



RECEIVED

NOV 30 2009

DEPT. OF ECOLOGY
TCP-NWRO

November 9, 2009

Ms. Olivia Skance
Chevron Environmental Management Company
6111 Bollinger Canyon Road, Suite 3636
San Ramon, California, 94583-5186

**Subject: Third Quarter 2009 Groundwater Monitoring Report
Chevron Service Station No. 30-5192**
9816 271st Street Northwest
Stanwood, Washington

Dear Ms. Skance:

Science Applications International Corporation (SAIC), on behalf of Chevron Environmental Management Company (Chevron), has prepared this letter summarizing the latest groundwater monitoring and sampling results from the above referenced property in Stanwood, Washington. The third quarter 2009 groundwater monitoring and sampling event was conducted by Gettler-Ryan Inc. on July 22, 2009.

Groundwater elevation and analytical data, along with field data sheets and a laboratory analytical report are presented in the Gettler-Ryan, Inc. *Groundwater Monitoring and Sampling Report*, which is included as Attachment A.

1.0 FIELD ACTIVITIES

Depth-to-groundwater measurements were collected from each of the four monitoring wells on the property. Each monitoring well was also checked for the presence of separate-phase hydrocarbon (SPH). SPH was not detected in any of the monitoring wells gauged during this event.

At the time of this monitoring event, groundwater elevations ranged from 96.70 feet in well MW-4 to 93.89 feet in well MW-1, based on an arbitrary benchmark elevation of 100.00 feet. Groundwater elevation had generally decreased an average of 0.75 feet since the previous sampling event in February 2009. Groundwater flow at the time of this event was to the north at a gradient of approximately 0.03 to 0.04 feet per foot (ft/ft). Figure 1 of the enclosed Attachment A depicts groundwater elevations and well locations.

Groundwater samples were collected from each of the four monitoring wells at the property and submitted to Lancaster Laboratories for the following analyses:

- Gasoline-range hydrocarbons by Washington State Department of Ecology (WDOE) Method NWTPH-Gx;
- Diesel- and heavy oil-range hydrocarbons by WDOE Method NWTPH-Dx with silica-gel cleanup; and

- Benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tert-butyl ether (MTBE) by United States Environmental Protection Agency (USEPA) Method 8021.

2.0 ANALYTICAL RESULTS

Diesel- and heavy oil-range hydrocarbons were detected in each of the four monitoring wells sampled at concentrations exceeding the MTCA Method Cleanup Levels (CULs) of 500 micrograms per Liter ($\mu\text{g/L}$). Diesel-range hydrocarbons were detected at concentrations ranging from 650 $\mu\text{g/L}$ in monitoring well MW-1 to 14,000 $\mu\text{g/L}$ in monitoring well MW-4. Heavy oil-range hydrocarbons were detected at concentrations ranging from 720 $\mu\text{g/L}$ in monitoring well MW-1 to 7,600 $\mu\text{g/L}$ in monitoring well MW-4.

None of the other constituents analyzed for were present at concentrations exceeding their respective MTCA Method A CULs. Groundwater analytical results are summarized in Table 1 of Attachment A.

3.0 DISCUSSION

Groundwater sampling results remain consistent with historical results for the property, indicating that the dissolved groundwater plume remains stable. Monitoring well MW-4, located in the southwest corner of the property, contained significantly elevated concentrations of diesel- and heavy oil-range hydrocarbons that may result from a leaking off property heating oil tank. The dissolved phase contamination detected in monitoring well MW-2 is most likely associated with the underground storage tanks (USTs), which were filled with waste oil by a previous tenant (not Standard Oil), located in the alleyway directly upgradient from monitoring well MW-2. The diesel and oil range petroleum impacts observed in wells MW-1 and MW-3 are likely associated with the two previously mentioned upgradient source areas.

Groundwater monitoring and sampling will continue to be performed on a semi-annual basis, with the next sampling event scheduled to be performed in February 2010.

Please contact the undersigned if you have any questions or comments about the information provided herein at (425) 482-3321 or at catterallp@saic.com.

Sincerely,

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION



Peter Catterall
Project Manager

Enclosures:

Attachment A: Gettler-Ryan Inc., Groundwater Monitoring and Sampling Report, Event of July 22, 2009, Former Chevron Service Station #305192, 9816 271st Street Northwest, Stanwood, Washington

cc: Mr. Joe Hickey, WDOE – Northwest Regional Office, Toxics Cleanup Program
Mr. Wayne Raplee
Mr. Joshua Lipsky, Cascadia Law Group PLLC
File

Accession # 16012.20090914.001

**Attachment A:
Gettler Ryan Groundwater Monitoring Report, Event of July 22, 2009,
Former Chevron Service Station #30-5192, 9816 271st Street Northwest,
Stanwood, Washington**



GETTLER - RYAN INC.

TRANSMITTAL

August 20, 2009
G-R #387100

TO: Mr. Peter Catterall
SAIC
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

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

RE: **Former Chevron Service Station
#305192
9816 271st Street Northwest
Stanwood, Washington**

WE HAVE ENCLOSED THE FOLLOWING:

| COPIES | DATED | DESCRIPTION |
|--------|-----------------|---|
| 5 | August 18, 2009 | Groundwater Monitoring and Sampling Report Event of July 22, 2009 |

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced report for **your use and distribution to the following:**

Ms. Olivia Skance, Chevron Environmental Management Company, 6111 Bollinger Canyon Road,
Room 3636, San Ramon, CA 94583

Mr. Joe Hickey, WDOE, Northwest Region, Toxics Cleanup Program, 3190 160th Avenue, SE, Bellevue,
WA 98008-5452

Mr. Wayne Raplee, 14115 70th Avenue NW, Stanwood, WA 98292

Mr. Joshua Lipsky, Cascadia Law Group PLLC, 1201 Third Avenue, Suite 320, Seattle, WA 98101

Current Site Check List included.

Enclosure

trans/305192-OS



GETTLER-RYAN INC.

August 18, 2009
Job #387100

Ms. Olivia Skance
Chevron Environmental Management Company
6111 Bollinger Canyon Road Room 3636
San Ramon, CA 94583

RE: Event of July 22, 2009
Groundwater Monitoring & Sampling Report
Former Chevron Service Station #305192
9816 271st Street Northwest
Stanwood, Washington

Dear Ms. Skance:

