

Ms. Rachel Caron
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Subject:

First Quarter 2023 Groundwater Monitoring Report

Former Chevron Station No. 98944
1323 Lee Boulevard
Richland, Washington
Facility Site ID: 27223439
Cleanup Site ID: 5798

ENVIRONMENT

Date:
April 24, 2023

Dear Ms. Caron:

On behalf of Chevron Environmental Management Company (CEMC), Arcadis U.S., Inc. (Arcadis) has prepared this *First Quarter 2023 Groundwater Monitoring Report* (Report) to document the first quarter groundwater monitoring activities at Former Chevron Station No. 98944 (the site; Figures 1 and 2) located at 1323 Lee Boulevard in Richland, Washington. The three remaining onsite monitoring wells (MW-9, MW-10, and MW-11) were gauged and sampled during the groundwater monitoring event on February 16, 2023.

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SITE BACKGROUND

The site was operated as a Standard Oil/Chevron gasoline service station from 1960 until approximately 1976. All station features were subsequently demolished, and the site was redeveloped in 2003 with a commercial structure and associated parking areas. Currently, the site is occupied by a Subway restaurant. Previous site investigations and site history were summarized in the *First Quarter 2020 Groundwater Monitoring Report* (Arcadis 2020).

Our ref:
30064311

SITE GEOLOGY/HYDROGEOLOGY

The topography of the general site area slopes gently to the east and southeast (Figure 1). The confluence of the Yakima and Columbia Rivers is located south-southeast of the site. The topography to the west contains an alluvial terrace running north-south.

The site is located in Pasco Basin. Local geology consists of alluvial sediments deposited over basalt bedrock of the Columbia River Basalt Group (Reidel and Fecht, 1994). Glacial outburst flood deposits (cobbles, gravels, and sands) were deposited on top of this and reworked by local streams and rivers, chiefly the

Columbia River in this region (Reidel and Fecht, 1994).

Previous subsurface explorations at the site have generally encountered silt and sandy gravels to depths of approximately 20 feet below ground surface (bgs) (CRA 2007). The soil types observed in monitoring well borings (MW-9 through MW-11) were consistent with historical findings; silt was encountered at 5 to 5.5 feet bgs, silt and well graded gravel was encountered at 10 and 15 feet bgs, and poorly- and well-graded gravel was encountered at 17 to 20 feet bgs.

Depth to groundwater beneath the site ranges from approximately 6 to 15 feet bgs. The general groundwater flow direction appears to follow the local topography to the east-southeast.

GROUNDWATER MONITORING AND SAMPLING

Groundwater monitoring and sampling was completed at the site on February 16, 2023, by Blaine Tech Services, Inc. (Blaine Tech). The completed tasks included measuring depth to groundwater, collection of groundwater samples, and recording of groundwater quality parameters (recorded on field forms; Attachment 1) from monitoring wells MW-9, MW-10, and MW-11.

Groundwater Elevation

Blaine Tech gauged groundwater monitoring wells MW-9, MW-10 and MW-11 using a static water level indicator prior to groundwater sample collection on February 16, 2023. The measured depth to groundwater ranged from 5.68 (MW-9) to 12.89 (MW-10) feet below top of casing and groundwater elevations ranged from 346.07 to 353.53 feet above the North American Vertical Datum of 1988 (NAVD88). Groundwater elevations in these three wells typically differ by less than 0.5 feet; therefore the approximate 7 feet in difference noted during this event is considered anomalous or perhaps a field error, and will be confirmed during the Q2 2023 groundwater monitoring event. Groundwater depths and elevations are summarized in Table 1.

Groundwater Sampling

Monitoring wells MW-9, MW-10, and MW-11 were purged and sampled using a peristaltic pump and dedicated tubing via low-flow methods. During the purging process, the following parameters were monitored and recorded on the sampling field forms, included as Attachment 1.

- pH
- electrical conductivity
- turbidity
- dissolved oxygen
- oxidation reduction potential
- temperature

Purging continued until these parameters stabilized in accordance with United States Environmental Protection Agency procedures (USEPA 2017). Samples were then collected in laboratory-supplied containers, labeled, packaged in ice-cooled chests, and shipped under proper chain-of-custody protocols to Pace Analytical (National Center for Testing & Innovation) in Mount Juliet, Tennessee. Groundwater samples were analyzed for the following constituents:

- Total petroleum hydrocarbons – gasoline range organics (TPH-GRO) by Northwest method NWTPH-

Gx;

- Total petroleum hydrocarbons – diesel and heavy oil range organics (TPH-DRO/HRO) by Northwest method NWTPH-Dx with and without silica-gel cleanup (SGC) sample preparation
- Benzene, toluene, ethylbenzene and xylenes (BTEX) by USEPA method 8260D.
- Nitrate as (N) and Sulfate by USEPA method 9056A
- Total Lead, Total Iron, Total Manganese and Dissolved Manganese by USEPA method 6020B
- Methane by USEPA method RSK175

The laboratory analytical report and chain-of-custody documentation are included in Attachment 2.

QUALITY ASSURANCE/QUALITY CONTROL

Trip blanks assess potential sample contamination resulting from the transportation and storage of samples. Due to an error on the chain-of-custody, the trip blank was not analyzed.

Field duplicate samples help assess the reproducibility of the analyses. A field duplicate sample was collected from monitoring well MW-10 during the event and submitted to Pace Analytical for chemical analysis. The parent and duplicate sample results are considered comparable.

DATA INTERPRETATION AND CONCLUSIONS

Current and historical groundwater elevations and analytical results for site constituents of potential concern (COPCs) are summarized in Table 1; historical geochemical analytical results are summarized in Table 2; and groundwater field parameters are summarized in Table 3. Based on local topography and previous sampling events, the groundwater flow direction has historically been inferred to be to the east-southeast with some variation noted. The groundwater flow direction during the current event was unable to be determined due to observed anomalous groundwater elevation results. A groundwater analytical map for the samples collected on February 16, 2023, is shown on Figure 2.

TPH-GRO was detected in wells MW-9 above the applicable Model Toxics Control Act (MTCA) Method A cleanup level (CUL) at concentrations of 5,920 µg/L. TPH-DRO (analyzed without silica gel cleanup) was detected in well MW-9 above the MTCA Method A CUL at a concentration of 1,130 µg/L. Following silica gel cleanup, the reported TPH-DRO in the groundwater sample collected from MW-9 was 647 µg/L, also above the MTCA Method A CUL but indicating the presence of natural organic material in the sample being reported in the TPH-DRO range. TPH-HRO was detected in well MW-10 just above the MTCA Method A CUL at a concentration of 501 µg/L. Other COPCs were either not detected in the wells or were detected at concentrations below CULs.

Geochemical data collected in the first quarter of 2023 continues to indicate variable and mixed redox conditions. Evidence of continuing intermittent influx of oxygen and nitrate along with variable sulfate and methane concentrations indicate that biodegradation of petroleum hydrocarbons is supported by multiple pathways.

Groundwater monitoring will continue on a quarterly basis. The next groundwater monitoring event is currently scheduled for second quarter of 2023. Potential biodegradation of dissolved site related COPCs in groundwater will continue to be evaluated during sampling events in the first and third quarter of each year.

A Monitoring Well Installation Work Plan (work plan) was submitted to Ecology on March 29, 2022 that

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proposed Installation of additional monitoring wells at the site to further evaluate the extent of petroleum hydrocarbons in groundwater and the occurrence of natural attenuation. The proposed work is planned to take place in summer 2023.

Please contact Ada Hamilton at ada.hamilton@arcadis.com if you should have any questions.

Sincerely,

Arcadis U.S., Inc.



