

July 11, 2017



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Mr. Dale Myers
Washington State Department of Ecology
3190 160th Ave SE
Bellevue, Washington 98008-5452

Subject: **First Semi-annual 2017 Groundwater Monitoring and Sampling Report
Former Standard Oil Service Station, Chevron Site No. 209335**
1225 North 45th Street
Seattle, Washington

Dear Mr. Myers:

Leidos Inc. (Leidos), on behalf of Chevron Environmental Management Company (CEMC), prepared this letter summarizing the first semi-annual 2017 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 May 17, 2017. 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 not observed in any of the monitoring wells. Groundwater flow direction was toward the south at a gradient of approximately 0.002 to 0.007 feet per foot. A potentiometric map is provided as Figure 2.

Groundwater samples were collected from all 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 (TPH-GRO) by Northwest Method NWTPH-Gx;
- TPH as diesel-range organics (TPH-DRO) and TPH as heavy oil-range organics (TPH-HRO) by Northwest Method NWTPH-Dx extended with and without 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.

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

RESULTS

Groundwater elevations and flow direction during this event are consistent with historical data. 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 and hydrographs are included in Attachment C.

The results of the first semi-annual 2017 sampling event indicate that petroleum-hydrocarbon constituent concentrations have been below Model Toxics Control Act (MTCA) Method A cleanup levels for at least three consecutive quarters in monitoring wells MW-8, MW-9, and MW-10. Concentrations of lead in monitoring well MW-6 and lead, TPH-DRO, TPH-GRO, ethylbenzene, and toluene in monitoring well MW-7 were above their respective MTCA Method A cleanup levels during this sampling event.

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

Sincerely,

Leidos Inc.



Ruth Otteman, LG #2633
Project Manager



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

Attachment C – Hydrographs

cc: Mr. Mark Horne – Chevron Environmental Management Company

6001 Bollinger Canyon Road, San Ramon, CA 94583

Ms. Veronica Redstone – Bellwether (hard copy & email)

1651 Bellevue Avenue, Seattle, WA 98122-2014

vredstone@bellwetherhousing.org

Project File

REPORT LIMITATIONS

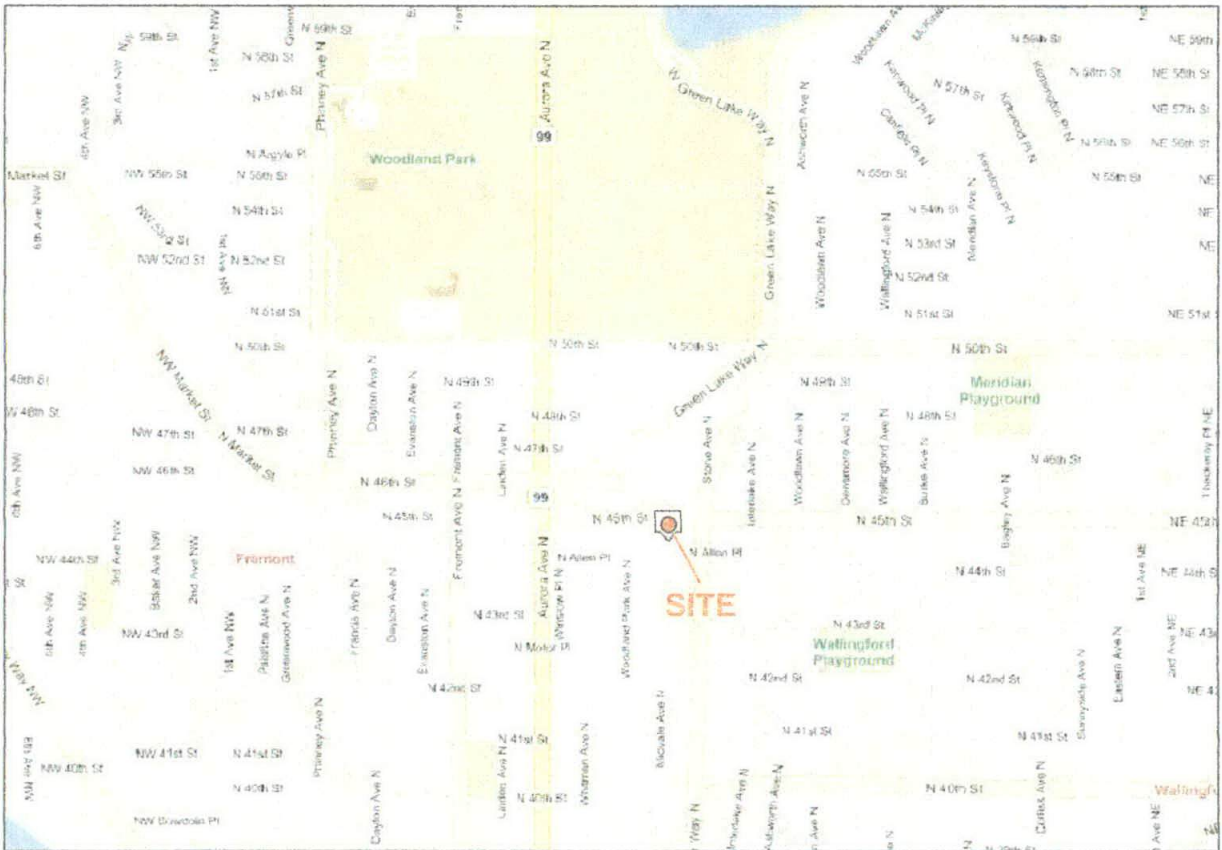
This technical document was prepared on behalf of CEMC and is intended for its sole use and for use by the local, state or federal regulatory agency that the technical document was sent to by Leidos. Any other person or entity obtaining, using, or relying on this technical document hereby acknowledges 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



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:
8/7/2014

NORTH 45TH STREET



Legend

-  Groundwater Monitoring Well
- 171.19 Groundwater Elevation in Feet
- 170.00  Groundwater Elevation Contour at an 0.1-Foot Interval (Dashed Where Inferred)
-  Approximate Groundwater Flow Direction at a Gradient of 0.002 to 0.007 feet per foot



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

FIGURE 2
 Potentiometric Map
 May 17, 2017

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
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	Total 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			--	--	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
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	Total 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		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					--	--	--	--

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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	Total Lead
MW-3 (cont.)															
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			--	--	--	--	--	--
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	--	--
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	--	--

