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November 19, 2012

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

Subject: **Third Quarter 2012 Groundwater Monitoring and Sampling Report
Former Chevron Service Station No. 20-9335**
1225 North 45th Street
Seattle, Washington

Dear Mr. Horne:

SAIC Energy, Environment & Infrastructure, LLC (SAIC), on behalf of Chevron Environmental Management Company (CEMC), prepared this letter summarizing the third quarter 2012 groundwater monitoring and sampling event at former Chevron Service Station No. 20-9335 (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 5, 2012. 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 southeast at a gradient of approximately 0.007 to 0.003 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. 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.

SAIC Energy, Environment & Infrastructure, LLC

18912 North Creek Parkway | Suite 101 | Bothell, WA 98011 | tel: (425) 485-5800 | fax: (425) 485-5566 | saic.com/leelandi

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

RESULTS

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. Below is a summary of analytical results.


- SPH were detected in monitoring well MW-7 at a thickness of 0.38 feet, which is consistent with historical data.
- All analytes were below their respective Model Toxic Cleanup Act (MTCA) Method A cleanup levels or the laboratory reporting limits in all other monitoring wells.

The results of the third quarter 2012 sampling event indicate that petroleum-hydrocarbon constituent concentrations continue to fluctuate above and below MTCA Method A cleanup levels with seasonal changes in groundwater elevation.

Gettler-Ryan will continue to perform groundwater monitoring and sampling on a quarterly basis. If you have any questions or comments, please contact Ruth Otteman at (425) 482-3328 or via email at ottemanr@saic.com.

Sincerely,

SAIC Energy, Environment & Infrastructure, LLC



Ruth Otteman, LG
Project Manager



Stuart Brown
Environmental Scientist

Enclosures:

Figure 1 – Vicinity Map

Figure 2 – Potentiometric Map

Table 1 – Groundwater Monitoring Data and Analytical Results

Attachment A – Groundwater Monitoring and Sampling Data Package

Attachment B – Laboratory Analysis Report

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

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

Ms. Veronica Redstone – Bellwether
1651 Bellevue Avenue, Seattle, WA 98122-2014

Project File

REPORT LIMITATIONS

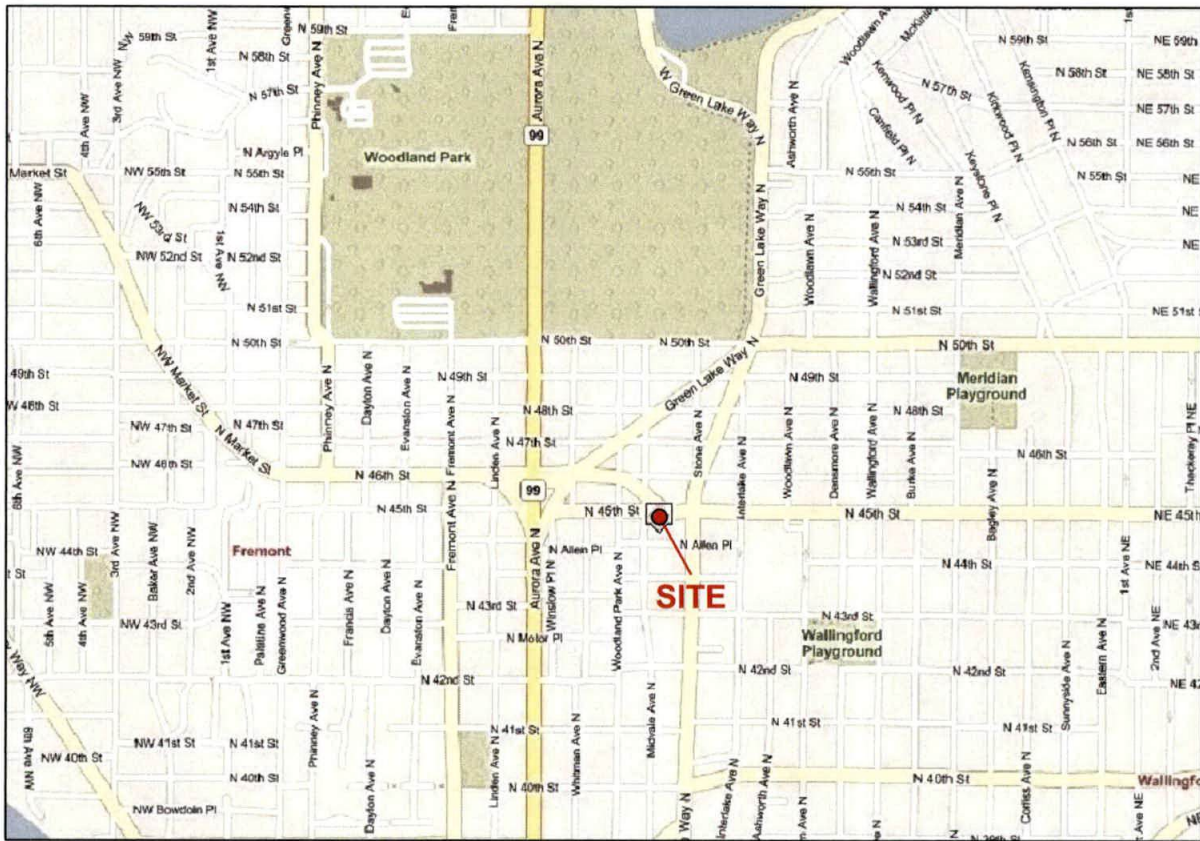
This technical document was prepared on behalf of Chevron and is intended for its sole use and for use by the local, state or federal regulatory agency that the technical document was sent to by SAIC. Any other person or entity obtaining, using, or relying on this technical document hereby acknowledges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

