Raplee Property
Stanwood
Release
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July 18, 2012

Mr. Mark Horne
Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, California 94583

Subject: **First Semiannual 2012 Groundwater Monitoring and Sampling Report**
Former Chevron Service Station No. 30-5192
9816 271st Street Northwest
Stanwood, Washington

Dear Mr. Mark Horne:

SAIC Energy, Environment & Infrastructure, LLC (SAIC), on behalf of Chevron Environmental Management Company (CEMC), prepared this letter summarizing the first semiannual 2012 groundwater monitoring and sampling event at former Chevron Service Station No. 30-5192 (the site) in Stanwood, Washington (Figure 1).

FIELD ACTIVITIES

Gettler-Ryan Inc. (Gettler-Ryan) conducted the groundwater monitoring and sampling field event on January 27, 2012. They collected depth-to-groundwater measurements and checked for the presence of separate-phase hydrocarbons (SPH) in four monitoring wells on site.

Groundwater samples were collected from three of the four monitoring wells. Monitoring well MW-4 was not sampled due to the presence of SPH. Samples were submitted to Lancaster Laboratories, Inc. in Pennsylvania for the following analyses:

- Total petroleum hydrocarbons (TPH) as gasoline-range organics (TPH-GRO) by Washington State Department of Ecology (Ecology) Method NWTPH-Gx;
- TPH as diesel-range organics (TPH-DRO) and TPH as heavy oil-range organics (TPH-HRO) by Ecology Method NWTPH-Dx extended with silica-gel cleanup; and
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tert-butyl ether (MTBE) by United States Environmental Protection Agency Method 8021B.

A laboratory-supplied trip blank (QA) was submitted to the laboratory and analyzed for TPH-GRO, BTEX, and MTBE to provide quality assurance. Field data sheets are provided in the Gettler-Ryan groundwater monitoring and sampling data package (Attachment A).

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2012

FINDINGS

Historical groundwater elevation data and laboratory analytical results are summarized in Table 1. The laboratory analysis report is provided as Attachment B.

At the time of this monitoring event, groundwater elevations ranged from 97.12 feet in monitoring well MW-4 to 94.77 feet in monitoring well MW-1, based on an arbitrary benchmark elevation of 100.00 feet. Groundwater flows toward the northwest at a gradient of approximately 0.02 to 0.007 feet per foot (Figure 2). Groundwater elevations decreased an average of 0.64 foot since the previous semiannual monitoring event in August 2011, but are consistent with historical data reported at the site.

SPH were detected in monitoring well MW-4 at a thickness of 0.15 foot.

No analytes were detected at concentrations exceeding their respective Model Toxics Control Act Method A cleanup levels in monitoring wells MW-1, MW-2, and MW-3. Petroleum hydrocarbon constituent concentrations are the lowest since monitoring began in April of 2006.

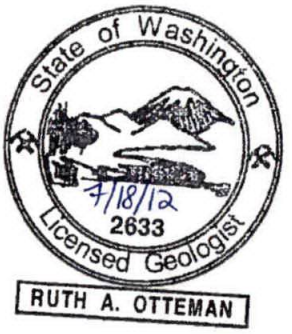
Gettler-Ryan will continue to perform groundwater monitoring and sampling on a semiannual basis.

If you have any questions or comments, please contact me at (425) 482-3328 or via email at Ottemanr@saic.com.

Sincerely,

SAIC Energy, Environment & Infrastructure, LLC

Ruth Otteman
Project Manager



Stuart Brown
Environmental Scientist

Enclosures:
Figure 1 – Vicinity Map
Figure 2 – Potentiometric Map
Table 1 – Groundwater Monitoring Data and Analytical Results
Attachment A – Groundwater Monitoring and Sampling Data Package
Attachment B – Laboratory Analysis Report

cc: Ms. Donna Musa – Ecology NW Region, Toxics Cleanup Program
3190 160th Avenue SE, Bellevue, WA 98008-5452
Mr. Wayne Raplee – Property Owner
14115 70th Avenue NW, Stanwood, WA 98292
Mr. Joshua Lipsky – Cascadia Law Group PLLC
1201 Third Avenue, Suite 320, Seattle, WA 98101
Project File