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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	Total Lead
MW-4 (cont.)															
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															
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			--	--	--	--	--	--	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
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	Total Lead
MW-5 (cont.)															
01/04/05		99.42	WELL DRY/OBSTRUCTED			--	--	--	--	--	--	--	--	--	--
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
03/20/14	NP	197.18	--	26.68	0.00	170.50	<30	<70	<50	<0.5	<0.5	<0.5	<1.5	--	4.0
06/25/14	NP	197.18	--	26.85	0.00	170.33	<29	<67	<50	<0.5	<0.5	<0.5	<1.5	--	2.1
09/24/14	NP	197.18	--	27.19	0.00	169.99	<28	<66	<50	<0.2	<0.2	<0.2	<0.2	--	0.00048
12/11/14	NP	197.18	--	27.16	0.00	170.02	<28	<66	<50	<0.5	<0.5	<0.5	<1.5	--	1.5
03/11/15	NP	197.18	--	26.66	0.00	170.52	<30	<71	<50	<0.5	0.5	<0.5	<1.5	--	0.0063
10/21/15	NP	197.18	--	27.47	0.00	169.71	<28	<66	<50	<0.5	<0.5	<0.5	<1.5	--	10.9
04/20/16	NP	197.18	--	26.66	0.00	170.52	<28	<66	<50	<0.5	<0.5	<0.5	<1.5	--	0.0064
10/17/16	NP	197.18	--	26.98	0.00	170.20	<28	<66	<50	<0.5	<0.5	<0.5	<1.5	--	14.8
05/17/17	NP	197.18	--	25.99	0.00	171.19	<29	<68	<50	<0.5	<0.5	<0.5	<1.5	--	30.5
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			--	--	--	--	--	--	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
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	Total Lead
MW-7 (cont.)															
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				--	--	--	--	--
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				--	--	--	--	--
03/20/14		197.42	26.99	27.11	0.12	170.41	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--
06/25/14		197.42	27.26	27.28	0.02	170.16	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--
09/24/14		197.42	27.56	27.61	0.05	169.85	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--
12/11/14	NP	197.42	--	27.50	0.00	169.92	55,000	<6,900	96,000	<13	600	660	14,000	--	168
03/11/15	NP	197.42	--	26.96	0.00	170.46	200,000	<17,000	65,000	<5.0	470	570	6,700	--	0.0717
10/21/15		197.42	27.77	28.17	0.40	169.57	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--
04/20/16		197.42	26.91	27.31	0.40	170.43	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--
10/17/16		197.42	27.25	27.57	0.32	170.11	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--	--
05/17/17	NP	197.42	--	26.38	0.00	171.04	29,000	<660	480,000	<50	360	1,400	18,000	--	1,020
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

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
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	Total Lead
MW-8 (cont.)															
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
03/20/14	NP	197.35	--	27.01	0.00	170.34	<29	<67	<50	<0.5	<0.5	<0.5	<1.5	--	1.4
06/25/14	NP	197.35	--	27.31	0.00	170.04	<30	<69	<50	<0.5	<0.5	<0.5	<1.5	--	0.24
09/24/14	NP	197.35	--	27.63	0.00	169.72	<29	<67	93	<0.2	<0.2	2.9	1	--	0.00013
12/11/14	NP	197.35	--	27.46	0.00	169.89	<30	<70	59	<0.5	0.5	0.6	<1.5	--	0.12
03/11/15	NP	197.35	--	27.18	0.00	170.17	<29	<68	<50	<0.5	<0.5	<0.5	<1.5	--	0.00032
10/21/15	NP	197.35	--	27.89	0.00	169.46	<28	<66	110	<0.5	<0.5	1.1	3.9	--	0.63
04/20/16	NP	197.35	--	27.87	0.00	169.48	<28	<66	<50	<0.5	<0.5	<0.5	<1.5	--	0.00046
10/17/16	NP	197.35	--	27.42	0.00	169.93	<29	<67	<50	<0.5	<0.5	<0.5	<1.5	--	0.16
05/17/17	NP	197.35	--	26.46	0.00	170.89	<28	<66	<50	<0.5	<0.5	<0.5	<1.5	--	0.56
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	--	--	--	--	--	--	--
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
03/20/14	NP	208.11	--	29.58	0.00	178.53	<29	<68	<50	<0.5	<0.5	<0.5	<1.5	--	4.1
06/25/14	NP	208.11	--	34.92	0.00	173.19	<30	<69	<50	<0.5	<0.5	<0.5	<1.5	--	2.5
09/24/14	NP	208.11	--	38.56	0.00	169.55	<29	<67	<50	<0.2	<0.2	<0.2	<0.2	--	0.0015
12/11/14	NP	208.11	--	38.53	0.00	169.58	<28	<66	<50	<0.5	<0.5	<0.5	<1.5	--	<0.082

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
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	Total Lead
MW-9 (cont.)															
03/11/15	NP	208.11	--	29.63	0.00	178.48	<28	<66	<50	<0.5	0.5	<0.5	<1.5	--	0.00020
10/21/15	NP	208.11	--	38.81	0.00	169.30	<28	<66	<50	<0.5	0.5	<0.5	<1.5	--	12.4
04/20/16	NP	208.11	--	38.02	0.00	170.09	<29	<67	<50	<0.5	0.5	<0.5	<1.5	--	0.0049
10/17/16	NP	208.11	--	38.32	0.00	169.79	<28	<66	<50	<0.5	0.5	<0.5	<1.5	--	3.2
05/17/17	NP	208.11	--	37.41	0.00	170.70	<28	<66	<50	<0.5	0.5	<0.5	<1.5	--	1.6
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
03/20/14	NP	207.29	--	29.77	0.00	177.52	<30	<69	<50	<0.5	<0.5	<0.5	<1.5	--	<0.085
06/23/14	NP	207.29	--	35.03	0.00	172.26	<30	<71	<50	<0.5	<0.5	<0.5	<1.5	--	2.5
09/24/14	NP	207.29	--	37.88	0.00	169.41	<30	<70	<50	<0.2	<0.2	<0.2	<0.2	--	0.00095
12/11/14	NP	207.29	--	37.88	0.00	169.41	<29	<67	<50	<0.5	<0.5	<0.5	<1.5	--	<0.082
03/11/15	NP	207.29	--	29.71	0.00	177.58	<29	<69	<50	<0.5	<0.5	<0.5	<1.5	--	0.00020
10/21/15	NP	207.29	--	38.14	0.00	169.15	<28	<66	<50	<0.5	<0.5	<0.5	<1.5	--	20.1
04/20/16	NP	207.29	--	37.39	0.00	169.90	<29	<67	<50	<0.5	<0.5	<0.5	<1.5	--	0.0113
10/17/16	NP	207.29	--	37.69	0.00	169.60	<28	<66	<50	<0.5	<0.5	<0.5	<1.5	--	12.0
05/17/17	NP	207.29	--	36.78	0.00	170.51	<28	<66	<50	<0.5	<0.5	<0.5	<1.5	--	3.6
QA															
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	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
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	Total Lead
QA (cont.)															
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	--	--
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	--	--
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	--	--
03/20/14		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
06/25/14		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
09/24/14		--	--	--	--	--	--	--	<50	<0.2	<0.2	<0.2	<0.2	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
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	Total Lead
QA (cont.)															
12/11/14		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
03/11/15		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
10/23/15		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
04/20/16		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
10/17/16		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
05/17/17		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
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

