SIT 2,3.2

February 24, 2014

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Mr. Brian Waite
Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, California 94583-5186

Subject: **Fourth Quarter 2013 Groundwater Monitoring and Sampling Report**
Former Standard Oil Service Station, Chevron Site No. 209335
1225 North 45th Street
Seattle, Washington

Dear Mr. Waite:

Leidos Engineering, LLC (Leidos; formerly SAIC Energy, Environment & Infrastructure, LLC), on behalf of Chevron Environmental Management Company (CEMC), prepared this letter summarizing the fourth quarter 2013 groundwater monitoring and sampling event at former Standard Oil Service Station, Chevron Site No. 209335 (the site) located in Seattle, Washington (Figure 1).

FIELD ACTIVITIES

Gettler-Ryan Inc. (Gettler-Ryan) conducted the groundwater monitoring and sampling field event on October 17, 2013. Gettler-Ryan collected depth-to-groundwater measurements and checked for the presence of separate-phase hydrocarbons (SPH) in monitoring wells MW-6, MW-7, MW-8, MW-9, and MW-10. SPH were observed in monitoring well MW-7. Groundwater flow is to the southwest at a gradient of approximately 0.006 to 0.02 feet per foot. A potentiometric map is provided on Figure 2.

Groundwater samples were collected from four monitoring wells and submitted under chain of custody (COC) procedures to Eurofins Lancaster Laboratories, Inc. in Lancaster, Pennsylvania for the following analyses:

- Total petroleum hydrocarbons (TPH) as gasoline-range organics by Northwest Method NWTPH-Gx;
- TPH as diesel-range organics and TPH as heavy oil-range organics by Northwest Method NWTPH-Dx extended with silica-gel cleanup;
- Benzene, toluene, ethylbenzene, and total xylenes by United States Environmental Protection Agency (USEPA) Method 8021B; and
- Total lead by USEPA Method 6020.

REPORT LIMITATIONS

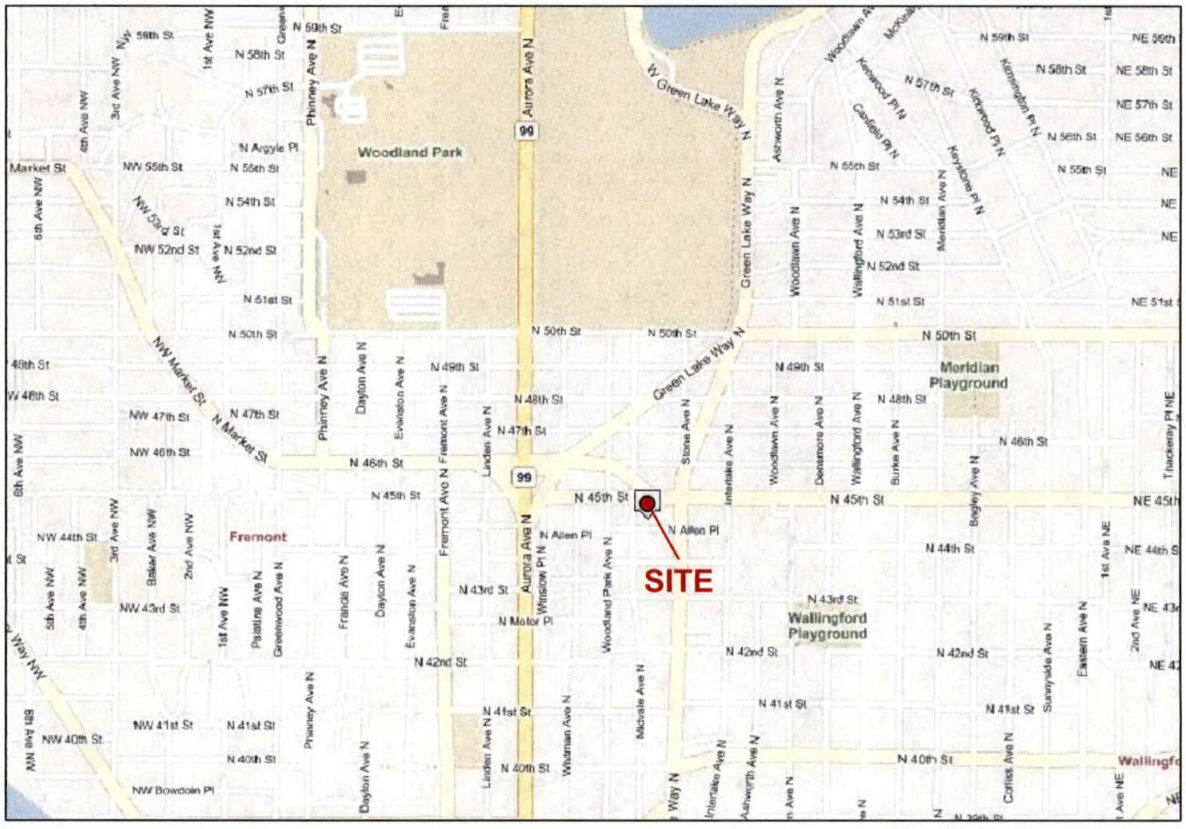
This technical document was prepared on behalf of CEMC and is intended for its sole use and for use by the local, state or federal regulatory agency that the technical document was sent to by Leidos. Any other person or entity obtaining, using, or relying on this technical document hereby acknowledges that they do so at their own risk, and that Leidos 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. Leidos 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 Leidos site visits or site work and cannot be applied to conditions and features of which Leidos is unaware and has not had the opportunity to evaluate.