NORTH

Maps Provided by Seattle.gov

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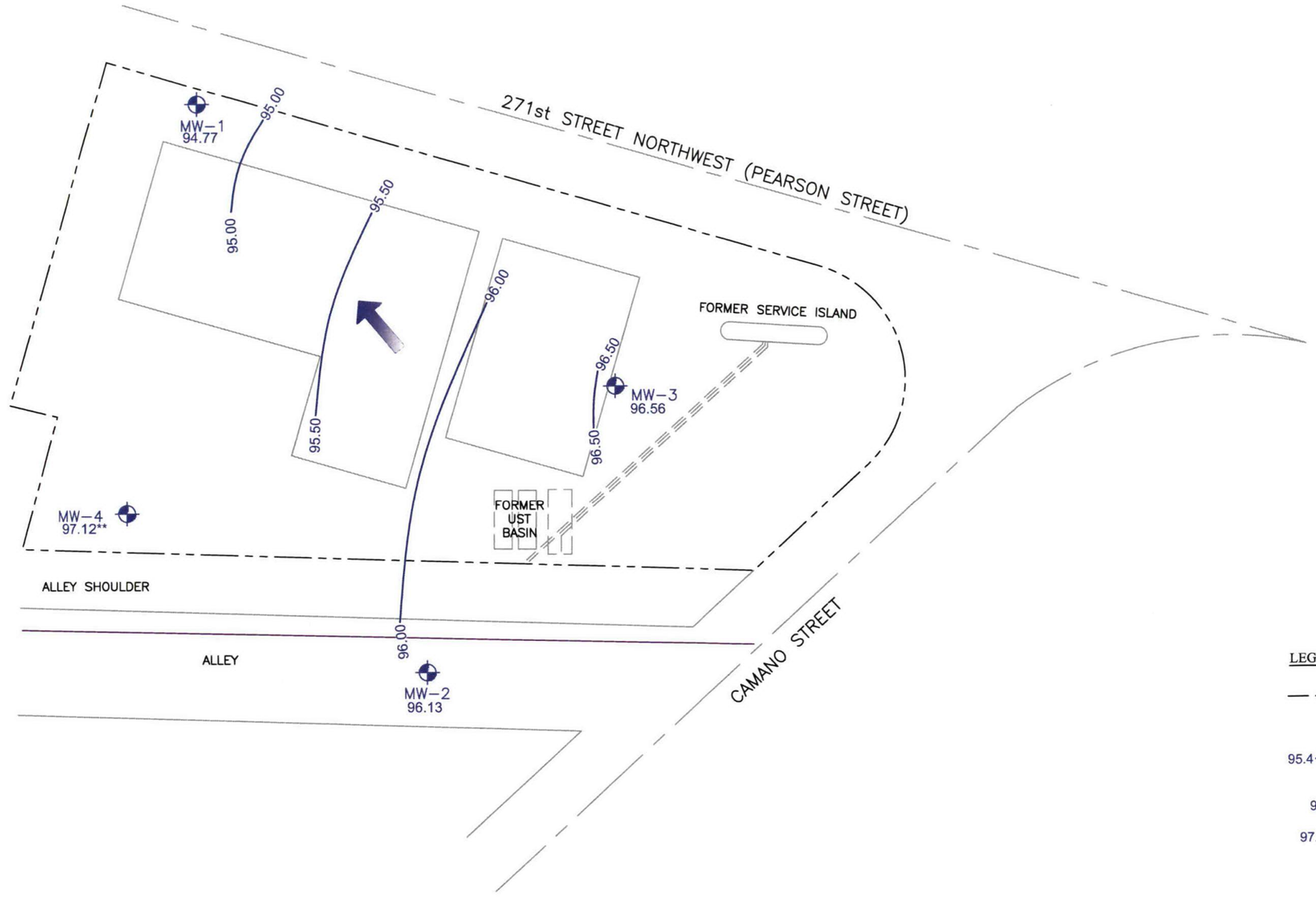
Former Chevron Service Station No. 30-5192 9816 271st Street Northwest Stanwood, Washington	FIGURE 1 Vicinity Map	
	FILE NAME: 30-5192_VM2010.dwg	DATE: 10/05/2011



N

0 10 20

LEGEND

- Property Line
- Monitoring Well Location
- 95.4 — Groundwater Elevation Contour at a 0.50 Foot Interval (Dashed Where Inferred)
- 95.69 — Groundwater Elevation in Feet
- 97.12** — Groundwater Elevation Corrected for the Presence of Separate Phase Hydrocarbons (SPH) Groundwater Elevation Not Used in Contour Map (in Feet)
- Approximate Groundwater Flow Direction at a Gradient of 0.02 to 0.007

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Former Chevron Service Station No. 30-5192
9816 271st Street Northwest
Stanwood, Washington

FIGURE 2
Potentiometric Map
(January 27, 2012)