MTBE = Methyl Tertiary Butyl Ether

MTCA = Model Toxics Control Act

ND = Not Detected

NP = No Purge

QA = Quality Assurance/Trip Blank

SPH = Separate Phase Hydrocarbon

SPHT = Separate Phase Hydrocarbon Thickness

TOC = Top of Casing

TPH = Total Petroleum Hydrocarbons

TPH-DRO = TPH as Diesel-Range Organics

TPH-GRO = TPH as Gasoline-Range Organics

TPH-HRO = TPH as Heavy Oil-Range Organics

USEPA = United States Environmental Protection Agency

µg/L = Micrograms per liter

-- = Not Measured/Not Analyzed

Notes:

1 Analytical results in bold font indicate concentrations exceed MTCA Method A Cleanup Levels.

2 TOC elevations have been surveyed in feet relative to the 1988 North American Vertical Datum. MW-1 through MW-5 TOC elevations are reference to an arbitrary benchmark of 100 feet.

3 When SPH is present, GWE has been corrected using the following formula: $GWE = [(TOC - DTW) + (SPHT \times 0.80)]$.

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 SPH/Groundwater Interface, unable to gauge hydrocarbon thickness and calculate corrected GWE.

8 Pre-surfactant injection groundwater sample.

9 Post-surfactant extraction groundwater sample.

Attachment A:
Groundwater Monitoring and Sampling Data Package



GETTLER-RYAN INC.

TRANSMITTAL

May 25, 2017
G-R #17156750

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 First Semi Annual Event of May 17, 2017

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: 5-17-17
Address: 1225 N. 45th Street	
City/St.: Seattle, WA	
Status of Site: Apt parking / sidewalk	

DRUMS:

Please list below ALL DRUMS on site:

(i.e., drum description, condition, labeling, contents and location of drums)



#	Description	Condition	Labeling	Contents/Capacity	Location
	No Drums				

WELLS:

Please check the condition of ALL WELLS on site:

(i.e., gaskets, bolts, replaced well plug and/or well lock, well box condition and 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	OK	OK	N	N	man / 8" / 3	
MW-7	↓	↓	↓	↓	↓	
MW-8	↓	↓	↓	↓	↓	
MW-9	↓	↓	↓	↓	↓	
MW-10	↓	↓	↓	↓	↓	

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. Total well depths are measured annually.

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: 17156750
 Site Address: 1225 N. 45th Street Event Date: 5-17-17 (inclusive)
 City: Seattle, WA Sampler: AW / GM

Well ID: MW-6 Date Monitored: 5-17-17
 Well Diameter: 2 in.
 Total Depth: 33.10 ft.
 Depth to Water: 25.99 ft. Check if water column is less than 0.50 ft.
7.11 xVF — = — x3 case volume = Estimated Purge Volume: — gal.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

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

Purge Equipment:

Disposable Bailer /
 Stainless Steel Bailer /
 Stack Pump /
 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: — ft
 Depth to Water: — ft
 Hydrocarbon Thickness: — ft
 Visual Confirmation/Description: —
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: — ltr
 Amt Removed from Well: — ltr
 Water Removed: — ltr
 Product Transferred to: —

Start Time (purge): 1800 — Weather Conditions: Sunny
 Sample Time/Date: 1500 15-17-17 Water Color: Cloudy Odor: Y 1/10
 Approx. Flow Rate: — gpm. Sediment Description: Cloudy
 Did well de-water? — If yes, Time: — Volume: — gal. DTW @ Sampling: 25.99

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

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-6	3 x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8021)
	2 x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc/NWTPG-Dx
	1 x 250ml poly	YES	HNO3	EUROFINS	TOTAL LEAD(6020)

COMMENTS: No purge sample

Add/Replaced Gasket: — Add/Replaced Bolt: — Add/Replaced Plug: — Add/Replaced Lock: —



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #209335
 Site Address: 1225 N. 45th Street
 City: Seattle, WA

Job Number: 17156750
 Event Date: 5-17-17 (inclusive)
 Sampler: AW/CM

Well ID: MW-7
 Well Diameter: 2 in.
 Total Depth: 33.52 ft.
 Depth to Water: 26.38 ft.
7.14 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 5-17-17

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 than 0.50 ft.

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

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 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: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): _____ Weather Conditions: Sunny
 Sample Time/Date: 1550 / 5-17-17 Water Color: Cloudy Odor: (N) N
 Approx. Flow Rate: _____ gpm. Sediment Description: Strong Cloudy
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 26.38

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

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-7	3 x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8021)
	2 x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc/NWTPG-Dx
	1 x 250ml poly	YES	HNO3	EUROFINS	TOTAL LEAD(6020)

COMMENTS: No purge sample

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



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #209335
 Site Address: 1225 N. 45th Street
 City: Seattle, WA

Job Number: 17156750
 Event Date: 5/17/17 (inclusive)
 Sampler: AW/GM

Well ID: MW-8
 Well Diameter: 2 in.
 Total Depth: 31.92 ft.
 Depth to Water: 26.46 ft.
5.46 xVF = = x3 case volume = Estimated Purge Volume: gal.

Date Monitored: 5-17-17

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 than 0.50 ft.

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

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer
 Stack Pump
 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: ft
 Depth to Water: ft
 Hydrocarbon Thickness: ft
 Visual Confirmation/Description:
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: ltr
 Amt Removed from Well: ltr
 Water Removed: ltr
 Product Transferred to:

Start Time (purge):
 Sample Time/Date: 15.25 / 5-17-17
 Approx. Flow Rate: gpm.
 Did well de-water? If yes, Time: Volume: gal.

Weather Conditions: Sunny
 Water Color: Cloudy Odor: Y10
 Sediment Description: Cloudy
 DTW @ Sampling: 26.46

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS / cmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8	3 x vovial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8021)
	2 x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc/NWTPG-Dx
	1 x 250ml poly	YES	HNO3	EUROFINS	TOTAL LEAD(6020)

COMMENTS: No purge sample

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



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #209335
 Site Address: 1225 N. 45th Street
 City: Seattle, WA

Job Number: 17156750
 Event Date: 5-17-17 (inclusive)
 Sampler: BW/GM

Well ID: MW-9
 Well Diameter: 2 in.
 Total Depth: 44.21 ft.
 Depth to Water: 37.41 ft.
6.80 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 5-17-17

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.65	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

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

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 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: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): _____ Weather Conditions: Sunny
 Sample Time/Date: 1400 / 5-17-17 Water Color: Cloudy Odor: Y-10
 Approx. Flow Rate: _____ gpm. Sediment Description: Cloudy
 Did well de-water? N If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 37.41

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

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-9	3 x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8021)
	2 x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc/NWTPG-Dx
	x 250ml poly	YES	HNO3	EUROFINS	TOTAL LEAD(8020)

COMMENTS: No purge sample.

