SIT 2.3.2

SAIC

September 2, 2011

Ms. Miren Garde-Aranzadi
Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, California 94583-5186

Subject: **First Semiannual 2011 Groundwater Monitoring and Sampling Report**
Former Chevron Service Station No. 20-9335 (Seattle Housing Authority Maint Pkg Cat)
1225 North 45th Street
Seattle, Washington

Dear Ms. Garde-Aranzadi:

SAIC Energy, Environment & Infrastructure, LLC (SAIC), on behalf of Chevron Environmental Management Company (CEMC), prepared this letter summarizing the first semiannual 2011 groundwater monitoring and sampling event at former Chevron Service Station No. 20-9335 (the site) in Seattle, Washington (Figure 1).

FIELD ACTIVITIES

Gettler-Ryan Inc. (Gettler-Ryan) conducted the groundwater monitoring and sampling field event on June 21, 2011. Gettler-Ryan collected depth-to-groundwater measurements and checked for the presence of separate-phase hydrocarbons (SPH) in the five monitoring wells on site.

Groundwater samples were collected from the five monitoring wells on site and submitted to Lancaster Laboratories, Inc. in Pennsylvania for the following analyses:

- Total petroleum hydrocarbons (TPH) as gasoline-range organics (TPG-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 by Ecology Method NWTPH-Dx extended with silica-gel cleanup;
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by United States Environmental Protection Agency (USEPA) Method 8021B; and
- Total Lead by USEPA Method 6020.

Field data sheets are provided in the Gettler-Ryan groundwater monitoring and sampling data package (Attachment A).

SAIC Energy, Environment & Infrastructure, LLC
18912 North Creek Parkway | Suite 101 | Bothell, WA 98011 | tel: (425) 485-5800 | fax: (425) 485-5566 | saic.com

FINDINGS

During this event, groundwater elevations ranged from 171.41 feet above mean sea level (MSL) in monitoring well MW-6 to 170.83 feet above MSL in monitoring well MW-10. Groundwater potentially flows toward the southeast at a gradient of approximately 0.002 to 0.006 feet per foot (Figure 2). Groundwater elevations increased an average of 1.14 feet since the previous semiannual monitoring event in November 2010.

The following analytes were detected at concentrations exceeding their respective Model Toxics Control Act (MTCA) Method A cleanup levels (CULs):

- TPH-GRO were detected in monitoring wells MW-6, and MW-7;
- TPH-DRO were detected in monitoring well MW-7;
- BTEX compounds were detected in monitoring well MW-7; and
- Total lead was detected in monitoring wells MW-7.

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

DISCUSSION

Groundwater elevations and potential flow direction are consistent with historical data reported at the site. Groundwater elevations were at the highest ever recorded during the June 2011 event.

SPH were not detected in monitoring well MW-7 during this event. This is likely due to relatively high groundwater that is above the SPH saturation zone.

Petroleum-hydrocarbon constituent concentrations continue to fluctuate above and below MTCA Method A CULs with seasonal changes in groundwater elevation. Lower concentrations are typically observed during the November/December sampling events.

Gettler-Ryan will continue to perform groundwater monitoring and sampling on a semiannual basis. The next groundwater monitoring and sampling event is scheduled for December 2011.

If you have any questions or comments, please contact me at (425) 482-3319 or via email at langem@saic.com.

Sincerely,

SAIC Energy, Environment & Infrastructure, LLC

Michael Lange
Project Manager

Gabriel Cisneros LG #2357
Geologist

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: Mr. Roger Nye – Ecology, Toxics Cleanup Program
3190 160th Ave SE, Bellevue, WA 98008-5452

Mr. Larry Hard – Seattle Housing Authority
120 Sixth Avenue North, Seattle, WA 98109-5003

Ms. Veronica Redstone – Housing Resources Group
1651 Bellevue Avenue, Seattle, WA 98122-2014

Project File

REPORT LIMITATIONS

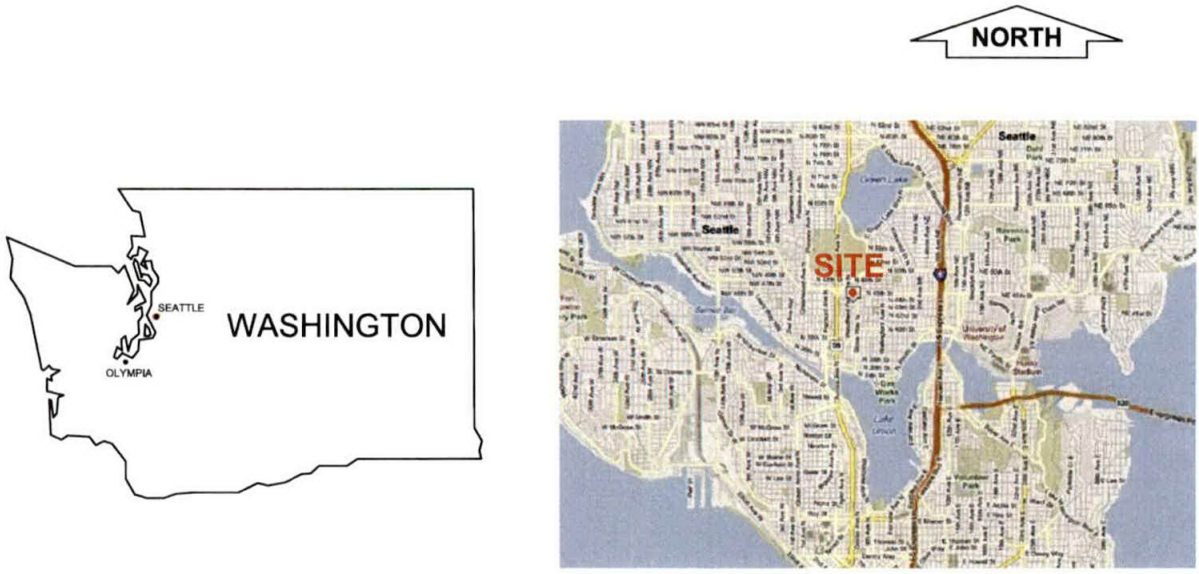
This technical document was prepared on behalf of Chevron and is intended for its sole use and for use by the local, state or federal regulatory agency that the technical document was sent to by SAIC. Any other person or entity obtaining, using, or relying on this technical document hereby acknowledges that they do so at their own risk, and that SAIC Energy, Environment & Infrastructure, LLC (SAIC) shall have no responsibility or liability for the consequences thereof.