Ada Hamilton
Project Manager



Rebecca Andresen, L.G.
Licensed Geologist 2588

Copies:

James Kiernan, CEMC

REFERENCES

- Arcadis, 2020. First Quarter 2020 Groundwater Monitoring Report, Chevron Ste No. 9-8944, 1323 Lee Boulevard, Richland, WA, March 17.
- Conestoga, Rovers, and Associates, 2007. Soil and Groundwater Assessment Report, Former Chevron Service Station No. 9-8944, 1323 Lee Boulevard, Richland, WA, December 11.
- Ecology. 2005. Version 1.0; Guidance on Remediation of Petroleum-Contaminated Ground Water By Natural Attenuation. July.
- USEPA, 2017, Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells, United States Environmental Protection Agency, EQASOP-GW4. <https://www.epa.gov/sites/production/files/2017-10/documents/eqasop-gw4.pdf>
- Reidel, S.P., and Fecht, K.R. 1994. Geologic Map of the Richland 1:100,000 Quadrangle. Washington Division of Geology and Earth Resources Open File Report 94-8. June.

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Washington State Department of Ecology
April 13, 2023

Enclosures:

Tables

- 1 Groundwater Gauging Data and Analytical Results
- 2 Geochemical Analytical Results
- 3 Groundwater Field Parameter Measurements

Figures

- 1 Site Location Map
- 2 Groundwater Analytical Map – February 16, 2023

Attachments

- 1 Field Data and Chain of Custody
- 2 Laboratory Analytical Report

TABLES



Table 1
Groundwater Gauging Data and Analytical Results
Chevron Site No. 98944
1323 Lee Boulevard
Richland, Washington



Well ID	Date	TOC	DTW	GWE	HYDROCARBONS					PRIMARY VOCs				LEAD		OXYGENATES		PAHs								Comments
					TPH-GRO	TPH-DRO	TPH-DRO w/SGC	TPH-HRO	TPH-HRO w/SGC	Benzene	Toluene	Ethylbenzene	Xylene	Dissolved Lead	Total Lead	MTBE by SW8020	MTBE by SW8260B	Naphthalene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	
					800/1000	500	500	500	500	5	1,000	700	1,000	NA	15	NA	20	160	NA	NA	NA	NA	NA	NA	NA	
MTCA Method A Cleanup Levels					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
Units	ft	ft	ft	ft-elev.	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
MW-1	8/11/1994	93.98	7.03	86.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	8/25/1994	93.98	7.00	86.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	9/23/1994	93.98	7.00	86.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	8/12/1996	93.98	7.29	86.69	14,400	--	--	--	--	94.4	15.5	325	978	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	2/27/2000	93.98	8.58	85.40	16,200	--	--	--	--	11.7	<8.00	439	504	--	--	<25.0	--	--	--	--	--	--	--	--	--	
MW-1	2/21/2001	93.98	8.66	85.32	6,320	--	--	--	--	38.3	9.30	194	64.1	--	--	15.4	<4.00	--	--	--	--	--	--	--	--	
MW-1	05/22/2001 ¹	93.98	9.95	84.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	8/11/2001	93.98	9.14	84.84	8,450	--	--	--	--	48.4	11.8	410	356	--	--	<50.0	<50.0	--	--	--	--	--	--	--	--	
MW-1	11/10/2001	93.98	9.85	84.13	6,650	--	--	--	--	49.2	11.0	340	97.9	--	--	16.8	<5.00	--	--	--	--	--	--	--	--	
MW-1	2/4/2002	93.98	10.71	83.27	1,480	--	--	--	--	1.81	<1.00	71.6	3.81	--	--	--	<5.00	--	--	--	--	--	--	--	--	
MW-1	08/24/2002 ²	93.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	2/20/2003	93.98	10.55	83.43	91	--	--	--	--	<0.50	<0.50	<1.0	<3.0	--	--	<2.5	--	--	--	--	--	--	--	--	--	
MW-1	8/21/2003	93.98	11.26	82.72	78	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--	<2.5	--	--	--	--	--	--	--	--	--	
MW-1	02/19/2004 ¹	93.98	11.79	82.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	08/10/2004 ¹	93.98	10.97	83.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	12/03/2004 ¹	93.98	11.39	82.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	02/21/2006 ³	93.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	10/23/2007 ⁴	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	8/11/1994	93.21	6.10	87.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Well Decommissioned	
MW-2	8/25/1994	93.21	6.11	87.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	9/23/1994	93.21	6.11	87.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	8/12/1996	93.21	6.40	86.81	17,400	--	--	--	--	152	39.2	306	1,120	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	2/27/2000	93.21	7.77	85.44	7,500	--	--	--	--	99.8	13.0	175	453	--	--	<10.0	--	--	--	--	--	--	--	--	--	
MW-2	2/21/2001	93.21	7.84	85.37	1,510	--	--	--	--	20.1	5.43	31.9	67.2	--	--	<5.00	<2.00	--	--	--	--	--	--	--	--	
MW-2	5/22/2001	93.21	8.14	85.07	4,310	--	--	--	--	34.9	7.91	109	211	--	--	11.6	<5.00	--	--	--	--	--	--	--	--	
MW-2	8/11/2001	93.21	8.35	84.86	1,870	--	--	--	--	14.6	2.90	16.6	20.5	--	--	<25.0	<5.00	--	--	--	--	--	--	--	--	
MW-2	11/10/2001	93.21	9.10	84.11	4,320	--	--	--	--	51.0	6.44	53.0	91.5	--	--	25.1	<5.00	--	--	--	--	--	--	--	--	
MW-2	2/4/2002	93.21	9.96	83.25	4,500	--	--	--	--	33.3	2.80	74.5	97.6	--	--	--	<5.00	--	--	--	--	--	--	--	--	
MW-2	8/24/2002	93.21	9.18	84.03	3,400	--	--	--	--	17	2.10	25	56	--	--	<2.5	--	--	--	--	--	--	--	--	--	
MW-2	2/20/2003	93.21	9.78	83.43	2,600	--	--	--	--	7.3	1.80	47	32	--	--	<2.5	--	--	--	--	--	--	--	--	--	
MW-2	8/21/2003	93.21	10.52	82.69	840	--	--	--	--	2.1	<2.0	2.9	<3.0	--	--	<2.5	--	--	--	--	--	--	--	--	--	
MW-2	2/19/2004	93.21	11.06	82.15	950	--	--	--	--	<5.0	<0.5	3.0	<5.0	--	--	<2.5	--	--	--	--	--	--	--	--	--	
MW-2	8/10/2004	93.21	10.16	83.05	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--	<2.5	--	--	--	--	--	--	--	--	--	
MW-2	12/3/2004	93.21	10.68	82.53	<48	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--	<2.5	--	--	--	--	--	--	--	--	--	
MW-2	02/21/2006 ¹	93.21	11.52	81.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	10/23/2007 ⁴	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Well Decommissioned	
MW-3	8/11/1994	94.57	7.63	86.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	8/25/1994	94.57	7.59	86.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	9/23/1994	94.57	7.59	86.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	8/12/1996	94.57	7.89	86.68	37,700	--	--	--	--	84.6	77.1	1,190	3,800	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	2/27/2000	94.57	9.18	85.39	30,700	--	--	--	--	42.4	60.1	1,160	3,250	--	--	<25.0	--	--	--	--	--	--	--	--	--	
MW-3	2/21/2001	94.57	9.23	85.34	6,090	--	--	--	--	29.9	6.07	182	293	--	--	8.75	<4.00	--	--	--	--	--	--	--	--	
MW-3	05/22/2001 ¹	94.57	9.52	85.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	08/11/2001 ⁵	94.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	11/10/2001 ²	94.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	02/04/2002 ²	94.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	08/24/2002 ³	94.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	02/20/2003 ²	94.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	08/21/2003 ³	94.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	02/19/2004 ³	94.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	08/10/2004 ³	94.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	12/03/2004 ⁴	94.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	02/21/2006 ³	94.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	10/23/2007 ²	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Well Decommissioned	