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,

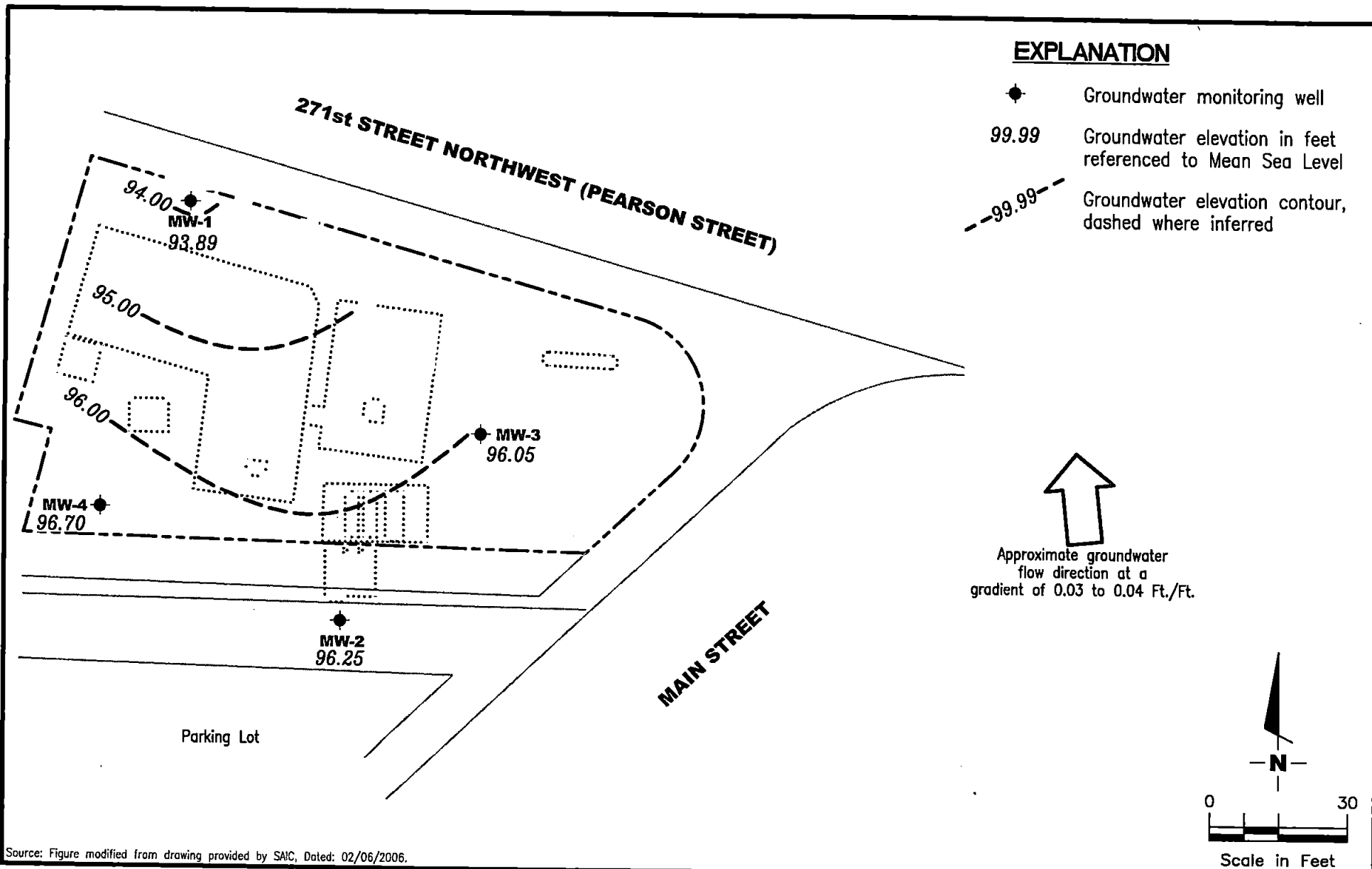
Deanna L. Harding
Project Coordinator



Douglas J. Lee
Senior Geologist, L.G. No. 2660

Douglas J. Lee

Figure 1: Potentiometric Map
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
 Dublin, CA 94568 (925) 551-7555

POTENTIOMETRIC MAP
 Former Chevron Service Station #305192
 9816 271st Street Northwest
 Stanwood, Washington

FIGURE

1

PROJECT NUMBER
 387100

REVIEWED BY

DATE
 July 22, 2009

REVISED DATE

FILE NAME: P:\Enviro\Chevron\305192\Q09-305192.dwg | Layout Tab: Pot3

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

| WELL ID/ DATE | TOC* (ft.) | DTW (ft.) | GWE (ft.) | TPH-DRO (µg/L) | TPH-HRO (µg/L) | TPH-GRO (µg/L) | B (µg/L) | T (µg/L) | E (µg/L) | X (µg/L) | MTBE (µg/L) | D-LEAD (µg/L) |
|------------------|---------------|--------------|--------------|----------------------|-----------------------|-------------------|-------------|-------------|-------------|-------------|----------------|------------------|
| MW-1 | | | | | | | | | | | | |
| 04/10/06 | 98.32 | 1.81 | 96.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05/03/06 | 98.32 | -- | -- | 310 ¹ | 120 ¹ | <240 | <2.5 | <2.5 | 4.7 | 11 | <13 | <0.87 |
| 08/02/06 | PER 98.32 | 2.96 | 95.36 | 260 ¹ | 330 ¹ | <48 | <0.5 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 10/10/06 | PER 98.32 | 2.55 | 95.77 | 150 ¹ | <100 ¹ | <48 | <0.5 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 01/15/07 | PER 98.32 | 1.64 | 96.68 | <160 ¹ | <200 ¹ | <240 | <2.5 | <2.5 | <2.5 | <7.5 | <13 | -- |
| 04/25/07 | PER 98.32 | 1.58 | 96.74 | 190 ¹ | 130 ¹ | <50 | <0.5 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 07/15/07 | PER 98.32 | 2.58 | 95.74 | <81 ¹ | <100 ¹ | <500 | <5.0 | <5.0 | <5.0 | <15 | <25 | -- |
| 10/03/07 | PER 98.32 | 3.00 | 95.32 | 130 ¹ | <100 ¹ | <250 | <2.5 | <2.5 | <2.5 | <7.5 | <13 | -- |
| 01/03/08 | PER 98.32 | 2.51 | 95.81 | 130 ¹ | <100 ¹ | <50 | <0.5 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 02/28/09 | PER 98.32 | 3.27 | 95.05 | 610 ¹ | 610 ¹ | <50 | <0.5 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 07/22/09 | PER 98.32 | 4.43 | 93.89 | 650 ¹ | 720 ¹ | <50 | <0.5 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| MW-2 | | | | | | | | | | | | |
| 04/10/06 | 99.58 | 2.29 | 97.29 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05/03/06 | 99.58 | -- | -- | 1,400 ¹ | 560 ¹ | <240 | 13 | <2.5 | <2.5 | <7.5 | <13 | <0.87 |
| 08/02/06 | PER 99.58 | 2.98 | 96.60 | 2,000 ¹ | 1,800 ¹ | 220 | 20 | <0.5 | <0.5 | 1.6 | <2.5 | -- |
| 10/10/06 | PER 99.58 | 3.64 | 95.94 | 1,400 ¹ | 790 ¹ | <240 | 16 | <2.5 | <2.5 | <7.5 | <13 | -- |
| 01/15/07 | PER 99.58 | 2.08 | 97.50 | 810 ¹ | 270 ¹ | <240 | 9.3 | <2.5 | <2.5 | <7.5 | <13 | -- |
| 04/25/07 | PER 99.58 | 2.16 | 97.42 | 830 ¹ | 480 ¹ | 250 | 13 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 07/15/07 | PER 99.58 | 2.95 | 96.63 | 7,800 ^{1,3} | <1,000 ^{1,3} | <500 | 13 | <5.0 | <5.0 | <15 | <25 | -- |
| 10/03/07 | PER 99.58 | 3.44 | 96.14 | 1,600 ¹ | 1,100 ¹ | <250 | 4.9 | <2.5 | <2.5 | <7.5 | <13 | -- |
| 01/03/08 | PER 99.58 | 2.32 | 97.26 | 1,400 ¹ | 800 ¹ | 460 | 6.7 | 1.0 | <0.5 | <1.5 | <2.5 | -- |
| 02/28/09 | PER 99.58 | 2.89 | 96.69 | 2,700 ¹ | 2,800 ¹ | 450 | 2.5 | 0.6 | <0.5 | <1.5 | <2.5 | -- |
| 07/22/09 | PER 99.58 | 3.33 | 96.25 | 2,500 ¹ | 4,000 ¹ | 360 | 1.1 | 0.8 | <0.5 | 1.5 | <2.5 | -- |
| MW-3 | | | | | | | | | | | | |
| 04/10/06 | 99.16 | 0.40 | 98.76 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05/03/06 | 99.16 | -- | -- | 580 ¹ | 240 ¹ | <240 | <2.5 | <2.5 | <2.5 | <7.5 | <13 | <0.87 |
| 08/02/06 | PER 99.16 | 2.61 | 96.55 | 350 ¹ | 380 ¹ | <48 | <0.5 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 10/10/06 | PER 99.16 | 2.75 | 96.41 | 310 ¹ | 140 ¹ | <48 | <0.5 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 01/15/07 | PER 99.16 | 0.50 | 98.66 | 250 ¹ | <100 ¹ | <240 | <2.5 | <2.5 | <2.5 | <7.5 | <13 | -- |
| 04/25/07 | PER 99.16 | 0.84 | 98.32 | 260 ¹ | 110 ¹ | <50 | <0.5 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 07/15/07 | PER 99.16 | 2.16 | 97.00 | 250 ¹ | 150 ¹ | <500 | <5.0 | <5.0 | <5.0 | <15 | <25 | -- |