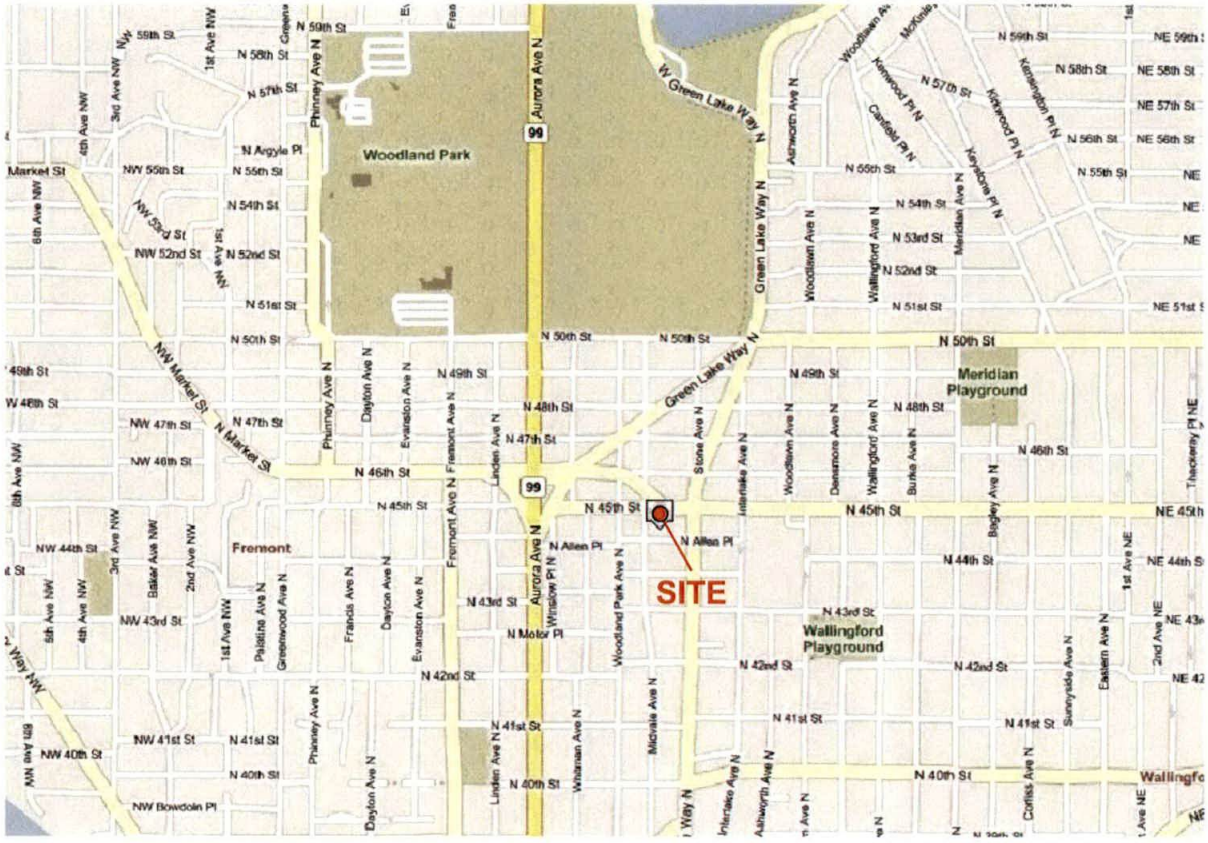
Site history and background information provided in this technical document are based on sources that may include interviews with environmental regulatory agencies and property management personnel and a review of acquired environmental regulatory agency documents and property information obtained from CEMC and others. SAIC has not made, nor has it been asked to make, any independent investigation concerning the accuracy, reliability, or completeness of such information beyond that described in this technical document.

Recognizing reasonable limits of time and cost, this technical document cannot wholly eliminate uncertainty regarding the vertical and lateral extent of impacted environmental media.

Opinions and recommendations presented in this technical document apply only to site conditions and features as they existed at the time of SAIC's site visits or site work and cannot be applied to conditions and features of which SAIC is unaware and has not had the opportunity to evaluate.

All sources of information on which SAIC has relied in making its conclusions (including direct field observations) are identified by reference in this technical document or in appendices attached to this technical document. Any information not listed by reference or in appendices has not been evaluated or relied upon by SAIC in the context of this technical document. The conclusions, therefore, represent our professional opinion based on the identified sources of information.





Maps Provided by Seattle.gov

SAIC

Former Chevron Service Station No. 20-9335
1225 North 45th Street
Seattle, Washington

FIGURE 1
Vicinity Map

FILE NAME:	DATE:
20-9335 Vicinity Map.dwg	01/20/2011

NORTH 45TH STREET

Sidewalk

171.41
MW-6

171.40

171.30

171.20

MW-7
171.30

MW-8
171.17

Stoneway
Apartments

Sidewalk

STONE WAY NORTH

171.10

Sidewalk

Beso del Sol Restaurant/
Natural Health Clinic

Residence

Residence

Residence

Residence

Parking Lot (Asphalt)

Big Wheel Auto Parts

171.00

MW-9
170.96

170.90

Parking Lot

MW-10
170.83

NORTH ALLEN PLACE

Legend

- Groundwater Monitoring Well
- 170.09 Groundwater Elevation in Feet
- 169.90 Groundwater Elevation Contour at an 0.1 Foot Interval (Dashed Where Inferred
- Approximate Groundwater Flow Direction at a Gradient of 0.002 to 0.006

N

0 20 40

Feet

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Former Chevron Service Station No. 20-9335
1225 North 45th Street
Seattle, Washington

FIGURE 2
Potentiometric Map
June 21, 2011

DATE: 02/10/2011 | DRAWING: 209335_GW Contours.dwg

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
FORMER CHEVRON SERVICE STATION NO. 20-9335
1225 North 45th Street
Seattle, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC* (ft.)	DTP (ft.)	DTW (ft.)	SPHT (ft.)	GWE (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethly-benzene	Total Xylenes	MTBE	T. Lead
MW-6															
02/09/06		197.18	--	36.74	0.00	160.44	**680**	98	**1,500**	<0.5	0.7	1.2	37	--	--
05/03/07		197.18	--	36.74	0.00	160.44	**1,000**	130	380	**29**	1	4	30	--	--
06/16/09		197.18	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--
07/01/09	NP	197.18	--	27.46	0.00	169.72	270[3]	<70[3]	<50	<0.5	<0.5	<0.5	<1.5	--	**22.9**
12/11/09	NP	197.18	--	27.55	0.00	169.63	35[3]	<69[3]	<50	<0.5	<0.5	<0.5	<1.5	--	0.76
06/09/10	NP	197.18	--	26.84	0.00	170.34	360[3]	<340[3,12]	**5,900**[13]	<0.5	<0.5	<0.5	350[13]	--	13.2
11/19/10	NP	197.18	--	26.97	0.00	170.21	240	81	750	<0.5	<0.5	<0.5	11	--	3.7
06/21/11	NP	197.18	--	25.77	0.00	171.41	270	88	**2,400**	<0.5	<0.5	0.6	9.2	--	3.2
MW-7															
02/09/06		197.42	37.87	38.17	0.30	159.49**	--	--	--	--	--	--	--	--	--
05/03/07		197.42	26.55	27.80	0.00	169.62**	--	--	--	--	--	--	--	--	--
06/16/09		197.42	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--
07/01/09[9]		197.42	27.39	--[10]	--[10]	--[10]	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
12/11/09[9]		197.42	27.50	--[11]	--[11]	--[11]	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
06/09/10[9]		197.42	27.03	28.20	1.17	170.16**	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
11/19/10		197.42	27.08	28.34	1.26	170.09**	NOT SAMPLED DUE TO THE PRESENCE OF SPH							--	
06/21/11		197.42	--	26.12	0.00	171.30	**11,000**	<1,800	**150,000**	**45**	**4,800**	**2,600**	**18,000**	--	**310**
MW-8															
02/09/06		197.35	--	36.74	0.00	160.61	280	<96	440	<0.5	1.1	3.3	28	--	--
05/03/07		197.35	--	36.74	0.00	160.61	**940**	<200	**2,600**	<0.5	<0.5	<0.5	<0.5	--	--
06/16/09		197.35	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--
07/01/09	NP	197.35	--	27.84	0.00	169.51	390[3]	<700[3]	430	<0.5	<0.5	<0.5	2.2	--	3.5
12/11/09	NP	197.35	--	27.91	0.00	169.44	300[3]	<69[3]	<50	<0.5	<0.5	<0.5	<1.5	--	7.3
06/09/10	NP	197.35	--	27.21	0.00	170.14	280[3]	180[3]	350	<0.5	<0.5	<0.5	<1.5	--	**16.5**
11/19/10	NP	197.35	--	27.34	0.00	170.01	320	120	94	<0.5	<0.5	<0.5	<1.5	--	3.4
06/21/11	NP	197.35	--	26.18	0.00	171.17	94	150	54	<0.5	<0.5	1.0	<1.5	--	3.6
MW-9															
05/03/07		208.11	--	36.74	0.00	171.37	<400	<500	<50	<0.5	<0.5	4	18	--	--
06/16/09		208.11	--	38.72	0.00	169.39	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	**19.3**
07/01/09	NP	208.11	--	38.03	0.00	170.08	<31[3]	<71[3]	--	--	--	--	--	--	--
12/11/09	NP	208.11	--	38.86	0.00	169.25	76[3]	<69[3]	<50	<0.5	<0.5	<0.5	<1.5	--	14.5
06/09/10	NP	208.11	--	38.17	0.00	169.94	42[3]	110[3]	<50	<0.5	<0.5	<0.5	<1.5	--	**21.2**
11/19/10	NP	208.11	--	38.23	0.00	169.88	<29	130	<50	<0.5	<0.5	<0.5	<1.5	--	**18.7**
06/21/11	NP	208.11	--	37.15	0.00	170.96	<30	<70	<50	<0.5	<0.5	<0.5	<1.5	--	4.7