Table 1
Groundwater Gauging Data and Analytical Results
Chevron Site No. 98944
1323 Lee Boulevard
Richland, Washington



Well ID	Date	TOC	DTW	GWE	HYDROCARBONS					PRIMARY VOCs				LEAD		OXYGENATES		PAHs								Comments
					TPH-GRO	TPH-DRO	TPH-DRO w/SGC	TPH-HRO	TPH-HRO w/SGC	Benzene	Toluene	Ethylbenzene	Xylene	Dissolved Lead	Total Lead	MTBE by SW8020	MTBE by SW8260B	Naphthalene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	
					800/1000	500	500	500	500	5	1,000	700	1,000	NA	15	NA	20	160	NA	NA	NA	NA	NA	NA	NA	
MTCA Method A Cleanup Levels					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
Units	ft	ft	ft-elev.																							
MW-4	10/23/2007	359.19	12.69	346.50	2,800	610	--	<250	--	0.17	0.48	78	17.1	<2.0	20	--	<0.14	2.3	<0.010	<0.010	<0.010	<0.010	<0.021	<0.010	<0.010	
MW-4	3/24/2008	359.19	14.00	345.19	1,700	560	--	<240	--	<1.0	<1.0	89	28.9	<2.0	24	--	<1.0	--	--	--	--	--	--	--	--	
MW-4	5/12/2008	359.19	14.21	344.98	570	110	--	<95	--	<0.5	<0.5	46	<0.5	--	0.21	--	<0.5	--	--	--	--	--	--	--	--	
MW-4	7/28/2008	359.19	13.02	346.17	460	570	--	<96	--	<0.5	<0.5	5	<0.5	--	0.16	--	<0.5	--	--	--	--	--	--	--	--	
MW-4	11/3/2008	359.19	13.54	345.65	63	48	--	<74	--	<0.5	<0.5	<0.5	<0.5	--	0.18 J	--	<0.5	--	--	--	--	--	--	--	--	
MW-4	2/11/2009	359.19	13.91	345.28	2,600 J	2,600	--	<150	--	--	--	--	--	--	0.18	--	--	--	--	--	--	--	--	--	--	
MW-4	8/11/2010	359.19	13.67	345.52	200	<130	--	<250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	9/9/2011	359.19	13.78	345.41	180	<29	--	<67	--	--	--	--	--	--	0.15	--	--	--	--	--	--	--	--	--	--	
MW-4	8/27/2012	359.19	13.72	345.47	<50	<30	--	<70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	9/23/2013	359.19	13.69	345.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Well Decommissioned																										
MW-5	10/23/2007	359.07	12.42	346.65	51	<120	--	<250	--	<0.10	<0.066	0.49	0.799	<2.0	6.9	--	<0.14	0.020	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	
MW-5	3/24/2008	359.07	13.73	345.34	<50	<120	--	<240	--	<1.0	<1.0	<1.0	<2.0	<2.0	27	--	<1.0	--	--	--	--	--	--	--	--	
MW-5	5/12/2008	359.07	13.93	345.14	110	<77	--	<96	--	<0.5	<0.5	<0.5	<0.5	--	0.11	--	<0.5	--	--	--	--	--	--	--	--	
MW-5	7/28/2008	359.07	12.78	333.51	<50	<76	--	<95	--	<0.5	<0.5	<0.5	<0.5	--	0.34	--	<0.5	--	--	--	--	--	--	--	--	
MW-5	11/3/2008	359.07	13.30	345.77	<50	<29	--	<67	--	<0.5	<0.5	<0.5	<0.5	--	0.18 J	--	<0.5	--	--	--	--	--	--	--	--	
MW-5	2/10/2009	359.07	13.61	345.46	--	--	--	--	--	--	--	--	--	--	0.44	--	--	--	--	--	--	--	--	--	--	
MW-5	8/11/2010	359.07	13.35	345.72	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	9/9/2011	359.07	13.35	345.72	--	--	--	--	--	--	--	--	--	--	0.16	--	--	--	--	--	--	--	--	--	--	
MW-5	9/23/2013	359.07	13.31	345.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Well Decommissioned																										
MW-6	10/23/2007	358.85	12.14	346.71	3,400	670	--	<260	--	<0.10	<0.066	0.41	0.57	3.0	27	--	<0.14	2.8	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	
MW-6	3/24/2008	358.85	13.42	345.43	1,100	830	--	<240	--	<1.0	<1.0	<1.0	<2.0	<2.0	67	--	<1.0	--	--	--	--	--	--	--	--	
MW-6	5/12/2008	358.85	13.69	345.16	500	330	--	<96	--	<0.5	<0.5	<0.5	<0.5	--	2.0	--	<0.5	--	--	--	--	--	--	--	--	
MW-6	7/28/2008	358.85	12.53	333.79	700	170	--	<96	--	<0.5	<0.5	<0.5	<0.5	--	1.5	--	<0.5	--	--	--	--	--	--	--	--	
MW-6	11/3/2008	358.85	13.03	345.82	790	150	--	<67	--	<0.5	<0.5	<0.5	<0.5	--	0.92	--	<0.5	--	--	--	--	--	--	--	--	
MW-6	2/11/2009	358.85	13.34	345.51	470	100	--	<65	--	--	--	--	--	--	0.76	--	--	--	--	--	--	--	--	--	--	
MW-6	8/11/2010	358.85	13.20	345.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	9/9/2011	358.85	13.18	345.67	610	44	--	<68	--	--	--	--	--	--	0.77	--	--	--	--	--	--	--	--	--	--	
MW-6	9/23/2013	358.85	13.06	345.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Well Decommissioned																										
MW-7	10/23/2007	359.01	12.63	346.38	73	<130	--	<260	--	<0.10	<0.066	0.14	0.26	<2.0	13	--	<0.14	0.031	<0.010	<0.010	<0.010	<0.010	<0.021	<0.010	<0.010	
MW-7	3/24/2008	359.01	14.00	345.01	<50	<120	--	<240	--	<1.0	<1.0	<1.0	<2.0	<2.0	33	--	<1.0	--	--	--	--	--	--	--	--	
MW-7	5/12/2008	359.01	14.19	344.82	<50	<76	--	<95	--	<0.5	<0.5	<0.5	<0.5	--	0.070	--	<0.5	--	--	--	--	--	--	--	--	
MW-7	7/28/2008	359.01		333.15	<50	<78	--	<97	--	<0.5	<0.5	<0.5	<0.5	--	11.2	--	<0.5	--	--	--	--	--	--	--	--	
MW-7	11/3/2008	359.01	13.54	345.47	<50	<29	--	<67	--	<0.5	<0.5	<0.5	<0.5	--	1.3	--	<0.5	--	--	--	--	--	--	--	--	
MW-7	2/10/2009	359.01	13.89	345.12	--	--	--	--	--	--	--	--	--	--	0.49	--	--	--	--	--	--	--	--	--	--	
MW-7	8/11/2010	359.01	13.61	345.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	9/9/2011	359.01	13.71	345.30	--	--	--	--	--	--	--	--	--	--	0.60	--	--	--	--	--	--	--	--	--	--	
MW-7	9/23/2013	359.01	13.70	345.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Well Decommissioned																										
MW-8	10/23/2007	359.29	12.79	346.50	33,000	4,000	--	270	--	0.12	16	1,300	2,280	<2.0	22	--	<0.14	190	<0.010	<0.010	<0.010	<0.010	<0.021	<0.010	<0.010	
MW-8	3/24/2008	359.29	14.01	345.28	13,000	3,000	--	<240	--	<1.0	15	610	821	<2.0	54	--	<1.0	320	--	--	--	--	--	--	--	
MW-8	5/12/2008	359.29	14.31	344.98	18,000 J	4,600	--	<970	--	<1	17	640	1,100	--	0.44	--	<1	410	--	--	--	--	--	--	--	
MW-8	7/28/2008	359.29	13.13	346.16	16,000	8,000	--	<490	--	<0.5	9	800	1,300	--	1.2	--	<0.5	500	--	--	--	--	--	--	--	
MW-8	11/3/2008	359.29	13.65	345.64	15,000	6,900	--	<670	--	<0.5	10	760	520	--	1.6	--	<0.5	410	--	--	--	--	--	--	--	
MW-8	2/11/2009	359.29	13.92	345.37	4,800	550	--	<66	--	<0.5	0.8	200	70	--	0.24	--	--	110	--	--	--	--	--	--	--	
MW-8	8/11/2010	359.29	13.74	345.55	9,900	1,000	--	<250	--	<2.0	2.9	620	973	--	--	--	--	300	--	--	--	--	--	--	--	
MW-8	9/9/2011	359.29	13.85	345.44	2,100 [2,200]	130 [120]	--	<67 [-67]	--	<0.5 [-0.5]	0.5 [0.6]	45 [46]	4 [4]	--	0.29 [0.31]	--	--	24 [24]	--	--	--	--	--	--	--	
MW-8	8/27/2012	359.29	13.83	345.46	3,000 [2,900]	200 [-69]	--	<67 [-69]	--	<0.5 [-0.5]	<0.5 [0.5]	39 [34]	24 [23]	--	--	--	--	31 [29]	--	--	--	--	--	--	--	
MW-8	9/23/2013	359.29	13.60	345.69	4,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Well Decommissioned																										
MW-9	10/9/2018	--	13.73	--	7,800	960	420	<100	<70	<1.0	2.0	240	19	<1.1	<1.1	--	--	--	--	--	--	--	--	--	--	
MW-9	12/12/2018	--	14.07	--	7,600	760	330	<100	<67	<0.20	3.0	59	21	<1.1	<1.1	--	--	--	--	--	--	--	--	--	--	
MW-9	9/19/2019	--	13.28	--	620	370	--	<350	--	--	--	--	--													