All sources of information on which Leidos 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 Leidos 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

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Former Standard Oil Service Station, Chevron No. 209335 1225 North 45th Street Seattle, Washington	FIGURE 1 Vicinity Map	
	FILE NAME: 209335 Vicinity Map.dwg	DATE: 2/24/2014

NORTH 45TH STREET

Sidewalk

MW-6
170.54

170.40

MW-7
170.39**

170.40

Stoneway
Apartments

Sidewalk

MW-8
170.30

170.20

STONE WAY NORTH

Sidewalk

Beso del Sol Restaurant/
Natural Health Clinic

170.00

169.80

MW-9
170.34

Residence

Residence

Residence

Residence

Parking Lot (Asphalt)

Big Wheel Auto Parts

170.20

170.00

169.80

169.60

Parking Lot

MW-10
169.51

169.60

NORTH ALLEN PLACE

Legend

- Groundwater Monitoring Well
- 170.34 — Groundwater Elevation in Feet
- 170.39** — Groundwater Elevation Corrected for the Presence of Separate Phase Hydrocarbons (SPH)
- 170.00 — Groundwater Elevation Contour at an 0.2 Foot Interval (Dashed Where Inferred)
- Approximate Groundwater Flow Direction at a Gradient of 0.006 to 0.02 feet per foot

N

0 20 40

Feet

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Former Standard Oil Service Station,
Chevron No. 209335
1225 North 45th Street
Seattle, Washington

FIGURE 2
Potentiometric Map
October 17, 2013

DATE: 11/22/2013 | DRAWING: 209335 Site Map.dwg

TABLE 1

GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
FORMER STANDARD OIL SERVICE STATION, CHEVRON SITE NO. 209335
1225 North 45th Street
Seattle, 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	T. Lead
MW-3 (cont.)															
09/29/04	NP	98.76	--	38.01	0.00	60.75	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	--	--
01/04/05		98.76	--	38.19	0.00	60.57	SAMPLED SEMIANNUALLY			--	--	--	--	--	--
ABANDONED															
MW-4															
10/11/00		98.52	--	35.00	--	63.52	--	--	--	--	--	--	--	--	--
12/16/00		98.52	--	36.35	0.00	62.17	ND	ND	**58,200**	**326**	**5,520**	**1,430**	**8,520**	ND	0.0123
03/26/01		98.52	--	37.00	0.00	61.52	266	ND	**27,200**	**178**	**2,160**	**785**	**4,160**	ND	--
06/25/01		98.52	--	37.25	0.00	61.27	<250	<750	**12,300**	**69.0**	654	416	**1,910**	--	--
09/24/01		98.52	--	37.60	0.00	60.92	<250	<500	**4,130**	**30.1**	154	197	684	--	--
12/13/01		98.52	--	37.72	0.00	60.80	<250	<500	**5,490**	**30.3**	175	177	679	--	--
03/08/02	NP	98.52	--	38.36	0.00	60.16	<250	<750	**9,000**	<50	150	170	710	--	--
05/29/02	NP	98.52	--	36.86	0.00	61.66	<250	<750	**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	<250	**7,500**	**46**	230	240	630	--	--
12/05/02	NP	98.52	--	37.53	0.00	60.99	<250	<250	**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	<500	**2,200**	**16**	55	76	170	--	--
MW-4 (cont.)															
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	<250	**3,900**	**14**	96	110	340	--	--
06/28/04	NP	98.52	--	37.54	0.00	60.98	<250	<250	**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	<250	**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**	<250	**1,600**	**10**	13	60	110	--	--
01/14/05		98.52	--	37.58	0.00	60.94	--	--	--	--	--	--	--	--	--
ABANDONED															

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TABLE 1

GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
FORMER STANDARD OIL SERVICE STATION, CHEVRON SITE NO. 209335
1225 North 45th Street
Seattle, 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	T. Lead
MW-5															
10/11/00		99.42	--	34.50	--	64.92	--	--	--	--	--	--	--	--	--
12/16/00		99.42	--	37.18	0.00	62.24	**5,080**	ND	**146,000**	ND	**15,100**	**4,160**	**24,100**	ND	0.0200
03/26/01		99.42	--	37.91	0.00	61.51	**77,900**	ND	**149,000**	**256**	**10,600**	**4,000**	**24,200**	ND	--
06/25/01		99.42	--	38.14	0.00	61.28	**109,000**	<18,100	**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			--	--	--	--	--	--	--	--	--	--
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			--	--	--	--	--	--	--	--	--	--