FILE NAME: 30-5192_PotentiometricMap.dwg

DATE: 05/23/2012

TABLE 1

GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
FORMER CHEVRON SERVICE STATION NO. 30-5192
9816 271st Street Northwest
Stanwood, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	SPHT (ft.)	GWE[3] (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-1															
04/10/06		98.32	--	1.81	--	96.51	--	--	--	--	--	--	--	--	--
05/03/06		98.32	--	--	--	--	310	120	<240	<2.5	<2.5	4.7	11	<13	<0.87
08/02/06	PER	98.32	--	2.96	--	95.36	260	330	<48	<0.5	<0.5	<0.5	<1.5	<2.5	--
10/10/06	PER	98.32	--	2.55	--	95.77	150	<100	<48	<0.5	<0.5	<0.5	<1.5	<2.5	--
01/15/07	PER	98.32	--	1.64	--	96.68	<160	<200	<240	<2.5	<2.5	<2.5	<7.5	<13	--
04/25/07	PER	98.32	--	1.58	--	96.74	190	130	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
07/15/07	PER	98.32	--	2.58	--	95.74	<81	<100	<500	<5.0	<5.0	<5.0	<15	<25	--
10/03/07	PER	98.32	--	3.00	--	95.32	130	<100	<250	<2.5	<2.5	<2.5	<7.5	<13	--
01/03/08		98.32	--	2.51	--	95.81	130	<100	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
02/28/09	LFP	98.32	--	3.27	--	95.05	**610**	**610**	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
07/22/09	LFP	98.32	--	4.43	--	93.89	**650**	**720**	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
01/08/10	LFP	98.32	--	3.32	--	95.00	350	160	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
07/20/10	LFP	98.32	--	3.02	--	95.30	130	100	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
01/21/11	LFP	98.32	--	1.71	--	96.61	<160[8]	**650**	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
08/05/11	LFP	98.32	--	1.90	--	96.42	190	130	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
01/27/12	LFP	98.32	--	3.55	--	94.77	<30	<69	<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**	**560**	<240	**13**	<2.5	<2.5	<7.5	<13	<0.87
08/02/06	PER	99.58	--	2.98	--	96.60	**2,000**	**1,800**	220	**20**	<0.5	<0.5	1.6	<2.5	--
10/10/06	PER	99.58	--	3.64	--	95.94	**1,400**	**790**	<240	**16**	<2.5	<2.5	<7.5	<13	--
01/15/07	PER	99.58	--	2.08	--	97.50	**810**	270	<240	**9.3**	<2.5	<2.5	<7.5	<13	--
04/25/07	PER	99.58	--	2.16	--	97.42	**830**	480	250	**13**	<0.5	<0.5	<1.5	<2.5	--
07/15/07	PER	99.58	--	2.95	--	96.63	**7,800**[7]	<1,000[7]	<500	**13**	<5.0	<5.0	<15	<25	--
10/03/07	PER	99.58	--	3.44	--	96.14	**1,600**	**1,100**	<250	**4.9**	<2.5	<2.5	<7.5	<13	--
01/03/08		99.58	--	2.32	--	97.26	**1,400**	**800**	460	**6.7**	1.0	<0.5	<1.5	<2.5	--
02/28/09	LFP	99.58	--	2.89	--	96.69	**2,700**	**2,800**	450	2.5	0.6	<0.5	<1.5	<2.5	--
07/22/09	LFP	99.58	--	3.33	--	96.25	**2,500**	**4,000**	360	1.1	0.8	<0.5	1.5	<2.5	--
01/08/10	LFP	99.58	--	2.90	--	96.68	**1,800**	**1,400**	470	<0.5	0.5	0.7	<1.5	<2.5	--
07/20/10	LFP	99.58	--	2.88	--	96.70	**2,000**	**1,600**	420	<0.5	0.8	<0.5	<1.5	<2.5	--

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TABLE 1

GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
FORMER CHEVRON SERVICE STATION NO. 30-5192
9816 271st Street Northwest
Stanwood, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	SPHT (ft.)	GWE[3] (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-2 (cont.)															
01/21/11	LFP	99.58	--	2.07	--	97.51	**2,000**	**1,900**	390	<0.5	<0.5	0.6	<1.5	<2.5	--
08/05/11	LFP	99.58	--	1.97	--	97.61	**830**	**880**	<250[8]	<2.5[8]	<2.5[8]	<2.5[8]	<7.5[8]	<13[8]	--
01/27/12	LFP	99.58	--	3.45	--	96.13	<29	<68	56	<0.5	<0.5	<0.5	<1.5	<2.5	--
MW-3															
04/10/06		99.16	--	0.40	--	98.76	--	--	--	--	--	--	--	--	--
05/03/06		99.16	--	--	--	--	**580**	240	<240	<2.5	<2.5	<2.5	<7.5	<13	<0.87
08/02/06	PER	99.16	--	2.61	--	96.55	350	380	<48	<0.5	<0.5	<0.5	<1.5	<2.5	--
10/10/06	PER	99.16	--	2.75	--	96.41	310	140	<48	<0.5	<0.5	<0.5	<1.5	<2.5	--
01/15/07	PER	99.16	--	0.50	--	98.66	250	<100	<240	<2.5	<2.5	<2.5	<7.5	<13	--
04/25/07	PER	99.16	--	0.84	--	98.32	260	110	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
07/15/07	PER	99.16	--	2.16	--	97.00	250	150	<500	<5.0	<5.0	<5.0	<15	<25	--
10/03/07	PER	99.16	--	2.68	--	96.48	330	260	<250	<2.5	<2.5	<2.5	<7.5	<13	--
01/03/08		99.16	--	1.62	--	97.54	280	210	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
02/28/09	LFP	99.16	--	1.56	--	97.60	290	190	<50	<0.5	<0.5	<0.5	1.6	<2.5	--
07/22/09	LFP	99.16	--	3.11	--	96.05	**780**	**830**	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
01/08/10	LFP	99.16	--	2.83	--	96.33	**680**	360	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
07/20/10	LFP	99.16	--	1.92	--	97.24	330	190	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
01/21/11	LFP	99.16	--	1.63	--	97.53	<160[8]	**630**	<50	<0.5	<0.5	<1.5	<1.5	<2.5	--
08/05/11	LFP	99.16	--	1.70	--	97.46	230	210	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
01/27/12	LFP	99.16	--	2.60	--	96.56	<30	<70	<50	<0.5	<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**	<1,000	<240	<2.5	<2.5	<2.5	<7.5	<13	<0.87
08/02/06	PER	100.00	--	3.57	--	96.43	**7,300**	<1,000	73	<0.5	<0.5	<0.5	2.8	<2.5	--
10/10/06[6]	PER	100.00	--	4.28	--	95.72	**7,900**	**2,200**	<48	<0.5	<0.5	<0.5	<1.5	<2.5	--
01/15/07[6]	PER	100.00	--	2.98	--	97.02	**8,300**	**3,000**	<240	<2.5	<2.5	<2.5	<7.5	<13	--
04/25/07[6]	PER	100.00	--	4.35	--	95.65	**9,300**	**2,000**	89	<0.5	<0.5	<0.5	<1.5	<2.5	--
07/15/07	PER	100.00	--	4.06	--	95.94	**850**[7]	320[7]	<500	<5.0	<5.0	<5.0	<15	<25	--
10/03/07	PER	100.00	--	4.22	--	95.78	**8,500**	<2,100	<250	<2.5	<2.5	<2.5	<7.5	<13	--
01/03/08		100.00	--	3.98	--	96.02	**9,100**	**2,200**	61	<0.5	<0.5	<0.5	<1.5	<2.5	--