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

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

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

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



Maps Provided by Seattle.gov



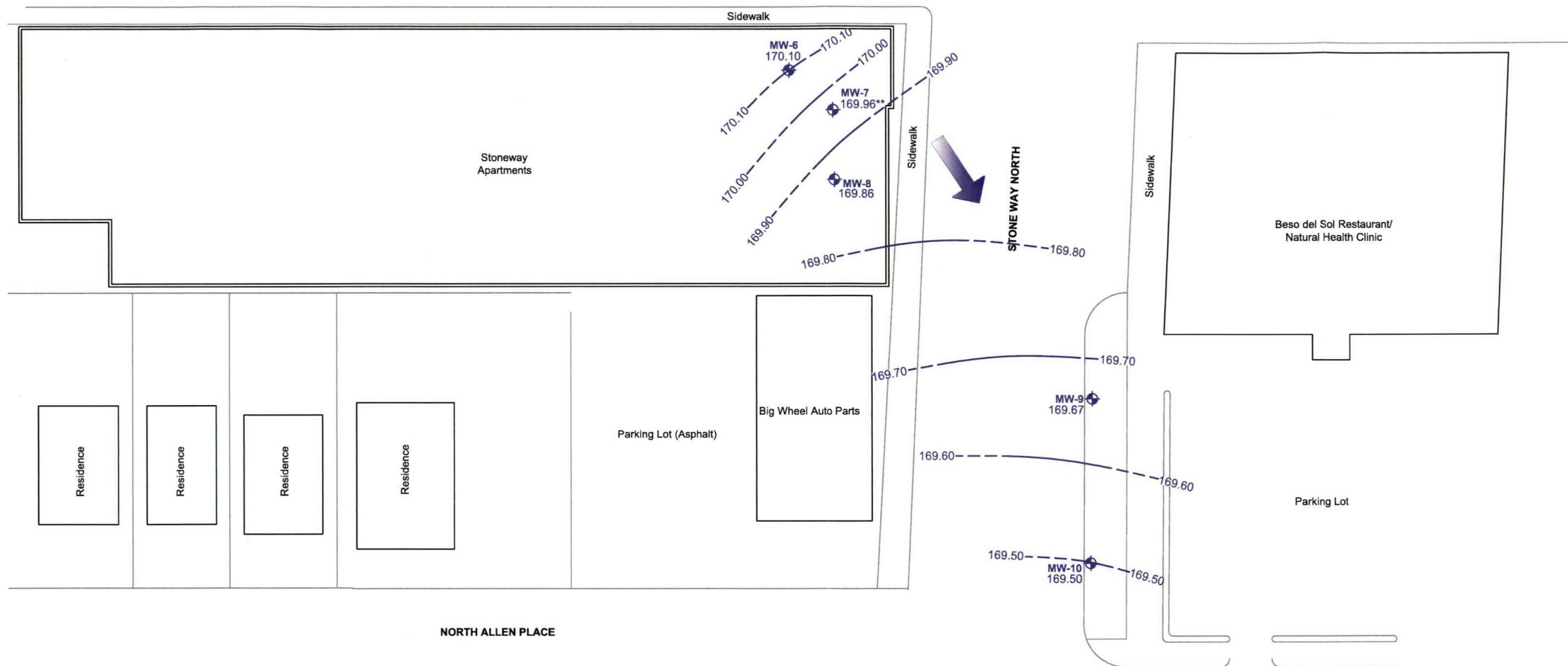
Former Chevron Service Station No. 20-9335
1225 North 45th Street
Seattle, Washington

