055            | 6.72 | 401                           | 15.4/--                                   | 93              |
|         | 01/15/07 | 1140            | 6.79 | 412                           | 12.0/--                                   | --              |
|         |          | 1144            | 6.72 | 408                           | 11.8/--                                   | --              |
|         |          | 1149            | 6.68 | 403                           | 11.7/--                                   | --              |
| MW-2    | 08/02/06 | 1017            | 6.49 | 430                           | 15.2/--                                   | 371             |
|         |          | 1025            | 6.47 | 421                           | 15.1/--                                   | 78              |
|         | 01/15/07 | 1106            | 6.82 | 404                           | 11.8/--                                   | --              |
|         |          | 1111            | 6.76 | 398                           | 11.7/--                                   | --              |
|         |          | 1116            | 6.75 | 393                           | 11.6/--                                   | --              |
| MW-3    | 08/02/06 | 957             | 6.56 | 412                           | 15.5/--                                   | 83              |
|         | 01/15/07 | 1041            | 6.70 | 407                           | 11.9/--                                   | --              |
|         |          | 1046            | 6.65 | 401                           | 11.8/--                                   | --              |
|         |          | 1051            | 6.62 | 397                           | 11.7/--                                   | --              |
| MW-4    | 08/02/06 | 920             | 6.76 | 433                           | 15.6/--                                   | 176             |
|         |          | 926             | 6.73 | 429                           | 15.5/--                                   | 72              |
|         | 01/15/07 | 958             | 6.77 | 402                           | 11.9/--                                   | --              |
|         |          | 1002            | 6.70 | 394                           | 11.8/--                                   | --              |
|         |          | 1007            | 6.63 | 391                           | 11.7/--                                   | --              |

**EXPLANATIONS:**

pH = Potential Hydrogen Ions  
( $\mu$ mhos/cm) = Micromhos per cubic centimeter  
( $^{\circ}$ C/ $^{\circ}$ F) = Degrees Celsius/ Fahrenheit  
(NTU) = Nephelometric Turbidity Unit  
-- = Not Measured

## 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, temperature, pH and electrical conductivity are measured. If purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or disposable bailers. The measurements are taken a minimum of three times during the purging. Purging continues until these parameters stabilize. Purge water is treated by filtering the water through granular activated carbon and is subsequently discharged to the ground surface at the site.

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 for all samples. 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.





# GETTLER - RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #305192  
Site Address: 9816 271st Street Nw  
City: Stanwood, WA

Job Number: 387100  
Event Date: 1-15-07 (inclusive)  
Sampler: Ben W. Newton

Well ID: MW - 1  
Well Diameter: 1.5 in.  
Total Depth: 14.08 ft.  
Depth to Water: 1.64 ft.  
12.44 xVF 1.1 = 1.2

Date Monitored: 1-15-07

Well Condition: O.K.

|             |             |           |           |            |
|-------------|-------------|-----------|-----------|------------|
| 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 |

x3 (case volume) = Estimated Purge Volume: 3.5 gal.

### Purge Equipment:

Disposable Bailer M  
Stainless Steel Bailer \_\_\_\_\_  
Stack Pump \_\_\_\_\_  
Suction Pump \_\_\_\_\_  
Grundfos \_\_\_\_\_  
Other: Peristaltic

### Sampling Equipment:

Disposable Bailer \_\_\_\_\_  
Pressure Bailer \_\_\_\_\_  
Discrete Bailer \_\_\_\_\_  
Other: Peristaltic

Time Started: \_\_\_\_\_ (2400 hrs)  
Time Completed: \_\_\_\_\_ (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  
Water Removed: \_\_\_\_\_  
Product Transferred to: \_\_\_\_\_

Start Time (purge): 1136 Weather Conditions: cloudy  
Sample Time/Date: 1158 1-15 Water Color: clear Odor: no  
Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
Did well de-water? no If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

| Time<br>(2400 hr.) | Volume<br>(gal.) | pH          | Conductivity<br>(u mhos/cm) | Temperature<br>(C/F) | D.O.<br>(mg/L) | ORP<br>(mV) |
|--------------------|------------------|-------------|-----------------------------|----------------------|----------------|-------------|
| <u>1140</u>        | <u>1.2</u>       | <u>6.79</u> | <u>412</u>                  | <u>12.0</u>          |                |             |
| <u>1144</u>        | <u>2.4</u>       | <u>6.72</u> | <u>408</u>                  | <u>11.8</u>          |                |             |
| <u>1149</u>        | <u>3.5</u>       | <u>6.68</u> | <u>403</u>                  | <u>11.7</u>          |                |             |

### LABORATORY INFORMATION

| SAMPLE ID     | (#) CONTAINER       | REFRIG.    | PRESERV. TYPE | LABORATORY       | ANALYSES                        |
|---------------|---------------------|------------|---------------|------------------|---------------------------------|
| <u>MW - 1</u> | <u>3</u> x voa vial | <u>YES</u> | <u>HCL</u>    | <u>LANCASTER</u> | <u>NWTPH-Gx/BTEX/MTBE(8021)</u> |
| <u>MW - 1</u> | <u>2</u> x ambers   | <u>YES</u> | <u>HCL</u>    | <u>LANCASTER</u> | <u>NWTPH-Dx w/sgc</u>           |
|               |                     |            |               |                  |                                 |
|               |                     |            |               |                  |                                 |
|               |                     |            |               |                  |                                 |
|               |                     |            |               |                  |                                 |

COMMENTS: \_\_\_\_\_

Add/Replaced Lock: \_\_\_\_\_

Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER - RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #305192Job Number: 387100Site Address: 9816 271st Street NwEvent Date: 1-15-07 (inclusive)City: Stanwood, WASampler: Ben W. NewtonWell ID: MW - 2Date Monitored: 1-15-07 Well Condition: \_\_\_\_\_Well Diameter: 1.5 in.Total Depth: 14.21 ft.Depth to Water: 2.08 ft.

|             |            |          |          |           |
|-------------|------------|----------|----------|-----------|
| 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 |

12.13 x VF 1 = 1.2 x3 (case volume) = Estimated Purge Volume: 3.5 gal.