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TABLE 1

GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
FORMER CHEVRON SERVICE STATION NO. 30-5192
9816 271st Street Northwest
Stanwood, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	SPHT (ft.)	GWE[3] (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-4 (cont.)															
02/28/09	LFP	100.00	--	3.44	--	96.56	**5,400**	**2,100**	56	<0.5	<0.5	<0.5	<1.5	<2.5	--
07/22/09	LFP	100.00	--	3.30	--	96.70	**14,000**	**7,600**	100	<0.5	<0.5	<0.5	<1.5	<2.5	--
01/08/10	LFP	100.00	--	3.51	--	96.49	**13,000**	**18,000**	75	<0.5	<0.5	<0.5	<1.5	<2.5	--
07/20/10	LFP	100.00	--	4.31	--	95.69	**12,000**	**13,000**	69	<0.5	<0.5	<0.5	<1.5	<2.5	--
01/21/11	LFP	100.00	--	2.71	--	97.29	**14,000**	<1,800	50	<0.5	<0.5	<0.5	<1.5	<2.5	--
08/05/11	LFP	100.00	4.34	4.36	0.02	95.66	UNABLE TO SAMPLE DUE TO PRESENCE OF SPH					--	--	--	--
01/27/12		100.00	2.85	3.00	0.15	97.12	UNABLE TO SAMPLE DUE TO PRESENCE OF SPH					--	--	--	--
TRIP BLANK QA															
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	--
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	--
04/25/07		--		--		--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
07/15/07		--		--		--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
10/03/07		--		--		--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
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	--
01/08/10		--		--		--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
07/20/10		--		--		--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
01/21/11		--		--		--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
08/05/11		--		--		--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
01/27/12		--		--		--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
Standard Laboratory Reporting Limits:							--	--	50	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[4]:							NWTPH-Dx + Extended[5]		NWTPH-Gx and USEPA 8021B						USEPA 7421

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TABLE 1

GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
FORMER CHEVRON SERVICE STATION NO. 30-5192
9816 271st Street Northwest
Stanwood, Washington
Concentrations reported in µg/L

Abbreviations:

D. Lead = Dissolved Lead
DTP = Depth to Product
DTW = Depth to Water
(ft.) = Feet
GWE = Groundwater Elevation
LFP = Low Flow Purge
MTBE = Methyl Tertiary Butyl Ether
MTCA = Model Toxics Control Act
PER = Peristaltic Pump
QA = Quality Assurance/Trip Blank
SPH = Separate-phase hydrocarbons
SPHT = SPH Thickness
TOC = Top of Casing
TPH = Total Petroleum Hydrocarbons
TPH-DRO = TPH as diesel-range organics
TPH-GRO = TPH as gasoline-range organics
TPH-HRO = TPH as heavy oil-range organics
USEPA = United States Environmental Protection Agency
µg/L = Micrograms per liter
-- = Not Measured/Not Analyzed

Notes:

1 Analytical results in bold font indicate concentrations exceed MTCA Method A cleanup levels.
2 TOC elevations are expressed in feet relative to an arbitrary datum.
3 GWE has been corrected for the presence of SPH; correction factor: [(TOC - DTW) + (SPHT x 0.80)].
4 Laboratory analytical methods for historical data may not be consistent with list of current analytical methods. When necessary, consult original laboratory reports to verify methods used.
5 Analyzed with silica-gel cleanup.
6 Incorrect TOC used to calculate GWE in past reports (99.16). Correct TOC is shown.
7 Current laboratory analytical results do not coincide with historical data; samples may have been switched in the field.
8 Reporting limits were raised due to interference from the sample matrix or sample foaming.