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1225 North 45th Street
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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	T. Lead
MW-5 (cont.)															
01/14/05		99.42	WELL DRY/OBSTRUCTED			--	--	--	--	--	--	--	--	--	--
ABANDONED															
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	<70	<50	<0.5	<0.5	<0.5	<1.5	--	**22.9**
12/11/09	NP	197.18	--	27.55	0.00	169.63	35	<69	<50	<0.5	<0.5	<0.5	<1.5	--	0.76
06/09/10	NP	197.18	--	26.84	0.00	170.34	360	<340	**5,900**	<0.5	<0.5	<0.5	350	--	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
09/22/11	NP	197.18	--	25.90	0.00	171.28	<29	<69	660	<0.5	<0.5	<0.5	4.1	--	3.3
12/09/11	NP	197.18	--	27.34	0.00	169.84	<29	<69	64	**140**	0.5	<0.5	<1.5	--	0.44
03/30/12	NP	197.18	--	26.80	0.00	170.38	<30	<69	90	<0.5	<0.5	<0.5	<1.5	--	2.5
06/20/12	NP	197.18	--	26.56	0.00	170.62	<30	<70	<50	<0.5	<0.5	<0.5	<1.5	--	<0.034
10/05/12	NP	197.18	--	27.08	0.00	170.10	<32	<74	<50	<0.5	<0.5	<0.5	<1.5	--	1.2
12/27/12	NP	197.18	--	27.13	0.00	170.05	<29	<67	<50	<0.5	<0.5	<0.5	<1.5	--	2.0
03/18/13[8]		197.18	--	26.63	0.00	170.55	<30	<71	120	<0.5	<0.5	<0.5	<1.5	--	--
03/22/13[9]		197.18	--	26.71	0.00	170.47	<31	<72	100	<0.5	<0.5	<0.5	<1.5	--	--
03/28/13	NP	197.18	--	26.61	0.00	170.57	<29	<67	79	<0.5	<0.5	<0.5	<1.5	--	3.7
06/27/13	NP	197.18	--	26.42	0.00	170.76	<29	<68	120	<0.5	<0.5	<0.5	<1.5	--	1.3
10/17/13	NP	197.18	--	26.64	0.00	170.54	<29	<68	<50	<0.5	<0.5	<0.5	<1.5	--	0.3
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[6]		197.42	27.39	--[7]	--[7]	--[7]	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
12/11/09[6]		197.42	27.50	--[7]	--[7]	--[7]	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
06/09/10[6]		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**
09/22/11		197.42	--	26.25	0.00	171.17	**2,000**	<340	**100,000**	**29**	**4,300**	**1,900**	**17,000**	--	**94.4**
12/09/11		197.42	27.45	27.80	0.35	169.90	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--

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1225 North 45th Street
Seattle, 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	T. Lead
MW-7 (cont.)															
03/30/12		197.42	27.15	27.35	0.20	170.23	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
06/20/12		197.42	26.90	27.05	0.15	170.49	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
10/05/12		197.42	27.38	27.76	0.38	169.96	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
12/27/12		197.42	27.46	27.65	0.19	169.92	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
03/18/13[8]		197.42	27.01	27.18	0.17	170.38	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
03/22/13[9]		197.42	--	27.03	0.00	170.39	**5,200**	<69	**99,000**	**12**	**1,600**	**1,700**	**17,000**	--	--
03/28/13		197.42	26.91	27.00	0.09	170.49	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
06/27/13		197.42	26.77	26.79	0.02	170.65	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
10/17/13		197.42	27.03	27.05	0.02	170.39	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
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	<700	430	<0.5	<0.5	<0.5	2.2	--	3.5
12/11/09	NP	197.35	--	27.91	0.00	169.44	300	<69	<50	<0.5	<0.5	<0.5	<1.5	--	7.3
06/09/10	NP	197.35	--	27.21	0.00	170.14	280	180	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
09/22/11	NP	197.35	--	26.30	0.00	171.05	<29	<68	140	<0.5	<0.5	2.9	1.70	--	1.8
12/09/11	NP	197.35	--	27.70	0.00	169.65	70	<69	320	<2.0	<2.0	<0.5	3.0	--	0.30
03/30/12	NP	197.35	--	27.20	0.00	170.15	<30	<70	**2,000**	3.0	3.9	45	120	--	2.9
06/20/12	NP	197.35	--	27.00	0.00	170.35	<30	<70	170	0.7	0.7	1.3	2.2	--	1.8
10/05/12	NP	197.35	--	27.49	0.00	169.86	<31	<71	490	1.0	1.7	19	32	--	1.3
12/27/12	NP	197.35	--	27.49	0.00	169.86	<29	<68	280	0.6	0.7	4.7	6.8	--	1.1
03/18/13[8]		197.35	--	27.06	0.00	170.29	<30	<70	320	<0.5	<0.5	29	22	--	--
03/22/13[9]		197.35	--	27.13	0.00	170.22	<29	<68	360	<0.5	<0.5	29	22	--	--
03/28/13	NP	197.35	--	27.09	0.00	170.26	<29	<67	80	<0.5	<0.5	<0.5	<1.5	--	1.9
06/27/13	NP	197.35	--	26.86	0.00	170.49	<30	<69	<50	<0.5	<0.5	<0.5	<1.5	--	2.0
10/17/13	NP	197.35	--	27.05	0.00	170.30	<29	<68	<50	<0.5	<0.5	<0.5	<1.5	--	0.4
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	<71	--	--	--	--	--	--	--