## Purge Equipment:

Disposable Bailer ☒  
Stainless Steel Bailer ☐  
Stack Pump ☐  
Suction Pump ☐  
Grundfos ☐  
Other: Peristaltic

## Sampling Equipment:

Disposable Bailer ☒  
Pressure Bailer ☐  
Discrete Bailer ☐  
Other: Peristaltic

Time Started: \_\_\_\_\_ (2400 hrs)  
Time Completed: \_\_\_\_\_ (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  
Water Removed: \_\_\_\_\_  
Product Transferred to: \_\_\_\_\_

Start Time (purge): 1102Weather Conditions: cloudySample Time/Date: 1125 / 1-15Water Color: clear Odor: no

Purging Flow Rate: \_\_\_\_\_ gpm.

Sediment Description: \_\_\_\_\_

Did well de-water? no

If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

| Time<br>(2400 hr.) | Volume<br>(gal.) | pH          | Conductivity<br>(umhos/cm) | Temperature<br>(C/F) | D.O.<br>(mg/L) | ORP<br>(mV) |
|--------------------|------------------|-------------|----------------------------|----------------------|----------------|-------------|
| <u>1106</u>        | <u>1.2</u>       | <u>6.82</u> | <u>404</u>                 | <u>11.8</u>          |                |             |
| <u>1111</u>        | <u>2.4</u>       | <u>6.76</u> | <u>398</u>                 | <u>11.7</u>          |                |             |
| <u>1116</u>        | <u>3.5</u>       | <u>6.75</u> | <u>393</u>                 | <u>11.6</u>          |                |             |
|                    |                  |             |                            |                      |                |             |
|                    |                  |             |                            |                      |                |             |
|                    |                  |             |                            |                      |                |             |

## LABORATORY INFORMATION

| SAMPLE ID     | (#) CONTAINER       | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES                 |
|---------------|---------------------|---------|---------------|------------|--------------------------|
| <u>MW - 2</u> | <u>3</u> x voa vial | YES     | HCL           | LANCASTER  | NWTPH-Gx/BTEX/MTBE(8021) |
| <u>↓</u>      | <u>2</u> x ambers   | YES     | HCL           | LANCASTER  | NWTPH-Dx w/sgc           |
|               |                     |         |               |            |                          |
|               |                     |         |               |            |                          |
|               |                     |         |               |            |                          |
|               |                     |         |               |            |                          |
|               |                     |         |               |            |                          |

COMMENTS: \_\_\_\_\_

Add/Replaced Lock: \_\_\_\_\_

Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #305192 Job Number: 387100  
Site Address: 9816 271st Street Nw Event Date: 1-15-07 (inclusive)  
City: Stanwood, WA Sampler: Ben W. Newton

Well ID: MW - 3 Date Monitored: 1-15 Well Condition: ok  
Well Diameter: 1.5 in.  
Total Depth: 13.65 ft.  
Depth to Water: 0.50 ft.  
Volume Factor (VF): 

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

  
xVF 1 = 1.3 x3 (case volume) = Estimated Purge Volume: 4 gal.

### Purge Equipment:

Disposable Bailer ☒  
Stainless Steel Bailer ☐  
Stack Pump ☐  
Suction Pump ☐  
Grundfos ☐  
Other: Peristaltic

### Sampling Equipment:

Disposable Bailer ☒  
Pressure Bailer ☐  
Discrete Bailer ☐  
Other: Peristaltic

Time Started: \_\_\_\_\_ (2400 hrs)  
Time Completed: \_\_\_\_\_ (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  
Water Removed: \_\_\_\_\_  
Product Transferred to: \_\_\_\_\_

Start Time (purge): 1037 Weather Conditions: cloudy  
Sample Time/Date: 1054 1-15 Water Color: clear Odor: no  
Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
Did well de-water? no If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

| Time<br>(2400 hr.) | Volume<br>(gal.) | pH          | Conductivity<br>(umhos/cm) | Temperature<br>(C/F) | D.O.<br>(mg/L) | ORP<br>(mV) |
|--------------------|------------------|-------------|----------------------------|----------------------|----------------|-------------|
| <u>1041</u>        | <u>1.3</u>       | <u>6.70</u> | <u>407</u>                 | <u>11.9</u>          |                |             |
| <u>1046</u>        | <u>2.6</u>       | <u>6.65</u> | <u>401</u>                 | <u>11.8</u>          |                |             |
| <u>1051</u>        | <u>4</u>         | <u>6.62</u> | <u>397</u>                 | <u>11.7</u>          |                |             |

### LABORATORY INFORMATION

| SAMPLE ID     | (#) CONTAINER       | REFRIG.    | PRESERV. TYPE | LABORATORY       | ANALYSES                        |
|---------------|---------------------|------------|---------------|------------------|---------------------------------|
| <u>MW - 3</u> | <u>3</u> x voa vial | <u>YES</u> | <u>HCL</u>    | <u>LANCASTER</u> | <u>NWTPH-Gx/BTEX/MTBE(8021)</u> |
| <u>↓</u>      | <u>2</u> x ambers   | <u>YES</u> | <u>HCL</u>    | <u>LANCASTER</u> | <u>NWTPH-Dx w/sgc</u>           |
|               |                     |            |               |                  |                                 |
|               |                     |            |               |                  |                                 |
|               |                     |            |               |                  |                                 |
|               |                     |            |               |                  |                                 |

COMMENTS: \_\_\_\_\_

Add/Replaced Lock: \_\_\_\_\_

Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #305192

Job Number: 387100

Site Address: 9816 271st Street Nw

Event Date: 1-15-07 (inclusive)

City: Stanwood, WA

Sampler: Ben W. Newton

Well ID: MW - 4

Date Monitored: 1-15

Well Condition: OK

Well Diameter: 1.5 in.