FIGURE 1
Vicinity Map



FILE NAME:
209335 Vicinity Map.dwg

DATE:
9/13/2012

NORTH 45TH STREET



Legend

-  Groundwater Monitoring Well
- 170.10 Groundwater Elevation in Feet
- 169.96** Groundwater Elevation Corrected for the Presence of Separate Phase Hydrocarbons (SPH)
- 170.0 — Groundwater Elevation Contour at an 0.1 Foot Interval (Dashed Where Inferred)
-  Approximate Groundwater Flow Direction at a Gradient of 0.007 to 0.003 feet per foot



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

FIGURE 2
 Potentiometric Map
 October 5, 2012

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
FORMER CHEVRON SERVICE STATION NO. 20-9335
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-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	0.50	<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
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 ^o		197.42	27.39	-- ⁷	-- ⁷	-- ⁷	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
12/11/09 ^o		197.42	27.50	-- ⁷	-- ⁷	-- ⁷	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	--	--
06/09/10 ^o		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					--	--	--	--
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

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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-8 (cont.)															
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
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
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
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	--	--

**TABLE 1
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FORMER CHEVRON SERVICE STATION NO. 20-9335**

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 (cont.)															
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 SEMI-ANNUALLY			--	--	--	--	--	--
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 SEMI-ANNUALLY			--	--	--	--	--	--
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 SEMI-ANNUALLY			--	--	--	--	--	--
09/29/04		97.95	--	37.50	0.00	60.45	NOT SAMPLED DUE TO INSUFFICIENT WATER			--	--	--	--	--	--
01/04/05		97.95	--	37.61	0.00	60.34	SAMPLED SEMI-ANNUALLY			--	--	--	--	--	--
ABANDONED															
MW-2															
10/11/00		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			--	--	--	--	--	--	--	--	--	--
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			--	--	--	--	--	--

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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-2 (cont.)															
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 SEMI-ANNUALLY			--	--	--	--	--	--
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 SEMI-ANNUALLY			--	--	--	--	--	--
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 SEMI-ANNUALLY			--	--	--	--	--	--
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 SEMI-ANNUALLY			--	--	--	--	--	--
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 SEMI-ANNUALLY			--	--	--	--	--	--
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	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
FORMER CHEVRON SERVICE STATION NO. 20-9335

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-4 (cont.)															
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	--	--
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	--	--	--	--	--	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
FORMER CHEVRON SERVICE STATION NO. 20-9335

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 (cont.)															
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			--	--	--	--	--	--	--	--	--	--
01/14/05		99.42	WELL DRY/OBSTRUCTED			--	--	--	--	--	--	--	--	--	--
ABANDONED															
TRIP BLANK															
12/16/00		--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--
03/26/01		--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--
06/25/01		--	--	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
09/24/01		--	--	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
12/13/01		--	--	--	--	--	--	--	<80.0	<0.500	<0.500	<0.500	<1.00	--	--
03/08/02		--	--	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	--	--
05/29/02		--	--	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	--	--
09/16/02		--	--	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	--	--
12/05/02		--	--	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	--	--
03/04/03		--	--	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	--	--
10/27/03		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
FORMER CHEVRON SERVICE STATION NO. 20-9335