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

| WELL ID/ DATE | TOC* (%) | DTW (ft) | GWE (ft) | TPH-HRO (ug/L) | TPH-HRO (ug/L) | TPH-GRO (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | D-CEAD (ug/L) |
|-----------------------|-------------|-------------|-------------|-------------------|---------------------|---------------------|-------------|-------------|-------------|-------------|----------------|------------------|
| MW-3 (cont) | | | | | | | | | | | | |
| 10/03/07 | PER | 99.16 | 2.68 | 96.48 | 330 ¹ | 260 ¹ | <250 | <2.5 | <2.5 | <2.5 | <2.5 | <13 |
| 01/03/08 | PER | 99.16 | 1.62 | 97.54 | 280 ¹ | 210 ¹ | <50 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 02/28/09 | PER | 99.16 | 1.56 | 97.60 | 290 ¹ | 190 ¹ | <50 | <0.5 | <0.5 | 1.6 | <2.5 | -- |
| 07/22/09 | PER | 99.16 | 3.11 | 96.05 | 780 ¹ | 830 ¹ | <50 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| MW-4 | | | | | | | | | | | | |
| 04/10/06 | | 100.00 | 2.08 | 97.92 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05/03/06 | | 100.00 | -- | -- | 7,900 ¹ | <1,000 ¹ | <240 | <2.5 | <2.5 | <7.5 | <13 | <0.87 |
| 08/02/06 | PER | 100.00 | 3.57 | 96.43 | 7,300 ¹ | <1,000 ¹ | 73 | <0.5 | <0.5 | 2.8 | <2.5 | -- |
| 10/10/06 ² | PER | 100.00 | 4.28 | 95.72 | 7,900 ¹ | 2,200 ¹ | <48 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 01/15/07 ² | PER | 100.00 | 2.98 | 97.02 | 8,300 ¹ | 3,000 ¹ | <240 | <2.5 | <2.5 | <7.5 | <13 | -- |
| 04/25/07 ² | PER | 100.00 | 4.35 | 95.65 | 9,300 ¹ | 2,000 ¹ | 89 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 07/15/07 | PER | 100.00 | 4.06 | 95.94 | 850 ^{1,3} | 320 ^{1,3} | <500 | <5.0 | <5.0 | <15 | <25 | -- |
| 10/03/07 | PER | 100.00 | 4.22 | 95.78 | 8,500 ¹ | <2,100 ¹ | <250 | <2.5 | <2.5 | <7.5 | <13 | -- |
| 01/03/08 | PER | 100.00 | 3.98 | 96.02 | 9,100 ¹ | 2,200 ¹ | 61 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 02/28/09 | PER | 100.00 | 3.44 | 96.56 | 5,400 ¹ | 2,100 ¹ | 56 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 07/22/09 | PER | 100.00 | 3.30 | 96.70 | 14,000 ¹ | 7,600 ¹ | 100 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| TRIP BLANK | | | | | | | | | | | | |
| QA | | | | | | | | | | | | |
| 05/03/06 | -- | -- | -- | -- | -- | -- | <48 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 08/02/06 | -- | -- | -- | -- | -- | -- | <48 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 10/10/06 | -- | -- | -- | -- | -- | -- | <48 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 01/15/07 | -- | -- | -- | -- | -- | -- | <48 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 04/25/07 | -- | -- | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 07/15/07 | -- | -- | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 10/03/07 | -- | -- | -- | -- | -- | -- | <50 | <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/ DATE | TOC* (ft.) | DTW (ft.) | GWE (ft.) | TPH-DRO (µg/L) | TPH-HRO (µg/L) | TPH-GRO (µg/L) | B (µg/L) | T (µg/L) | E (µg/L) | X (µg/L) | MTBE (µg/L) | D. LEAD (µg/L) |
|------------------|---------------|--------------|--------------|-------------------|-------------------|-------------------|-------------|-------------|-------------|-------------|----------------|-------------------|
| QA (cont) | | | | | | | | | | | | |
| 01/03/08 | -- | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 02/28/09 | -- | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <1.5 | <2.5 | -- |
| 07/22/09 | -- | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <1.5 | <2.5 | -- |

| | TPH-DRO | TPH-HRO | TPH-GRO | B | T | E | X | MTBE | D. LEAD | |
|--|---------------------|---------|-----------|------------------------|-------|-----|-------|------|----------|--|
| Standard Laboratory Reporting Limits: | -- | -- | 50 | 0.5 | 0.5 | 0.5 | 1.5 | 2.5 | 0.001 | |
| MTC A Method A Cleanup Levels: | 500 | 500 | 800/1,000 | 5 | 1,000 | 700 | 1,000 | 20 | -- | |
| Current Method: | NWTPH-Dx + Extended | | | NWTPH-Gx and EPA 8021B | | | | | EPA 7421 | |

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

EXPLANATIONS:

TOC = Top of Casing

(ft.) = Feet

DTW = Depth to Water

GWE = Groundwater Elevation

TPH = Total Petroleum Hydrocarbons

DRO = Diesel Range Organics

GRO = Gasoline Range Organics

HRO = Heavy Range Organics

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

MTBE = Methyl Tertiary Butyl Ether

D. LEAD = Dissolved Lead

($\mu\text{g/L}$) = Micrograms per liter

-- = Not Measured/Not Analyzed

PER = Peristaltic Pump

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.

¹ Analyzed with silica gel cleanup.

² Incorrect TOC used to calculate GWE in past reports (99.16). Correct TOC is shown.

³ Current laboratory analytical results do not coincide with historical data, samples may have been switched in the field.

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

| WELL ID | DATE | ETHANOL ($\mu\text{g/L}$) | TBA ($\mu\text{g/L}$) | MTBE ($\mu\text{g/L}$) | DIPE ($\mu\text{g/L}$) | ETBE ($\mu\text{g/L}$) | TAME ($\mu\text{g/L}$) | FULL SCAN EPA 8260 ($\mu\text{g/L}$) |
|---------|----------|--------------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|--|
| MW-4 | 05/03/06 | <500 | <50 | <5 | <5 | <5 | <5 | <5 - <60 |

EXPLANATIONS:

TBA = t-Butyl alcohol
 MTBE = Methyl Tertiary Butyl Ether
 DIPE = di-Isopropyl ether
 ETBE = Ethyl t-butyl ether
 TAME = t-Amyl methyl ether
 ($\mu\text{g/L}$) = Micrograms per liter