Total Depth: 13.83 ft.

Depth to Water: 2.98 ft.

|             |            |          |          |           |
|-------------|------------|----------|----------|-----------|
| 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 |

10.85 xVF 1 = 1 x3 (case volume) = Estimated Purge Volume: 3 gal.

### Purge Equipment:

Disposable Bailer \_\_\_\_\_  
Stainless Steel Bailer \_\_\_\_\_  
Stack Pump \_\_\_\_\_  
Suction Pump \_\_\_\_\_  
Grundfos \_\_\_\_\_  
Other: Peristaltic

### Sampling Equipment:

Disposable Bailer \_\_\_\_\_  
Pressure Bailer \_\_\_\_\_  
Discrete Bailer \_\_\_\_\_  
Other: Peristaltic

Time Started: \_\_\_\_\_ (2400 hrs)  
Time Completed: \_\_\_\_\_ (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  
Water Removed: \_\_\_\_\_  
Product Transferred to: \_\_\_\_\_

Start Time (purge): 955 Weather Conditions: cloudy

Sample Time/Date: 1019 1-15 Water Color: clear Odor: no

Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_

Did well de-water? no If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

| Time<br>(2400 hr.) | Volume<br>(gal.) | pH          | Conductivity<br>(umhos/cm) | Temperature<br>(C/F) | D.O.<br>(mg/L) | ORP<br>(mV) |
|--------------------|------------------|-------------|----------------------------|----------------------|----------------|-------------|
| <u>958</u>         | <u>1</u>         | <u>6.77</u> | <u>402</u>                 | <u>11.9</u>          |                |             |
| <u>1002</u>        | <u>2</u>         | <u>6.70</u> | <u>394</u>                 | <u>11.8</u>          |                |             |
| <u>1007</u>        | <u>3</u>         | <u>6.63</u> | <u>391</u>                 | <u>11.7</u>          |                |             |

### LABORATORY INFORMATION

| SAMPLE ID     | (#) CONTAINER       | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES                 |
|---------------|---------------------|---------|---------------|------------|--------------------------|
| MW - <u>4</u> | <u>3</u> x voa vial | YES     | HCL           | LANCASTER  | NWTPH-Gx/BTEX/MTBE(8021) |
| <u>4</u>      | <u>2</u> x ambers   | YES     | HCL           | LANCASTER  | NWTPH-Dx w/sgc           |
|               |                     |         |               |            |                          |
|               |                     |         |               |            |                          |
|               |                     |         |               |            |                          |
|               |                     |         |               |            |                          |

COMMENTS: \_\_\_\_\_

Add/Replaced Lock: \_\_\_\_\_

Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_

# Chevron Northwest Region Analysis Request/Chain of Custody



For Lancaster Laboratories use only  
 Acct. #: 11260 Sample #: 4962281-85

SCR#: \_\_\_\_\_

Group # 1022255

Facility #: SS#305192-OML G-R#387100  
 Site Address: 9816 271st Street NW, STANWOOD, WA  
 Chevron PM: BH Lead Consultant: SAICPC  
 Consultant/Office: G-R, Inc., 6747 Sierra Court, Suite J, Dublin, Ca. 94568  
 Consultant Prj. Mgr.: Deanna L. Harding (deanna@grinc.com)  
 Consultant Phone #: 925-551-7555 Fax #: 925-551-7899  
 Sampler: Ben Newton  
 Service Order #: \_\_\_\_\_ ☐ Non SAR: \_\_\_\_\_

## Matrix

Potable ☐ NPDES ☐  
 Water ☐  
 Oil ☐ Air ☐

Total Number of Containers

## Analyses Requested

### Preservation Codes

| Matrix | Analysis         | Preservation Code                   | Analysis       | Preservation Code                   |
|--------|------------------|-------------------------------------|----------------|-------------------------------------|
| Soil   | BTEX + MTBE 8021 | <input checked="" type="checkbox"/> | TPH G          | <input checked="" type="checkbox"/> |
|        | 8260 full scan   | <input checked="" type="checkbox"/> | TPH D          | <input checked="" type="checkbox"/> |
| Water  | 8260 full scan   | <input checked="" type="checkbox"/> | Lead Total     | <input type="checkbox"/>            |
|        | 8260 full scan   | <input checked="" type="checkbox"/> | VPHEP          | <input type="checkbox"/>            |
| Oil    | 8260 full scan   | <input checked="" type="checkbox"/> | NWTPH HClD     | <input type="checkbox"/>            |
|        | 8260 full scan   | <input checked="" type="checkbox"/> | quantification | <input type="checkbox"/>            |

### Preservative Codes

H = HCl T = Thiosulfate  
 N = HNO<sub>3</sub> B = NaOH  
 S = H<sub>2</sub>SO<sub>4</sub> O = Other

- ☐ J value reporting needed  
☐ Must meet lowest detection limits possible for 8260 compounds  
 8021 MTBE Confirmation  
☐ Confirm MTBE + Naphthalene  
☐ Confirm highest hit by 8260  
☐ Confirm all hits by 8260  
☐ Run \_\_\_\_\_ oxy's on highest hit  
☐ Run \_\_\_\_\_ oxy's on all hits