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Seattle, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC* (ft.)	DTP (ft.)	DTW (ft.)	SPHT (ft.)	GWE (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethly-benzene	Total Xylenes	MTBE	T. Lead
MW-10															
05/03/07		207.29	--	36.74	0.00	170.55	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
06/16/09		207.29	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--
07/01/09	NP	207.29	--	38.72	0.00	168.57	<30[3]	<69[3]	<50	<0.5	<0.5	<0.5	<1.5	--	10.9
12/11/09	NP	207.29	--	35.91	0.00	171.38	49[3]	<69[3]	<50	<0.5	<0.5	<0.5	<1.5	--	13.4
06/09/10	NP	207.29	--	37.48	0.00	169.81	50[3]	88[3]	<50	<0.5	<0.5	<0.5	<1.5	--	7.2
11/19/10	NP	207.29	--	37.53	0.00	169.76	<29	74	<50	<0.5	<0.5	<0.5	<1.5	--	**18.8**
06/21/11	NP	207.29	--	36.46	0.00	170.83	<31	180	<50	<0.5	<0.5	<0.5	<1.5	--	5.7
MW-1															
10/11/00[1]		97.95	--	34.50	--	63.45	--	--	--	--	--	--	--	--	--
12/16/00		97.95	--	35.91	0.00	62.04	ND[2,3]	ND[2,3]	74.4	ND	ND	ND	ND	ND	ND[4]
03/26/01		97.95	--	36.54	0.00	61.41	ND[3]	ND[3]	ND	ND	ND	ND	ND	ND	--
06/25/01		97.95	--	36.78	0.00	61.17	<281[3]	<842[3]	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
09/24/01		97.95	--	37.14	0.00	60.81	<250[3,8]	<500[3,8]	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
12/13/01		97.95	--	37.25	0.00	60.70	<250[3]	<500[3]	<80.0	<0.500	<0.500	<0.500	<1.00	--	--
03/08/02	NP	97.95	--	36.79	0.00	61.16	<250[3]	<750[3]	<50	<0.50	<0.50	<0.50	<1.5	--	--
05/29/02		97.95	--	36.44	0.00	61.51	SAMPLED SEMI-ANNUALLY			--	--	--	--	--	--
09/16/02	NP	97.95	--	36.71	0.00	61.24	<250[3]	<250[3]	<50	<0.50	<0.50	<0.50	<1.5	--	--
12/05/02		97.95	--	37.09	0.00	60.86	SAMPLED SEMI-ANNUALLY			--	--	--	--	--	--
03/04/03	NP	97.95	--	37.26	0.00	60.69	<250[3]	<250[3]	100	<0.50	<0.50	<0.50	<3.0	--	--
06/03/03		97.95	--	37.09	0.00	60.86	SAMPLED SEMI-ANNUALLY			--	--	--	--	--	--
10/27/03		97.95	--	37.42	0.00	60.53	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	--	--
03/31/04	NP	97.95	--	37.12	0.00	60.83	<800[3]	<1,000[3]	<50	<0.5	<0.5	<0.5	<1.5	--	--
06/28/04		97.95	--	37.14	0.00	60.81	SAMPLED SEMI-ANNUALLY			--	--	--	--	--	--
09/29/04		97.95	--	37.50	0.00	60.45	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	--	--
01/04/05		97.95	--	37.61	0.00	60.34	SAMPLED SEMI-ANNUALLY			--	--	--	--	--	--
ABANDONED															
MW-2															
10/11/00[1]		98.70	--	34.50	--	64.20	--	--	--	--	--	--	--	--	--
12/16/00		98.70	--	36.46	0.00	62.24	**1,000**[3]	ND[3]	**28,100**	**283**	**2,560**	693	**4,020**	ND[2]	0.00194[4]
03/26/01		98.70	--	37.12	0.00	61.58	**1,180**[3,5]	ND[3]	**17,000**	**143**	**1,450**	378	**2,180**	[2]ND/ND[6]	--
06/25/01		98.70	--	37.37	0.00	61.33	418[3,5]	<750[3]	**11,700**	**92.3**	547	181	**1,010**	--	--
09/24/01		98.70	--	37.72	0.00	60.98	**4,840**[3,7,8]	<557[3,8]	**22,100**	**120**	**1,380**	658	**4,100**	--	--
12/13/01		98.70	--	37.89	0.00	60.81	**5,540**[3,5]	<500[3]	**84,000**	**185**	**3,960**	**1,590**	**9,950**	--	--
03/08/02		98.70	37.24	38.00	0.76	61.31***	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
05/29/02		98.70	36.81	37.54	0.73	61.74***	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--