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 (umhos/cm - μ S) | Temperature (°C/F ⁹) | 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/-- | -- | |
| | 04/25/07 | 1259 | 6.39 | 752 | 13.5/-- | -- | |
| | 07/15/07 | 1542 | 6.31 | 589 | 17.8/-- | -- | |
| | 10/03/07 | 1204 | 6.46 | 436 | 15.7/-- | -- | |
| | | 1208 | 6.42 | 430 | 15.6/-- | -- | |
| | | 1214 | 6.39 | 426 | 15.5/-- | -- | |
| | 01/03/08 | 1125 | 6.79 | 403 | 11.9/-- | -- | |
| MW-2 | 07/22/09 | 1129 | 6.77 | 398 | 11.8/-- | -- | |
| | | 1133 | 6.74 | 393 | 11.8/-- | -- | |
| | 02/28/09 | 1045 | 7.13 | 906 | 8.8/-- | -- | |
| | | 1048 | 7.11 | 909 | 8.9/-- | -- | |
| | | 1051 | 7.11 | 910 | 8.9/-- | -- | |
| | 07/22/09 | 1140 | 7.36 | 1,187 | 17.5/-- | -- | |
| | | 1143 | 7.40 | 1,190 | 17.5/-- | -- | |
| | | 1146 | 7.41 | 1,190 | 17.5/-- | -- | |
| | MW-3 | 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/-- | -- | |
| 04/25/07 | | 1158 | 6.60 | 856 | 12.8/-- | -- | |
| 07/15/07 | | 1442 | 6.56 | 572 | 17.5/-- | -- | |
| 10/03/07 | | 1349 | 6.46 | 429 | 15.8/-- | -- | |
| | | 1355 | 6.37 | 426 | 15.7/-- | -- | |
| 01/03/08 | | 1401 | 6.36 | 421 | 15.7/-- | -- | |
| MW-3 | 01/03/08 | 1231 | 6.72 | 381 | 11.9/-- | -- | |
| | | 1235 | 6.70 | 378 | 11.9/-- | -- | |
| | | 1239 | 6.67 | 371 | 11.8/-- | -- | |
| | 02/28/09 | 1140 | 6.57 | 1,102 | 8.7/-- | -- | |
| | | 1143 | 6.60 | 1,108 | 8.7/-- | -- | |
| | | 1146 | 6.61 | 1,111 | 8.7/-- | -- | |
| | 07/22/09 | 1040 | 6.56 | 1,311 | 19.8/-- | -- | |
| | | 1043 | 6.60 | 1,307 | 19.8/-- | -- | |
| | | 1046 | 6.61 | 1,308 | 19.8/-- | -- | |
| | 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/-- | -- | |
| 04/25/07 | | 1227 | 6.52 | 1266 | 12.3/-- | -- | |
| 07/15/07 | | 1512 | 6.58 | 687 | 17.7/-- | -- | |
| 10/03/07 | | 1314 | 6.37 | 456 | 15.9/-- | -- | |
| | | 1319 | 6.32 | 451 | 15.7/-- | -- | |
| 01/03/08 | | 1323 | 6.31 | 446 | 15.7/-- | -- | |
| | | 1157 | 6.84 | 393 | 12.0/-- | -- | |
| MW-3 | 02/28/09 | 1201 | 6.82 | 390 | 11.9/-- | -- | |
| | | 1206 | 6.81 | 387 | 11.9/-- | -- | |
| | | 1230 | 6.86 | 1,159 | 8.2/-- | -- | |
| | | 1233 | 6.85 | 1,162 | 8.2/-- | -- | |
| | | 1236 | 6.85 | 1,161 | 8.3/-- | -- | |

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

| WELL ID | DATE | Time (2400 hr.) | pH | Conductivity (μmhos/cm - μS) | Temperature ($^{\circ}$C/$^{\circ}$F) | Turbidity (NTU) |
|----------------|-------------|------------------------|-----------|---|--|------------------------|
| MW-3 (cont) | 07/22/09 | 1235 | 7.12 | 1,553 | 17.3/-- | -- |
| | | 1238 | 7.09 | 1,556 | 17.4/-- | -- |
| | | 1241 | 7.10 | 1,559 | 17.4/-- | -- |
| 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/-- | -- |
| | 04/25/07 | 1337 | 7.38 | 620 | 12.8/-- | -- |
| | 07/15/07 | 1617 | 6.20 | 593 | 14.9/-- | -- |
| | 10/03/07 | 1240 | 6.52 | 426 | 15.9/-- | -- |
| | | 1246 | 6.48 | 422 | 15.6/-- | -- |
| | 01/03/08 | 1305 | 6.64 | 387 | 11.8/-- | -- |
| | | 1309 | 6.62 | 383 | 11.8/-- | -- |
| | | 1313 | 6.61 | 379 | 11.7/-- | -- |
| | 02/28/09 | 1325 | 6.69 | 821 | 8.4/-- | -- |
| | | 1328 | 6.71 | 824 | 8.4/-- | -- |
| | | 1331 | 6.71 | 827 | 8.4/-- | -- |
| | 07/22/09 | 1330 | 6.67 | 846 | 17.1/-- | -- |
| | | 1333 | 6.71 | 849 | 17.1/-- | -- |
| 1336 | | 6.72 | 853 | 17.2/-- | -- | |

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.

Standard Operating Procedure, Low-Flow Purging and Sampling

This procedure is designed to assist the user in taking representative groundwater samples from groundwater monitoring wells. Samples will be collected using low-flow (minimal drawdown) purging and sampling methods as discussed in U.S. EPA, Ground Water Issue, Publication Number EPA/540/S-95/504, April 1996 by Puls, R. W. and M.J. Barcelona - "Low-Flow (Minimal Drawdown) Ground-water Sampling Procedures."

The field sampler's objective is to purge and sample the well so that the water that is discharged from the pump, and subsequently collected, is representative of the formation water from the aquifer's identified zone of interest.

The wells to be sampled are equipped with QED Well Wizard™ bladder (squeeze-type) pumps or Peristaltic Pumps. Each bladder pump or the suction inlet tubing of the peristaltic pump is positioned with its inlet located within the screened interval of the well. The down well equipment includes a bladder pump or Teflon-lined PE (polyethylene) tubing.

Initial Pump Flow Test Procedures

If possible, the optimum flow rate for each well will be established during well development or redevelopment, or in advance of the actual sampling event. The monitoring well must be gauged for Static Water Level (SWL) prior to the installation of the pump and before pumping of any water from the well. The measurement will be documented on a Low Flow Ground Water Sample Collection Record, or field data sheet.

After pump installation, and confirmation that the SWL has returned to its original level (as determined prior to pump installation), the bladder pump or peristaltic pump should be started at a discharge rate between 100 ml to 300 ml per minute without any in-line flow cell connected. The water level in the well casing must be monitored continuously for any change from the original measurement. If significant drawdown is observed, the pump's flow rate should be incrementally reduced until the SWL drawdown ceases and stabilizes. Total drawdown from the initial (static) water level should not exceed 25% of the distance between pump inlet location and the top of the well screen. (For example, if a well has a 10-foot screen zone and the pump inlet is located mid-screen; the maximum drawdown should be 1.25 feet.) In any case, the water level in the well should not be lowered below the top of the screen/intake zone of the well.

Once the specific well's optimum discharge rate, without an in-line flow cell connected, has been determined and documented, the in-line flow cell system to be used is connected to the well discharge and the control settings required to achieve the well's optimum discharge rate are determined with the in-line flow cell connected. (Due to the system's back-pressure, the discharge rate will be decreased by 10-20%). All control settings are to be documented on the gauging and sampling sheet as specific to that particular well's ID and will be utilized for its subsequent purging and sampling events.