### Sample Identification

| Sample Identification | Date Collected | Time Collected | Grab | Composite | Soil | Water | Oil | Air | Total Number of Containers | Analysis | Preservation Code |
|-----------------------|----------------|----------------|------|-----------|------|-------|-----|-----|----------------------------|----------|-------------------|
| QA                    | 1-15-07        | —              | X    |           | X    | X     |     |     | 2                          | X        | X                 |
| MW-1                  |                | 1158           | X    |           | X    | X     |     |     | 9                          | X        | X                 |
| MW-2                  |                | 1125           | X    |           | X    | X     |     |     | 5                          | X        | X                 |
| MW-3                  |                | 1054           | X    |           | X    | X     |     |     | 5                          | X        | X                 |
| MW-4                  |                | 1019           | X    |           | X    | X     |     |     | 5                          | X        | X                 |

### Comments / Remarks

### Turnaround Time Requested (TAT) (please circle)

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) Disk / EDD  
 WIP (RWQCB) Standard Format  
 Disk \_\_\_\_\_ Other \_\_\_\_\_

### EDF/EDD

Relinquished by:

Ben Newton

Date

1-17-07

Time

1404

Received by:

Date

Time

Relinquished by:

Date

Time

Received by:

Date

Time

Relinquished by:

Date

Time

Received by:

Date

Time

Relinquished by Commercial Carrier:

UPS

FedEx

Other \_\_\_\_\_

Received by:

Rodney Binkley

Date

1-19-07

Time

0940

Temperature Upon Receipt 2.1° - 5.7° C range

Custody Seals Intact?

Yes No



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## Analysis Report

### ANALYTICAL RESULTS

RECEIVED

Prepared for:

Chevron  
6001 Bollinger Canyon Road  
L4310  
San Ramon CA 94583

GETTLER-RYAN, INC.  
GENERAL CONTRACTORS

925-842-8582

Prepared by:

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

### SAMPLE GROUP

The sample group for this submittal is 1022255. Samples arrived at the laboratory on Friday, January 19, 2007. The PO# for this group is 0015011911 and the release number is HUNTER.

#### Client Description

QA Water Sample  
MW-1 Grab Water Sample  
MW-2 Grab Water Sample  
MW-3 Grab Water Sample  
MW-4 Grab Water Sample

#### Lancaster Labs Number

4962281  
4962282  
4962283  
4962284  
4962285

ELECTRONIC  
COPY TO

SAIC c/o Gettler-Ryan

Attn: Cheryl Hansen



## ***Analysis Report***

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Questions? Contact your Client Services Representative  
Lynn M Frederiksen at (717) 656-2300

Respectfully Submitted,

*Melissa A. McDermott*

Melissa A. McDermott  
Senior Chemist



# Analysis Report

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Page 1 of 1

Lancaster Laboratories Sample No. WW 4962281

QA Water Sample  
Facility# 305192 Job# 387100  
9816 271st St NW-Stanwood, WA  
Collected: 01/15/2007

Account Number: 11260

Submitted: 01/19/2007 09:40  
Reported: 01/31/2007 at 08:50  
Discard: 03/03/2007

Chevron  
6001 Bollinger Canyon Road  
L4310  
San Ramon CA 94583

271-Q

| CAT No. | Analysis Name           | CAS Number | As Received Result | As Received Method Detection Limit | Units | Dilution Factor |
|---------|-------------------------|------------|--------------------|------------------------------------|-------|-----------------|
| 02159   | BTEX, MTBE              |            |                    |                                    |       |                 |
| 02161   | Benzene                 | 71-43-2    | N.D.               | 0.5                                | ug/l  | 1               |
| 02164   | Toluene                 | 108-88-3   | N.D.               | 0.5                                | ug/l  | 1               |
| 02166   | Ethylbenzene            | 100-41-4   | N.D.               | 0.5                                | ug/l  | 1               |
| 02171   | Total Xylenes           | 1330-20-7  | N.D.               | 1.5                                | ug/l  | 1               |
| 02172   | Methyl tert-Butyl Ether | 1634-04-4  | N.D.               | 2.5                                | ug/l  | 1               |
| 08274   | TPH by NWTPH-Gx waters  |            |                    |                                    |       |                 |
| 01648   | TPH by NWTPH-Gx waters  | n.a.       | N.D.               | 48.                                | ug/l  | 1               |

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Chronicle

| CAT No. | Analysis Name          | Method                       | Trial# | Analysis Date and Time | Analyst         | Dilution Factor |
|---------|------------------------|------------------------------|--------|------------------------|-----------------|-----------------|
| 02159   | BTEX, MTBE             | SW-846 8021B                 | 1      | 01/20/2007 21:30       | Martha L Seidel | 1               |
| 08274   | TPH by NWTPH-Gx waters | ECY 97-602 NWTPH-Gx modified | 1      | 01/20/2007 21:30       | Martha L Seidel | 1               |
| 01146   | GC VOA Water Prep      | SW-846 5030B                 | 1      | 01/20/2007 21:30       | Martha L Seidel | 1               |





# Analysis Report

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Lancaster Laboratories Sample No. WW 4962282

MW-1 Grab Water Sample  
Facility# 305192 Job# 387100  
9816 271st St NW-Stanwood, WA  
Collected: 01/15/2007 11:58 by BN

Account Number: 11260

Submitted: 01/19/2007 09:40  
Reported: 01/31/2007 at 08:50  
Discard: 03/03/2007