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1225 North 45th Street
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Well ID/ Date	Purge Method	TOC* (ft.)	DTP (ft.)	DTW (ft.)	SPHT (ft.)	GWE (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethly-benzene	Total Xylenes	MTBE	T. Lead
MW-2 (cont)															
09/16/02		98.70	37.19	37.61	0.42	61.43***	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
10/15/02		98.70	37.24	37.68	0.44	61.37***	--	--	--	--	--	--	--	--	--
11/22/02		98.70	37.12	37.63	0.51	61.48***	--	--	--	--	--	--	--	--	--
12/05/02		98.70	37.51	38.10	0.59	61.07***	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
01/28/03		98.70	36.77	37.33	0.56	61.82***	--	--	--	--	--	--	--	--	--
02/13/03		98.70	37.44	38.02	0.58	61.14***	--	--	--	--	--	--	--	--	--
03/04/03		98.70	INACCESSIBLE - VEHICLE PARKED OVER WELL				--	--	--	--	--	--	--	--	--
04/21/03		98.70	37.21	37.78	0.57	61.38***	--	--	--	--	--	--	--	--	--
05/08/03		98.70	37.43	37.94	0.51	61.17***	--	--	--	--	--	--	--	--	--
06/03/03		98.70	37.37	37.91	0.54	61.22***	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
07/06/03		98.70	36.96	37.51	0.55	61.63***	--	--	--	--	--	--	--	--	--
08/18/03		98.70	37.49	38.02	0.53	61.10***	--	--	--	--	--	--	--	--	--
10/27/03		98.70	37.54	39.98	2.44	60.67**	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
11/17/03		98.70	37.10	37.58	0.48	61.50**	--	--	--	--	--	--	--	--	--
12/31/03		98.70	36.18	38.19	2.01	62.12**	--	--	--	--	--	--	--	--	--
02/09/04		98.70	37.00	37.49	0.49	61.60**	--	--	--	--	--	--	--	--	--
03/04/04		98.70	35.85	37.06	1.21	62.61**	--	--	--	--	--	--	--	--	--
03/31/04		98.70	37.32	39.05	1.73	61.03**	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
06/28/04		98.70	37.32	39.05	1.73	61.03**	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
09/11/04		98.70	37.65	39.10	1.45	60.76**	--	--	--	--	--	--	--	--	--
09/29/04		98.70	37.71	39.39	1.68	60.65**	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
11/22/04		98.70	36.89	38.16	1.27	61.56**	--	--	--	--	--	--	--	--	--
01/04/05		98.70	37.88	39.80	1.92	60.44**	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
01/14/05		98.70	37.49	39.02	1.53	60.90**	--	--	--	--	--	--	--	--	--
ABANDONED															
MW-3															
10/11/00[1]		98.76	--	34.00	--	64.76	--	--	--	--	--	--	--	--	--
12/16/00		98.76	--	36.39	0.00	62.37	ND[3]	ND[3]	ND	ND	0.612	ND	1.95	ND	ND[4]
03/26/01		98.76	--	37.05	0.00	61.71	ND[3]	ND[3]	ND	ND	ND	ND	ND	ND	--
06/25/01		98.76	--	37.29	0.00	61.47	<250[3]	<750[3]	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
09/24/01		98.76	--	37.64	0.00	61.12	<250[3,8]	<500[3,8]	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
12/13/01		98.76	--	37.78	0.00	60.98	<250[3]	<500[3]	<80.0	<0.500	<0.500	<0.500	<1.00	--	--
03/08/02	NP	98.76	--	37.28	0.00	61.48	<250[3]	<750[3]	320	<0.50	0.64	2.1	15	--	--

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Well ID/ Date	Purge Method	TOC* (ft.)	DTP (ft.)	DTW (ft.)	SPHT (ft.)	GWE (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethly-benzene	Total Xylenes	MTBE	T. Lead
MW-3 (cont)															
05/29/02		98.76	--	36.92	0.00	61.84	SAMPLED SEMI-ANNUALLY			--	--	--	--	--	--
09/16/02	NP	98.76	--	37.21	0.00	61.55	<250[3]	<250[3]	<50	<0.50	<0.50	<0.50	<1.5	--	--
12/05/02		98.76	--	37.58	0.00	61.18	SAMPLED SEMI-ANNUALLY			--	--	--	--	--	--
03/04/03	NP	98.76	--	37.79	0.00	60.97	<250[3]	<250[3]	<50	<0.50	<0.50	<0.50	<1.5	--	--
06/03/03		98.76	--	37.68	0.00	61.08	SAMPLED SEMI-ANNUALLY			--	--	--	--	--	--
10/27/03	NP	98.76	--	38.00	0.00	60.76	<250[3]	<250[3]	<50	<0.5	<0.5	<0.5	<1.5	--	--
03/31/04	NP	98.76	--	37.65	0.00	61.11	<800[3]	<1,000[3]	<50	<0.5	<0.5	<0.5	<1.5	--	--
06/28/04		98.76	--	37.68	0.00	61.08	SAMPLED SEMI-ANNUALLY			--	--	--	--	--	--
09/29/04	NP	98.76	--	38.01	0.00	60.75	<250[3]	<250[3]	<50	<0.5	<0.5	<0.5	<1.5	--	--
01/04/05		98.76	--	38.19	0.00	60.57	SAMPLED SEMI-ANNUALLY			--	--	--	--	--	--
ABANDONED															
MW-4															
10/11/00[1]		98.52	--	35.00	--	63.52	--	--	--	--	--	--	--	--	--
12/16/00		98.52	--	36.35	0.00	62.17	ND[2,3]	ND[2,3]	**58,200**	**326**	**5,520**	**1,430**	**8,520**	ND[2]	0.0123[4]
03/26/01		98.52	--	37.00	0.00	61.52	266[3,5]	ND[3]	**27,200**	**178**	**2,160**	**785**	**4,160**	[2]ND/ND[6]	--
06/25/01		98.52	--	37.25	0.00	61.27	<250[3]	<750[3]	**12,300**	**69.0**	654	416	**1,910**	--	--
09/24/01		98.52	--	37.60	0.00	60.92	<250[3,8]	<500[3,8]	**4,130**	**30.1**	154	197	684	--	--
12/13/01		98.52	--	37.72	0.00	60.80	<250[3]	<500[3]	**5,490**	**30.3**	175	177	679	--	--
03/08/02	NP	98.52	--	38.36	0.00	60.16	<250[3]	<750[3]	**9,000**	<50	150	170	710	--	--
05/29/02	NP	98.52	--	36.86	0.00	61.66	<250[3]	<750[3]	**6,700**	**22**	150	190	780	--	--
08/07/02		98.52	--	36.92	0.00	61.60	--	--	--	--	--	--	--	--	--
09/16/02	NP	98.52	--	37.16	0.00	61.36	<250[3]	<250[3]	**7,500**	**46**	230	240	630	--	--
12/05/02	NP	98.52	--	37.53	0.00	60.99	<250[3]	<250[3]	**14,000**	**73**	400	540	**1,500**	--	--
03/04/03		98.52	36.68	36.71	0.03	61.83***	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
06/03/03		98.52	36.59	36.63	0.04	61.92***	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
07/06/03		98.52	36.90	36.93	0.03	61.61***	--	--	--	--	--	--	--	--	--
08/18/03		98.52	36.76	36.80	0.04	61.75***	--	--	--	--	--	--	--	--	--
10/27/03	NP	98.52	--	37.96	0.00	60.56	<400[3]	<500[3]	**2,200**	**16**	55	76	170	--	--
11/17/03		98.52	36.34	36.37	0.03	62.17**	--	--	--	--	--	--	--	--	--
12/31/03		98.52	--	36.88	0.00	61.64	--	--	--	--	--	--	--	--	--
02/09/04		98.52	36.14	36.17	0.03	62.37**	--	--	--	--	--	--	--	--	--
03/04/04		98.52	--	36.74	0.00	61.78	--	--	--	--	--	--	--	--	--
03/31/04	NP	98.52	--	37.59	0.00	60.93	<250[3]	<250[3]	**3,900**	**14**	96	110	340	--	--