SAIC

Attachment A:
Groundwater Monitoring and Sampling Data Package

GETTLER-RYAN INC.

TRANSMITTAL

February 2, 2012
G-R #387100

TO: Mr. Michael Lange
SAIC
18912 North Creek Parkway, Ste. 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	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package **First Semi-Annual Event of January 27, 2012**

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/305192

GETTLER-RYAN INC.

CHEVRON - SITE CHECK LIST

Facility#:	#305192	Date:	1.27.12
Address:	9816 271St Street Nw		
City/St.:	Stanwood,WA		
Status of Site:	VACANT LOT / FENCED		

DRUMS: Please list below ALL DRUMS @ site: i.e., drum description, condition, labeling, contents, location of drum:

#	Description	Condition	Labeling	Contents	Location
	No DW's				

WELLS: Please check the condition of ALL WELLS @ site: i.e., well box condition, gaskets, bolts, well plug, well lock, etc.:

Well ID	Gaskets (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Well Plug Y/N	Well Lock Y/N	Well Box Manufacturer/Size/# of Bolts	Other
MW-1	GOOD	GOOD	GOOD	GOOD	BY MORRIS 13	
MW-2	↓	↓	↓	↓	↓	
MW-3						
MW-4	↓	↓	↓	↓	↓	

Additional Comments/Observations: _____

Standard Operating Procedure, Low-Flow Purging and Sampling

Gettler-Ryan Inc. field personnel adhere to the following Standard Operating Procedure (SOP) for the collection and handling of representative groundwater samples using the Low-Flow (Minimal-Drawdown) Purging technique. This SOP incorporates purging and sampling methods 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."*

A QED Well Wizard™ (or equivalent) bladder pump or Peristaltic Pump will be used to purge and sample selected wells as outlined in the scope-of-work. An in-line flow cell or other multi-parameter meter is used to collect water quality indicating parameters during purging.

Initial Pump Discharge Test Procedures

The Static Water Level (SWL) is measured in all wells at the site prior to the installation of the pump or tubing and initiation of the test procedures in any well. In addition, the presence or absence of separate-phase hydrocarbons (SPH) is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot. The SWL measurement and SPH thickness, if any, will be recorded on the field data sheet.

The bladder pump or suction inlet tubing of the peristaltic pump is then positioned with its inlet located within the screened interval of the well. After pump installation, the SWL is allowed to recover to its original level. The pump is then started at a discharge rate between 100 ml to 300 ml per minute without the in-line flow cell connected. The water level is monitored continuously for any change from the original measurement and the discharge rate is adjusted until an optimum discharge rate (ODR) is determined. The goal for the ODR is to produce a stable drawdown of less than 0.1 meter; however the total drawdown from the initial SWL should not exceed 25% of the distance between pump inlet location and the top of the well screen. If the in-line flow cell is to be used, purging is discontinued once the ODR is determined, and the inline flow cell is connected. Purging is then resumed and the ODR is adjusted to allow for the back pressure of the in-line flow cell.

Purging and Water Quality Parameter Measurement

Prior to sampling the well, the SWL will be re-measured and documented and purging will be re-initiated using the ODR. The discharge rate will be confirmed by volumetric discharge measurement and the ODR adjusted as necessary. When the ODR has been re-established, the SWL drawdown has stabilized within the acceptable range and at least one pump system volume (bladder volume and/or discharge tubing volume) has been purged, field measurements for temperature (T), pH, conductivity (Ec), and if required, oxygen reduction potential (ORP) and dissolved oxygen (DO) will be collected and documented on the field data sheet. Measurements should be taken every three to five minutes until parameters stabilize for three consecutive readings. The minimum parameter subset of T (± 10%), pH (± 0.1 unit), and Ec (± 10 uS) are required to stabilize. Additional parameters that may be required are DO (± 0.2 mg/l) and ORP (± 20 mV). Purge water is treated by filtering the water through granular activated carbon and is subsequently discharged to the ground surface at the site.

Sample Collection

When water quality parameters have stabilized, and there is no change in the SWL drawdown, groundwater sample collection may begin. Water samples are collected from the discharge tubing into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. 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. A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples. 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 | Job Number: 387100
Site Address: 9816 271St Street Nw | Event Date: 1.27.12 (inclusive)
City: Stanwood,WA | Sampler: J. Payne

Well ID: MW-1 | Date Monitored: 1.27.12
Well Diameter: 1.5 in.
Total Depth: 14.45 ft.
Depth to Water: 8.55 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

☐ Check if water column is less then 0.50 ft.