Purge and Sampling Events

Prior to the initiation of purging a well, the SWL will be measured and documented. The pump will be started utilizing its documented control settings and its discharge rate will be confirmed by volumetric discharge measurement with the in-line flow cell connected. If necessary, any minor modifications to the control settings to achieve the well's optimum discharge rate will be documented on the gauging sheet. When the optimum pump flow rate has been established, the SWL draw down has stabilized within the required range and at least one pump system volume (bladder volume + discharge tubing volume) has been purged, begin taking field measurements for pH, temperature (T), conductivity (Ec), oxygen reduction potential (ORP) and dissolved oxygen (DO) using a "QED" Model MP-20 in-line flow cell, or other multi-parameter meter. All water chemistry field measurements will be documented on the field data sheet. Measurements should be taken every three to five minutes until stabilization has been achieved. Stabilization is achieved after all parameters have stabilized for three consecutive readings. In lieu of measuring all five parameters, a minimum subset would include pH, conductivity and dissolved oxygen. Three consecutive measurements indicating stability should be within:

| | |
|-------------|-------------|
| Temperature | ± 10% |
| pH | ± 0.1 units |
| Conductance | ± 03 |

When water quality parameters have stabilized, and there has been no change in the stabilized SWL (ie. No continuous draw down), sample collection may begin.

Equipment List

The following equipment is needed to conduct low flow purging and sampling:

- Bladder pump installed within the well's screened interval
- Pump controller and air source set to operate at the specific well's documented optimum discharge rate
- In-line flow cell and meter(s) with connection fittings and tubing to measure water quality
- Water level probe or installed dedicated water level measurement system
- Sample containers appropriate for the analytical requirements
- Low Flow Ground Water Sample Collection Record, or field data sheets
- 300-500 milliliter graduated cylinder or measuring cup
- 5 gallon bucket(s) for collecting purge water
- Wristwatch with second hand or stopwatch
- Sufficient cleaning and decontamination supplies if portable water level probe is utilized
- Peristaltic pump & tubing, in place of bladder pump, if applicable
- Multi-parameter meter, in place of in-line flow cell, if applicable

Procedure QED Bladder Pumps

1. Calibrate all field instruments at the start of each day's deployment per the instrument manufacturer's instructions. Record calibration data on the "Field Instruments Calibration Documentation Form."
2. Drive to the first well scheduled to be sampled (typically the least contaminated). Make notes in the field logbook, describing the well condition and activity in the vicinity of the well. Decontaminate the portable water gauging probe by washing with phosphate-free detergent, rinsing with potable water.
3. Measure the depth to water from the surveyed reference mark on the wellhead and record the measurement on the gauging and sampling sheet. Lock the water level meter in place so that the level can be monitored during purging and sampling. When placing the probe in the well, take precautions to not disturb or agitate the water.
4. Connect the compressed air source's airline to the pump controller's "AIR IN" connection (If utilizing a gas-engine operated compressor, locate the compressor at least 25 feet, down wind from the wellhead).
5. Connect the pump controller "AIR OUT" air-line to the bladder pump's air supply fitting at the wellhead.
6. Connect the pump discharge line to the in-line flow cell's "IN" fitting.
7. Connect the flow cell's "OUT" line and secure to drain the purge water into the purge water collection container.
8. Start the air supply to the pump. Set the pump controller settings to the documented settings for the specific well. Confirm the flow rate is equal to the well's established optimum flow rate. Modify as necessary (documenting any required modifications).
9. Monitor the water level and confirm that the SWL draw down has stabilized within the well's allowable limits.
10. After a single pump-system's volume (bladder volume + discharge tubing volume) has been adequately purged, read and record water quality field measurements every three to five minutes until all parameters have stabilized within their allowable ranges for at least three consecutive measurements. When stabilization has been achieved, sample collection may begin.
11. Disconnect the flow cell, and it's tubing, from the pump discharge line before collecting samples. Decrease the pump rate to 100 milliliters per minute or less by lowering the controller's air pressure setting prior to collecting samples for volatiles. Utilize the QED Model 400 Controller's 'MANUAL SAMPLE' button to ensure minimized sample exposure to the ambient air. Refer to

the task instructions for the correct order and procedures for filling sample containers. Place the samples in a cooler with enough ice to keep them at 4 degrees Centigrade.

12. Once samples for volatiles have been collected, re-establish pump flow rate to the original purge flow rate by inputting the documented controller settings for the well without the in-line flow cell connected and collect remaining samples.
13. When all sample containers have been filled, make a final measurement of the well's SWL and record the measurement on the gauging and sampling sheet. If the well has a "QED" dedicated bottom sounder, measure the well's total depth and record the measurement, as well.
14. Measure and record total purge volume collected. Consolidate generated purge water.
15. Remove and decontaminate the portable water level probe with phosphate-free detergent, rinsing with potable water.
16. Disconnect the controller air supply to the pump.
17. Secure the pump's discharge line/discharge adapter in the wellhead.
18. Secure the wellhead cover and secure with its lock. Move equipment to next well to be sampled.
19. At the end of each day, post calibrate all field instruments and record the measurements on the "Field Calibration Documentation Form".
20. Clean and decontaminate the in-line flow cell with phosphate-free detergent, rinsing with potable water.

Procedure Peristaltic Pump

1. Record all depth to water readings on field data sheets
2. Calibrate all field instruments according to manufacturer's directions.
3. Setup pump and install silicone tubing in the roller head.
4. Place suction tubing at desired intake level in well, (mid screen) and attach to the intake side of the pump roller head.
5. Attach tubing at discharge side of pump head and place in collection container.
6. Start pump and adjust flow rate to achieve flow without depressing water level more than necessary (approx. 0.30').
7. Record parameter readings after parameters have stabilized (3 consecutive readings that fall within the acceptance criteria).
8. Decrease the flow rate of the pump to achieve approximately 100ml/min. when collecting samples.
9. Change all tubing between wells and repeat procedure.



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: 7-22-09 (inclusive)
 Sampler: ML

Well ID: MW-1
 Well Diameter: 1.5 in.
 Total Depth: 14.15 ft.
 Depth to Water: 4.43 ft.
4.72 xVF = x3 case volume = Estimated Purge Volume: gal.

Date Monitored: 7-22-09

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

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]:

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

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

Start Time (purge): 1125
 Sample Time/Date: 1155 17-22-09
 Approx. Flow Rate: 200 ml / min.
 Did well de-water? N/D If yes, Time: _____

Weather Conditions: SONNY
 Water Color: Clear Odor: Y10
 Sediment Description: None
 Volume: _____ gal. DTW @ Sampling: 5.68

| Time (2400 hr.) | Volume (L) | pH | Conductivity (µmhos/cm - µS) | Temperature (C / F) | D.O. (mg/L) | ORP (mV) | Gauge DTW as parameters are recorded |
|-----------------|------------|-------------|------------------------------|---------------------|-------------|----------|--------------------------------------|
| <u>1140</u> | <u>3</u> | <u>7.36</u> | <u>1187</u> | <u>17.5</u> | | | <u>5.16</u> |
| <u>1143</u> | <u>3.6</u> | <u>7.40</u> | <u>1190</u> | <u>17.5</u> | | | <u>5.34</u> |
| <u>1146</u> | <u>4.2</u> | <u>7.41</u> | <u>1190</u> | <u>17.5</u> | | | <u>5.68</u> |

LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|-----------|--------------------|---------|---------------|------------|--------------------------|
| MW-1 | 5 x voa vial | YES | HCL | LANCASTER | NWTPH-Gx/BTEX+MTBE(8021) |
| | 2 x 1 liter ambers | YES | HCL | LANCASTER | NWTPH-Dx w/sq |
| | | | | | |
| | | | | | |
| | | | | | |

COMMENTS:

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



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: 7-22-09 (inclusive)
 Sampler: ML

Well ID: MW-2
 Well Diameter: 1.5 in.
 Total Depth: 14.21 ft.
 Depth to Water: 3.33 ft.
10.88 xVF _____ = _____