Chevron  
6001 Bollinger Canyon Road  
L4310  
San Ramon CA 94583

271-1

| CAT No. | Analysis Name  | CAS Number | As Received Result | As Received Method Detection Limit | Units | Dilution Factor |
|---------|--|------------|--------------------|------------------------------------|-------|-----------------|
| 02159   | BTEX, MTBE   |            |                    |                                    |       |                 |
| 02161   | Benzene  | 71-43-2    | N.D.               | 2.5                                | ug/l  | 5               |
| 02164   | Toluene  | 108-88-3   | N.D.               | 2.5                                | ug/l  | 5               |
| 02166   | Ethylbenzene   | 100-41-4   | N.D.               | 2.5                                | ug/l  | 5               |
| 02171   | Total Xylenes  | 1330-20-7  | N.D.               | 7.5                                | ug/l  | 5               |
| 02172   | Methyl tert-Butyl Ether  | 1634-04-4  | N.D.               | 13.                                | ug/l  | 5               |
|         | Due to excessive foaming of the sample, normal reporting limits were not attained.   |            |                    |                                    |       |                 |
| 02211   | TPH by NWTPH-Dx(water) w/SiGel   |            |                    |                                    |       |                 |
| 02095   | Diesel Range Organics  | n.a.       | N.D.               | 160.                               | ug/l  | 1               |
| 02096   | Heavy Range Organics   | n.a.       | N.D.               | 200.                               | ug/l  | 1               |
|         | Due to the nature of the sample matrix, a reduced aliquot was used for analysis. The reporting limits were raised accordingly. |            |                    |                                    |       |                 |
| 08274   | TPH by NWTPH-Gx waters   |            |                    |                                    |       |                 |
| 01648   | TPH by NWTPH-Gx waters   | n.a.       | N.D.               | 240.                               | ug/l  | 5               |
|         | Due to excessive foaming of the sample, normal reporting limits were not attained.   |            |                    |                                    |       |                 |

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Chronicle

| CAT No. | Analysis Name                  | Method                       | Trial# | Analysis Date and Time | Analyst         | Dilution Factor |
|---------|--------------------------------|------------------------------|--------|------------------------|-----------------|-----------------|
| 02159   | BTEX, MTBE                     | SW-846 8021B                 | 1      | 01/20/2007 21:51       | Martha L Seidel | 5               |
| 02211   | TPH by NWTPH-Dx(water) w/SiGel | ECY 97-602 NWTPH-Dx modified | 1      | 01/26/2007 21:03       | Sarah M Snyder  | 1               |
| 08274   | TPH by NWTPH-Gx waters         | ECY 97-602 NWTPH-Gx modified | 1      | 01/20/2007 21:51       | Martha L Seidel | 5               |
| 01146   | GC VOA Water Prep              | SW-846 5030B                 | 1      | 01/20/2007 21:51       | Martha L Seidel | 5               |



# Analysis Report

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Lancaster Laboratories Sample No. WW 4962282

MW-1 Grab Water Sample  
Facility# 305192 Job# 387100  
9816 271st St NW-Stanwood, WA  
Collected: 01/15/2007 11:58 by BN

Submitted: 01/19/2007 09:40  
Reported: 01/31/2007 at 08:50  
Discard: 03/03/2007

Account Number: 11260

Chevron  
6001 Bollinger Canyon Road  
L4310  
San Ramon CA 94583

|       |                        |                     |   |                  |                 |   |
|-------|------------------------|---------------------|---|------------------|-----------------|---|
| 271-1 |                        |                     |   |                  |                 |   |
| 02135 | Extraction - DRO Water | ECY 97-602 NWTPH-Dx | 2 | 01/26/2007 04:00 | Sherry L Morrow | 1 |
|       | Special                | 06/97               |   |                  |                 |   |



# Analysis Report

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Lancaster Laboratories Sample No. WW 4962283

MW-2 Grab Water Sample  
Facility# 305192 Job# 387100  
9816 271st St NW-Stanwood, WA  
Collected: 01/15/2007 11:25 by BN

Account Number: 11260

Submitted: 01/19/2007 09:40  
Reported: 01/31/2007 at 08:50  
Discard: 03/03/2007

Chevron  
6001 Bollinger Canyon Road  
L4310  
San Ramon CA 94583

271-2

| CAT No. | Analysis Name  | CAS Number | As Received Result | As Received Method Detection Limit | Units | Dilution Factor |
|---------|--|------------|--------------------|------------------------------------|-------|-----------------|
| 02159   | BTEX, MTBE   |            |                    |                                    |       |                 |
| 02161   | Benzene  | 71-43-2    | 9.3                | 2.5                                | ug/l  | 5               |
| 02164   | Toluene  | 108-88-3   | N.D.               | 2.5                                | ug/l  | 5               |
| 02166   | Ethylbenzene   | 100-41-4   | N.D.               | 2.5                                | ug/l  | 5               |
| 02171   | Total Xylenes  | 1330-20-7  | N.D.               | 7.5                                | ug/l  | 5               |
| 02172   | Methyl tert-Butyl Ether  | 1634-04-4  | N.D.               | 13.                                | ug/l  | 5               |
|         | Due to excessive foaming of the sample, normal reporting limits were not attained. |            |                    |                                    |       |                 |
| 02211   | TPH by NWTPH-Dx(water) w/SiGel   |            |                    |                                    |       |                 |
| 02095   | Diesel Range Organics  | n.a.       | 810.               | 80.                                | ug/l  | 1               |
| 02096   | Heavy Range Organics   | n.a.       | 270.               | 100.                               | ug/l  | 1               |
| 08274   | TPH by NWTPH-Gx waters   |            |                    |                                    |       |                 |
| 01648   | TPH by NWTPH-Gx waters   | n.a.       | N.D.               | 240.                               | ug/l  | 5               |
|         | Due to excessive foaming of the sample, normal reporting limits were not attained. |            |                    |                                    |       |                 |