Well ID	Date	TOC	DTW	GWE	HYDROCARBONS					PRIMARY VOCs				LEAD		OXYGENATES		PAHs								Comments
					TPH-GRO	TPH-DRO	TPH-DRO w/SGC	TPH-HRO	TPH-HRO w/SGC	Benzene	Toluene	Ethylbenzene	Xylene	Dissolved Lead	Total Lead	MTBE by SW8020	MTBE by SW8260B	Naphthalene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	
					800/1000	500	500	500	500	5	1,000	700	1,000	NA	15	NA	20	160	NA	NA	NA	NA	NA	NA	NA	
MTCA Method A Cleanup Levels					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
Units	ft	ft	ft-elev.																							
MW-9	7/19/2022	359.21	12.92	346.29	1,290	327	133 J	<250	<250	<1.00	<1.00	1.68	0.606 J	--	<2.00	--	--	--	--	--	--	--	--	--		
MW-9	10/25/2022	359.21	12.84	346.37	1,560	514	297	<250	<250	<1.00	<1.00	0.380 J	0.384 J	--	--	--	--	--	--	--	--	--	--	--		
MW-9	2/16/2023	359.21	5.68	353.53	5,920	1,130	647	392	<250	<5.00	2.88 J	79.6	16.5	--	<2.00	--	--	--	--	--	--	--	--	--		
Groundwater Elevation results are anomalous																										
MW-10	10/9/2018	--	13.47	--	9,500 [9,400]	740 [680]	430 [430]	<110 [<100]	<69 [<68]	<1.0 [<1.0]	<1.0 [<1.0]	91 [86]	<5.0 [<5.0]	8.3 [8.6]	7.6 [8.2]	--	--	--	--	--	--	--	--	--		
MW-10	12/12/2018	--	13.72	--	8,000 [7,900]	540 [540]	350 [400]	<100 [<100]	<66 [<66]	<0.20 [<0.20]	0.40 [0.50]	81 [85]	4.0 [4.0]	2.0 [1.8]	2.2 [2.1]	--	--	--	--	--	--	--	--	--		
MW-10	9/19/2019	--	12.88	--	190 J [250]	290 J [290 J]	--	290 J [320 J]	--	--	--	--	--	--	<1.4 J [1.3 J]	--	--	--	--	--	--	--	--	--		
MW-10	2/19/2020	--	13.98	--	4,600 [4,500]	1,300 [1,200]	--	150 J [150 J]	--	<0.53 [<0.53]	<0.39 [<0.39]	31 [33]	1.8 J [2.0 J]	--	--	--	--	--	--	--	--	--	--	--		
MW-10	5/20/2020	--	14.31	--	4,900 [4,700]	2,100 [2,400]	1,500 [1,900]	270 J * [280 J *]	<89 * [98 J *]	<0.24 [<0.24]	0.45 J [0.46 J]	47 [49]	2.5 J [2.4 J]	--	2.0 J [1.9 J]	--	--	--	--	--	--	--	--	--		
MW-10	8/27/2020	--	13.32	--	1,100 [1,000]	810 [1000]	--	670 B [910 B]	--	<0.24 [<0.24]	<0.39 [0.42 J]	5.4 [6.0]	<0.39 [<0.39]	--	2.0 J [1.7 J]	--	--	--	--	--	--	--	--	--		
MW-10	11/5/2020	--	13.46	--	3,300 [2,900]	1,100 [1,200]	760 [800]	500 [540]	<89 [90 J]	<0.24 [<0.24]	0.88 J [0.88 J]	21 [21]	1.2 J [1.2 J]	--	<1.0 [<1.0]	--	--	--	--	--	--	--	--	--		
MW-10	2/24/2021	--	13.37	--	3,300 [3,400]	1,000 [1,200]	--	220 J [240 J]	--	0.24 [0.24]	0.65 J [0.63 J]	27 [28]	1.7 J [1.6 J]	--	--	--	--	--	--	--	--	--	--	--		
MW-10	5/18/2021	--	13.78	--	3,200 [3,780]	771 [812]	215 [343]	<250	<250	<0.941 [<0.0941]	<0.278 [<0.278]	15.1 [21.1]	0.875 J [1.40 J]	--	--	--	--	--	--	--	--	--	--	--		
MW-10	8/18/2021	358.96	12.44	346.52	1,440 [996]	704 [599]	233 [96.5 J]	428 [523]	<250 [<250]	1.00 [<1.00]	0.394 J [0.327 J]	4.93 [3.51]	0.352 J [0.307 J]	--	<6.00 [<6.00]	--	--	--	--	--	--	--	--	--		
MW-10	11/10/2021	358.96	13.00	345.96	263 B [233 B]	175 J [193 J]	-- [-]	<250 [<250]	<250 [<250]	<1.00 [<1.00]	<1.00 [<1.00]	0.174 J [<1.00]	<3.00 [<3.00]	--	--	--	--	--	--	--	--	--	--	--		
MW-10	1/18/2022	358.96	12.88	346.08	65.5 J [101]	135 J [165 J]	<200 [<200]	302 [296]	<250 [<250]	<1.00 [<1.00]	<1.00 [<1.00]	0.366 J [0.234 J]	<3.00 [<3.00]	--	<6.00 [<6.00]	--	--	--	--	--	--	--	--	--		
MW-10	4/5/2022	358.96	13.35	345.61	604 [867]	277 [278]	78.1 J [82.4 J]	<250 [<250]	<250 [<250]	<1.00 [<1.00]	<1.00 [<1.00]	1.83 [2.20]	0.186 J [0.174 J]	--	--	--	--	--	--	--	--	--	--	--		
MW-10	7/19/2022	358.96	12.60	346.36	46.0 J [64.2 J]	278 [189 J]	<200 [<200]	364 [351]	<250 [<250]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<3.00 [<3.00]	--	<2.00 [<2.00]	--	--	--	--	--	--	--	--	--		
MW-10	10/25/2022	358.96	12.53	346.43	121B [105 B]	<200 [<200]	<200 [<200]	<250 [<250]	<250 [<250]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<3.00 [<3.00]	--	--	--	--	--	--	--	--	--	--	--		
MW-10	2/16/2023	358.96	12.89	346.07	105 B [290]	118 J [114 J]	<200 [<200]	501 [420]	<250 [<250]	<1.00 [<1.00]	<1.00 [<1.00]	0.278 J [0.342 J]	<3.00 [<3.00]	-- [-]	<2.00 [<2.00]	-- [-]	-- [-]	-- [-]	-- [-]	-- [-]	-- [-]	-- [-]	-- [-]	-- [-]		
MW-11	10/9/2018	--	13.63	--	7,800	740	450	200	<69	<0.20	<0.20	2.0	<1.0	3.2	3.4	--	--	--	--	--	--	--	--	--		
MW-11	12/12/2018	--	13.81	--	4,100	270	300	<100	<66	<0.20	<0.20	0.70	<1.0	<1.1	<1.1	--	--	--	--	--	--	--	--	--		
MW-11	9/19/2019	--	12.95	--	470	310	--	120 J	--	--	--	--	--	--	<4.0	--	--	--	--	--	--	--	--	--		
MW-11	2/19/2020	--	14.09	--	2,100	460	--	<110	--	<0.53	<0.39	<0.50	<0.39	--	1.4 J	--	--	--	--	--	--	--	--	--		
MW-11	5/20/2020	--	14.33	--	2,100	1,600	1,400	130 J *	130 J *	<0.24	0.77 J	<0.50	<0.39	--	<1.0	--	--	--	--	--	--	--	--	--		
MW-11	8/27/2020	--	13.59	--	1,600	1,100	--	400 B	--	<0.24	0.88 J	<0.50	<0.39	--	<1.0	--	--	--	--	--	--	--	--	--		
MW-11	11/5/2020	--	13.34	--	1,800	920	740	370	140 J	<0.24	0.71 J	<0.50	<0.39	--	<1.0	--	--	--	--	--	--	--	--	--		
MW-11	2/24/2021	--	13.45	--	1,000	430	--	120 J	--	0.24	0.39	0.50	0.39	--	--	--	--	--	--	--	--	--	--	--		
MW-11	5/18/2021	--	13.91	--	1,540	490	425	<250	<250	<0.0941	<0.278	0.154 J	0.330 J	--	--	--	--	--	--	--	--	--	--	--		
MW-11	8/18/2021	359.06	13.43	345.63	1,190	445	187 J	161 J	<250	<1.00	<1.00	<1.00	<3.00	--	<6.00	--	--	--	--	--	--	--	--	--		
MW-11	11/10/2021	359.06	13.10	345.96	573 B	338	92.4 J	<250	<250	<1.00	<1.00	<1.00	<3.00	--	--	--	--	--	--	--	--	--	--	--		
MW-11	1/18/2022	359.06	13.05	346.01	515	210	114 J	168 J	<250	<1.00	<1.00	<1.00	<3.00	--	<6.00	--	--	--	--	--	--	--	--	--		
MW-11	4/5/2022	359.06	13.45	345.61	773	272	113 J	<250	<250	<1.00	<1.00	<1.00	<3.00	--	--	--	--	--	--	--	--	--	--	--		
MW-11	7/19/2022	359.06	12.66	346.40	518	268	97.8 J	<250	<250	<1.00	<1.00	<1.00	<3.00	--	<2.00	--	--	--	--	--	--	--	--	--		
MW-11	10/25/2022	359.06	12.62	346.44	430 B	<200	<200	<250	<250	<1.00	<1.00	<1.00	<3.00	--	--	--	--	--	--	--	--	--	--	--		
MW-11	2/16/2023	359.06	7.94	351.12	621	197 J	86.3 J	351	<250	<1.00	<1.00	<1.00	<3.00	--	<2.00	--	--	--	--	--	--	--	--	--		
Groundwater Elevation results are anomalous																										
Trip Blank	2/27/2000	--	--	--	<50.0	--	--	--	--	<0.500	<0.500	<0.500	<1.00	--	--	<5.00	--	--	--	--	--	--	--	--	--	
Trip Blank	2/21/2001	--	--	--	<50.0	--	--	--	--	<0.500	<0.500	<0.500	<1.00	--	--	<5.00	--	--	--	--	--	--	--	--	--	
Trip Blank	5/22/2001	--	--	--	<50.0	--	--	--	--	<0.500	<0.500	<0.500	<1.00	--	--	<5.00	--	--	--	--	--	--	--	--	--	
Trip Blank	8/11/2001	--	--	--	<50.0	--	--	--	--	<0.500	<0.500	<0.500	<1.50	--	--	<5.00	--	--	--	--	--	--	--	--	--	
Trip Blank	11/10/2001	--	--	--	<100	--	--	--	--	<0.500	<2.00	<1.00	<1.50	--	--	<5.00	--	--	--	--	--	--	--	--	--	
Trip Blank	2/4/2002	--	--	--	<50.0	--	--	--	--	<0.500	<0.500	<0.500	<1.00	--	--	<5.00	--	--	--	--	--	--	--	--	--	
Trip Blank	8/24/2002	--	--	--	<50	--	--	--	--	<0.50	<0.50	<0.50	<1.5	--	--	<2.5	--	--	--	--	--	--	--	--	--	
Trip Blank	2/20/2003	--	--	--	<50	--	--	--	--	<0.50	<0.50	<0.50	<1.5	--	--	<2.5	--	--	--	--	--	--	--	--	--	
Trip Blank	8/21/2003	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--	<2.5	--	--	--	--	--	--	--	--	--	
Trip Blank	2/19/2004	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--	<2.5	--	--	--	--	--	--	--	--	--	
Trip Blank	8/10/2004	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--	<2.5	--	--	--	--	--	--	--	--	--	
Trip Blank	12/3/2004	--	--	--	<48	--	--	--	--	<0.5	<0.5	<0.5	<1.5	--	--	<2.5	--	--	--	--	--	--	--	--	--	
Trip Blank	10/23/2007	--	--	--	<50	--	--	--	--	<1.0	<1.0	<1.														