SAIC

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
FORMER CHEVRON SERVICE STATION NO. 20-9335
1225 North 45th Street
Seattle, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC* (ft.)	DTP (ft.)	DTW (ft.)	SPHT (ft.)	GWE (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethly-benzene	Total Xylenes	MTBE	T. Lead
MW-4 (cont)															
06/28/04	NP	98.52	--	37.54	0.00	60.98	<250[3]	<250[3]	**1,600**	**8.5**	15	59	110	--	--
09/11/04		98.52	37.78	37.81	0.03	60.73**	--	--	--	--	--	--	--	--	--
09/29/04	NP	98.52	--	37.86	0.00	60.66	<250[3]	<250[3]	**1,500**	**18**	40	76	170	--	--
11/22/04		98.52	--	36.81	0.00	61.71	--	--	--	--	--	--	--	--	--
01/04/05	NP	98.52	--	38.11	0.00	60.41	**1,600[3]**	<250[3]	**1,600**	**10**	13	60	110	--	--
01/14/05		98.52	--	37.58	0.00	60.94	--	--	--	--	--	--	--	--	--
ABANDONED															
MW-5															
10/11/00[1]		99.42	--	34.50	--	64.92	--	--	--	--	--	--	--	--	--
12/16/00		99.42	--	37.18	0.00	62.24	**5,080[3]**	ND[3]	**146,000**	ND[2]	**15,100**	**4,160**	**24,100**	ND[2]	0.0200[4]
03/26/01		99.42	--	37.91	0.00	61.51	**77,900[3,5]**	ND[3]	**149,000**	**256**	**10,600**	**4,000**	**24,200**	[2]ND/ND[6]	--
06/25/01		99.42	--	38.14	0.00	61.28	**109,000[3]**	<18,100[3]	**127,000**	**210**	**9,580**	**3,730**	**21,500**	--	--
09/24/01		99.42	38.40	38.44	0.04	61.01***	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
12/13/01		99.42	38.55	38.59	0.04	60.86***	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
03/08/02		99.42	37.96	38.46	0.50	61.36***	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
05/29/02		99.42	37.60	38.05	0.45	61.73***	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
08/07/02		99.42	37.73	38.12	0.39	61.61***	--	--	--	--	--	--	--	--	--
09/16/02		99.42	38.00	38.39	0.39	61.34***	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
10/15/02		99.42	38.09	38.47	0.38	61.25***	--	--	--	--	--	--	--	--	--
11/22/02		99.42	37.84	38.26	0.42	61.50***	--	--	--	--	--	--	--	--	--
12/05/02		99.42	38.42	38.78	0.36	60.93***	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
01/28/03		99.42	37.88	38.24	0.36	61.47***	--	--	--	--	--	--	--	--	--
02/13/03		99.42	38.33	38.68	0.35	61.02***	--	--	--	--	--	--	--	--	--
03/04/03		99.42	37.54	37.89	0.35	61.81***	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
04/21/03		99.42	37.96	38.29	0.33	61.39***	--	--	--	--	--	--	--	--	--
05/08/03		99.42	38.50	38.82	0.32	60.86***	--	--	--	--	--	--	--	--	--
06/03/03		99.42	37.42	37.76	0.34	61.93***	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
07/06/03		99.42	37.77	38.11	0.34	61.58***	--	--	--	--	--	--	--	--	--
08/18/03		99.42	38.54	38.86	0.32	60.82***	--	--	--	--	--	--	--	--	--
10/27/03		99.42	WELL DRY/OBSTRUCTED			--	--	--	--	--	--	--	--	--	--
11/17/03		99.42	37.87	38.17	0.30	61.49**	--	--	--	--	--	--	--	--	--
12/31/03		99.42	WELL DRY/OBSTRUCTED			--	--	--	--	--	--	--	--	--	--
02/09/04		99.42	WELL DRY/OBSTRUCTED			--	--	--	--	--	--	--	--	--	--
03/04/04		99.42	WELL DRY/OBSTRUCTED			--	--	--	--	--	--	--	--	--	--

SAIC

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
FORMER CHEVRON SERVICE STATION NO. 20-9335
1225 North 45th Street
Seattle, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC* (ft.)	DTP (ft.)	DTW (ft.)	SPHT (ft.)	GWE (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethly-benzene	Total Xylenes	MTBE	T. Lead
MW-5 (cont)															
03/31/04		99.42	WELL DRY/OBSTRUCTED			--	--	--	--	--	--	--	--	--	--
06/28/04		99.42	WELL DRY/OBSTRUCTED			--	--	--	--	--	--	--	--	--	--
09/11/04		99.42	WELL DRY/OBSTRUCTED			--	--	--	--	--	--	--	--	--	--
09/29/04		99.42	WELL DRY/OBSTRUCTED			--	--	--	--	--	--	--	--	--	--
11/22/04		99.42	WELL DRY/OBSTRUCTED			--	--	--	--	--	--	--	--	--	--
01/04/05		99.42	WELL DRY/OBSTRUCTED			--	--	--	--	--	--	--	--	--	--
01/14/05		99.42	WELL DRY/OBSTRUCTED			--	--	--	--	--	--	--	--	--	--
ABANDONED															
TRIP BLANK															
12/16/00		--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--
03/26/01		--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--
06/25/01		--	--	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
09/24/01		--	--	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
12/13/01		--	--	--	--	--	--	--	<80.0	<0.500	<0.500	<0.500	<1.00	--	--
03/08/02		--	--	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	--	--
05/29/02		--	--	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	--	--
09/16/02		--	--	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	--	--
12/05/02		--	--	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	--	--
03/04/03		--	--	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	--	--
10/27/03		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
QA															
03/31/04		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
06/28/04		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
09/29/04		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
01/04/05		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
06/16/09		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
07/01/09		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
12/11/09		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
06/09/10		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
11/19/10		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
06/21/11		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
Standard Laboratory Reporting Limits:							--	--	50	0.5	0.5	0.5	1.5	--	0.00100
MTCA Method A CULs:							500	500	800/1,000	5	1,000	700	1,000	20	--
Current Method:							NWTPH-Dx + Extended		NWTPH-Gx and USEPA 8021						USEPA 6020

SAIC

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
FORMER CHEVRON SERVICE STATION NO. 20-9335
1225 North 45th Street
Seattle, Washington
Concentrations reported in µg/L

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to December 16, 2000, were compiled from reports prepared by Delta Environmental Consultants Inc.
Groundwater monitoring data and laboratory analytical results for February 9, 2006, and May 3, 2007, events were compiled from reports prepared by SAIC.
Analytical results in bold font indicate concentrations exceed MTCA Method A CULs.

TOC = Top of Casing
(ft.) = Feet
DTP = Depth to Product
DTW = Depth to Water
GWE = Groundwater Elevation
SPH = Separate Phase Hydrocarbon
SPHT = Separate Phase Hydrocarbon Thickness
TPH = Total Petroleum Hydrocarbons
TPH-DRO = TPH as Diesel-Range Organics
TPH-HRO = TPH as Heavy Oil-Range Organics
TPH-GRO = TPH as Gasoline-Range Organics
MTBE = Methyl Tertiary Butyl Ether
T. Lead = Total Lead
ND = Not Detected
NP = No Purge
-- = Not Measured/Not Analyzed
QA = Quality Assurance/Trip Blank
MTCA = Model Toxics Control Act Cleanup Regulations
CULs = Cleanup levels
LNAPL = Light Non-Aqueous Phase Liquid

* TOC elevations provided by SAIC. TOC elevations are referenced to mean sea level.
TOC elevations have been provided by Delta Environmental Consultants, Inc. referenced to an assumed datum in feet.