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Chronicle

| CAT No. | Analysis Name                  | Method                       | Trial# | Analysis Date and Time | Analyst          | Dilution Factor |
|---------|--------------------------------|------------------------------|--------|------------------------|------------------|-----------------|
| 02159   | BTEX, MTBE                     | SW-846 8021B                 | 1      | 01/20/2007 22:33       | Martha L Seidel  | 5               |
| 02211   | TPH by NWTPH-Dx(water) w/SiGel | ECY 97-602 NWTPH-Dx modified | 1      | 01/23/2007 01:11       | Matthew E Barton | 1               |
| 08274   | TPH by NWTPH-Gx waters         | ECY 97-602 NWTPH-Gx modified | 1      | 01/20/2007 22:33       | Martha L Seidel  | 5               |
| 01146   | GC VOA Water Prep              | SW-846 5030B                 | 1      | 01/20/2007 22:33       | Martha L Seidel  | 5               |
| 02135   | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97    | 1      | 01/22/2007 08:00       | Tracy L Schickel | 1               |



# Analysis Report

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Lancaster Laboratories Sample No. WW 4962283

MW-2 Grab Water Sample  
Facility# 305192 Job# 387100  
9816 271st St NW-Stanwood, WA  
Collected: 01/15/2007 11:25 by BN

Submitted: 01/19/2007 09:40  
Reported: 01/31/2007 at 08:50  
Discard: 03/03/2007

Account Number: 11260

Chevron  
6001 Bollinger Canyon Road  
L4310  
San Ramon CA 94583

271-2



# Analysis Report

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Lancaster Laboratories Sample No. WW 4962284

MW-3 Grab Water Sample  
Facility# 305192 Job# 387100  
9816 271st St NW-Stanwood, WA  
Collected: 01/15/2007 10:54 by BN

Account Number: 11260

Submitted: 01/19/2007 09:40  
Reported: 01/31/2007 at 08:50  
Discard: 03/03/2007

Chevron  
6001 Bollinger Canyon Road  
L4310  
San Ramon CA 94583

271-3

| CAT No.  | Analysis Name                  | CAS Number | As Received Result | As Received Method Detection Limit | Units | Dilution Factor |
|--|--------------------------------|------------|--------------------|------------------------------------|-------|-----------------|
| 02159  | BTEX, MTBE                     |            |                    |                                    |       |                 |
| 02161  | Benzene                        | 71-43-2    | N.D.               | 2.5                                | ug/l  | 5               |
| 02164  | Toluene                        | 108-88-3   | N.D.               | 2.5                                | ug/l  | 5               |
| 02166  | Ethylbenzene                   | 100-41-4   | N.D.               | 2.5                                | ug/l  | 5               |
| 02171  | Total Xylenes                  | 1330-20-7  | N.D.               | 7.5                                | ug/l  | 5               |
| 02172  | Methyl tert-Butyl Ether        | 1634-04-4  | N.D.               | 13.                                | ug/l  | 5               |
| The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt. The pH of this sample was pH = 7.<br>Due to excessive foaming of the sample, normal reporting limits were not attained. |                                |            |                    |                                    |       |                 |
| 02211  | TPH by NWTPH-Dx(water) w/SiGel |            |                    |                                    |       |                 |
| 02095  | Diesel Range Organics          | n.a.       | 250.               | 82.                                | ug/l  | 1               |
| 02096  | Heavy Range Organics           | n.a.       | N.D.               | 100.                               | ug/l  | 1               |
| 08274  | TPH by NWTPH-Gx waters         |            |                    |                                    |       |                 |
| 01648  | TPH by NWTPH-Gx waters         | n.a.       | N.D.               | 240.                               | ug/l  | 5               |
| The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt. The pH of this sample was pH = 7.<br>Due to excessive foaming of the sample, normal reporting limits were not attained. |                                |            |                    |                                    |       |                 |

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle



# Analysis Report

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Lancaster Laboratories Sample No. WW 4962284

MW-3 Grab Water Sample  
Facility# 305192 Job# 387100  
9816 271st St NW-Stanwood, WA  
Collected: 01/15/2007 10:54 by BN

Account Number: 11260

Submitted: 01/19/2007 09:40  
Reported: 01/31/2007 at 08:50  
Discard: 03/03/2007

Chevron  
6001 Bollinger Canyon Road  
L4310  
San Ramon CA 94583

271-3  
CAT

| No.   | Analysis Name                      |
|-------|------------------------------------|
| 02159 | BTEX, MTBE                         |
| 02211 | TPH by NWTTPH-Dx(water)<br>w/SiGel |
| 08274 | TPH by NWTTPH-Gx waters            |
| 01146 | GC VOA Water Prep                  |
| 02135 | Extraction - DRO Water<br>Special  |

| Method                           |
|----------------------------------|
| SW-846 8021B                     |
| ECY 97-602 NWTTPH-Dx<br>modified |
| ECY 97-602 NWTTPH-Gx<br>modified |
| SW-846 5030B                     |
| ECY 97-602 NWTTPH-Dx<br>06/97    |

| Analysis |                  |                  |
|----------|------------------|------------------|
| Trial#   | Date and Time    | Analyst          |
| 1        | 01/20/2007 23:15 | Martha L Seidel  |
| 1        | 01/23/2007 01:50 | Matthew E Barton |
| 1        | 01/20/2007 23:15 | Martha L Seidel  |
| 1        | 01/20/2007 23:15 | Martha L Seidel  |
| 1        | 01/22/2007 08:00 | Tracy L Schickel |

| Dilution<br>Factor |
|--------------------|
| 5                  |
| 1                  |
| 5                  |
| 5                  |
| 1                  |