Well ID	Date	TOC	DTW	GWE	HYDROCARBONS					PRIMARY VOCs				LEAD		OXYGENATES		PAHs								Comments	
					TPH-GRO	TPH-DRO	TPH-DRO w/SGC	TPH-HRO	TPH-HRO w/SGC	Benzene	Toluene	Ethylbenzene	Xylene	Dissolved Lead	Total Lead	MTBE by SW8020	MTBE by SW8260B	Naphthalene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene		
MTCA Method A Cleanup Levels					800/1000	500	500	500	500	5	1,000	700	1,000	NA	15	NA	20	160	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Units	ft	ft	ft-elev.	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
Trip Blank	2/24/2021	--	--	--	--	--	--	--	--	0.24	0.39	0.50	0.39	--	--	--	--	0.93	--	--	--	--	--	--	--	--	
Trip Blank	5/18/2021	--	--	--	--	--	--	--	--	<0.0941	<0.278	<0.137	0.222 J	--	--	--	--	--	--	--	--	--	--	--	--	--	
Trip Blank	8/18/2021	--	--	--	--	--	--	--	--	<1.00	<1.00	<1.00	<3.00	--	--	--	--	--	--	--	--	--	--	--	--	--	
Trip Blank	11/10/2021	--	--	--	--	--	--	--	--	<1.00	<1.00	<1.00	<3.00	--	--	--	--	--	--	--	--	--	--	--	--	--	
Trip Blank	1/18/2022	--	--	--	--	--	--	--	--	<1.00	<1.00	<1.00	<3.00	--	--	--	--	--	--	--	--	--	--	--	--	--	
Trip Blank	4/5/2022	--	--	--	--	--	--	--	--	<1.00	<1.00	<1.00	0.242 J	--	--	--	--	--	--	--	--	--	--	--	--	--	
Trip Blank	7/19/2022	--	--	--	--	--	--	--	--	<1.00	<1.00	<1.00	<3.00	--	--	--	--	--	--	--	--	--	--	--	--	--	
Trip Blank	10/25/2022	--	--	--	--	--	--	--	--	<1.00	<1.00	<1.00	<3.00	--	--	--	--	--	--	--	--	--	--	--	--	--	
Equipment Blank	9/9/2011	--	--	--	<50	<29		<68		<0.5	<0.5	<0.5	<0.5	--	<0.080	--	--	<1	--	--	--	--	--	--	--	--	
Equipment Blank	8/27/2012	--	--	--	<50	<29		<68		<0.5	<0.5	<0.5	<0.5	--	--	--	--	<1	--	--	--	--	--	--	--	--	