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TABLE 1

GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
FORMER STANDARD OIL SERVICE STATION, CHEVRON SITE NO. 209335
1225 North 45th Street
Seattle, 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	T. Lead
MW-9 (cont.)															
12/11/09	NP	208.11	--	38.86	0.00	169.25	76	<69	<50	<0.5	<0.5	<0.5	<1.5	--	14.5
06/09/10	NP	208.11	--	38.17	0.00	169.94	42	110	<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
09/22/11	NP	208.11	--	37.25	0.00	170.86	<300	<700	<50	<0.5	<0.5	<0.5	<1.5	--	12.4
12/09/11	NP	208.11	--	38.66	0.00	169.45	<29	<68	<50	<0.5	<0.5	<0.5	<1.5	--	2.8
03/30/12	NP	208.11	--	29.60	0.00	178.51	<29	<68	<50	<0.5	<0.5	<0.5	<1.5	--	**114**
06/20/12	NP	208.11	--	38.00	0.00	170.11	<30	<70	<50	<0.5	<0.5	<0.5	<1.5	--	3.8
10/05/12	NP	208.11	--	38.44	0.00	169.67	<30	<70	<50	<0.5	<0.5	<0.5	<1.5	--	10.6
12/27/12	NP	208.11	--	38.50	0.00	169.61	<31	<73	<50	<0.5	<0.5	<0.5	<1.5	--	5.3
03/28/13	NP	208.11	--	29.73	0.00	178.38	<28	<66	<50	<0.5	<0.5	<0.5	<1.5	--	<0.073
06/27/13	NP	208.11	--	37.81	0.00	170.30	<29	<67	<50	<0.5	<0.5	<0.5	<1.5	--	5.4
10/17/13	NP	208.11	--	37.77	0.00	170.34	<29	<67	<50	<0.5	<0.5	<0.5	<1.5	--	0.34
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	<69	<50	<0.5	<0.5	<0.5	<1.5	--	10.9
12/11/09	NP	207.29	--	35.91	0.00	171.38	49	<69	<50	<0.5	<0.5	<0.5	<1.5	--	13.4
06/09/10	NP	207.29	--	37.48	0.00	169.81	50	88	<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
09/22/11	NP	207.29	--	36.60	0.00	170.69	<300	<700	<50	<0.5	<0.5	<0.5	<1.5	--	6.6
12/09/11	NP	207.29	--	35.71	0.00	171.58	<29	<69	<50	<0.5	<0.5	<0.5	<1.5	--	2.1
03/30/12	NP	207.29	--	29.80	0.00	177.49	<30	<69	<50	<0.5	<0.5	<0.5	<1.5	--	**110**
06/20/12	NP	207.29	--	37.35	0.00	169.94	<31	<71	<50	<0.5	<0.5	<0.5	<1.5	--	0.23
10/05/12	NP	207.29	--	37.79	0.00	169.50	45	<70	<50	<0.5	<0.5	<0.5	<1.5	--	3.7
12/27/12	NP	207.29	--	37.84	0.00	169.45	<29	<67	<50	<0.5	<0.5	<0.5	<1.5	--	2.2
03/28/13	NP	207.29	--	27.36	0.00	179.93	<29	<67	<50	<0.5	<0.5	<0.5	<1.5	--	<0.073
06/27/13	NP	207.29	--	37.16	0.00	170.13	<29	<67	<50	<0.5	<0.5	<0.5	<1.5	--	1.8
10/17/13	NP	207.29	--	37.78	0.00	169.51	<28	<66	<50	<0.5	<0.5	<0.5	<1.5	--	0.34

TABLE 1

GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
FORMER STANDARD OIL SERVICE STATION, CHEVRON SITE NO. 209335
1225 North 45th Street
Seattle, 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	T. Lead
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	--	--
09/22/11		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
12/09/11		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
03/30/12		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
06/20/12		QA Vials Not Received by the Laboratory													
10/05/12		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
12/27/12		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--

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GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
FORMER STANDARD OIL SERVICE STATION, CHEVRON SITE NO. 209335
1225 North 45th Street
Seattle, 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	T. Lead
QA (cont.)															
03/28/13		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
06/27/13		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
10/17/13		--	--	--	--	--	--	--	<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 Cleanup Levels:							500	500	800/1,000	5	1,000	700	1,000	20	15
Current Method[5]:							NWTPH-Dx + Extended[4]		NWTPH-Gx	USEPA 8021B					USEPA 6020

Abbreviations:

DTP = Depth to Product
DTW = Depth to Water
(ft.) = Feet
GWE = Groundwater Elevation
SPH = Separate Phase Hydrocarbons
MTBE = Methyl Tertiary Butyl Ether
MTCA = Model Toxics Control Act Cleanup Regulations
ND = Not Detected
NP = No Purge
QA = Quality Assurance/Trip Blank
SPH = Separate Phase Hydrocarbon
SPHT = Separate Phase Hydrocarbon Thickness
T. Lead = Total Lead
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 have been surveyed in feet relative to the 1988 North American Vertical Datum. MW-1 through MW-5 TOC Elevation are reference to an arbitrary benchmark of 100 feet.
3 When SPH is present, GWE has been corrected using the following formula: GWE = [(TOC - DTW) + (SPHT x 0.80)].
4 Analyzed with silica-gel cleanup.
5 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.
6 Skimmer in well.
7 Interface probe could not detect LNAPL/Groundwater Interface, unable to gauge hydrocarbon thickness and calculate corrected GWE.
8 Pre-surfactant injection groundwater sample.
9 Post-surfactant extraction groundwater sample.