10.90 xVF ___ = ___ x3 case volume = Estimated Purge Volume: ___ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.73

Purge Equipment:
- Disposable Bailer: ___
- Stainless Steel Bailer: ___
- Stack Pump: ___
- Suction Pump: ___
- Grundfos: ___
- Peristaltic Pump: ✓
- QED Bladder Pump: ___
- Other: ___

Sampling Equipment:
- Disposable Bailer: ___
- Pressure Bailer: ___
- Discrete Bailer: ___
- Peristaltic Pump: ✓
- 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): 1100 | Weather Conditions: SUN
Sample Time/Date: 1145 / 1.27.12 | Water Color: CLEAR | Odor: Y / (N)
Approx. Flow Rate: 1000 gpm. | Sediment Description: NONE
Did well de-water? NO | If yes, Time: — | Volume: — gal. | DTW @ Sampling: 3.76

Time (2400 hr.)	Volume (gal.)	pH	~~Conductivity (umhos/cm - µS)~~ mS	Temperature (C) / F	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1110	2.7	6.36	1.12	10.1	1.3	240	3.77
1121	5.2	6.34	1.11	10.0	1.2	241	3.76
1124	8.7	6.34	1.11	10.0	1.3	240	3.76
1127	4.2	6.34	1.12	10.1	1.2	240	3.76

LABORATORY INFORMATION

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

COMMENTS: SET TUBING @ 12' 6000

Add/Replaced Lock: ___ Add/Replaced Plug: ___ Add/Replaced Bolt: ___

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #305192 Job Number: 387100
Site Address: 9816 271St Street Nw Event Date: ~~1-26-12~~ 1-27-12 (inclusive)
City: Stanwood,WA Sampler: J.PAYNE

Well ID MW-2 Date Monitored: 1-27-12
Well Diameter 1.5 in.
Total Depth ~~18.45~~ ft. 14.75
Depth to Water 3.45 ft. ☐ Check if water column is less then 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

11.30 xVF — = — x3 case volume = Estimated Purge Volume: — gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.71

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

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Discrete Bailer
Peristaltic Pump ✓
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): 0900 Weather Conditions: SUNNY
Sample Time/Date: 0945 1-27-12 Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: 150 gpm. Sediment Description: NONE
Did well de-water? NO If yes, Time: — Volume: — gal. DTW @ Sampling: 3.64

Time (2400 hr.)	Volume ~~(gal.)~~ L	pH	Conductivity ~~(µmhos/cm - µS)~~ mS/cm	Temperature (C) F	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
0918	2.7	6.37	1.83	9.9	1.2	244	3.62
0921	3.2	6.36	1.82	10.0	1.3	243	3.64
0924	3.7	6.36	1.82	10.1	1.2	243	3.64
0927	4.2	6.37	1.83	10.1	1.2	245	3.64

LABORATORY INFORMATION

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

COMMENTS: 8" MANHOLE x2 GOOD CONDITION
SET PUMP @ 12'

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #305192 Job Number: 387100
Site Address: 9816 271St Street Nw Event Date: 1.27.12 (inclusive)
City: Stanwood,WA Sampler: JP

Well ID MW-3 Date Monitored: 1.27.12
Well Diameter 1.5 in.
Total Depth 13.85 ft.
Depth to Water 2.60 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.16	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

11.25 xVF 1.5 = 16.9 x3 case volume = Estimated Purge Volume: 16.9 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.85

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

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Discrete Bailer
Peristaltic Pump ✓
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): 1000 Weather Conditions: SUN
Sample Time/Date: 1045 1.27.12 Water Color: CLEAR Odor: Y (N)
Approx. Flow Rate: — gpm. Sediment Description: NONE
Did well de-water? NO If yes, Time: — Volume: — gal. DTW @ Sampling: 2.74

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
1010	2.7	6.30	1.10	10.1	1.4	236	2.72
1021	3.2	6.36	1.11	10.0	1.4	235	2.74
1024	3.7	6.61	1.10	10.0	1.4	236	2.73
1027	4.2	6.81	1.10	10.1	1.4	236	2.73

LABORATORY INFORMATION

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

COMMENTS: SET Pump @ 12'

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #305192 Job Number: 387100
Site Address: 9816 271St Street Nw Event Date: 1.27.12 (inclusive)
City: Stanwood,WA Sampler: VP

Well ID MW-4 Date Monitored: 1.27.12
Well Diameter 1.5 in.
Total Depth 13.80 ft.
Depth to Water 3.00 ft.
10.80 xVF ___ = ___ x3 case volume = Estimated Purge Volume: ___ gal.

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

☐ Check if water column is less then 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.16

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

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

Time Started: 0800 (2400 hrs)
Time Completed: 0830 (2400 hrs)
Depth to Product: 2.85 ft
Depth to Water: 3.00 ft
Hydrocarbon Thickness: .15 ft
Visual Confirmation/Description: YELLOWISH · BROWN · THICK
~~Skimmer / Absorbant Sock (circle one)~~ NONE
Amt Removed from Skimmer: — gal
Amt Removed from Well: — gal
Water Removed: —
Product Transferred to: —

Start Time (purge): ___ Weather Conditions: ___
Sample Time/Date: ___ / ___ Water Color: ___ Odor: Y / N ___
Approx. Flow Rate: ___ gpm. Sediment Description: ___
Did well de-water? ___ If yes, Time: ___ Volume: ___ gal. DTW @ Sampling: ___

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

LABORATORY INFORMATION

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

COMMENTS: UNABLE TO SAMPLE OR MONITOR DUE TO PRESENCE OF SPH.