LEGEND:
 ID = Identification
 MTCA = Model Toxics Control Act Cleanup Regulations [WAC 173-340-720(2)(a)(1), as amended February 2001]
 NA = No applicable MTCA Method A cleanup level
 TOC = Top of Casing
 DTW = Depth to Water
 GWE = Groundwater elevation
 (ft-elev) = Feet Above Elevation
 ft = Feet
 µg/L = Micrograms per Liter
 TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics
 TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics
 TPH-HRO = Total Petroleum Hydrocarbons - Oil Range Organics
 BTEX = Benzene, toluene, ethylbenzene, xylenes
 VOCs = Volatile organic compounds
 MTBE = Methyl tertiary butyl ether
 PAHs = Polycyclic aromatic hydrocarbons
 -- = Not available / not applicable
 < = Not detected above laboratory method detection limit (till 5/18/2021). Not detected above REPORTED detection limit (from 8/18/2021)
 J = The identification of the analyte is acceptable; the reported value is an estimate.
 B = Compound was found in the blank and sample
 H = Sample was prepped or analyzed beyond the specified holding time
 w/SGC = with Silica Gel Cleanup
 [] = Duplicate sample results
 1 = Not sampled due to insufficient water
 2 = Inaccessible
 3 = Dry
 4 = Destroyed
 5 = Inaccessible - Paved over
 + = LCS and/or LCSD is outside acceptance limits, high biased.

NOTES:
 800/1,000 = GRO MTCA Method A CUL with benzene present is 800 µg/L and without is 1,000 µg/L
 Monitoring wells MW-9, MW-10 and MW-11 have not been surveyed.
 Concentrations in bold exceed MTCA Method A Cleanup Levels.

Well ID	Date	TOC	DTW	GWE	Methane	Nitrate	Sulfate	Total Manganese	Dissolved Manganese	Total Iron	Dissolved Iron
	Units	ft	ft	ft-elev.	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
MW-9	5/20/2020	--	14.64	--	51	570	79,000	1,600	--	--	--
MW-9	8/27/2020	--	13.78	--	--	<20	19,000	560	580	1,300	1000
MW-9	11/5/2020	--	13.75	--	1,200	<20	1,000 J	1,600	1,700	2,200	2,000
MW-9	2/24/2021	--	13.68	--	3,200	560	830 J	1,200	1,300	1,400 J	1,600 J
MW-9	5/18/2021	--	14.19	--	--	--	--	--	--	--	--
MW-9	8/18/2021	359.21	13.79	345.42	38.7	54.4 J	11,400	829	873	1,020	--
MW-9	11/10/2021	359.21	13.30	345.91	--	--	--	--	--	--	--
MW-9	1/18/2022	359.21	13.33	345.88	1,980	<100	<5,000	2,100	2,080	2,260	--
MW-9	4/5/2022	359.21	13.69	345.52	--	--	--	--	--	--	--
MW-9	7/19/2022	359.21	12.92	346.29	58.7	158 P1	28,500	328	379	759	--
MW-9	10/25/2022	359.21	12.84	346.37	--	--	--	--	--	--	--
MW-9	2/16/2023	359.21	5.68	353.53	4,220	<100	621 J	1,420	1,540	1,670	--
MW-10	5/20/2020	--	14.31	--	980 [1,200]	600 [640 H]	410,000 [380,000]	3,500 [3,400]	--	--	--
MW-10	8/27/2020	--	13.32	--	--	4,800 [4,600]	170,000 [160,000]	520 [780]	950 [890]	560 J [810 J]	760 J [670 J]
MW-10	11/5/2020	--	13.46	--	280 [280]	2,100 [2,200]	79,000 [80,000]	760 [740]	790 [760]	1,200 [1,200]	1,300 [1,200]
MW-10	2/24/2021	--	13.37	--	520 [470]	1,100 [1,100]	56,000 [56,000]	920 [970]	1,000 [1,100]	2,500 [2,600]	2,800 [2,700]
MW-10	5/18/2021	--	13.78	--	--	--	--	--	--	--	--
MW-10	8/18/2021	358.96	12.44	346.52	289 [182]	3,940 [3,840]	107,000 [105,000]	413 [428]	517 [500]	1,040 [961]	--
MW-10	11/10/2021	358.96	13.00	345.96	--	--	--	--	--	--	--
MW-10	1/18/2022	358.96	12.88	346.08	11 [10.9]	2,170 [2,150]	59,500 [61,100]	108 [103]	73.6 [77]	104 [96.7 J]	--
MW-10	4/5/2022	358.96	13.35	345.61	--	--	--	--	--	--	--
MW-10	7/19/2022	358.96	12.60	346.36	<10.0 [<10.0]	5,720 [5,870]	83,400 [84,300]	112 [120]	17.7 [17.1]	209 [211]	--
MW-10	10/25/2022	358.96	12.53	346.43	--	--	--	--	--	--	--
MW-10	2/16/2023	358.96	12.89	346.07	12.4 [22.1]	2,790 [2,790]	52,400 [52,000]	93.9 [99.2]	29.8 [31.4]	80.6 J [92.3 J]	-- [--]
MW-11	5/20/2020	--	14.33	--	1400	740	97,000	2,900	--	--	--
MW-11	8/27/2020	--	13.59	--	--	1,100	52,000	1,900	2,000	4,500	3,900
MW-11	11/5/2020	--	13.34	--	460	<20	23,000	2,000	1,900	3,200	2,900
MW-11	2/24/2021	--	13.45	--	390	790	18,000	1,500	1,500	2,200 J	2,000 J
MW-11	5/18/2021	--	13.91	--	--	--	--	--	--	--	--
MW-11	8/18/2021	359.06	13.43	345.63	532	90.5 J	37,000	992	1,050	2,190	--
MW-11	11/10/2021	359.06	13.10	345.96	--	--	--	--	--	--	--
MW-11	1/18/2022	359.06	13.05	346.01	66	55.5 J	21,700	986	948	1,960	--
MW-11	4/5/2022	359.06	13.45	345.61	--	--	--	--	--	--	--
MW-11	7/19/2022	359.06	12.66	346.40	330	237	22,600	736	721	1,760	--
MW-11	10/25/2022	359.06	12.62	346.44	--	--	--	--	--	--	--
MW-11	2/16/2023	359.06	7.94	351.12	221	129	7,430	934	850	2,920	--

Well ID	Date	TOC	DTW	GWE	Methane	Nitrate	Sulfate	Total Manganese	Dissolved Manganese	Total Iron	Dissolved Iron
	Units	ft	ft	ft-elev.	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L