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TABLE 1

GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
FORMER STANDARD OIL SERVICE STATION, CHEVRON SITE NO. 209335
1225 North 45th Street
Seattle, 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	T. Lead
MW-1															
10/11/00		97.95	--	34.50	--	63.45	--	--	--	--	--	--	--	--	--
12/16/00		97.95	--	35.91	0.00	62.04	ND	ND	74.4	ND	ND	ND	ND	ND	ND
03/26/01		97.95	--	36.54	0.00	61.41	ND	ND	ND	ND	ND	ND	ND	ND	--
06/25/01		97.95	--	36.78	0.00	61.17	<281	<842	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
09/24/01		97.95	--	37.14	0.00	60.81	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
12/13/01		97.95	--	37.25	0.00	60.70	<250	<500	<80.0	<0.500	<0.500	<0.500	<1.00	--	--
03/08/02	NP	97.95	--	36.79	0.00	61.16	<250	<750	<50	<0.50	<0.50	<0.50	<1.5	--	--
05/29/02		97.95	--	36.44	0.00	61.51	SAMPLED SEMIANNUALLY			--	--	--	--	--	--
09/16/02	NP	97.95	--	36.71	0.00	61.24	<250	<250	<50	<0.50	<0.50	<0.50	<1.5	--	--
12/05/02		97.95	--	37.09	0.00	60.86	SAMPLED SEMIANNUALLY			--	--	--	--	--	--
03/04/03	NP	97.95	--	37.26	0.00	60.69	<250	<250	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	<1,000	<50	<0.5	<0.5	<0.5	<1.5	--	--
06/28/04		97.95	--	37.14	0.00	60.81	SAMPLED SEMIANNUALLY			--	--	--	--	--	--
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 SEMIANNUALLY			--	--	--	--	--	--
ABANDONED															
MW-2															
10/11/00		98.70	--	34.50	--	64.20	--	--	--	--	--	--	--	--	--
12/16/00		98.70	--	36.46	0.00	62.24	**1,000**	ND	**28,100**	**283**	**2,560**	693	**4,020**	ND	0.00194
03/26/01		98.70	--	37.12	0.00	61.58	**1,180**	ND	**17,000**	**143**	**1,450**	378	**2,180**	ND	--
06/25/01		98.70	--	37.37	0.00	61.33	418	<750	**11,700**	**92.3**	547	181	**1,010**	--	--
09/24/01		98.70	--	37.72	0.00	60.98	**4,840**	<557	**22,100**	**120**	**1,380**	658	**4,100**	--	--
12/13/01		98.70	--	37.89	0.00	60.81	**5,540**	<500	**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					--	--	--	--
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				--	--	--	--	--	--	--	--	--

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TABLE 1

GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
FORMER STANDARD OIL SERVICE STATION, CHEVRON SITE NO. 209335
1225 North 45th Street
Seattle, 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	T. Lead
MW-2 (cont.)															
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		98.76	--	34.00	--	64.76	--	--	--	--	--	--	--	--	--
12/16/00		98.76	--	36.39	0.00	62.37	ND	ND	ND	ND	0.612	ND	1.95	ND	ND
03/26/01		98.76	--	37.05	0.00	61.71	ND	ND	ND	ND	ND	ND	ND	ND	--
06/25/01		98.76	--	37.29	0.00	61.47	<250	<750	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
09/24/01		98.76	--	37.64	0.00	61.12	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
12/13/01		98.76	--	37.78	0.00	60.98	<250	<500	<80.0	<0.500	<0.500	<0.500	<1.00	--	--
03/08/02	NP	98.76	--	37.28	0.00	61.48	<250	<750	320	<0.50	0.64	2.1	15	--	--
05/29/02		98.76	--	36.92	0.00	61.84	SAMPLED SEMIANNUALLY			--	--	--	--	--	--
09/16/02	NP	98.76	--	37.21	0.00	61.55	<250	<250	<50	<0.50	<0.50	<0.50	<1.5	--	--
12/05/02		98.76	--	37.58	0.00	61.18	SAMPLED SEMIANNUALLY			--	--	--	--	--	--
03/04/03	NP	98.76	--	37.79	0.00	60.97	<250	<250	<50	<0.50	<0.50	<0.50	<1.5	--	--
06/03/03		98.76	--	37.68	0.00	61.08	SAMPLED SEMIANNUALLY			--	--	--	--	--	--
10/27/03	NP	98.76	--	38.00	0.00	60.76	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	--	--
03/31/04	NP	98.76	--	37.65	0.00	61.11	<800	<1,000	<50	<0.5	<0.5	<0.5	<1.5	--	--
06/28/04		98.76	--	37.68	0.00	61.08	SAMPLED SEMIANNUALLY			--	--	--	--	--	--

leidos

Attachment A:
Groundwater Monitoring and Sampling Data Package

GETTLER-RYAN INC.

TRANSMITTAL

October 30, 2013
G-R #386750

TO: Ms. Ruth A. Otteman
Leidos, Inc.
18912 North Creek Parkway, Suite 101
Bothell, WA 98011

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
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 **Third Quarter Event of October 17, 2013**

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:	10.17.13
Address:	1225 N. 45Th Street		
City/St.:	Seattle, WA		
Status of Site:	SIDEWALK @ WALGREENS & APARTMENT PARKING		

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

#	Description	Condition	Labeling	Contents/Capacity	Location
	No Drums				

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	Replaced Plug Y/N	Replaced Lock Y/N	Well Box Manufacturer/Size/# of Bolts	Other
MW-6	GOOD				8" MORRIS 3	
MW-7	GOOD					
MW-8	GOOD					
MW-9	GOOD					
MW-10	GOOD					

Additional Comments/Observations: _____

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. Purge water is treated by filtering the water through granular activated carbon and is subsequently discharged to the ground surface at the site.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used. 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: 10.17.13 (inclusive)
City: Seattle, WA Sampler: J.P

Well ID MW-6 Date Monitored: 10.17.13
Well Diameter 2
Total Depth 34.17 ft.
Depth to Water 26.64 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.