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



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #209335
 Site Address: 1225 N. 45th Street
 City: Seattle, WA

Job Number: 17156750
 Event Date: 5-17-17 (inclusive)
 Sampler: AW/GM

Well ID: MW-10
 Well Diameter: 2 in.
 Total Depth: 40.40 ft.
 Depth to Water: 36.78 ft.

Date Monitored: 5-17-17

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____
 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Purge Equipment:

Disposable Bailor _____
 Stainless Steel Bailor _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailor
 Pressure Bailor _____
 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: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): _____
 Sample Time/Date: 1425 / 5-17-17
 Approx. Flow Rate: _____ gpm.
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 36.78

Weather Conditions: Sunny
 Water Color: Cloudy Odor: Y / 10
 Sediment Description: Cloudy

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS pmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-10	3 x vov vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8021)
	2 x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc/NWTPG-Dx
	1 x 250ml poly	YES	HNO3	EUROFINS	TOTAL LEAD(6020)

COMMENTS: No purge sample.

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

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____

For Eurofins Lancaster Laboratories use only
Group # _____ Sample # _____

Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analyses Requested										6 Remarks																																																																																																																																																				
Facility # SS#209335-OML G-R#17156750 WBS			<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air			Total Number of Containers BTEX <input checked="" type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>6.0210</u>										SCR #: _____																																																																																																																																																				
Site Address 225 N. 45th Street, SEATTLE, WA																																																																																																																																																																				
Chevron WHO LEIDOSRO Lead Consultant Ruth Otteman																																																																																																																																																																				
Consultant/Office Gentler-Ryan Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568																																																																																																																																																																				
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)																																																																																																																																																																				
Consultant Phone # (925) 551-7444 x180			Composite <input type="checkbox"/>			Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits <input type="checkbox"/>																																																																																																																																																														
Sampler Alex W., Gilbert M.																																																																																																																																																																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">2 Sample Identification</th> <th colspan="2" style="text-align: center;">3 Collected</th> <th rowspan="2" style="text-align: center;">Grab</th> <th rowspan="2" style="text-align: center;">Soil</th> <th rowspan="2" style="text-align: center;">Water</th> <th rowspan="2" style="text-align: center;">Oil</th> <th rowspan="2" style="text-align: center;">Total Number of Containers</th> <th rowspan="2" style="text-align: center;">BTEX</th> <th rowspan="2" style="text-align: center;">8260 full scan</th> <th rowspan="2" style="text-align: center;">Oxygenates</th> <th rowspan="2" style="text-align: center;">NWTPH-Gx</th> <th rowspan="2" style="text-align: center;">NWTPH-Dx with Silica Gel Cleanup</th> <th rowspan="2" style="text-align: center;">NWTPH-Dx without Silica Gel Cleanup</th> <th rowspan="2" style="text-align: center;">WA VPH</th> <th rowspan="2" style="text-align: center;">WA EPH</th> <th rowspan="2" style="text-align: center;">Lead Total</th> <th rowspan="2" style="text-align: center;">Diss.</th> <th rowspan="2" style="text-align: center;">Method</th> </tr> <tr> <th>Date</th> <th>Time</th> <th>Date</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>GA</td> <td>170517</td> <td></td> <td></td> <td><input checked="" type="checkbox"/></td> <td></td> <td><input checked="" type="checkbox"/></td> <td></td> <td>2</td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>mw-6</td> <td></td> <td></td> <td>1500</td> <td><input checked="" type="checkbox"/></td> <td></td> <td><input checked="" type="checkbox"/></td> <td></td> <td>6</td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>mw-7</td> <td></td> <td></td> <td>1550</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>mw-8</td> <td></td> <td></td> <td>1525</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>mw-9</td> <td></td> <td></td> <td>1400</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>mw-10</td> <td></td> <td></td> <td>1425</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			2 Sample Identification		3 Collected											Grab	Soil	Water	Oil	Total Number of Containers	BTEX	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	Date	Time	Date	Time	GA	170517			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		2	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							mw-6			1500	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		6	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							mw-7			1550																		mw-8			1525																		mw-9			1400																		mw-10			1425																		Please forward the lab results directly to the Lead Consultant and cc: G-R. Please report results for Dx both with and without silica gel cleanup		
2 Sample Identification		3 Collected		Grab	Soil																											Water	Oil	Total Number of Containers	BTEX	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																																																																																																																							
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mw-10			1425																																																																																																																																																																	
Turnaround Time Requested (TAT) (please circle) Standard <input checked="" type="radio"/> 5 day <input type="radio"/> 4 day <input type="radio"/> EDF/EDD 72 hour <input type="radio"/> 48 hour <input type="radio"/> 24 hour			Relinquished by _____ Date <u>5/18/17</u> Time <u>8:20</u>			Received by <u>Vin Th</u> Date <u>5/18/17</u> Time <u>8:20 AM</u>																																																																																																																																																														
Data Package (circle if required) Type I - Full <input type="checkbox"/> Type VI (Raw Data) <input type="checkbox"/>			Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____			Received by _____ Date _____ Time _____																																																																																																																																																														
EDD (circle if required) CVX-RTBU-FI_05 (default) <input type="checkbox"/> Other: _____			Temperature Upon Receipt _____ °C			Custody Seals Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>																																																																																																																																																														

Attachment B:
Laboratory Analysis Report



Lancaster Laboratories
Environmental

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-650-2300 • Fax: 717-650-2081 • www.LancasterLabs.com

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

Report Date: June 12, 2017

Project: 209335

Submittal Date: 05/19/2017
Group Number: 1803443
PO Number: 0015201727
Release Number: HORNE
State of Sample Origin: WA

Client Sample Description

QA-T-170517 NA Water
MW-6-W-170517 Grab Groundwater
MW-7-W-170517 Grab Groundwater
MW-8-W-170517 Grab Groundwater
MW-9-W-170517 Grab Groundwater
MW-10-W-170517 Grab Groundwater

Lancaster Labs

(LL) #
9002369
9002370
9002371
9002372
9002373
9002374

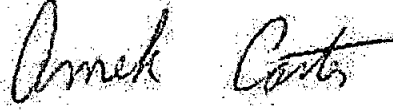
The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>. To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To Leidos
Electronic Copy To Leidos
Electronic Copy To Gettler-Ryan Inc.