Add/Replaced Lock: ___ Add/Replaced Plug: ___ Add/Replaced Bolt: ___

Chevron Northwest Region Analysis Request/Chain of Custody

Lancaster Laboratories

~~SS#305192-OML G-R#307100~~

For Lancaster Laboratories use only

Acct. #: _____ Group #: _____ Sample #: _____

SCR#: _____

Facility #: 9816 27 1st Street NW, STANWOOD WA WBS:

Site Address: MHO

Chevron PM: SAICML Lange Lead Consultant:

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: J. TAYLOR

Analyses Requested

Preservation Codes

Matrix

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water (☐ Potable ☐ NPDES)	Oil ☐ Air ☐	Total Number of Containers	BTEX + MTBE ☐ 8021 ☐ 8260 ☐ Naphth	8260 full scan	Oxygenates ____	NWTPH GX	NWTPH DX ☐ Silica Gel Cleanup	Lead ☐ Total ☐ Diss. ☐ Method ____	☐ WAVPH ☐ WAEPH	NWTPH H HCID ☐ quantification
QA	1.27.17		X			X		2	X			X				
MW-1	↓	1145	X			X		5	X			X	X			
MW-2		0945	X			X		5	X			X	X			
MW-3		1045	X			X		5	X			X	X			

☐ Results in Dry Weight
☐ 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

Comments /Remarks

Please forward the lab results directly to the Lead Consultant and cc: G-R.

Turnaround Time Requested (TAT) (please circle)

STD. TAT 72 hour 48 hour
24 hour 4 day 5 day
EDF/EDD

Data Package Options (please circle if required)

QC Summary Type I – Full
Type VI (Raw Data)

Relinquished by:	Date	Time	Received by:	Date	Time
	1.27.17	1700			
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:	Date	Time
Temperature Upon Receipt _____ C°			Custody Seals Intact? Yes No		

Attachment B:
Laboratory Analysis Report

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

Analysis Report

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

February 20, 2012

Project: 305192

Submittal Date: 01/28/2012
Group Number: 1287086
PO Number: 0015080810
Release Number: BAUHS
State of Sample Origin: WA

Client Sample Description	Lancaster Labs (LLI) #
QA Water Sample	6534624
MW-1 Grab Water Sample	6534625
MW-2 Grab Water Sample	6534626
MW-3 Grab Water Sample	6534627

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

ELECTRONIC COPY TO	SAIC c/o Gettler-Ryan	Attn: Rachelle Munoz
ELECTRONIC COPY TO	SAIC	Attn: Mike Lange
ELECTRONIC COPY TO	SAIC	Attn: Jamalyn Green

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Analysis Report

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Questions? Contact your Client Services Representative
Jill M Parker at (717) 556-7262

Respectfully Submitted,

Susan M Goshert

Susan M. Goshert
Group Leader

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Analysis Report

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

LLI Sample # WW 6534624
LLI Group # 1287086
Account # 11260

Project Name: 305192

Collected: 01/27/2012

Submitted: 01/28/2012 10:00
Reported: 02/20/2012 22:55

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

QA100

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	**ECY 97-602 NWTPH-Gx**		ug/l	ug/l	
08274	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Volatiles	**SW-846 8021B**		ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Methyl tert-Butyl Ether	1634-04-4	N.D.	2.5	1
02102	Toluene	108-88-3	N.D.	0.5	1
02102	Total Xylenes	1330-20-7	N.D.	1.5	1

General Sample Comments

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 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	12037A53A	02/07/2012 13:50	Marie D John	1
02102	Method 8021 Water Master	SW-846 8021B	1	12037A53A	02/07/2012 13:50	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12037A53A	02/07/2012 13:50	Marie D John	1

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Analysis Report

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

Sample Description: MW-1 Grab Water Sample
Facility# 305192 Job# 387100
9816 271st St NW - Stanwood, WA

LLI Sample # WW 6534625
LLI Group # 1287086
Account # 11260

Project Name: 305192

Collected: 01/27/2012 11:45 by JP

Submitted: 01/28/2012 10:00
Reported: 02/20/2012 22:55

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

M1100

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08274	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Methyl tert-Butyl Ether	1634-04-4	N.D.	2.5	1
02102	Toluene	108-88-3	N.D.	0.5	1
02102	Total Xylenes	1330-20-7	N.D.	1.5	1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1

The reverse surrogate, capric acid, was present at <1%.

General Sample Comments

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 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	12037A53A	02/07/2012 15:09	Marie D John	1
02102	Method 8021 Water Master	SW-846 8021B	1	12037A53A	02/07/2012 15:09	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12037A53A	02/07/2012 15:09	Marie D John	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	120370007A	02/14/2012 19:17	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	120370007A	02/06/2012 22:00	Elaine F Stoltzfus	1

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Analysis Report

Sample Description: MW-2 Grab Water Sample
Facility# 305192 Job# 387100
9816 271st St NW - Stanwood, WA

LLI Sample # WW 6534626
LLI Group # 1287086
Account # 11260

Project Name: 305192

Collected: 01/27/2012 09:45 by JP

Submitted: 01/28/2012 10:00
Reported: 02/20/2012 22:55

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

M2100

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08274	NWTPH-Gx water C7-C12	n.a.	56	50	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Methyl tert-Butyl Ether	1634-04-4	N.D.	2.5	1
02102	Toluene	108-88-3	N.D.	0.5	1
02102	Total Xylenes	1330-20-7	N.D.	1.5	1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

The reverse surrogate, capric acid, was present at <1%.