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

Notes:

- Analytical results in bold font indicate concentrations exceed MTCA Method A Cleanup Levels.
- 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.
- When SPH is present, GWE has been corrected using the following formula: $GWE = [(TOC - DTW) + (SPHT \times 0.80)]$.
- Analyzed with silica-gel cleanup.
- 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.
- Skimmer in well.
- Interface probe could not detect LNAPL/Groundwater Interface, unable to gauge hydrocarbon thickness and calculate corrected GWE.

Attachment A:
Groundwater Monitoring and Sampling Data Package



GETTLER-RYAN INC.

TRANSMITTAL

October 16, 2012
G-R #386750

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

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

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

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Third Quarter Event of October 5, 2012

COMMENTS:

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

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

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

trans/209335



GETTLER-RYAN INC.

CHEVRON - SITE CHECK LIST

Facility#: **Chevron #209335** Date: 10-6-12
 Address: **1225 N. 45Th Street**
 City/St.: **Seattle, WA**
 Status of Site: Sidewalk & Apartment Garage

DRUMS:

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



#	Description	Condition	Labeling	Contents/Capacity	Location
	<u>No Drums</u>				

WELLS:

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

Well ID	Gaskets (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Well Plug Y/N	Well Lock Y/N	Well Box Manufacturer/Size/# of Bolts	Other
MW-6	(M)	(M)	(N)	(N)	<u>B MORRIS 3</u> ↓	
MW-7	(M)	(M)	(N)	(N)		
MW-8	(M)	(M)	(N)	(N)		
MW-9	(M)	(M)	(N)	(N)		
MW-10	(M)	(M)	(N)	(N)		

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
 Site Address: 1225 N. 45Th Street
 City: Seattle, WA

Job Number: 386750
 Event Date: 10-5-12 (inclusive)
 Sampler: J.P.

Well ID: MW-6
 Well Diameter: 2
 Total Depth: 34.20 ft.
 Depth to Water: 27.08 ft.
7.12 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 10-5-12

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	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]: _____

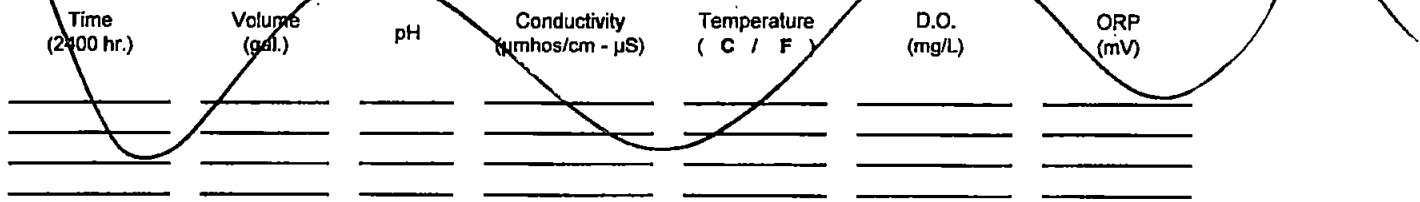
- Purge Equipment:**
- Disposable Bailer _____
 - Stainless Steel Bailer _____
 - Stack Pump _____
 - Suction Pump _____
 - Grundfos _____
 - Peristaltic Pump _____
 - QED Bladder Pump _____
 - Other: _____

- 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:	_____ 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): _____
 Sample Time/Date: 1045 / 10-5-12
 Approx. Flow Rate: _____ gpm.
 Did well de-water? _____ If yes, Time: _____

Weather Conditions: _____
 Water Color: _____ Odor: Y / N
 Sediment Description: _____
 Volume: _____ gal. DTW @ Sampling: _____



LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-6	3 x vva 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: No Purge Sample

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: 10-5-12 (inclusive)
 City: Seattle, WA Sampler: J.T

Well ID: MW-7 Date Monitored: 10-5-12

Well Diameter: 2

Total Depth: 33.6 ft.