7.53 xVF - = - x3 case volume = Estimated Purge Volume: - gal.

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

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump
Suction Pump
Grundfos
Peristaltic Pump
QED Bladder Pump
Other: No Purge

Sampling Equipment:
Disposable Bailer X
Pressure Bailer
Metal Filters
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: gal
Product Transferred to:

Start Time (purge): 0940 Weather Conditions: OVERCAST
Sample Time/Date: 1000 / 10.17.13 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: 26.64

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm µS)	Temperature (C) F)	D.O. (mg/L)	ORP (mV)
		6.72	.091	14.9		

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 250ml poly	YES	HNO3	LANCASTER	TOTAL LEAD (6020)

COMMENTS:

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: 10.17.13 (inclusive)
City: Seattle, WA Sampler: J.P

Well ID MW-7 Date Monitored: 10.17.13
Well Diameter 2
Total Depth 33.68 ft.
Depth to Water 27.05 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.

(33.68 - 27.05) 6.63 xVF 0.17 = 1.13 x3 case volume = Estimated Purge Volume: 3.39 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 28.38

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

Sampling Equipment:
- Disposable Bailer
- Pressure Bailer
- Metal Filters
- Peristaltic Pump
- QED Bladder Pump
- Other:

Time Started: (2400 hrs)
Time Completed: (2400 hrs)
Depth to Product: 27.03 ft
Depth to Water: 27.05 ft
Hydrocarbon Thickness: .02 ft
Visual Confirmation/Description: YELLOW/LIGHT
~~Skimmer / Absorbent Sock (circle one)~~
Amt Removed from Skimmer: gal
Amt Removed from Well: gal
Water Removed: gal
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)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX(8021)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc
	x 250ml poly	YES	HNO3	LANCASTER	TOTAL LEAD (6020)

COMMENTS: SPH

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: 10.17.13 (inclusive)
City: Seattle, WA Sampler: J.F

Well ID MW-8 Date Monitored: 10.17.13
Well Diameter 2
Total Depth 36.63 ft.
Depth to Water 27.65 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

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

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

Purge Equipment:
- Disposable Bailer
- Stainless Steel Bailer
- Stack Pump
- Suction Pump
- Grundfos
- Peristaltic Pump
- QED Bladder Pump
- Other: NO PURGE

Sampling Equipment:
- Disposable Bailer: X
- Pressure Bailer
- Metal Filters
- 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: gal
Product Transferred to:

Start Time (purge): 1612 Weather Conditions: OVERCAST
Sample Time/Date: 1636 / 10.17.13 Water Color: CLEAR Odor (Y) N MILD
Approx. Flow Rate: — gpm. Sediment Description: NONE
Did well de-water? No If yes, Time: — Volume: — gal. DTW @ Sampling: 27.65

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm µS)	Temperature (C) F)	D.O. (mg/L)	ORP (mV)
		6.74	.1000	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 250ml poly	YES	HNO3	LANCASTER	TOTAL LEAD (6020)

COMMENTS:

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: 10.17.13 (inclusive)
City: Seattle, WA Sampler: JF

Well ID MW-9 Date Monitored: 10.17.13
Well Diameter 2
Total Depth 44.12 ft.
Depth to Water 37.77 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.

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

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

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump
Suction Pump
Grundfos
Peristaltic Pump
QED Bladder Pump
Other: No Purge

Sampling Equipment:
Disposable Bailer X
Pressure Bailer
Metal Filters
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: gal
Product Transferred to:

Start Time (purge): ~~0911~~ 0928 Weather Conditions: Overcast
Sample Time/Date: 0946 10.17.13 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: 37.77

Time (2400 hr.)	Volume (gal.)	pH	Conductivity ~~(µmhos/cm µS)~~ mS	Temperature (C) F	D.O. (mg/L)	ORP (mV)
		6.88	.422	10.6		

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 250ml poly	YES	HNO3	LANCASTER	TOTAL LEAD (6020)

COMMENTS:

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: 10.17.13 (inclusive)
City: Seattle, WA Sampler: J.P

Well ID MW-10 Date Monitored: 10.17.13
Well Diameter 2
Total Depth 44.49 ft.
Depth to Water 37.78 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.

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

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

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump
Suction Pump
Grundfos
Peristaltic Pump
QED Bladder Pump
Other: No Purge

Sampling Equipment:
Disposable Bailer X
Pressure Bailer
Metal Filters
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: gal
Product Transferred to:

Start Time (purge): 0801
Sample Time/Date: 0910 / 10.17.13
Approx. Flow Rate: — gpm.
Did well de-water? No If yes, Time: — Volume: — gal. DTW @ Sampling: 37.78

Weather Conditions: Overcast
Water Color: clear Odor: Y (N)
Sediment Description: None

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
		6.91	.788	13.4		

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 250ml poly	YES	HNO3	LANCASTER	TOTAL LEAD (6020)

COMMENTS:

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

Chevron Northwest Region Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories

For Eurofins Lancaster Laboratories use only
Acct. # _____ Group # _____ Sample # _____
Instructions on reverse side correspond with circled numbers.