** GWE has been corrected for the presence of SPH; correction factor = [(TOC - DTW) + (SPHT x 0.80)]

*** GWE has been corrected for the presence of SPH; correction factor = [(TOC - DTP - SPHT) + (SPHT x 0.80)]; Historical data has been altered to correct error in original reporting of depth to product as depth to water.

1 Data provided by Delta Environmental Consultants, Inc.
2 Detection limit raised. Refer to analytical reports.
3 Analyzed with silica-gel cleanup.
4 Filtered at the laboratory.
5 Laboratory report indicates results in the diesel organics range are primarily due to overlap from a gasoline range product.
6 MTBE by USEPA Method 8260.
7 Laboratory report indicates the sample chromatographic pattern does not resemble the fuel standard used for quantitation.
8 Laboratory report indicates the sample was prepared outside of the method established holding time.
9 Skimmer in well.
10 Interface probe could not detect LNAPL/Groundwater Interface, unable to gauge hydrocarbon thickness and calculate corrected GWE. From visual confirmation estimate thickness to be approximately 1.5 feet.
11 Interface probe could not detect LNAPL/Groundwater Interface, unable to gauge hydrocarbon thickness and calculate corrected GWE. From visual confirmation estimate thickness to be approximately 2.25 feet.
12 Laboratory report indicates due to the nature of the sample extract matrix, a dilution was used for the analysis. The reporting limits were raised accordingly.
13 Laboratory confirmed result.

SAIC

Attachment A:
Groundwater Monitoring and Sampling Data Package

GETTLER-RYAN INC.

TRANSMITTAL

June 30, 2011
G-R #386750

TO: Mr. Michael Lange
SAIC
18912 North Creek Parkway, Suite 101
Bothell, WA 98011

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

RE: Former Chevron Service Station
#209335
1225 North 45th Street
Seattle, Washington

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package **Second Quarter Event of June 21, 2011**

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/209335

GETTLER-RYAN INC.

CHEVRON - SITE CHECK LIST

Facility#:	**Chevron #209335**	Date: 6-21-11
Address:	**1225 N. 45Th Street**	
City/St.:	**Seattle, WA**	
Status of Site:	~~Active~~ SIDEWALK / PARKING GARAGE	

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

#	Description	Condition	Labeling	Contents	Location
	NO DRUMS ONSITE				

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

Well ID	Well Box	Bolts	Well Plug	Well Lock	Other
MW-6	8" MORRIS	GOOD	→	→	→
MW-7	8" MORRIS	GOOD	→	→	→
MW-8	8" MORRIS	GOOD	→	→	→
MW-9	8" MORRIS	GOOD	→	→	→
MW-10	8" MORRIS	GOOD	→	→	→

Additional Comments/Observations: HEAVY SHEENING IN MW-7

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. (GR) field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. All work is performed in accordance with the GR Health & Safety Plan and all client-specific programs. The scope of work and type of analysis to be performed is determined prior to commencing field work.

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, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used. When 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. 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. 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 #209335 Job Number: 386750
Site Address: 1225 N. 45Th Street Event Date: 6.21.11 (inclusive)
City: Seattle, WA Sampler: J.PAYNE / A.WONG

Well ID MW-6 Date Monitored: 6.21.11
Well Diameter 2 in.
Total Depth 34.23 ft.
Depth to Water 25.77 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.

8.46 xVF .17 = 1.44 x3 case volume = Estimated Purge Volume: 4.5 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 27.46

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): 1115 Weather Conditions: SUNNY
Sample Time/Date: 1145 / 6.21.11 Water Color: Cloudy Odor: Y / N
Approx. Flow Rate: — gpm. Sediment Description: Cloudy
Did well de-water? NO If yes, Time: — Volume: — gal. DTW @ Sampling: 26.99

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm (µS))	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1125	1.5	6.61	645	15.6		
1130	3.0	6.64	662	16.0		
1135	4.5	6.63	670	16.1		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-6	3 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX(8021)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc
	1 x 500ml poly	YES	HNO3	LANCASTER	TOTAL LEAD (ICP/MS 6020)

COMMENTS: MW-5 / 8" / B-OK

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #209335 Job Number: 386750
Site Address: 1225 N. 45Th Street Event Date: 6/21/11 (inclusive)
City: Seattle, WA Sampler: AW

Well ID MW-7 Date Monitored: 6-21-11
Well Diameter 2 in.
Total Depth 33.57 ft.
Depth to Water 26.12 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.

7.45 xVF .17 = 1.27 x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 27.61

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): 1200 Weather Conditions: Sunny
Sample Time/Date: 1230 / 6-21-11 Water Color: Cloudy Odor: (Y) N / Strong
Approx. Flow Rate: — gpm. Sediment Description: Cloudy
Did well de-water? N If yes, Time: — Volume: — gal. DTW @ Sampling: 27.34

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm (µS))	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1205	1.5	6.81	515	16.4		
1210	3.0	6.85	544	16.6		
1215	4.0	6.87	570	16.7		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-7	3 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX(8021)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc
	1 x 500ml poly	YES	HNO3	LANCASTER	TOTAL LEAD (ICP/MS 6020)

COMMENTS: Sheen (Heavy) in H_2O marks / 8" / 3 -ok

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #209335 Job Number: 386750
Site Address: 1225 N. 45Th Street Event Date: 6.21.11 (inclusive)
City: Seattle, WA Sampler: J.PAYNE / A.WONG

Well ID MW-8 Date Monitored: 6.21.11
Well Diameter 2 in.
Total Depth 35.12 ft.
Depth to Water 26.18 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.

8.94 xVF .17 = 1.52 x3 case volume = Estimated Purge Volume: 4.5 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 27.97

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): 1030 Weather Conditions: SUNNY
Sample Time/Date: 1100 / 6.21.11 Water Color: Cloudy Odor: Y / N
Approx. Flow Rate: — gpm. Sediment Description: Cloudy
Did well de-water? NO If yes, Time: — Volume: — gal. DTW @ Sampling: ~~27.23~~ 27.23

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm (µS))	Temperature (C) F)	D.O. (mg/L)	ORP (mV)
1040	1.5	6.72	421	15.8		
1045	3.0	6.75	421	16.0		
1050	4.5	6.77	424	16.1		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8	3 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX(8021)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc
	1 x 500ml poly	YES	HNO3	LANCASTER	TOTAL LEAD (ICP/MS 6020)

COMMENTS: Monks / 8" / 3-OK

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #209335 Job Number: 386750
Site Address: 1225 N. 45Th Street Event Date: 6-21-11 (inclusive)
City: Seattle, WA Sampler: JP/AW

Well ID MW-9 Date Monitored: 6-21-11
Well Diameter 2 in.
Total Depth 44.23 ft.
Depth to Water 37.15 ft. ☐ Check if water column is less then 0.50 ft.
7.08 xVF .17 = 1.20 x3 case volume = Estimated Purge Volume: 4.0 gal.
Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 38.57

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

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): 0915 Weather Conditions: Sunny
Sample Time/Date: 0945 / 6-21-11 Water Color: Cloudy Odor: Y / N
Approx. Flow Rate: - gpm. Sediment Description: Cloudy
Did well de-water? N If yes, Time: - Volume: - gal. DTW @ Sampling: 38.50

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0920	1.5	6.53	347	13.7		
0925	3.0	6.57	362	13.9		
0930	4.0	6.60	364	14.1		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-9	3 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX(8021)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc
	1 x 500ml poly	YES	HNO3	LANCASTER	TOTAL LEAD (ICP/MS 6020)

COMMENTS: Morris 8"/3-OK

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #209335 Job Number: 386750
Site Address: 1225 N. 45Th Street Event Date: 6.21.11 (inclusive)
City: Seattle, WA Sampler: J. Payne / A. Work

Well ID MW-10 Date Monitored: 6.21.11
Well Diameter (2) in.
Total Depth 44.53 ft.
Depth to Water 36.46 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.