# Analysis Report

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Lancaster Laboratories Sample No. WW 4962285

MW-4 Grab Water Sample  
Facility# 305192 Job# 387100  
9816 271st St NW-Stanwood, WA  
Collected: 01/15/2007 10:19 by BN

Account Number: 11260

Submitted: 01/19/2007 09:40  
Reported: 01/31/2007 at 08:50  
Discard: 03/03/2007

Chevron  
6001 Bollinger Canyon Road  
L4310  
San Ramon CA 94583

| CAT No. | Analysis Name  | CAS Number | As Received Result | As Received Method Detection Limit | Units | Dilution Factor |
|---------|--|------------|--------------------|------------------------------------|-------|-----------------|
| 02159   | BTEX, MTBE   |            |                    |                                    |       |                 |
| 02161   | Benzene  | 71-43-2    | N.D.               | 2.5                                | ug/l  | 5               |
| 02164   | Toluene  | 108-88-3   | N.D.               | 2.5                                | ug/l  | 5               |
| 02166   | Ethylbenzene   | 100-41-4   | N.D.               | 2.5                                | ug/l  | 5               |
| 02171   | Total Xylenes  | 1330-20-7  | N.D.               | 7.5                                | ug/l  | 5               |
| 02172   | Methyl tert-Butyl Ether  | 1634-04-4  | N.D.               | 13.                                | ug/l  | 5               |
|         | Due to excessive foaming of the sample, normal reporting limits were not attained. |            |                    |                                    |       |                 |
| 02211   | TPH by NWTPH-Dx(water) w/SiGel   |            |                    |                                    |       |                 |
| 02095   | Diesel Range Organics  | n.a.       | 8,300.             | 820.                               | ug/l  | 10              |
| 02096   | Heavy Range Organics   | n.a.       | 3,000.             | 1,000.                             | ug/l  | 10              |
| 08274   | TPH by NWTPH-Gx waters   |            |                    |                                    |       |                 |
| 01648   | TPH by NWTPH-Gx waters   | n.a.       | N.D.               | 240.                               | ug/l  | 5               |
|         | Due to excessive foaming of the sample, normal reporting limits were not attained. |            |                    |                                    |       |                 |

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Chronicle

| CAT No. | Analysis Name                  | Method                       | Trial# | Analysis Date and Time | Analyst          | Dilution Factor |
|---------|--------------------------------|------------------------------|--------|------------------------|------------------|-----------------|
| 02159   | BTEX, MTBE                     | SW-846 8021B                 | 1      | 01/20/2007 23:57       | Martha L Seidel  | 5               |
| 02211   | TPH by NWTPH-Dx(water) w/SiGel | ECY 97-602 NWTPH-Dx modified | 1      | 01/23/2007 12:31       | Matthew E Barton | 10              |
| 08274   | TPH by NWTPH-Gx waters         | ECY 97-602 NWTPH-Gx modified | 1      | 01/20/2007 23:57       | Martha L Seidel  | 5               |
| 01146   | GC VOA Water Prep              | SW-846 5030B                 | 1      | 01/20/2007 23:57       | Martha L Seidel  | 5               |
| 02135   | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97    | 1      | 01/22/2007 08:00       | Tracy L Schickel | 1               |



# Analysis Report

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Lancaster Laboratories Sample No. WW 4962285

MW-4 Grab Water Sample  
Facility# 305192 Job# 387100  
9816 271st St NW-Stanwood, WA  
Collected: 01/15/2007 10:19 by BN

Submitted: 01/19/2007 09:40  
Reported: 01/31/2007 at 08:50  
Discard: 03/03/2007

Account Number: 11260

Chevron  
6001 Bollinger Canyon Road  
L4310  
San Ramon CA 94583

271-4



## Quality Control Summary

Client Name: Chevron  
Reported: 01/31/07 at 08:50 AM

Group Number: 1022255

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

### Laboratory Compliance Quality Control

| Analysis Name            | Blank Result                      | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|--------------------------|-----------------------------------|-----------|--------------|----------|-----------|-----------------|-----|---------|
| Batch number: 070200011A | Sample number(s): 4962283-4962285 |           |              |          |           |                 |     |         |
| Diesel Range Organics    | N.D.                              | 80.       | ug/l         | 85       |           | 51-113          |     |         |
| Heavy Range Organics     | N.D.                              | 100.      | ug/l         |          |           |                 |     |         |
| Batch number: 07020A54A  | Sample number(s): 4962281-4962285 |           |              |          |           |                 |     |         |
| TPH by NWTPH-Gx waters   | N.D.                              | 48.       | ug/l         | 95       | 96        | 70-130          | 2   | 30      |
| Benzene                  | N.D.                              | 0.5       | ug/l         | 99       | 101       | 86-119          | 2   | 30      |
| Toluene                  | N.D.                              | 0.5       | ug/l         | 100      | 102       | 82-119          | 2   | 30      |
| Ethylbenzene             | N.D.                              | 0.5       | ug/l         | 102      | 104       | 81-119          | 2   | 30      |
| Total Xylenes            | N.D.                              | 1.5       | ug/l         | 103      | 105       | 82-120          | 2   | 30      |
| Methyl tert-Butyl Ether  | N.D.                              | 2.5       | ug/l         | 95       | 97        | 82-124          | 2   | 30      |
| Batch number: 070240016A | Sample number(s): 4962282         |           |              |          |           |                 |     |         |
| Diesel Range Organics    | N.D.                              | 80.       | ug/l         | 85       | 85        | 51-113          | 0   | 20      |
| Heavy Range Organics     | N.D.                              | 100.      | ug/l         |          |           |                 |     |         |