Attn: Ruth Otteman
Attn: Jamalyn Agyei
Attn: Gettler Ryan

Respectfully Submitted,



Arnek Carter
Specialist

(717) 556-7252



Lancaster Laboratories
Environmental

Analysis Report

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

Sample Description: QA-T-170517 NA Water
Facility# 209335 Job# 17156750
1225 N 45th St - Seattle, WA

LL Sample # WW 9002369
LL Group # 1803443
Account # 11260

Project Name: 209335

Collected: 05/17/2017

Chevron

Submitted: 05/19/2017 09:10

6001 Bollinger Canyon Road
L4310

Reported: 06/12/2017 08:21

San Ramon CA 94583

458QA

CAT No.	Analysis Name	CAS Number	Result	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

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	1	17143A53A	05/23/2017 20:46	Jeremy C Giffin	1
		NWTPH-Gx					
02102	Method 8021 Water Master	SW-846 8021B	1	17143A53A	05/23/2017 20:46	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17143A53A	05/23/2017 20:46	Jeremy C Giffin	1



Sample Description: MW-6-W-170517 Grab Groundwater
Facility# 209335 Job# 17156750
1225 N 45th St - Seattle, WA

LL Sample # WW 9002370
LL Group # 1803443
Account # 11260

Project Name: 209335

Collected: 05/17/2017 15:00 by AW

Chevron

6001 Bollinger Canyon Road

Submitted: 05/19/2017 09:10

L4310

Reported: 06/12/2017 08:21

San Ramon CA 94583

45SM6

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC Volatiles					
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Volatiles					
02102	Benzene	SW-846 8021B 71-43-2	ug/l N.D.	ug/l 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					
ECY 97-602 NWTPH-Dx modified ug/l					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum Hydrocarbons w/Si					
ECY 97-602 NWTPH-Dx modified 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					
06035	Lead	SW-846 6020 7439-92-1	ug/l 30.5	ug/l 0.090	1

Sample Comments

State of Washington Lab Certification No. C457

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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	17143A53A	05/23/2017 23:07	Jeremy C Giffin	1
02102	Method 8021 Water Master	SW-846 8021B	1	17143A53A	05/23/2017 23:07	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17143A53A	05/23/2017 23:07	Jeremy C Giffin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	171500014A	05/31/2017 20:29	Amy Lehr	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	171500015A	06/01/2017 23:04	Amy Lehr	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	171500015A	05/31/2017 00:30	Nadia Bernabe	1



Lancaster Laboratories
Environmental

Analysis Report

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

Sample Description: MW-6-W-170517 Grab Groundwater
Facility# 209335 Job# 17156750
1225 N 45th St - Seattle, WA

LL Sample # WW 9002370
LL Group # 1803443
Account # 11260

Project Name: 209335

Collected: 05/17/2017 15:00 by AW

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/19/2017 09:10

Reported: 06/12/2017 08:21

San Ramon CA 94583

45SM6

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	171500014A	05/31/2017 00:30	Nadia Bernabe	1
06035	Lead	SW-846 6020	1	171420605001A	05/24/2017 03:55	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	171420605001	05/22/2017 23:10	Denise L Trimby	1



Sample Description: MW-7-W-170517 Grab Groundwater
Facility# 209335 Job# 17156750
1225 N 45th St - Seattle, WA

LL Sample # WW 9002371
LL Group # 1803443
Account # 11260

Project Name: 209335

Collected: 05/17/2017 15:50 by AW

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/19/2017 09:10

Reported: 06/12/2017 08:21

San Ramon CA 94583

45SM7

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC Volatiles					
08274	NWTPH-Gx water C7-C12	n.a.	480,000	5,000	100
GC Volatiles					
02102	Benzene	71-43-2	N.D.	50	100
02102	Ethylbenzene	100-41-4	1,400	50	100
02102	Toluene	108-88-3	360	50	100
02102	Total Xylenes	1330-20-7	18,000	150	100
Reporting limits were raised due to interference from the sample matrix.					
GC Petroleum					
Hydrocarbons					
08271	Diesel Range Organics C12-C24	n.a.	41,000	570	20
08271	Heavy Range Organics C24-C40	n.a.	N.D.	1,300	20
GC Petroleum					
Hydrocarbons w/Si					
12005	DRO C12-C24 w/Si Gel	n.a.	29,000	280	10
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	660	10
Due to the dilution of the sample extract, capric acid recovery can not be determined.					
Metals					
06035	Lead	7439-92-1	1,020	0.090	1

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	17143A53A	05/24/2017 04:13	Jeremy C Giffin	100
02102	Method 8021 Water Master	SW-846 8021B	1	17143A53A	05/24/2017 04:13	Jeremy C Giffin	100
01146	GC VOA Water Prep	SW-846 5030B	1	17143A53A	05/24/2017 04:13	Jeremy C Giffin	100
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	171500014A	06/03/2017 02:14	Amy Lehr	20
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	171500015A	06/07/2017 21:23	Amy Lehr	10



Lancaster Laboratories
Environmental

Analysis Report

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

Sample Description: MW-7-W-170517 Grab Groundwater
Facility# 209335 Job# 17156750
1225 N 45th St - Seattle, WA

LL Sample # WW 9002371
LL Group # 1803443
Account # 11260

Project Name: 209335

Collected: 05/17/2017 15:50 by AW

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/19/2017 09:10

Reported: 06/12/2017 08:21

San Ramon CA 94583

45SM7

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	171500015A	05/31/2017 00:30	Nadia Bernabe	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	171500014A	05/31/2017 00:30	Nadia Bernabe	1
06035	Lead	SW-846 6020	1	171420605001A	05/24/2017 04:44	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	171420605001	05/22/2017 23:10	Denise L Trimby	1



Sample Description: MW-8-W-170517 Grab Groundwater
Facility# 209335 Job# 17156750
1225 N 45th St - Seattle, WA

LL Sample # WW 9002372
LL Group # 1803443
Account # 11260

Project Name: 209335

Collected: 05/17/2017 15:25 by AW

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/19/2017 09:10

Reported: 06/12/2017 08:21

San Ramon CA 94583

45SM8

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC Volatiles					
08274	NWTPH-Gx water C7-C12	ECY 97-602 n.a.	NWTPH-Gx N.D.	ug/l 50	1
GC Volatiles					
02102	Benzene	SW-846 8021B 71-43-2	ug/l N.D.	ug/l 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					
ECY 97-602 NWTPH-Dx modified ug/l					
08271	Diesel Range Organics C12-C24	n.a.	46	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum Hydrocarbons w/Si					
ECY 97-602 NWTPH-Dx modified 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					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.56	ug/l 0.090	1