8.07 x VF .17 = 1.37 x3 case volume = Estimated Purge Volume: 4.11 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 38.07
1.61

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): 0830 Weather Conditions: Sunny
Sample Time/Date: 0900 / 6-21-11 Water Color: Cloudy Odor: Y / (N)
Approx. Flow Rate: gpm. Sediment Description: Cloudy
Did well de-water? NO If yes, Time: — Volume: — gal. DTW @ Sampling: 38.01

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm) (µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0835	1.5	6.62	384	13.8		
0840	3.0	6.65	395	14.0		
0845	4.5	6.65	400	14.1		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-10	3 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX(8021)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc
	1 x 500ml poly	YES	HNO3	LANCASTER	TOTAL LEAD (ICP/MS 6020)

COMMENTS: Morris 8/11/3 -OK

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

Chevron Northwest Region Analysis Request/Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

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

SCR #: _____

SS#209335-OML G-R#386750

Facility #: _____ WBS: _____

Site Address: 1225 N. 45th Street, SEATTLE, WA

Chevron PM: MGA 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. Payne A. Wong

Analyses Requested

Preservation Codes

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water	Matrix: Oil	Matrix: Air	Total Number of Containers	BTEX 8021 / 8260 / Naphth	8260 full scan	Oxygenates	NWTPH GX	NWTPH DX / Silica Gel Cleanup	Lead Total / Diss. / Method 6020	WAVPH / WAEPH	NWTPH H HCID / quantification	
QA	6.21.11		X			X			2	X			X					
MW-6		1145	X			X			6	X			X	X	X			
MW-7		1230	X			X			6	X			X	X	X			
MW-8		1100	X			X			6	X			X	X	X			
MW-9		0945	X			X			6	X			X	X	X			
MW-10		0900	X			X			6	X			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)

	Date	Time	Received by:	Date	Time
Relinquished by:	6/21/11	1600			
Relinquished by:					
Relinquished by:					
Relinquished by Commercial Carrier: UPS FedEx Other					
Temperature Upon Receipt ____ C°			Custody Seals Intact? Yes No		

Attachment B:
Laboratory Analysis Report

Lancaster Laboratories

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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

July 06, 2011

Project: 209335

Submittal Date: 06/22/2011
Group Number: 1252781
PO Number: 0015080810
Release Number: BAUHS
State of Sample Origin: WA

Client Sample Description	Lancaster Labs (LLI) #
QA Water Sample	6323862
MW-6 Grab Water Sample	6323863
MW-7 Grab Water Sample	6323864
MW-8 Grab Water Sample	6323865
MW-9 Grab Water Sample	6323866
MW-10 Grab Water Sample	6323867

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

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Jill M Parker at (717) 656-2300 Ext. 1241

Respectfully Submitted,

Tracy A. Cole

Tracy A. Cole
Senior Specialist

Lancaster Laboratories

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Analysis Report

Sample Description: QA Water Sample
Facility# 209335 Job# 386750
1225 N 45th St - Seattle, WA

LLI Sample # WW 6323862
LLI Group # 1252781
Account # 11260

Project Name: 209335

Collected: 06/21/2011

Submitted: 06/22/2011 10:20
Reported: 07/06/2011 14:31

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
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	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	11175A53A	06/25/2011 17:52	Laura M Krieger	1
02102	Method 8021 Water Master	SW-846 8021B	1	11175A53A	06/25/2011 17:52	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175A53A	06/25/2011 17:52	Laura M Krieger	1

Lancaster Laboratories

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Analysis Report

Sample Description: MW-6 Grab Water Sample
Facility# 209335 Job# 386750
1225 N 45th St - Seattle, WA

LLI Sample # WW 6323863
LLI Group # 1252781
Account # 11260

Project Name: 209335

Collected: 06/21/2011 11:45 by JP

Submitted: 06/22/2011 10:20
Reported: 07/06/2011 14:31

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

45SM6

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.	2,400	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	0.6	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1
02102	Total Xylenes	1330-20-7	9.2	1.5	1
GC Extractable TPH w/Si Gel	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
02211	DRO C12-C24 w/Si Gel	n.a.	270	31	1
02211	HRO C24-C40 w/Si Gel	n.a.	88	72	1
Metals	**SW-846 6020**		**ug/l**	**ug/l**	
06035	Lead	7439-92-1	3.2	0.080	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	11175A53A	06/26/2011 01:28	Laura M Krieger	1
02102	Method 8021 Water Master	SW-846 8021B	1	11175A53A	06/26/2011 01:28	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175A53A	06/26/2011 01:28	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740017A	06/26/2011 02:04	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740017A	06/24/2011 08:00	Cynthia J Salvatori	1
06035	Lead	SW-846 6020	1	111746050003A	06/25/2011 00:11	David K Beck	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	111746050003	06/24/2011 08:28	Denise K Conners	1

Lancaster Laboratories

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Analysis Report

Sample Description: MW-7 Grab Water Sample
Facility# 209335 Job# 386750
1225 N 45th St - Seattle, WA

LLI Sample # WW 6323864
LLI Group # 1252781
Account # 11260

Project Name: 209335

Collected: 06/21/2011 12:30 by JP

Submitted: 06/22/2011 10:20
Reported: 07/06/2011 14:31

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

45SM7

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.	150,000	5,000	100
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
02102	Benzene	71-43-2	45	10	20
02102	Ethylbenzene	100-41-4	2,600	10	20
02102	Toluene	108-88-3	4,800	10	20
02102	Total Xylenes	1330-20-7	18,000	30	20
GC Extractable TPH w/Si Gel	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
02211	DRO C12-C24 w/Si Gel	n.a.	11,000	760	25
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	1,800	25
Metals	**SW-846 6020**		**ug/l**	**ug/l**	
06035	Lead	7439-92-1	310	0.080	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	11175A53B	06/27/2011 11:02	Carrie E Miller	100
02102	Method 8021 Water Master	SW-846 8021B	1	11175A53A	06/26/2011 02:49	Laura M Krieger	20
01146	GC VOA Water Prep	SW-846 5030B	1	11175A53A	06/26/2011 02:49	Laura M Krieger	20
01146	GC VOA Water Prep	SW-846 5030B	2	11175A53B	06/27/2011 11:02	Carrie E Miller	100
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740017A	06/27/2011 21:16	Heather E Williams	25
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740017A	06/24/2011 08:00	Cynthia J Salvatori	1
06035	Lead	SW-846 6020	1	111746050003A	06/25/2011 00:13	David K Beck	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	111746050003	06/24/2011 08:28	Denise K Conners	1

Lancaster Laboratories

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Analysis Report

Sample Description: MW-8 Grab Water Sample
Facility# 209335 Job# 386750
1225 N 45th St - Seattle, WA