Depth to Water: 27.7 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 than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.81 xVF = x3 case volume = Estimated Purge Volume: gal.

Purge Equipment:

Disposable Bailer X
 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: 11:03 (2400 hrs)
 Time Completed: 11:10 (2400 hrs)
 Depth to Product: 27.38 ft
 Depth to Water: 27.70 ft
 Hydrocarbon Thickness: .38 ft
 Visual Confirmation/Description: yellowish
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: 0 gal
 Amt Removed from Well: 0 gal
 Water Removed: 0 gal
 Product Transferred to: 0

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 DETECTED

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: 10-6-12 (inclusive)
 City: Seattle, WA Sampler: J. Payne

Well ID: MW-8 Date Monitored: 10-6-12

Well Diameter: 2

Total Depth: 36.0 ft

Depth to Water: 27.49 ft

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	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.

7.56 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 X
 Stainless Steel Bailer _____
 Slack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

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): _____ Weather Conditions: _____
 Sample Time/Date: 1000 10-5-12 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- <u>8</u>	<u>2</u> x voa vial	YES	HCL	LANCASTER	NWTPH-GxBTEX(8021)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	TOTAL LEAD (6020)

COMMENTS: No purge sample

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: 10-5-12 (inclusive)
 City: Seattle, WA Sampler: JIP

Well ID: MW-9 Date Monitored: 10-5-12

Well Diameter: 2

Total Depth: 44.10 ft.

Depth to Water: 38.44 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 than 0.50 ft.

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

Purge Equipment:

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

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): _____ Weather Conditions: _____
 Sample Time/Date: 1800 / 10-5-12 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-9	3 x vva 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: no further samples

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: 10-5-12 (inclusive)
 City: Seattle, WA Sampler: J.P.

Well ID: MW-10 Date Monitored: 10-5-12

Well Diameter: 2

Total Depth: 44.60 ft.

Depth to Water: 37.79 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.

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

Purge Equipment:

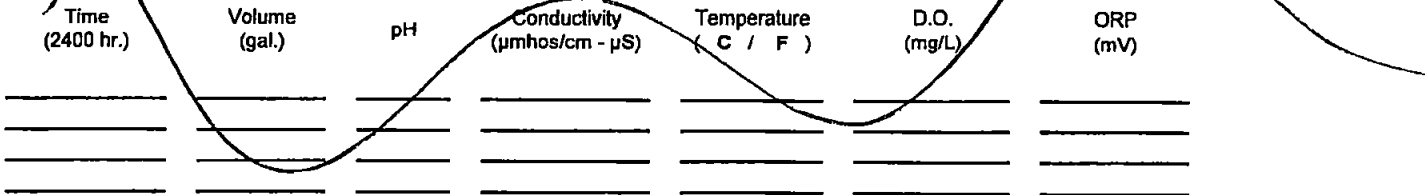
Disposable Bailer X
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

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): _____ Weather Conditions: _____
 Sample Time/Date: 0839 / 10-5-12 Water Color: _____ Odor: Y / N
 Approx. Flow Rate: _____ gpm. Sediment Description: _____
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: _____



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: No Lead Sample

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

Chevron Northwest Region Analysis Request/Chain of Custody



For Lancaster Laboratories use only
 Acc. #: 11260 Group # 1340550 Sample #: 6814984-88