Date Monitored: 7-22-09

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

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

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): 1030 Weather Conditions: SUNNY
 Sample Time/Date: 1055 17-22-09 Water Color: clear Odor: Y10
 Approx. Flow Rate: 200 ml gpm. Sediment Description: none
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 3.46

| Time (2400 hr.) | Volume (L) | pH | Conductivity (µmhos/cm - µS) | Temperature (C/F) | D.O. (mg/L) | ORP (mV) | Gauge DTW as parameters are recorded |
|-----------------|------------|-------------|------------------------------|-------------------|-------------|----------|--------------------------------------|
| <u>1040</u> | <u>2</u> | <u>6.56</u> | <u>1311</u> | <u>19.8</u> | | | <u>3.45</u> |
| <u>1043</u> | <u>2.6</u> | <u>6.60</u> | <u>1307</u> | <u>19.8</u> | | | <u>3.47</u> |
| <u>1046</u> | <u>3.2</u> | <u>6.61</u> | <u>1308</u> | <u>19.8</u> | | | <u>3.46</u> |

LABORATORY INFORMATION

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

COMMENTS: _____

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



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: 7-22-09 (inclusive)
 Sampler: ML

Well ID: MW-3
 Well Diameter: 1.5 in.
 Total Depth: 13.62 ft.
 Depth to Water: 3.11 ft.
10.51 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 7-22-09

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

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

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

Start Time (purge): 1220
 Sample Time/Date: 1250 / 7-22-09
 Approx. Flow Rate: 2.00 ml / gpm.
 Did well de-water? no if yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.26

Weather Conditions: SUNNY
 Water Color: CLAR Odor: Y10
 Sediment Description: none

| Time (2400 hr.) | Volume (gal) | pH | Conductivity (µmhos/cm - µS) | Temperature (C / F) | D.O. (mg/L) | ORP (mV) | Gauge DTW as parameters are recorded |
|-----------------|--------------|-------------|------------------------------|---------------------|-------------|----------|--------------------------------------|
| <u>1235</u> | <u>3</u> | <u>7.12</u> | <u>1553</u> | <u>17.3</u> | | | <u>6.96</u> |
| <u>1238</u> | <u>3.6</u> | <u>7.09</u> | <u>1556</u> | <u>17.4</u> | | | <u>7.15</u> |
| <u>1241</u> | <u>4.2</u> | <u>7.10</u> | <u>1559</u> | <u>17.4</u> | | | <u>7.26</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>2</u> x 1 liter ambers | <u>YES</u> | <u>HCL</u> | <u>LANCASTER</u> | <u>NWTPH-Dx w/g</u> |
| | | | | | |
| | | | | | |
| | | | | | |

COMMENTS:

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



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: 7-22-09 (inclusive)
 Sampler: ML

Well ID: MW-4
 Well Diameter: 1.5 in.
 Total Depth: 13.75 ft.
 Depth to Water: 3.30 ft.

Date Monitored: 7-22-09

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

Check if water column is less than 0.50 ft.

10.45 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.61

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

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): 1315 Weather Conditions: SUNNY
 Sample Time/Date: 1345 7-22-09 Water Color: Clear Odor: Y10
 Approx. Flow Rate: 200 ml / gpm. Sediment Description: None
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 5.61

| Time (2400 hr.) | Volume (L) | pH | Conductivity (µmhos/cm - (µS)) | Temperature (C / F) | D.O. (mg/L) | ORP (mV) | Gauge DTW as parameters are recorded |
|-----------------|------------|-------------|--------------------------------|---------------------|-------------|----------|--------------------------------------|
| <u>1330</u> | <u>3</u> | <u>6.67</u> | <u>8416</u> | <u>17.1</u> | | | <u>4.96</u> |
| <u>1333</u> | <u>3.6</u> | <u>6.71</u> | <u>8419</u> | <u>17.1</u> | | | <u>5.25</u> |
| <u>1336</u> | <u>4.2</u> | <u>6.72</u> | <u>853</u> | <u>17.2</u> | | | <u>5.61</u> |

LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|-------------|---------------------------|---------|---------------|------------|--------------------------|
| <u>MW-4</u> | <u>3</u> x voa vial | YES | HCL | LANCASTER | NWTPH-Gx/BTEX+MTBE(8021) |
| | <u>2</u> x 1 liter ambers | YES | HCL | LANCASTER | NWTPH-Dx w/sg |
| | | | | | |
| | | | | | |
| | | | | | |

COMMENTS:

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2900 Fax: 717-656-2891 • www.lancasterlabs.com

Analysis Report

RECEIVED

AUG 07 2009

GETTLER-RYAN INC.
GENERAL CONTRACTORS

ANALYTICAL RESULTS

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

925-842-8582

Prepared by:

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

August 07, 2009

SAMPLE GROUP

The sample group for this submittal is 1154963. Samples arrived at the laboratory on Saturday, July 25, 2009. The PO# for this group is 0015040041 and the release number is SKANCE.

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

5733073
5733074
5733075
5733076
5733077

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC SAIC c/o Gettler-Ryan
COPY TO

Attn: Cheryl Hansen



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2661 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jill M Parker at (717) 656-2300

Respectfully Submitted,

Martha L. Seidel

Martha L. Seidel
Senior Chemist



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Lancaster Laboratories Sample No. WW 5733073

Group No. 1154963
WA

QA Water Sample
Facility# 305192 Job# 387100
9816 271st Street NW - Stanwood, WA

Collected: 07/22/2009

Account Number: 11260

Submitted: 07/25/2009 09:30
Reported: 08/07/2009 at 11:46
Discard: 09/07/2009

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|-------------------------|------------|--------------------|------------------------------------|-----------------|
| ECY 97-602 NWTPH-Gx GC Volatiles | | | | | |
| 08274 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 50 | 1 |
| SW-846 8021B GC Volatiles | | | | | |
| 02159 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 02159 | Ethylbenzene | 100-41-4 | N.D. | 0.5 | 1 |
| 02159 | Methyl tert-Butyl Ether | 1634-04-4 | N.D. | 2.5 | 1 |
| 02159 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 02159 | Total Xylenes | 1330-20-7 | N.D. | 1.5 | 1 |

General Sample Comments

State of Washington Lab Certification No. C259
The temperature of the temperature blank bottle(s) for the VOA samples upon receipt at the lab was >10C using a Hg thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.6-11.7 C.

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

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|-----------------------|-----------------|
| 08274 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 09207A54A | 07/27/2009 00:00 | Katrina T Longenecker | 1 |
| 02159 | BTEX, MTBE | SW-846 8021B | 1 | 09207A54A | 07/27/2009 00:00 | Katrina T Longenecker | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 09207A54A | 07/27/2009 00:00 | Katrina T Longenecker | 1 |



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Lancaster Laboratories Sample No. WW 5733074

Group No. 1154963

WA

MW-1 Grab Water Sample

Facility# 305192 Job# 387100

9816 271st Street NW - Stanwood, WA

Collected: 07/22/2009 11:55 by ML

Account Number: 11260

Submitted: 07/25/2009 09:30

Reported: 08/07/2009 at 11:46

Discard: 09/07/2009

Chevron

6001 Bollinger Canyon Road

L4310

San Ramon CA 94583

271S1

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|--------------|-----------------------------|------------|--------------------|------------------------------------|-----------------|
| ECY 97-602 | NWTPH-Gx GC Volatiles | | ug/l | ug/l | |
| 08274 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 50 | 1 |
| SW-846 8021B | GC Volatiles | | ug/l | ug/l | |
| 02159 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 02159 | Ethylbenzene | 100-41-4 | N.D. | 0.5 | 1 |
| 02159 | Methyl tert-Butyl Ether | 1634-04-4 | N.D. | 2.5 | 1 |
| 02159 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 02159 | Total Xylenes | 1330-20-7 | N.D. | 1.5 | 1 |
| ECY 97-602 | NWTPH-Dx GC Extractable TPH | | ug/l | ug/l | |
| modified | w/Si Gel | | | | |
| 02211 | DRO C12-C24 w/Si Gel | n.a. | 650 | 33 | 1 |
| 02211 | HRO C24-C40 w/Si Gel | n.a. | 720 | 76 | 1 |

General Sample Comments

State of Washington Lab Certification No. C259

The temperature of the temperature blank bottle(s) for the VOA samples upon receipt at the lab was >10C using a Hg thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.6-11.7 C.