LLI Sample # WW 6323865
LLI Group # 1252781
Account # 11260

Project Name: 209335

Collected: 06/21/2011 11:00 by JP

Submitted: 06/22/2011 10:20
Reported: 07/06/2011 14:31

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

45SM8

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.	54	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	1.0	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1
02102	Total Xylenes	1330-20-7	N.D.	1.5	1
GC Extractable TPH w/Si Gel	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
02211	DRO C12-C24 w/Si Gel	n.a.	94	30	1
02211	HRO C24-C40 w/Si Gel	n.a.	150	69	1
Metals	**SW-846 6020**		**ug/l**	**ug/l**	
06035	Lead	7439-92-1	3.6	0.080	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	11181B53A	07/05/2011 18:55	Marie D John	1
02102	Method 8021 Water Master	SW-846 8021B	1	11181B53A	07/05/2011 18:55	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11181B53A	07/05/2011 18:55	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740017A	06/26/2011 02:24	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740017A	06/24/2011 08:00	Cynthia J Salvatori	1
06035	Lead	SW-846 6020	1	111746050003A	06/25/2011 00:18	David K Beck	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	111746050003	06/24/2011 08:28	Denise K Conners	1

Lancaster Laboratories

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Analysis Report

Sample Description: MW-9 Grab Water Sample
Facility# 209335 Job# 386750
1225 N 45th St - Seattle, WA

LLI Sample # WW 6323866
LLI Group # 1252781
Account # 11260

Project Name: 209335

Collected: 06/21/2011 09:45 by JP

Submitted: 06/22/2011 10:20
Reported: 07/06/2011 14:31

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

45SM9

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	Toluene	108-88-3	N.D.	0.5	1
02102	Total Xylenes	1330-20-7	N.D.	1.5	1
GC Extractable TPH w/Si Gel	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	70	1
Metals	**SW-846 6020**		**ug/l**	**ug/l**	
06035	Lead	7439-92-1	4.7	0.080	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	11181B53A	07/05/2011 19:22	Marie D John	1
02102	Method 8021 Water Master	SW-846 8021B	1	11181B53A	07/05/2011 19:22	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11181B53A	07/05/2011 19:22	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740017A	06/26/2011 02:45	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740017A	06/24/2011 08:00	Cynthia J Salvatori	1
06035	Lead	SW-846 6020	1	111746050003A	06/25/2011 00:20	David K Beck	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	111746050003	06/24/2011 08:28	Denise K Conners	1

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Analysis Report

Sample Description: MW-10 Grab Water Sample
Facility# 209335 Job# 386750
1225 N 45th St - Seattle, WA

LLI Sample # WW 6323867
LLI Group # 1252781
Account # 11260

Project Name: 209335

Collected: 06/21/2011 09:00 by JP

Submitted: 06/22/2011 10:20
Reported: 07/06/2011 14:31

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

45S10

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	Toluene	108-88-3	N.D.	0.5	1
02102	Total Xylenes	1330-20-7	N.D.	1.5	1
GC Extractable TPH w/Si Gel	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	31	1
02211	HRO C24-C40 w/Si Gel	n.a.	180	72	1
Metals	**SW-846 6020**		**ug/l**	**ug/l**	
06035	Lead	7439-92-1	5.7	0.080	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	11181B53A	07/05/2011 19:49	Marie D John	1
02102	Method 8021 Water Master	SW-846 8021B	1	11181B53A	07/05/2011 19:49	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11181B53A	07/05/2011 19:49	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740017A	06/26/2011 03:06	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740017A	06/24/2011 08:00	Cynthia J Salvatori	1
06035	Lead	SW-846 6020	1	111746050003A	06/25/2011 00:22	David K Beck	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	111746050003	06/24/2011 08:28	Denise K Conners	1

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: Chevron
Group Number: 1252781
Reported: 07/06/11 at 02:31 PM

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

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11175A53A	Sample number(s): 6323862-6323864							
Benzene	N.D.	0.2	ug/l	110	105	80-120	5	30
Ethylbenzene	N.D.	0.2	ug/l	105	105	80-120	0	30
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	109	109	75-135	0	30
Toluene	N.D.	0.2	ug/l	110	105	80-120	5	30
Total Xylenes	N.D.	0.6	ug/l	110	107	80-120	3	30
Batch number: 11175A53B	Sample number(s): 6323864							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	109	109	75-135	0	30
Batch number: 11181B53A	Sample number(s): 6323865-6323867							
Benzene	N.D.	0.2	ug/l	105	105	80-120	0	30
Ethylbenzene	N.D.	0.2	ug/l	105	105	80-120	0	30
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	109	109	75-135	0	30
Toluene	N.D.	0.2	ug/l	105	110	80-120	5	30
Total Xylenes	N.D.	0.6	ug/l	107	108	80-120	2	30
Batch number: 111740017A	Sample number(s): 6323863-6323867							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	75	73	56-103	3	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 111746050003A	Sample number(s): 6323863-6323867							
Lead	N.D.	0.080	ug/l	106		90-115		

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 111746050003A	Sample number(s): 6323863-6323867 UNSPK: P324533 BKG: P324533								
Lead	103	105	83-120	2	20	0.13	0.12	12 (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: Method 8021 Water Master
Batch number: 11175A53A

*- 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: 07/06/11 at 02:31 PM

Group Number: 1252781

Surrogate Quality Control

	Trifluorotoluene-P	Trifluorotoluene-F
6323862	66	64
6323863	63	63
6323864	71	
Blank	66	65
LCS	66	83
LCSD	66	82
Limits:	58-146	63-135

Analysis Name: Method 8021 Water Master
Batch number: 11175A53B

	Trifluorotoluene-P	Trifluorotoluene-F
6323864		75
Blank	67	70
LCS	66	83
LCSD	66	82
Limits:	58-146	63-135

Analysis Name: Method 8021 Water Master
Batch number: 11181B53A

	Trifluorotoluene-P	Trifluorotoluene-F
6323865	66	65
6323866	67	66
6323867	67	73
Blank	67	70
LCS	66	85
LCSD	66	86
Limits:	58-146	63-135

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 111740017A

	Orthoterphenyl
6323863	102
6323864	143
6323865	100
6323866	94
6323867	87
Blank	90
LCS	103
LCSD	101
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 # 1252781 Sample #: 6323862-67

SCR #:

Facility #: SS#209335-OML G-R#386750 WBS:
Site Address: 1225 N. 45th Street, SEATTLE, WA
Chevron PM: MGA 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. Payne A. Wong

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water	Matrix: Oil / Air	Total Number of Containers	BTEX + 8021 / 8260 Naphth	8260 full scan	Oxygenates	NWTPH GX	NWTPH DX / Silica Gel Cleanup	Lead Total / Diss. / Method 6020	WAVPH / WAEPH	NWTPH H HCID / quantification	
QA	6.21.11		X			X		2	X			X					
MW-6		1145	X			X		6	X			X	X	X			
MW-7		1280	X			X		6	X			X	X	X			
MW-8		1100	X			X		6	X			X	X	X			
MW-9		0945	X			X		6	X			X	X	X			
MW-10	↓	0900	X			X		6	X			X	X	X			

Analyses Requested
Preservation Codes: H, H, H2O2, HNO3

- ☐ 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)

	Date	Time		Date	Time
Relinquished by:	6/21/11	1600	Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS / FedEx / Other			Received by:	6/22/11	1020
Temperature Upon Receipt 0.6 / 1.8 C°			Custody Seals Intact? Yes / No		

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.

Lancaster Laboratories

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)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< 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.

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