Facility #: <u>SS#209335-OML G-R#386750</u> WBS: _____ Site Address: <u>1225 N. 45th Street, SEATTLE, WA</u> Chevron PM: <u>MHO</u> Lead Consultant: <u>SAICRO Olteman</u> Consultant/Office: <u>G-R, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568</u> Consultant Prj. Mgr.: <u>Deanna L. Harding (deanna@grinc.com)</u> Consultant Phone #: <u>925-551-7555</u> Fax #: <u>925-551-7899</u> Sampler: <u>J. Payne</u>				Matrix <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air		Analyses Requested # Preservation Codes <input type="checkbox"/> BTEX <input type="checkbox"/> 8260 full scan <input type="checkbox"/> 8260 <input type="checkbox"/> 8021 <input type="checkbox"/> Oxygenates <input type="checkbox"/> NWTPH GX <input checked="" type="checkbox"/> NWTPH DX <input checked="" type="checkbox"/> Silica Gel Cleanup <input checked="" type="checkbox"/> Lead Total <input checked="" type="checkbox"/> Method <u>602P</u> <input type="checkbox"/> WAPPH <input type="checkbox"/> WAEPH <input type="checkbox"/> NWTPH HClD <input type="checkbox"/> quantification										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								
Sample Identification		Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX	8260 full scan	8260	8021	Oxygenates	NWTPH GX	NWTPH DX	Silica Gel Cleanup	Lead Total	Method	WAPPH	WAEPH	NWTPH HClD	quantification
<u>Q.A</u>		<u>10-5-12</u>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<u>2</u>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>								
<u>MWD-10</u>			<u>10/4/12</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<u>6</u>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
<u>MWD-8</u>			<u>10/4/12</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<u>6</u>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
<u>MWD-9</u>			<u>10/4/12</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<u>6</u>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
<u>MWD-8P</u>			<u>10/5/12</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<u>6</u>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Comments /Remarks <u>Silica gel cleanup added to Dx per J. Mayberry.</u> Please forward the lab results directly to the Lead Consultant and cc: G-R. <u>8/11/12</u> <u>10/8/12</u>																								
Turnaround Time Requested (TAT) (please circle) (STD. TAT) 72 hour 48 hour 24 hour 4 day 5 day										Relinquished by: <u>[Signature]</u> Date: <u>10/5/12</u> Time: <u>1400</u>		Received by: _____ Date: _____ Time: _____												
Data Package Options (please circle if required) QC Summary Type I - Full Type VI (Raw Data)										Relinquished by: _____ Date: _____ Time: _____		Received by: _____ Date: _____ Time: _____												
Relinquished by Commercial Carrier: UPS <u>FedEx</u> Other _____ Temperature Upon Receipt <u>2.1-2.50°</u>										Received by: <u>[Signature]</u> Date: <u>10/6/12</u> Time: <u>0955</u>		Custody Seals Intact? <u>Yes</u> No												

Attachment B:
Laboratory Analysis Report

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

October 18, 2012

Project: 209335

Submittal Date: 10/06/2012
Group Number: 1340550
PO Number: 0015103600
Release Number: HORNE
State of Sample Origin: WAClient Sample DescriptionQA Water Sample
MW-6 Grab Water Sample
MW-8 Grab Water Sample
MW-9 Grab Water Sample
MW-10 Grab Water SampleLancaster Labs (LLI) #6814984
6814985
6814986
6814987
6814988

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

ELECTRONIC COPY TO SAIC c/o Gettler-Ryan
ELECTRONIC COPY TO SAIC
ELECTRONIC COPY TO SAICAttn: Rachele Munoz
Attn: Jamalyn Green
Attn: Ruth Otteman

Respectfully Submitted,

Jill M. Parker

Jill M. Parker
Senior Specialist

(717) 556-7262

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

LLI Sample # WW 6814984
LLI Group # 1340550
Account # 11260

Project Name: 209335

Collected: 10/05/2012

Chevron

Submitted: 10/06/2012 09:45

6001 Bollinger Canyon Road

Reported: 10/18/2012 14:00

L4310

San Ramon CA 94583

45SQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received 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

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12283B94A	10/11/2012 20:56	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	12283B94A	10/11/2012 20:56	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12283B94A	10/11/2012 20:56	Catherine J Schwarz	1

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

LLI Sample # WW 6814985
 LLI Group # 1340550
 Account # 11260

Project Name: 209335

Collected: 10/05/2012 10:45 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 10/06/2012 09:45

L4310

Reported: 10/18/2012 14:00

San Ramon CA 94583

45S06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received 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 w/Si					
ECY 97-602 NWTPH-Dx modified ug/l ug/l					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	32	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	74	1
The reverse surrogate, capric acid, is present at <1%.					
Metals					
06035	Lead	SW-846 6020 7439-92-1	ug/l 1.2	ug/l 0.034	1