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

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|------------------------------|--------|------------|------------------------|-----------------------|-----------------|
| 08274 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 09208A53A | 07/27/2009 20:32 | Katrina T Longenecker | 1 |
| 02159 | BTEX, MTBE | SW-846 8021B | 1 | 09208A53A | 07/27/2009 20:32 | Katrina T Longenecker | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 09208A53A | 07/27/2009 20:32 | Katrina T Longenecker | 1 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 092160000A | 08/06/2009 19:02 | Diane V Do | 1 |
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 2 | 092160000A | 08/05/2009 09:15 | Karen R Rettew | 1 |



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Lancaster Laboratories Sample No. WW 5733075

Group No. 1154963

MW-2 Grab Water Sample

WA

Facility# 305192 Job# 387100

9816 271st Street NW - Stanwood, WA

Collected: 07/22/2009 10:55 by ML

Account Number: 11260

Submitted: 07/25/2009 09:30

Chevron

Reported: 08/07/2009 at 11:46

6001 Bollinger Canyon Road

Discard: 09/07/2009

L4310

San Ramon CA 94583

271S2

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|------------|-----------------------------|------------|--------------------|------------------------------------|-----------------|
| ECY 97-602 | NWTPH-Gx GC Volatiles | | ug/l | ug/l | |
| 08274 | NWTPH-Gx water C7-C12 | n.a. | 360 | 50 | 1 |
| SW-846 | 8021B GC Volatiles | | ug/l | ug/l | |
| 02159 | Benzene | 71-43-2 | 1.1 | 0.5 | 1 |
| 02159 | Ethylbenzene | 100-41-4 | N.D. | 0.5 | 1 |
| 02159 | Methyl tert-Butyl Ether | 1634-04-4 | N.D. | 2.5 | 1 |
| 02159 | Toluene | 108-88-3 | 0.8 | 0.5 | 1 |
| 02159 | Total Xylenes | 1330-20-7 | 1.5 | 1.5 | 1 |
| ECY 97-602 | NWTPH-Dx GC Extractable TPH | | ug/l | ug/l | |
| modified | w/Si Gel | | | | |
| 02211 | DRO C12-C24 w/Si Gel | n.a. | 2,500 | 160 | 5 |
| 02211 | HRO C24-C40 w/Si Gel | n.a. | 4,000 | 380 | 5 |

General Sample Comments

State of Washington Lab Certification No. C259
The temperature of the temperature blank bottle(s) for the VOA samples upon receipt at the lab was >10C using a Hg thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.6-11.7 C.

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

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|------------------------------|--------|------------|------------------------|-------------------------------------|-----------------|
| 08274 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 09208A53A | 07/27/2009 20:56 | Katrina T Longenecker | 1 |
| 02159 | BTEX, MTBE | SW-846 8021B | 1 | 09208A53A | 07/27/2009 20:56 | Katrina T Longenecker | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 09208A53A | 07/27/2009 20:56 | Katrina T Longenecker | 1 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 092160000A | 08/06/2009 18:19 | Katrina T Longenecker Diane V Do | 5 |
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 2 | 092160000A | 08/05/2009 09:15 | Karen R Rettew | 1 |



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Lancaster Laboratories Sample No. WW 5733076

Group No. 1154963

MW-3 Grab Water Sample

WA

Facility# 305192 Job# 387100

9816 271st Street NW - Stanwood, WA

Collected: 07/22/2009 12:50 by ML

Account Number: 11260

Submitted: 07/25/2009 09:30

Chevron

Reported: 08/07/2009 at 11:46

6001 Bollinger Canyon Road

Discard: 09/07/2009

L4310

San Ramon CA 94583

271S3

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|--------------|-----------------------------|------------|--------------------|------------------------------------|-----------------|
| ECY 97-602 | NWTPH-Gx GC Volatiles | | ug/l | ug/l | |
| 08274 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 50 | 1 |
| SW-846 8021B | GC Volatiles | | ug/l | ug/l | |
| 02159 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 02159 | Ethylbenzene | 100-41-4 | N.D. | 0.5 | 1 |
| 02159 | Methyl tert-Butyl Ether | 1634-04-4 | N.D. | 2.5 | 1 |
| 02159 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 02159 | Total Xylenes | 1330-20-7 | N.D. | 1.5 | 1 |
| ECY 97-602 | NWTPH-Dx GC Extractable TPH | | ug/l | ug/l | |
| modified | w/Si Gel | | | | |
| 02211 | DRO C12-C24 w/Si Gel | n.a. | 780 | 31 | 1 |
| 02211 | HRO C24-C40 w/Si Gel | n.a. | 830 | 73 | 1 |

General Sample Comments

State of Washington Lab Certification No. C259
 The temperature of the temperature blank bottle(s) for the VOA samples upon receipt at the lab was >10C using a Hg thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.6-11.7 C.

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

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|------------------------------|--------|------------|------------------------|-----------------------|-----------------|
| 08274 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 09208A53A | 07/27/2009 21:20 | Katrina T Longenecker | 1 |
| 02159 | BTEX, MTBE | SW-846 8021B | 1 | 09208A53A | 07/27/2009 21:20 | Katrina T Longenecker | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 09208A53A | 07/27/2009 21:20 | Katrina T Longenecker | 1 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 092160000A | 08/06/2009 18:40 | Diane V Do | 1 |
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 2 | 092160000A | 08/05/2009 09:15 | Karen R Rettew | 1 |



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Lancaster Laboratories Sample No. WW 5733077

Group No. 1154963

MW-4 Grab Water Sample

WA

Facility# 305192 Job# 387100

9816 271st Street NW - Stanwood, WA

Collected: 07/22/2009 13:45 by ML

Account Number: 11260

Submitted: 07/25/2009 09:30

Chevron

Reported: 08/07/2009 at 11:46

6001 Bollinger Canyon Road

Discard: 09/07/2009

L4310

San Ramon CA 94583

271S4

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|------------|-----------------------------|------------|--------------------|------------------------------------|-----------------|
| ECY 97-602 | NWTPH-Gx GC Volatiles | | ug/l | ug/l | |
| 08274 | NWTPH-Gx water C7-C12 | n.a. | 100 | 50 | 1 |
| SW-846 | 8021B GC Volatiles | | ug/l | ug/l | |
| 02159 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 02159 | Ethylbenzene | 100-41-4 | N.D. | 0.5 | 1 |
| 02159 | Methyl tert-Butyl Ether | 1634-04-4 | N.D. | 2.5 | 1 |
| 02159 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 02159 | Total Xylenes | 1330-20-7 | N.D. | 1.5 | 1 |
| ECY 97-602 | NWTPH-Dx GC Extractable TPH | | ug/l | ug/l | |
| modified | w/Si Gel | | | | |
| 02211 | DRO C12-C24 w/Si Gel | n.a. | 14,000 | 160 | 5 |
| 02211 | HRO C24-C40 w/Si Gel | n.a. | 7,600 | 370 | 5 |

General Sample Comments

State of Washington Lab Certification No. C259

The temperature of the temperature blank bottle(s) for the VOA samples upon receipt at the lab was >10C using a Hg thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.6-11.7 C.