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike  
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name            | MS %REC   | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|--------------------------|---|----------|---------------|-----|---------|----------|----------|---------|-------------|
| Batch number: 070200011A | Sample number(s): 4962283-4962285 BKG: P962275            |          |               |     |         |          |          |         |             |
| Diesel Range Organics    |   |          |               |     |         | N.D.     | N.D.     | 0 (1)   | 20          |
| Heavy Range Organics     |   |          |               |     |         | N.D.     | N.D.     | 0 (1)   | 20          |
| Batch number: 07020A54A  | Sample number(s): 4962281-4962285 UNSPK: P962279, P962280 |          |               |     |         |          |          |         |             |
| TPH by NWTPH-Gx waters   | 103   |          | 63-154        |     |         |          |          |         |             |
| Benzene                  | 117   |          | 78-131        |     |         |          |          |         |             |
| Toluene                  | 114   |          | 78-129        |     |         |          |          |         |             |
| Ethylbenzene             | 116   |          | 75-133        |     |         |          |          |         |             |
| Total Xylenes            | 117   |          | 84-131        |     |         |          |          |         |             |
| Methyl tert-Butyl Ether  | 104   |          | 70-134        |     |         |          |          |         |             |

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TPH by NWTPH-Dx(water) w/SiGel  
Batch number: 070200011A

\*- 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: Chevron  
Reported: 01/31/07 at 08:50 AM

Group Number: 1022255

### Surrogate Quality Control

#### Orthoterphenyl

|         |     |
|---------|-----|
| 4962283 | 111 |
| 4962284 | 104 |
| 4962285 | 147 |
| Blank   | 113 |
| DUP     | 112 |
| LCS     | 119 |

Limits: 50-150

Analysis Name: BTEX, MTBE

Batch number: 07020A54A

#### Trifluorotoluene-P

#### Trifluorotoluene-F

|         | Trifluorotoluene-P | Trifluorotoluene-F |
|---------|--------------------|--------------------|
| 4962281 | 93                 | 100                |
| 4962282 | 94                 | 100                |
| 4962283 | 94                 | 97                 |
| 4962284 | 93                 | 97                 |
| 4962285 | 94                 | 99                 |
| Blank   | 94                 | 100                |
| LCS     | 93                 | 91                 |
| LCSD    | 94                 | 90                 |
| MS      | 94                 | 89                 |

Limits: 69-129

63-135

Analysis Name: TPH by NWTPH-Dx(water) w/SiGel

Batch number: 070240016A

#### Orthoterphenyl

|         |     |
|---------|-----|
| 4962282 | 99  |
| Blank   | 99  |
| LCS     | 115 |
| LCSD    | 113 |

Limits: 50-150

\*- 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.

## Lancaster Laboratories

### Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

|                         |  |                        |  |
|-------------------------|--|------------------------|--|
| <b>N.D.</b>             | none detected  | <b>BMQL</b>            | Below Minimum Quantitation Level               |
| <b>TNTC</b>             | Too Numerous To Count  | <b>MPN</b>             | Most Probable Number                           |
| <b>IU</b>               | International Units  | <b>CP Units</b>        | cobalt-chloroplatinate units                   |
| <b>umhos/cm</b>         | micromhos/cm   | <b>NTU</b>             | nephelometric turbidity units                  |
| <b>C</b>                | degrees Celsius  | <b>F</b>               | degrees Fahrenheit                             |
| <b>Cal</b>              | (diet) calories  | <b>lb.</b>             | pound(s)                                       |
| <b>meq</b>              | milliequivalents   | <b>kg</b>              | kilogram(s)                                    |
| <b>g</b>                | gram(s)  | <b>mg</b>              | milligram(s)                                   |
| <b>ug</b>               | microgram(s)   | <b>l</b>               | liter(s)                                       |
| <b>ml</b>               | milliliter(s)  | <b>ul</b>              | microliter(s)                                  |
| <b>m3</b>               | cubic meter(s)   | <b>fib &gt;5 um/ml</b> | fibers greater than 5 microns in length per ml |
| <b>&lt;</b>             | less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.  |                        |  |
| <b>&gt;</b>             | greater than   |                        |  |
| <b>ppm</b>              | parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas. |                        |  |
| <b>ppb</b>              | parts per billion  |                        |  |
| <b>Dry weight basis</b> | Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.   |                        |  |

#### U.S. EPA data qualifiers:

##### Organic Qualifiers

|              |  |
|--------------|--|
| <b>A</b>     | TIC is a possible aldol-condensation product                           |
| <b>B</b>     | Analyte was also detected in the blank                                 |
| <b>C</b>     | Pesticide result confirmed by GC/MS                                    |
| <b>D</b>     | Compound quantitated on a diluted sample                               |
| <b>E</b>     | Concentration exceeds the calibration range of the instrument          |
| <b>J</b>     | Estimated value  |
| <b>N</b>     | Presumptive evidence of a compound (TICs only)                         |
| <b>P</b>     | Concentration difference between primary and confirmation columns >25% |
| <b>U</b>     | Compound was not detected  |
| <b>X,Y,Z</b> | Defined in case narrative  |

##### Inorganic Qualifiers

|          |   |
|----------|---|
| <b>B</b> | Value is <CRDL, but ≥IDL                                |
| <b>E</b> | Estimated due to interference                           |
| <b>M</b> | Duplicate injection precision not met                   |
| <b>N</b> | Spike amount not within control limits                  |
| <b>S</b> | Method of standard additions (MSA) used for calculation |
| <b>U</b> | Compound was not detected                               |
| <b>W</b> | Post digestion spike out of control limits              |
| <b>*</b> | Duplicate analysis not within control limits            |
| <b>+</b> | Correlation coefficient for MSA <0.995                  |

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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