SCR #: _____

(1) Client Information

Facility # SS#209335-OML G-R#386750 WBS
Site Address 1225 N. 45th Street, SEATTLE, WA
Chevron PM MHO SAICRO Lead Consultant Ruth Otteman
Consultant/Office Gettler-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 945[illegible]
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com), (925) 551-7444 x1[illegible]0
Consultant Phone # (425) 482-3328 x
Sampler V. PAYNE

(2) Sample Identification

(3) Grab / Composite

(4) Matrix

Soil / Sediment / Water (Ground, Potable, Surface, NPDES) / Oil / Air

Total Number of Containers

(5) Analyses Requested

- BTEX + ~~MTBE~~ 8021 / Naphth / 8260
- 8260 full scan
- Oxygenates ____
- NWTPH-Gx
- NWTPH-Dx with Silica Gel Cleanup
- NWTPH-Dx without Silica Gel Cleanup
- WA VPH / WA EPH
- Lead: Total / Diss. / Method 6020

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Sediment	Water (Ground)	Potable	Surface	NPDES	Oil	Air	Total Number of Containers	BTEX + ~~MTBE~~ 8021	Naphth	8260	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead: Total	Lead: Diss.	Method 6020
Q.A	10-17		X				X						2	X					X							
MW-6		1000	X				X						5	X					X	X				X		
MW-8		1030	X				X						5	X					X	X				X		
MW-9		0946	X				X						5	X					X	X				X		
MW-10		0910	X				X						5	X					X	X				X		

(6) Remarks

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

- 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

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

Standard | 5 day | 4 day | 72 hour | 48 hour | 24 hour

EDF/EDD

(8) Data Package (circle if required)

Type I - Full
Type VI (Raw Data)

EDD (circle if required)
CVX-RTBU-FL_05 (default)
Other: _____

Relinquished by	Date	Time	Received by	Date	Time
	10-18-13	1200			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by Commercial Carrier: UPS X FedEx ____ Other ____			Received by	Date	Time
Temperature Upon Receipt ____ °C			Custody Seals Intact? Yes No		

(9)

Attachment B:
Laboratory Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

October 31, 2013

Project: 209335

Submittal Date: 10/19/2013
Group Number: 1427715
PO Number: 0015119898
Release Number: SHRILL HOPKINS
State of Sample Origin: WA

Client Sample Description	Lancaster Labs (LL) #
QA Water	7244131
MW-6 Grab Groundwater	7244132
MW-8 Grab Groundwater	7244133
MW-9 Grab Groundwater	7244134
MW-10 Grab Groundwater	7244135

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

ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan
ELECTRONIC COPY TO	SAIC	Attn: Jamalyn Green
ELECTRONIC COPY TO	SAIC	Attn: Ruth Otteman

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Respectfully Submitted,

Amek Carter

Amek Carter
Specialist

(717) 556-7252

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

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

LL Sample # WW 7244131
LL Group # 1427715
Account # 11260

Project Name: 209335

Collected: 10/17/2013

Submitted: 10/19/2013 11:20
Reported: 10/31/2013 15:21

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

45SQA

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. C457

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	13297A53A	10/24/2013 23:59	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	13297A53A	10/24/2013 23:59	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13297A53A	10/24/2013 23:59	Catherine J Schwarz	1

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2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: MW-6 Grab Groundwater
Facility# 209335 Job# 386750
1225 N. 45th Street - Seattle, WA

LL Sample # WW 7244132
LL Group # 1427715
Account # 11260

Project Name: 209335

Collected: 10/17/2013 10:00 by JP

Submitted: 10/19/2013 11:20
Reported: 10/31/2013 15:21

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

45S06

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 Petroleum Hydrocarbons w/Si	**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, is present at <1%.					
Metals	**SW-846 6020**		**ug/l**	**ug/l**	
06035	Lead	7439-92-1	0.33	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457

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	13297A53A	10/25/2013 01:19	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	13297A53A	10/25/2013 01:19	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13297A53A	10/25/2013 01:19	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133010034A	10/31/2013 11:53	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133010034A	10/29/2013 11:40	Kelli M Barto	1
06035	Lead	SW-846 6020	1	132986050006A	10/27/2013 19:38	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132986050006	10/27/2013 10:00	James L Mertz	1

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Analysis Report

Sample Description: MW-8 Grab Groundwater
Facility# 209335 Job# 386750
1225 N. 45th Street - Seattle, WA

LL Sample # WW 7244133
LL Group # 1427715
Account # 11260

Project Name: 209335

Collected: 10/17/2013 10:30 by JP

Submitted: 10/19/2013 11:20
Reported: 10/31/2013 15:21

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

45S08

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 Petroleum Hydrocarbons w/Si	**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, is present at <1%.					
Metals	**SW-846 6020**		ug/l	ug/l	
06035	Lead	7439-92-1	0.36	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457

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	13297A53A	10/25/2013 01:46	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	13297A53A	10/25/2013 01:46	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13297A53A	10/25/2013 01:46	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133010034A	10/31/2013 12:15	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133010034A	10/29/2013 11:40	Kelli M Barto	1
06035	Lead	SW-846 6020	1	132986050006A	10/27/2013 18:52	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132986050006	10/27/2013 10:00	James L Mertz	1

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Analysis Report

Sample Description: MW-9 Grab Groundwater
Facility# 209335 Job# 386750
1225 N. 45th Street - Seattle, WA