LEGEND:

- ID = Identification
- TOC = Top of Casing
- DTW = Depth to Water
- GWE = Groundwater elevation
- (ft-elev) = Feet Above Elevation
- ft = Feet
- µg/L = Micrograms per Liter
- = Not available / not applicable
- < = Not detected above laboratory method detection limit (till 5/18/2021). Not detected above REPORTED detection limit (8/18/2021)
- J = The identification of the analyte is acceptable; the reported value is an estimate.
- P1 = RPD value not applicable for sample concentrations less than 5 times the reporting limit.
- H = Sample was prepped or analyzed beyond the specified holding time
- [] = Duplicate sample results

Table 3
 Groundwater Field Parameter Measurements
 Chevron Site No. 98944
 1323 Lee Boulevard
 Richland, Washington



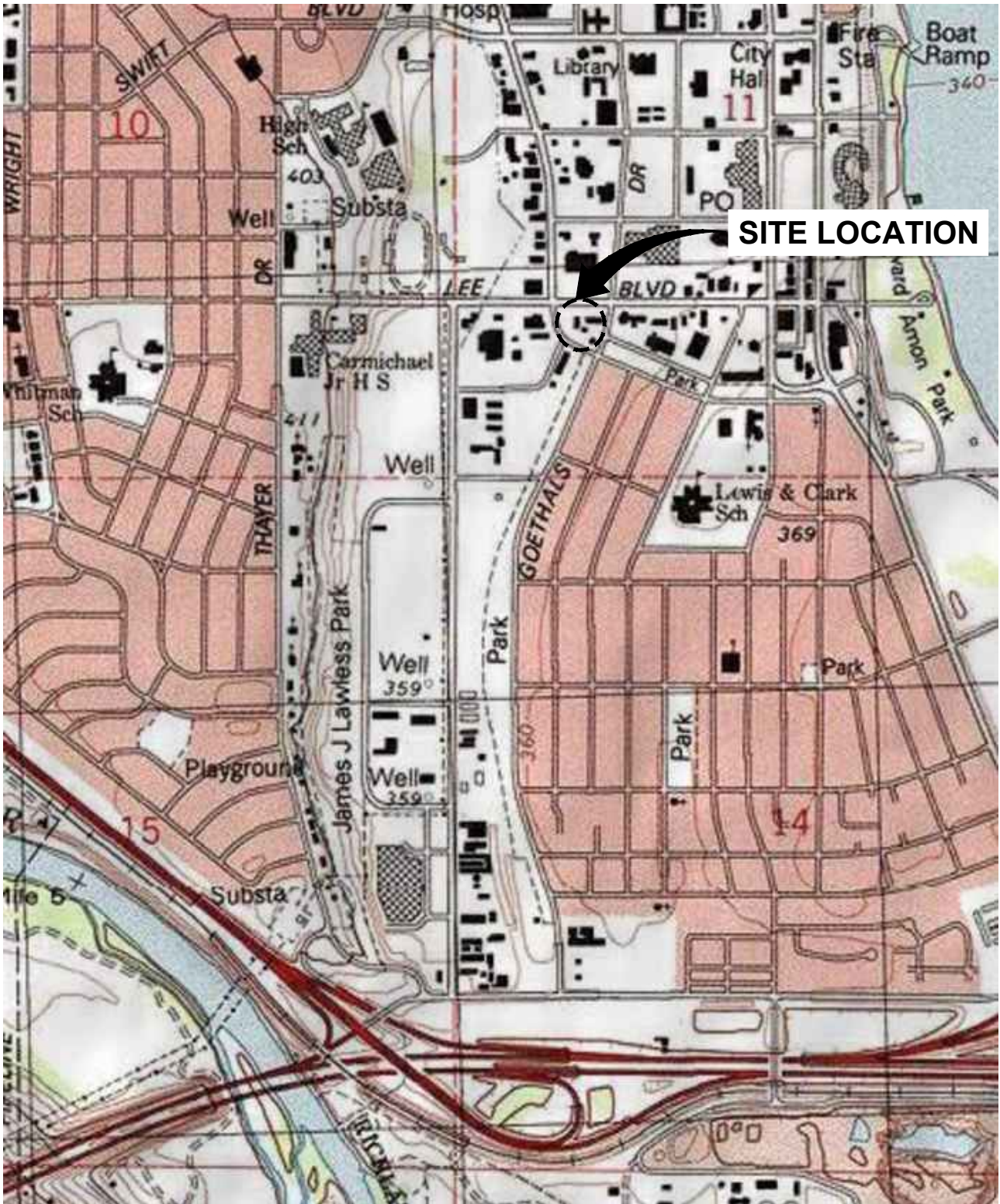
Well ID	Date	pH	Conductivity	Dissolved Oxygen	ORP	Turbidity	Ferrous Iron
		--	mS/cm	mg/L	mV	NTU	mg/L
MW-9	2/19/2020	6.76	0.665	3.16	83.9	9	--
MW-9	5/20/2020	7.04	0.939	0.58	-74.9	7	0.0
MW-9	8/27/2020	7.17	0.579	1.02	7.5	16	0.0
MW-9	11/5/2020	7.23	0.929	0.51	-80.9	16	--
MW-9	2/24/2021	7.30	0.56	0.63	-105.7	14	0.8
MW-9	5/18/2021	7.12	0.702	0.35	-120.7	16	--
MW-9	8/18/2021	7.91	0.694	0.50	148.9	9.0	--
MW-9	11/10/2021	7.37	0.643	1.63	0.2	11.0	--
MW-9	1/18/2022	6.40	0.969	1.49	56.2	6.0	--
MW-9	4/5/2022	6.34	1.77	0.38	140	18.0	--
MW-9	7/19/2022	6.80	0.742	0.88	130.7	10.0	--
MW-9	10/25/2022	6.80	0.745	0.09	187.7	3.0	--
MW-9	2/16/2023	6.53	0.241	0.64	-259.4	5.0	--
MW-10	2/19/2020	4.30	0.824	2.56	158.3	11	--
MW-10	5/20/2020	6.85	1.925	0.3	-90.1	17	0.0
MW-10	8/27/2020	7.16	1.62	0.27	12.5	8	0.0
MW-10	11/5/2020	7.11	1.91	0.44	-103.4	10	--
MW-10	2/24/2021	7.05	0.814	0.9	-67.6	48	2.4
MW-10	5/18/2021	7.04	1.39	0.36	-112.9	32	--
MW-10	8/18/2021	7.17	1.64	1.83	140.7	14	--
MW-10	11/10/2021	7.35	1.33	1.62	-17.2	6.0	--
MW-10	1/18/2022	6.35	0.917	0.52	99.1	12.0	--
MW-10	4/5/2022	6.29	1.68	0.49	76.1	13.0	--
MW-10	7/19/2022	6.52	1.26	2.01	233.1	10.0	--
MW-10	10/25/2022	6.94	1.24	0.09	131	9.0	--
MW-10	2/16/2023	7.04	0.308	1.96	-294.2	6.0	--
MW-11	2/19/2020	4.60	0.946	2.63	168.1	31	--
MW-11	5/20/2020	6.94	1.48	0.31	-90.9	61	0.0
MW-11	8/27/2020	7.09	1.45	0.22	-83.2	10	0.0
MW-11	11/5/2020	7.19	1.40	0.49	-56.7	11	--
MW-11	2/24/2021	7.07	0.743	0.69	-90	14	0.6
MW-11	5/18/2021	6.80	1.08	0.37	-117	60	--
MW-11	8/18/2021	7.00	1.179	1.68	101.5	60	--
MW-11	11/10/2021	7.44	1.25	0.41	-0.8	46.0	--
MW-11	1/18/2022	6.27	0.944	0.88	104.2	12.0	--
MW-11	4/5/2022	6.19	1.29	0.15	49.1	30.0	--
MW-11	7/19/2022	6.82	0.830	1.25	129.6	100	--
MW-11	10/25/2022	6.94	1.06	0.09	110.4	10.0	--
MW-11	2/16/2023	7.05	0.269	0.96	-327.3	25.0	--