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	17143A53A	05/23/2017 23:35	Jeremy C Giffin	1
02102	Method 8021 Water Master	SW-846 8021B	1	17143A53A	05/23/2017 23:35	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17143A53A	05/23/2017 23:35	Jeremy C Giffin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	171500014A	06/03/2017 01:08	Amy Lehr	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	171500015A	06/01/2017 23:26	Amy Lehr	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	171500015A	05/31/2017 00:30	Nadia Bernabe	1



Lancaster Laboratories
Environmental

Analysis Report

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

Sample Description: MW-8-W-170517 Grab Groundwater
Facility# 209335 Job# 17156750
1225 N 45th St - Seattle, WA

LL Sample # WW 9002372
LL Group # 1803443
Account # 11260

Project Name: 209335

Collected: 05/17/2017 15:25 by AW

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/19/2017 09:10

Reported: 06/12/2017 08:21

San Ramon CA 94583

45SM8

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	171500014A	05/31/2017 00:30	Nadia Bernabe	1
06035	Lead	SW-846 6020	1	171420605001A	05/24/2017 04:46	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	171420605001	05/22/2017 23:10	Denise L Trimby	1



Sample Description: MW-9-W-170517 Grab Groundwater
Facility# 209335 Job# 17156750
1225 N 45th St - Seattle, WA

LL Sample # WW 9002373
LL Group # 1803443
Account # 11260

Project Name: 209335

Collected: 05/17/2017 14:00 by AW

Chevron

6001 Bollinger Canyon Road

Submitted: 05/19/2017 09:10

L4310

Reported: 06/12/2017 08:21

San Ramon CA 94583

45SM9

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC Volatiles					
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Volatiles					
02102	Benzene	SW-846 8021B 71-43-2	ug/l N.D.	ug/l 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					
08271	Diesel Range Organics C12-C24	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 44	ug/l 28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum					
Hydrocarbons w/Si					
12005	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 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					
06035	Lead	SW-846 6020 7439-92-1	ug/l 1.6	ug/l 0.090	1

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	17143A53A	05/24/2017 00:58	Jeremy C Giffin	1
02102	Method 8021 Water Master	SW-846 8021B	1	17143A53A	05/24/2017 00:58	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17143A53A	05/24/2017 00:58	Jeremy C Giffin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	171500014A	06/03/2017 01:30	Amy Lehr	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	171500015A	06/01/2017 23:48	Amy Lehr	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	171500015A	05/31/2017 00:30	Nadia Bernabe	1



Lancaster Laboratories
Environmental

Analysis Report

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

Sample Description: MW-9-W-170517 Grab Groundwater
Facility# 209335 Job# 17156750
1225 N 45th St - Seattle, WA

LL Sample # WW 9002373
LL Group # 1803443
Account # 11260

Project Name: 209335

Collected: 05/17/2017 14:00 by AW

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 05/19/2017 09:10

Reported: 06/12/2017 08:21

45SM9

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	171500014A	05/31/2017 00:30	Nadia Bernabe	1
06035	Lead	SW-846 6020	1	171420605003A	05/25/2017 04:18	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	171420605003	05/24/2017 05:50	Lisa J Cooke	1



Sample Description: MW-10-W-170517 Grab Groundwater
Facility# 209335 Job# 17156750
1225 N 45th St - Seattle, WA

LL Sample # WW 9002374
LL Group # 1803443
Account # 11260

Project Name: 209335

Collected: 05/17/2017 14:25 by AW

Chevron

6001 Bollinger Canyon Road

Submitted: 05/19/2017 09:10

L4310

Reported: 06/12/2017 08:21

San Ramon CA 94583

45S10

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC Volatiles					
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWT n.a.	ug/l N.D.	ug/l 50	1
GC Volatiles					
02102	Benzene	SW-846 8021B 71-43-2	ug/l N.D.	ug/l 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					
08271	Diesel Range Organics C12-C24	ECY 97-602 NWT modified n.a.	ug/l N.D.	ug/l 28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum Hydrocarbons w/Si					
12005	DRO C12-C24 w/Si Gel	ECY 97-602 NWT modified n.a.	ug/l N.D.	ug/l 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					
06035	Lead	SW-846 6020 7439-92-1	ug/l 3.6	ug/l 0.090	1

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	17143A53A	05/24/2017 01:26	Jeremy C Giffin	1
02102	Method 8021 Water Master	SW-846 8021B	1	17143A53A	05/24/2017 01:26	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17143A53A	05/24/2017 01:26	Jeremy C Giffin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	171500014A	06/03/2017 01:52	Amy Lehr	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	171500015A	06/02/2017 00:10	Amy Lehr	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	171500015A	05/31/2017 00:30	Nadia Bernabe	1



Lancaster Laboratories
Environmental

Analysis Report

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

Sample Description: MW-10-W-170517 Grab Groundwater
Facility# 209335 Job# 17156750
1225 N 45th St - Seattle, WA

LL Sample # WW 9002374
LL Group # 1803443
Account # 11260

Project Name: 209335

Collected: 05/17/2017 14:25 by AW

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/19/2017 09:10

Reported: 06/12/2017 08:21

San Ramon CA 94583

45S10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	171500014A	05/31/2017 00:30	Nadia Bernabe	1
06035	Lead	SW-846 6020	1	171450605003A	05/30/2017 10:22	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	171420605003	05/24/2017 05:50	Lisa J Cooke	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	2	171450605003	05/25/2017 23:45	Denise L Trimby	1

Quality Control Summary

Client Name: Chevron
Reported: 06/12/2017 08:21

Group Number: 1803443

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.

Method Blank

Analysis Name	Result	MDL
	ug/l	ug/l
Batch number: 17143A53A	Sample number(s): 9002369-9002374	
Benzene	N.D.	0.2
Ethylbenzene	N.D.	0.2
NWTPH-Gx water C7-C12	N.D.	50
Toluene	N.D.	0.2
Total Xylenes	N.D.	0.2
Batch number: 171500014A	Sample number(s): 9002370-9002374	
Diesel Range Organics C12-C24	N.D.	30
Heavy Range Organics C24-C40	N.D.	70
Batch number: 171500015A	Sample number(s): 9002370-9002374	
DRO C12-C24 w/Si Gel	N.D.	30
HRO C24-C40 w/Si Gel	N.D.	70
Batch number: 171420605001A	Sample number(s): 9002370-9002372	
Lead	N.D.	0.090
Batch number: 171420605003A	Sample number(s): 9002373	
Lead	N.D.	0.090
Batch number: 171450605003A	Sample number(s): 9002374	
Lead	N.D.	0.090