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12283B94A	10/11/2012 23:04	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	12283B94A	10/11/2012 23:04	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12283B94A	10/11/2012 23:04	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	122830007A	10/16/2012 10:09	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	122830007A	10/09/2012 13:30	Seth A Farrier	1
06035	Lead	SW-846 6020	1	122856050003A	10/18/2012 12:59	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	122856050003	10/12/2012 10:38	James L Mertz	1

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

LLI Sample # WW 6814986
LLI Group # 1340550
Account # 11260

Project Name: 209335

Collected: 10/05/2012 10:00 by JP

Chevron

Submitted: 10/06/2012 09:45

6001 Bollinger Canyon Road

Reported: 10/18/2012 14:00

L4310

San Ramon CA 94583

45S08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 490	ug/l 50	1
GC Volatiles					
02102	Benzene	SW-846 8021B 71-43-2	ug/l 1.0	ug/l 0.5	1
02102	Ethylbenzene	100-41-4	19	0.5	1
02102	Toluene	108-88-3	1.7	0.5	1
02102	Total Xylenes	1330-20-7	32	1.5	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 31	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	71	1
The reverse surrogate, capric acid, is present at <1%.					
Metals					
06035	Lead	SW-846 6020 7439-92-1	ug/l 1.3	ug/l 0.034	1

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12283B94A	10/11/2012 23:29	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	12283B94A	10/11/2012 23:29	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12283B94A	10/11/2012 23:29	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	122830007A	10/12/2012 15:36	Tracy A Cole	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	122830007A	10/09/2012 13:30	Seth A Farrier	1
06035	Lead	SW-846 6020	1	122856050003A	10/18/2012 12:49	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	122856050003	10/12/2012 10:38	James L Mertz	1

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

LLI Sample # WW 6814987
 LLI Group # 1340550
 Account # 11260

Project Name: 209335

Collected: 10/05/2012 08:00 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 10/06/2012 09:45

L4310

Reported: 10/18/2012 14:00

San Ramon CA 94583

45S09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08274	NWTPH-Gx water C7-C12	ECY 97-602 n.a.	N.D.	ug/l 50	1
GC Volatiles					
02102	Benzene	SW-846 8021B 71-43-2	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 w/Si modified					
12005	DRO C12-C24 w/Si Gel	ECY 97-602 n.a.	N.D.	ug/l 30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	70	1
The reverse surrogate, capric acid, is present at <1%.					
Metals					
06035	Lead	SW-846 6020 7439-92-1	10.6	ug/l 0.034	1

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12283B94A	10/11/2012 23:54	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	12283B94A	10/11/2012 23:54	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12283B94A	10/11/2012 23:54	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	122830007A	10/12/2012 16:00	Tracy A Cole	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	122830007A	10/09/2012 13:30	Seth A Farrier	1
06035	Lead	SW-846 6020	1	122856050003A	10/18/2012 13:01	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	122856050003	10/12/2012 10:38	James L Mertz	1

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

LLI Sample # WW 6814988
LLI Group # 1340550
Account # 11260

Project Name: 209335

Collected: 10/05/2012 08:53 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 10/06/2012 09:45

L4310

Reported: 10/18/2012 14:00

San Ramon CA 94583

45S10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received 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 w/Si					
ECY 97-602 NWTPH-Dx modified ug/l					
12005	DRO C12-C24 w/Si Gel	n.a.	45	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	70	1
The reverse surrogate, capric acid, is present at <1%.					
Metals					
06035	Lead	SW-846 6020 7439-92-1	ug/l 3.7	ug/l 0.034	1

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12283B94A	10/12/2012 01:11	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	12283B94A	10/12/2012 01:11	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12283B94A	10/12/2012 01:11	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	122830007A	10/12/2012 14:03	Tracy A Cole	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	122830007A	10/09/2012 13:30	Seth A Farrier	1
06035	Lead	SW-846 6020	1	122856050003A	10/18/2012 13:06	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	122856050003	10/12/2012 10:38	James L Mertz	1