General Sample Comments

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 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	12037A53A	02/07/2012 15:36	Marie D John	1
02102	Method 8021 Water Master	SW-846 8021B	1	12037A53A	02/07/2012 15:36	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12037A53A	02/07/2012 15:36	Marie D John	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	120370007A	02/14/2012 19:36	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	120370007A	02/06/2012 22:00	Elaine F Stoltzfus	1

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Analysis Report

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

Sample Description: MW-3 Grab Water Sample
Facility# 305192 Job# 387100
9816 271st St NW - Stanwood, WA

LLI Sample # WW 6534627
LLI Group # 1287086
Account # 11260

Project Name: 305192

Collected: 01/27/2012 10:45 by JP

Submitted: 01/28/2012 10:00
Reported: 02/20/2012 22:55

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

M3100

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	**ECY 97-602 NWTPH-Gx**		ug/l	ug/l	
08274	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Volatiles	**SW-846 8021B**		ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Methyl tert-Butyl Ether	1634-04-4	N.D.	2.5	1
02102	Toluene	108-88-3	N.D.	0.5	1
02102	Total Xylenes	1330-20-7	N.D.	1.5	1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		ug/l	ug/l	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	70	1

The reverse surrogate, capric acid, was present at <1%.

General Sample Comments

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 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	12037A53A	02/07/2012 16:03	Marie D John	1
02102	Method 8021 Water Master	SW-846 8021B	1	12037A53A	02/07/2012 16:03	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12037A53A	02/07/2012 16:03	Marie D John	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	120370007A	02/14/2012 19:55	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	120370007A	02/06/2012 22:00	Elaine F Stoltzfus	1

Quality Control Summary

Client Name: Chevron Group Number: 1287086
Reported: 02/20/12 at 10:55 PM

Matrix QC may not be reported if insufficient sample or 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.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 12037A53A	Sample number(s): 6534624-6534627							
Benzene	N.D.	0.5	ug/l	100	105	80-120	5	30
Ethylbenzene	N.D.	0.5	ug/l	105	105	80-120	0	30
Methyl tert-Butyl Ether	N.D.	2.5	ug/l	95	100	78-125	5	30
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	85	84	75-135	2	30
Toluene	N.D.	0.5	ug/l	105	105	80-120	0	30
Total Xylenes	N.D.	1.5	ug/l	107	108	80-120	2	30
Batch number: 120370007A	Sample number(s): 6534625-6534627							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	81	75	50-120	8	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					

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: Method 8021 Water Master
Batch number: 12037A53A

	Trifluorotoluene-P	Trifluorotoluene-F
6534624	81	71
6534625	81	71
6534626	82	71
6534627	81	71
Blank	81	71
LCS	81	85
LCSD	81	84
Limits:	58-146	63-135

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 120370007A

	Orthoterphenyl
6534625	82
6534626	96
6534627	92
Blank	79
LCS	51

*- 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.

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Quality Control Summary

Client Name: Chevron
Group Number: 1287086
Reported: 02/20/12 at 10:55 PM

Surrogate Quality Control

LCSD	99
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.

Chevron Northwest Region Analysis Request/Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only
Acct. #: 11260 Group #: 1287086 Sample #: 6534624-27

SCR #:

Facility #: SS#305192-OML G-R#387100 WBS:
Site Address: 9816 271st Street NW, STANWOOD, WA
Chevron PM: MHO Lead Consultant: SAICML Lange
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: J Rayne

Analyses Requested — Preservation Codes

- ☐ Results in Dry Weight
- ☐ 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	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Water (Potable ☐ NPDES ☐)	Oil ☐ Air ☐	Total Number of Containers	BTEX + MTBE 8021 ☑ 8260 ☐ Napth ☐	8260 full scan	Oxygenates ____	NWTPH GX	NWTPH DX ☑ Silica Gel Cleanup ☑	Lead Total ☐ Diss. ☐ Method ____	☐ WAVPH ☐ WAEPH	NWTPH H HCID ☐ quantification
QA	1.27.12		X			X		2	X			X				
MW-1		1145	X			X		5	X			X	X			
MW-2		0945	X			X		5	X			X	X			
MW-3	↓	1045	X			X		5	X			X	X			

Comments /Remarks

Please forward the lab results directly to the Lead Consultant and cc: G-R.

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

Data Package Options (please circle if required)
QC Summary Type I – Full
Type VI (Raw Data)

	Date	Time		Date	Time
Relinquished by:	1-27-12	1700	Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS FedEx Other			Received by:	1-28-12	1000
Temperature Upon Receipt 0.4 - 0.8 °C			Custody Seals Intact? Yes No		

3468.02

Lancaster Laboratories, Inc., 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 (717) 656-2300
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

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Explanation of Symbols and Abbreviations

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

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

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. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

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

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

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.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.