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 17143A53A	Sample number(s): 9002369-9002374								
Benzene	20	18.74	20	18.55	94	93	80-120	1	30
Ethylbenzene	20.1	19.57	20.1	19.22	97	96	80-120	2	30
NWTPH-Gx water C7-C12	1100	974.67	1100	1022.41	89	93	79-120	5	30
Toluene	20.2	19.25	20.2	18.93	95	94	80-120	2	30
Total Xylenes	60.2	59.81	60.2	58.75	99	98	80-120	2	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 171500014A	Sample number(s): 9002370-9002374								
Diesel Range Organics C12-C24	1600	932.01	1600	1011.52	58	63	50-113	8	20

*- 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.

is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

 Client Name: Chevron
 Reported: 06/12/2017 08:21

Group Number: 1803443

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 171500015A DRO C12-C24 w/Si Gel	1600	809.36	1600	927.29	51	58	32-117	14	20
Batch number: 171420605001A Lead	15	15.25			102		80-120		
Batch number: 171420605003A Lead	15	15.17			101		80-120		
Batch number: 171450605003A Lead	15	16.81			112		80-120		

MS/MSD

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 171420605001A Lead	30.48	15	45.31	15	45.54	99	100	75-125	1	20
Batch number: 171420605003A Lead	1.65	15	17.94	15	18.36	109	111	75-125	2	20
Batch number: 171450605003A Lead	0.666	15	15.68	15	15.51	100	99	75-125	1	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 171420605001A Lead	30.48	28.13	8	20
Batch number: 171420605003A Lead	1.65	2.14	26* (1)	20
Batch number: 171450605003A				

*- 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.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 06/12/2017 08:21

Group Number: 1803443

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Lead	0.666	0.599	11 (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: 17143A53A

	Trifluorotoluene-P	Trifluorotoluene-F
9002369	97	115
9002370	97	92
9002371	92	95
9002372	96	112
9002373	96	118
9002374	97	90
Blank	97	117
LCS	96	105
LCSD	96	106
Limits:	51-120	63-135

Analysis Name: NWTPH-Dx water
Batch number: 171500014A

	Orthoterphenyl
9002370	80
9002371	226*
9002372	92
9002373	85
9002374	86
Blank	86
LCS	88
LCSD	95
Limits:	50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 171500015A

	Orthoterphenyl
9002370	70
9002371	154*
9002372	75
9002373	73
9002374	76

*- 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.

is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control SummaryClient Name: Chevron
Reported: 06/12/2017 08:21

Group Number: 1803443

Surrogate Quality Control (continued)

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

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 171500015A

	Orthoterphenyl
Blank	79
LCS	77
LCSD	90

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.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
 Group # 1803443 Sample # 9002369-74
Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix			5 Analyses Requested										6 Remarks			
Facility # SS#209335-OML G-R#17156750 WBS Site Address 1225 N. 45th Street, SEATTLE, WA Chevron PM MHO LEIDOSRO Lead Consultant Ruth Otteman Consultant/Office Gettler-Ryan Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler Alex W. Gilbert M.				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil			Total Number of Containers BTEX <input checked="" type="checkbox"/> 8021 <input checked="" type="checkbox"/> 8260 <input type="checkbox"/> Naphth 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>6020</u>										SCR #: _____ <input type="checkbox"/> Results In Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits			
2 Sample Identification		3 Collected		Grab	Composite															
		Date	Time																	
QA		170517		<input checked="" type="checkbox"/>																
mw-6			1500	<input checked="" type="checkbox"/>																
mw-7			1550																	
mw-8			1525																	
mw-9			1400																	
mw-10			1425																	
7 Turnaround Time Requested (TAT) (please circle) Standard 5 day 4 day EDF/EDD 72 hour 48 hour 24 hour				Relinquished by _____ Date <u>5/18/17</u> Time <u>8:20</u> Relinquished by _____ Date _____ Time _____			Received by <u>[Signature]</u> Date <u>5/18/17</u> Time <u>8:20 AM</u>			9										
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 Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx <input checked="" type="checkbox"/> Other _____			Received by <u>[Signature]</u> Date <u>5-19-17</u> Time <u>9:10</u>			Temperature Upon Receipt <u>14-29</u> °C Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No										



Client: WA Office

Delivery and Receipt Information

Delivery Method: SeaTac Arrival Timestamp: 05/19/2017 9:10
 Number of Packages: 5 Number of Projects: 4

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace \geq 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Timothy Cubberley (6520) at 09:59 on 05/19/2017

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	2.9	DT	Wet	Y	Bagged	N
2	DT131	2.3	DT	Wet	Y	Bagged	N
3	DT131	1.5	DT	Wet	Y	Bagged	N
4	DT131	2.1	DT	Wet	Y	Bagged	N
5	DT131	1.4	DT	Wet	Y	Bagged	N

Explanation of Symbols and Abbreviations

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

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

Laboratory Data Qualifiers:

- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...
- W - The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) 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.