LL Sample # WW 7244134
LL Group # 1427715
Account # 11260

Project Name: 209335

Collected: 10/17/2013 09:46 by JP

Submitted: 10/19/2013 11:20
Reported: 10/31/2013 15:21

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

45S09

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 Petroleum Hydrocarbons w/Si	**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.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Metals	**SW-846 6020**		ug/l	ug/l	
06035	Lead	7439-92-1	0.34	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457

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	13297A53A	10/25/2013 02:13	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	13297A53A	10/25/2013 02:13	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13297A53A	10/25/2013 02:13	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133010034A	10/31/2013 12:38	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133010034A	10/29/2013 11:40	Kelli M Barto	1
06035	Lead	SW-846 6020	1	132986050006A	10/27/2013 19:40	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132986050006	10/27/2013 10:00	James L Mertz	1

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Analysis Report

Sample Description: MW-10 Grab Groundwater
Facility# 209335 Job# 386750
1225 N. 45th Street - Seattle, WA

LL Sample # WW 7244135
LL Group # 1427715
Account # 11260

Project Name: 209335

Collected: 10/17/2013 09:10 by JP

Submitted: 10/19/2013 11:20
Reported: 10/31/2013 15:21

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 Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		ug/l	ug/l	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Metals	**SW-846 6020**		ug/l	ug/l	
06035	Lead	7439-92-1	0.34	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457

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	13297A53A	10/25/2013 02:39	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	13297A53A	10/25/2013 02:39	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13297A53A	10/25/2013 02:39	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133010034A	10/31/2013 13:00	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133010034A	10/29/2013 11:40	Kelli M Barto	1
06035	Lead	SW-846 6020	1	132986050006A	10/27/2013 19:42	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132986050006	10/27/2013 10:00	James L Mertz	1

Quality Control Summary

Client Name: Chevron Group Number: 1427715
Reported: 10/31/13 at 03:21 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: 13297A53A	Sample number(s): 7244131-7244135							
Benzene	N.D.	0.2	ug/l	97	93	80-120	4	30
Ethylbenzene	N.D.	0.2	ug/l	98	95	80-120	4	30
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	99	103	75-135	5	30
Toluene	N.D.	0.2	ug/l	98	95	80-120	3	30
Total Xylenes	N.D.	0.6	ug/l	102	99	80-120	4	30
Batch number: 133010034A	Sample number(s): 7244132-7244135							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	63	61	32-117	3	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 132986050006A	Sample number(s): 7244132-7244135							
Lead	N.D.	0.085	ug/l	104		90-110		

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: 132986050006A	Sample number(s): 7244132-7244135 UNSPK: 7244133 BKG: 7244133								
Lead	103	101	89-120	1	20	0.36	0.35	5 (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: 13297A53A

	Trifluorotoluene-P	Trifluorotoluene-F
7244131	79	72
7244132	79	72
7244133	79	79
7244134	80	74
7244135	79	69

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

Quality Control Summary

Client Name: Chevron
Group Number: 1427715
Reported: 10/31/13 at 03:21 PM

Surrogate Quality Control

Blank	81	75
LCS	80	79
LCSD	79	79
Limits:	51-120	63-135

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 133010034A

	Orthoterphenyl
7244132	80
7244133	80
7244134	73
7244135	75
Blank	85
LCS	84
LCSD	77
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

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Acct. # 11260 For Eurofins Lancaster Laboratories use only Group # 1427715 Sample # 724131-35
Instructions on reverse side correspond with circled numbers.

SCR #: _____

(1) Client Information

Facility # SS#209335-OML G-R#386750 WBS

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

Chevron PM MHO SAICRO Lead Consultant Ruth Otteman

Consultant/Office Gettler-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568

Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com), (925) 551-7444 x180

Consultant Phone # (425) 482-3328 x

Sampler J. Payne

(4) Matrix

Sediment ☐ Soil ☐ | Ground ☑ Potable ☐ Water | Surface ☐ NPDES ☐ | Air ☐ Oil ☐

(5) Analyses Requested

(2) Sample Identification	Collected Date	Collected Time	(3) Grab	(3) Composite	Total Number of Containers	BTEX + ~~MTBE~~ 8021	8260 full scan	Oxygenates ____	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead Total	Lead Diss.	Method 6020	Naphth	8260
Q.A	10.17		X		2	X			X									
MW-6	↓	1000	X		5	X			X	X				X				
MW-8		1030	X		5	X			X	X				X				
MW-9		0946	X		5	X			X	X				X				
MW-10		0910	X		5	X			X	X				X				

(6) Remarks

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

- ☐ 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

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

Standard | 5 day | 4 day | 72 hour | 48 hour | 24 hour

(8) Data Package (circle if required)

Type I - Full
Type VI (Raw Data)

EDD (circle if required) EQUIS
CVX-RTBU-FI_05 (default)
Other: _____

Relinquished by	Date	Time	Received by	Date	Time
	10.18.13	12pp			(9)
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by Commercial Carrier: UPS X FedEx ____ Other ____			Received by	Date 10/19/13	Time 1120
Temperature Upon Receipt 2.0-4.0 °C			Custody Seals Intact?	Yes	No

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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

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 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.

Data Qualifiers:

C – result confirmed by reanalysis.

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

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	**B**	Value is <CRDL, but ≥IDL
B	Analyte was also detected in the blank	**E**	Estimated due to interference
C	Pesticide result confirmed by GC/MS	**M**	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	**N**	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	**S**	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	**U**	Compound was not detected
P	Concentration difference between primary and confirmation columns >25%	**W**	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	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.