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

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|------------------------------|--------|------------|------------------------|-----------------------|-----------------|
| 08274 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 09208A53A | 07/27/2009 21:45 | Katrina T Longenecker | 1 |
| 02159 | BTEX, MTBE | SW-846 8021B | 1 | 09208A53A | 07/27/2009 21:45 | Katrina T Longenecker | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 09208A53A | 07/27/2009 21:45 | Katrina T Longenecker | 1 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 092160000A | 08/06/2009 17:58 | Diane V Do | 5 |
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 2 | 092160000A | 08/05/2009 09:15 | Karen R Rettew | 1 |

Quality Control Summary

 Client Name: Chevron
 Reported: 08/07/09 at 11:46 AM

Group Number: 1154963

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

| <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: 09207A54A | Sample number(s): 5733073 | | | | | | | |
| Benzene | N.D. | 0.5 | ug/l | 105 | 110 | 80-120 | 5 | 30 |
| Ethylbenzene | N.D. | 0.5 | ug/l | 100 | 105 | 80-120 | 5 | 30 |
| Methyl tert-Butyl Ether | N.D. | 2.5 | ug/l | 95 | 100 | 82-124 | 5 | 30 |
| NWTPH-Gx water C7-C12 | N.D. | 50. | ug/l | 109 | 109 | 75-135 | 0 | 30 |
| Toluene | N.D. | 0.5 | ug/l | 100 | 105 | 80-120 | 5 | 30 |
| Total Xylenes | N.D. | 1.5 | ug/l | 102 | 107 | 80-120 | 5 | 30 |
| Batch number: 09208A53A | Sample number(s): 5733074-5733077 | | | | | | | |
| Benzene | N.D. | 0.5 | ug/l | 110 | 120 | 80-120 | 9 | 30 |
| Ethylbenzene | N.D. | 0.5 | ug/l | 110 | 120 | 80-120 | 9 | 30 |
| Methyl tert-Butyl Ether | N.D. | 2.5 | ug/l | 110 | 110 | 82-124 | 0 | 30 |
| NWTPH-Gx water C7-C12 | N.D. | 50. | ug/l | 100 | 100 | 75-135 | 0 | 30 |
| Toluene | N.D. | 0.5 | ug/l | 110 | 120 | 80-120 | 9 | 30 |
| Total Xylenes | N.D. | 1.5 | ug/l | 110 | 118 | 80-120 | 7 | 30 |
| Batch number: 092160000A | Sample number(s): 5733074-5733077 | | | | | | | |
| DRO C12-C24 w/Si Gel | N.D. | 30. | ug/l | 76 | | 61-106 | | |
| HRO C24-C40 w/Si Gel | N.D. | 70. | 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

| <u>Analysis Name</u> | <u>MS %REC</u> | <u>MSD %REC</u> | <u>MS/MSD Limits</u> | <u>RPD</u> | <u>RPD MAX</u> | <u>BKG Conc</u> | <u>DUP Conc</u> | <u>DUP RPD</u> | <u>Dup RPD Max</u> |
|-------------------------|---|-----------------|----------------------|------------|----------------|-----------------|-----------------|----------------|--------------------|
| Batch number: 09207A54A | Sample number(s): 5733073 UNSPK: P733085, P733086 | | | | | | | | |
| Benzene | 120 | | 70-152 | | | | | | |
| Ethylbenzene | 110 | | 75-133 | | | | | | |
| Methyl tert-Butyl Ether | 95 | | 70-134 | | | | | | |
| NWTPH-Gx water C7-C12 | 100 | | 48-140 | | | | | | |
| Toluene | 110 | | 78-129 | | | | | | |
| Total Xylenes | 112 | | 67-155 | | | | | | |
| Batch number: 09208A53A | Sample number(s): 5733074-5733077 UNSPK: 5733076, 5733077 | | | | | | | | |
| Benzene | 125 | | 70-152 | | | | | | |
| Ethylbenzene | 125 | | 75-133 | | | | | | |
| Methyl tert-Butyl Ether | 110 | | 70-134 | | | | | | |
| NWTPH-Gx water C7-C12 | 82 | | 48-140 | | | | | | |
| Toluene | 125 | | 78-129 | | | | | | |
| Total Xylenes | 128 | | 67-155 | | | | | | |

*- Outside of specification

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

Quality Control Summary

Client Name: Chevron

Group Number: 1154963

Reported: 08/07/09 at 11:46 AM

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 | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max | |
|--------------------------|-----------------------------------|-------------|------------------|------------|------------|--------------|-------------|------------|----------------|--|
| Batch number: 092160000A | Sample number(s): 5733074-5733077 | | | | | BKG: P733095 | | | | |
| DRO C12-C24 w/Si Gel | | | | | | 1,000 | 11,000 | 167* (1) | 20 | |
| HRO C24-C40 w/Si Gel | | | | | | 3,700 | 10,000 | 92* (1) | 20 | |

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: BTEX, MTBE

Batch number: 09207A54A

| | Trifluorotoluene-P | Trifluorotoluene-F |
|---------|--------------------|--------------------|
| 5733073 | 110 | 107 |
| Blank | 110 | 106 |
| LCS | 110 | 116 |
| LCSD | 110 | 119 |
| MS | 112 | 114 |
| Limits: | 69-129 | 63-135 |

Analysis Name: BTEX, MTBE

Batch number: 09208A53A

| | Trifluorotoluene-P | Trifluorotoluene-F |
|---------|--------------------|--------------------|
| 5733074 | 95 | 79 |
| 5733075 | 96 | 86 |
| 5733076 | 96 | 80 |
| 5733077 | 96 | 81 |
| Blank | 95 | 82 |
| LCS | 97 | 96 |
| LCSD | 97 | 93 |
| MS | 97 | 92 |
| Limits: | 69-129 | 63-135 |

Analysis Name: NWTPH-Dx water w/Si Gel

Batch number: 092160000A

| | Orthoterphenyl |
|---------|----------------|
| 5733074 | 92 |
| 5733075 | 88 |
| 5733076 | 94 |
| 5733077 | 184* |
| Blank | 76 |
| DUP | 73 |
| LCS | 94 |
| Limits: | 50-150 |

*- Outside of specification

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

Quality Control Summary

Client Name: Chevron
Reported: 08/07/09 at 11:46 AM

Group Number: 1154963

Surrogate Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked 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:

| | | | |
|-------------------------|--|------------------------|--|
| N.D. | none detected | BMQL | Below Minimum Quantitation Level |
| TNTC | Too Numerous To Count | MPN | Most Probable Number |
| IU | International Units | CP Units | cobalt-chloroplatinate units |
| umhos/cm | micromhos/cm | NTU | nephelometric turbidity units |
| C | degrees Celsius | F | degrees Fahrenheit |
| Cal | (diet) calories | lb. | pound(s) |
| meq | milliequivalents | kg | kilogram(s) |
| g | gram(s) | mg | milligram(s) |
| ug | microgram(s) | l | liter(s) |
| ml | milliliter(s) | ul | microliter(s) |
| m3 | cubic meter(s) | fib >5 um/ml | fibers greater than 5 microns in length per ml |
| < | 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. | | |
| > | greater than | | |
| ppm | 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. | | |
| ppb | parts per billion | | |
| Dry weight basis | 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 | Inorganic Qualifiers |
|---|--|
| A TIC is a possible aldol-condensation product | B Value is <CRDL, but ≥IDL |
| B Analyte was also detected in the blank | E Estimated due to interference |
| C Pesticide result confirmed by GC/MS | M Duplicate injection precision not met |
| D Compound quantitated on a diluted sample | N Spike amount not within control limits |
| E Concentration exceeds the calibration range of the instrument | S Method of standard additions (MSA) used for calculation |
| J Estimated value | U Compound was not detected |
| N Presumptive evidence of a compound (TICs only) | W Post digestion spike out of control limits |
| P Concentration difference between primary and confirmation columns >25% | * Duplicate analysis not within control limits |
| U Compound was not detected | + Correlation coefficient for MSA <0.995 |
| X,Y,Z Defined in case narrative | |

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.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.