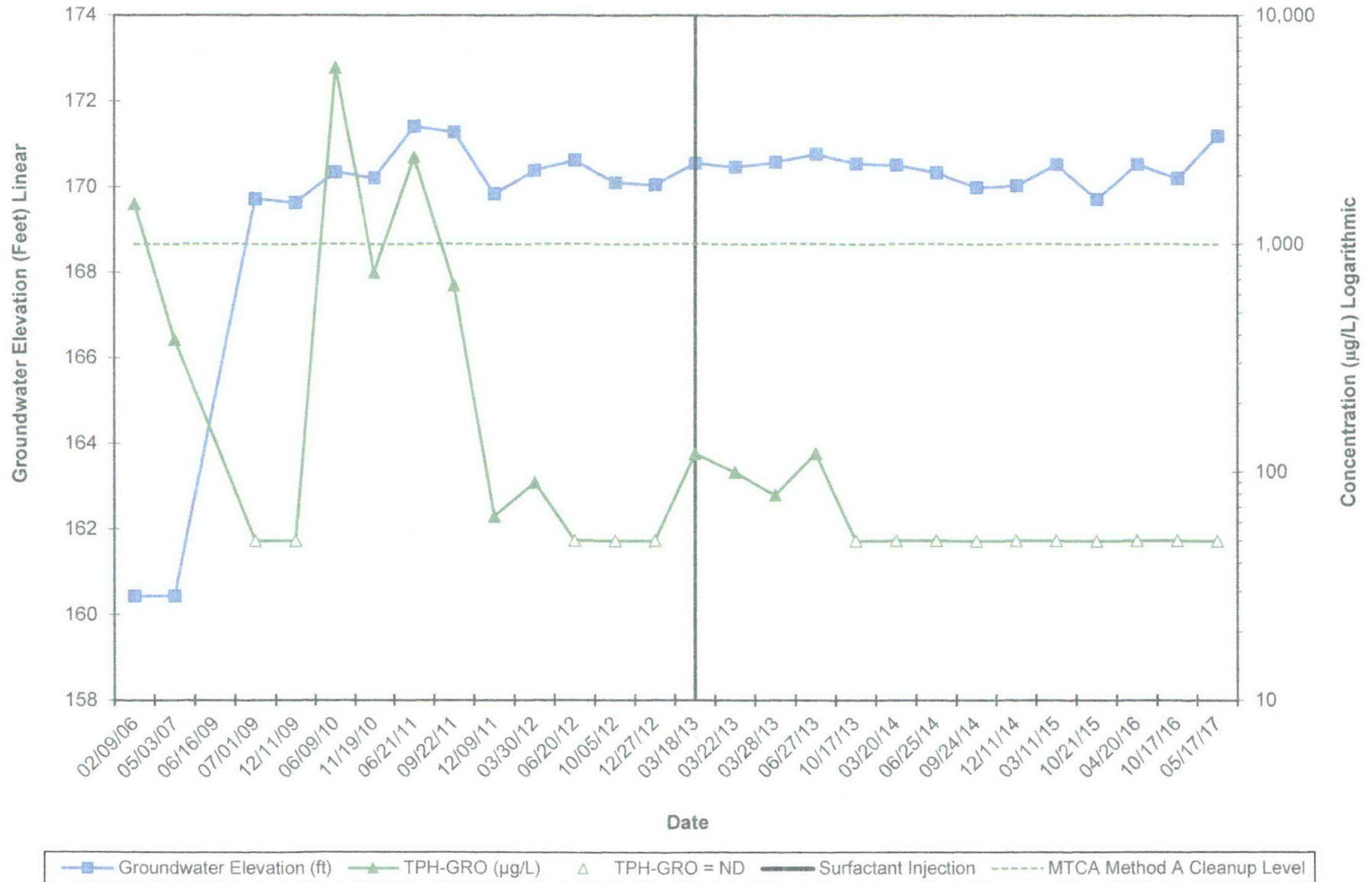
This report shall not be reproduced except in full, without the written approval of the laboratory.

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.

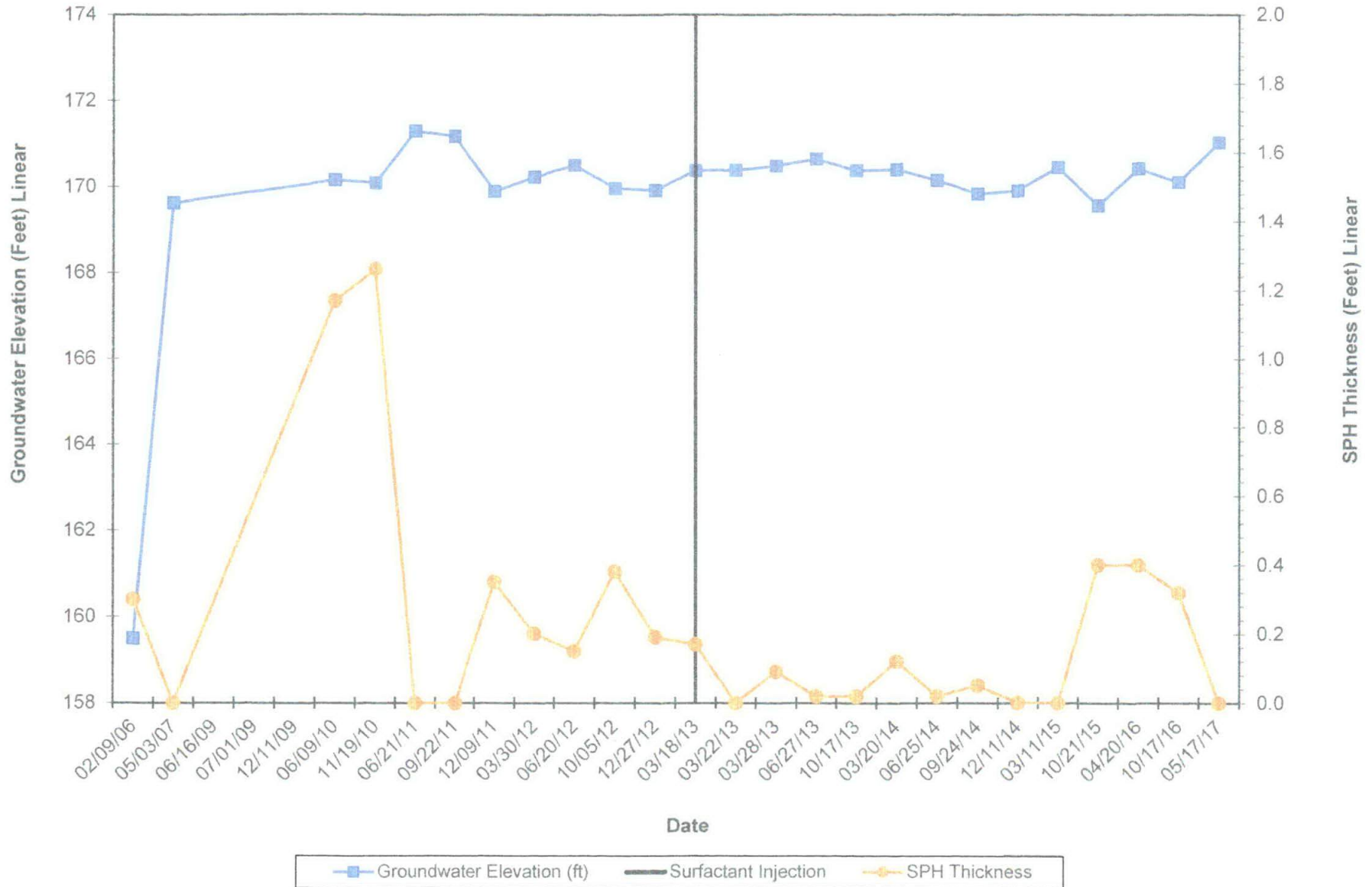
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Attachment C:
Hydrographs

Monitoring Well MW-6
Hydrograph - Gasoline-Range Hydrocarbons
Former Standard Oil Service Station, Chevron Site No. 209335
1225 North 45th Street, Seattle, Washington



Monitoring Well MW-7
Hydrograph - SPH Thickness
 Former Standard Oil Service Station, Chevron Site No. 209335
 1225 North 45th Street, Seattle, Washington



Monitoring Well MW-8
Hydrograph - Gasoline-Range Hydrocarbons
Former Standard Oil Service Station, Chevron Site No. 209335
1225 North 45th Street, Seattle, Washington