Quality Control Summary

 Client Name: Chevron
 Reported: 10/18/12 at 02:00 PM

Group Number: 1340550

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 12283B94A	Sample number(s): 6814984-6814988							
Benzene	N.D.	0.2	ug/l	106	104	80-120	2	30
Ethylbenzene	N.D.	0.2	ug/l	105	103	80-120	2	30
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	95	97	75-135	2	30
Toluene	N.D.	0.2	ug/l	106	103	80-120	3	30
Total Xylenes	N.D.	0.6	ug/l	106	105	80-120	2	30
Batch number: 122830007A	Sample number(s): 6814985-6814988							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	71	76	50-120	7	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 122856050003A	Sample number(s): 6814985-6814988							
Lead	N.D.	0.034	ug/l	102		90-115		

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 122856050003A	Sample number(s): 6814985-6814988 UNSPK: 6814986 BKG: 6814986								
Lead	103	104	83-120	1	20	1.3	1.2	3 (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: 12283B94A

	Trifluorotoluene-P	Trifluorotoluene-F
6814984	87	74
6814985	88	73
6814986	88	86
6814987	87	74
6814988	87	89
Blank	87	75

*- 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 SummaryClient Name: Chevron
Reported: 10/18/12 at 02:00 PM

Group Number: 1340550

Surrogate Quality ControlLCS 87 89
LCSD 87 89

Limits: 51-120 63-135

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 122830007A
Orthoterphenyl6814985 88
6814986 70
6814987 72
6814988 75
Blank 76
LCS 95
LCSD 100

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



For Lancaster Laboratories use only
 Acct. #: 11260 Group #: 1340550 Sample #: 6814984-88

Facility #: SS#209335-OML G-R#386750
 Site Address: 1225 N. 45th Street, SEATTLE, WA
 Chevron PM: MHO Lead Consultant: SAICRO Otteman
 Consultant/Office: G-R, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568
 Consultant Prj. Mgr.: Deanna L. Harding (deanna@gano.com)
 Consultant Phone #: 925-551-7555 Fax #: 925-551-7899
 Sampler: J. Payne

Analyses Requested

- SCR #: _____
- Results in Dry Weight
 - J value reporting needed
 - Must meet lowest detection limits possible for 8260 compounds
 - 8021 MTBE Confirmation
 - Confirm MTBE + Naphthalene
 - Confirm highest hit by 8260
 - Confirm all hits by 8260
 - Run ___ oxy's on highest hit
 - Run ___ oxy's on all hits

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix			Total Number of Containers	Preservation Codes													
					Soil	Water	Oil		BTEX + 8260	8260 full scan	Oxygenates	NWTPH GX	NWTPH DX	Lead Total	WAVPH	NWTPH H	HClID					
<u>Q.A</u>	<u>10/5/12</u>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<u>2</u>	<input checked="" type="checkbox"/>														
<u>MWD-10</u>		<u>10/4/12</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<u>6</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								
<u>MWD-8</u>		<u>10/4/12</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<u>6</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								
<u>MWD-9</u>		<u>10/4/12</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<u>6</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								
<u>MWD-10</u>		<u>10/4/12</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<u>6</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								

Comments/Remarks
Silica gel cleanup added to DX per J. Mayberry.
 Please forward me lab results directly to the Lead Consultant and not G-R.
JMP
10/8/12

Turnaround Time Requested (TAT) (please circle) <input checked="" type="radio"/> STD. TAT 24 hour 72 hour 48 hour 4 day 5 day	Relinquished by: <u>[Signature]</u>	Date: <u>10/5/12</u>	Time: <u>1:00</u>	Received by: _____	Date: _____	Time: _____
	Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Data Package Options (please circle if required) QC Summary Type I - Full Type VI (Raw Data)	Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
	Relinquished by Commercial Carrier: UPS <input checked="" type="radio"/> FedEx Other _____	Received by: <u>[Signature]</u>	Date: <u>10/6/12</u>	Time: <u>09:45</u>	Custody Seals Intact? <input checked="" type="radio"/> Yes <input type="radio"/> No	
Temperature Upon Receipt: <u>2.1-2.5°C</u>						

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 <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is \geq 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 \geq 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.

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