Notes:

- ID = Identification
- mg/L = Milligrams per liter
- mS/cm = milliSiemens per centimeter
- mV = millivolts
- NTU = Nephelometric Turbidity Unit
- pH = potential of hydrogen
- ORP = oxygen reduction potential
- = not analyzed/not available

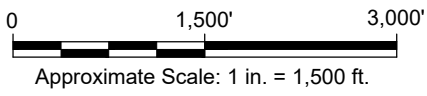
FIGURES





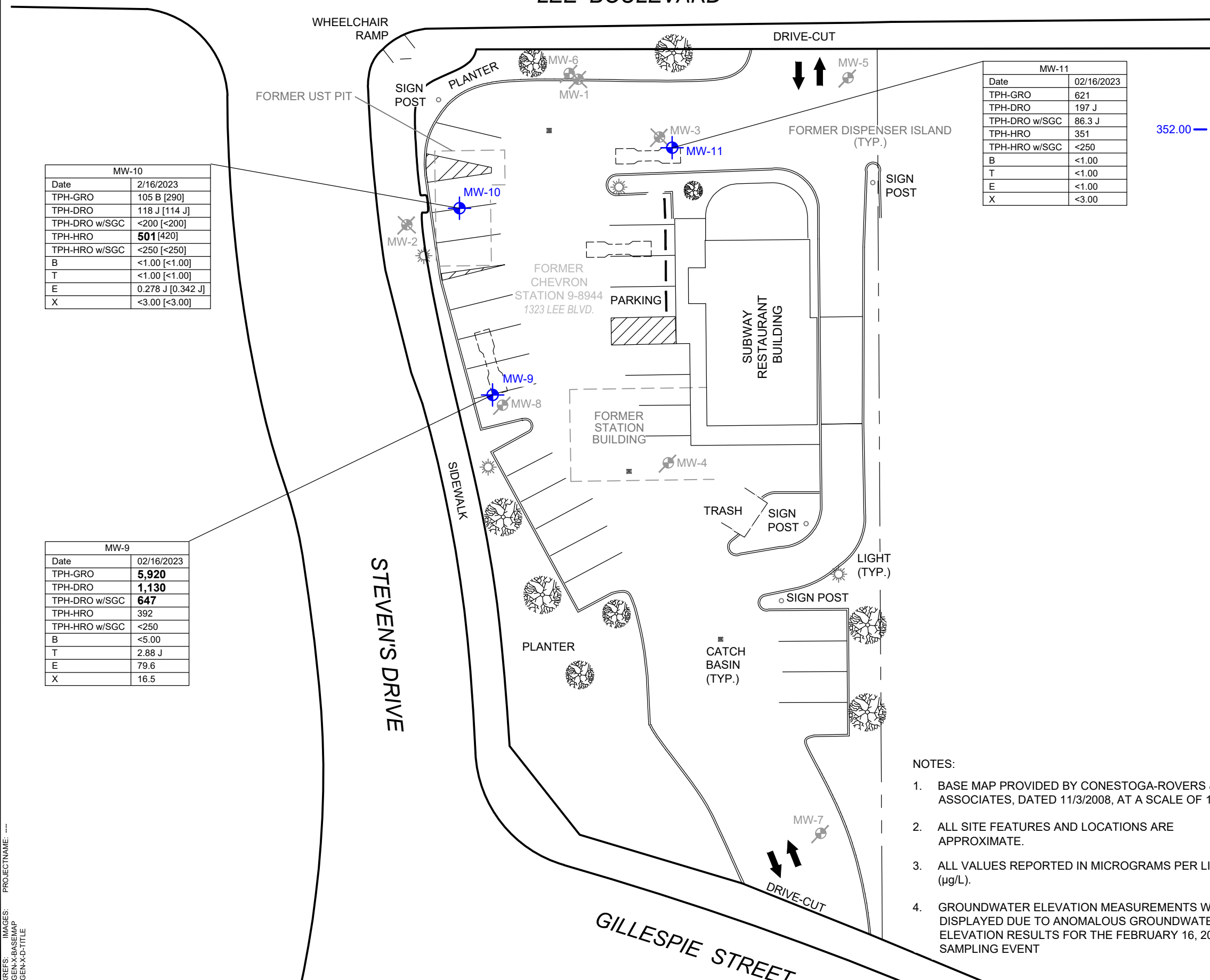
SITE LOCATION

REFERENCE: BASE MAP CREATED WITH TOPO! - RICHLAND, US TOPO.



CHEVRON SERVICE SITE 9-8944 1323 LEE BOULEVARD RICHLAND, WASHINGTON	
SITE LOCATION MAP	
	FIGURE 1

LEE BOULEVARD



MW-10	
Date	2/16/2023
TPH-GRO	105 B [290]
TPH-DRO	118 J [114 J]
TPH-DRO w/SGC	<200 [<200]
TPH-HRO	501 [420]
TPH-HRO w/SGC	<250 [<250]
B	<1.00 [<1.00]
T	<1.00 [<1.00]
E	0.278 J [0.342 J]
X	<3.00 [<3.00]

MW-9	
Date	02/16/2023
TPH-GRO	5,920
TPH-DRO	1,130
TPH-DRO w/SGC	647
TPH-HRO	392
TPH-HRO w/SGC	<250
B	<5.00
T	2.88 J
E	79.6
X	16.5

MW-11	
Date	02/16/2023
TPH-GRO	621
TPH-DRO	197 J
TPH-DRO w/SGC	86.3 J
TPH-HRO	351
TPH-HRO w/SGC	<250
B	<1.00
T	<1.00
E	<1.00
X	<3.00

LEGEND:

- MW-10 GROUNDWATER MONITORING WELL LOCATION
- MW-3 ABANDONED WELL LOCATIONS
- MW-2 DESTROYED MONITORING WELL LOCATION
- (353.53)** GROUNDWATER ELEVATION IN FEET
- 352.00 GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- BOLD** BOLD VALUES ARE GREATER THAN THEIR RESPECTIVE MTCA METHOD A CLEANUP LEVEL
- <1.00 NOT DETECTED AT OR ABOVE THE REPORTED DETECTION LIMIT
- J THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE IS AN ESTIMATE
- B THE SAME ANALYTE IS FOUND IN THE ASSOCIATED BLANK
- * ECOLOGY MODEL TOXICS CONTROL ACT (MTCA) METHOD A CLEANUP LEVELS (CULS) FOR GROUNDWATER, WAC CHAPTER 173-340-900, TABLE 720-1
- 800/1,000 GRO MTCA METHOD A CUL WITH B PRESENT IS 800 (µg/L) AND WITHOUT IS 1,000 (µg/L)
- TPH TOTAL PETROLEUM HYDROCARBONS
- [] DUPLICATE SAMPLE

Well ID		
Constituent	MTCA CULs*	
TPH-GRO	TPH as gasoline	800/1,000
TPH-DRO	TPH as diesel	500
TPH-DRO w/SGC	TPH as diesel with silica gel	500
TPH-HRO	TPH as motor oil	500
TPH-HRO w/SGC	TPH as motor oil with silica gel	500
B	Benzene	5
T	Toluene	1,000
E	Ethylbenzene	700
X	Xylenes (total)	1,000

NOTES:

- BASE MAP PROVIDED BY CONESTOGA-ROVERS & ASSOCIATES, DATED 11/3/2008, AT A SCALE OF 1"=30'.
- ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
- ALL VALUES REPORTED IN MICROGRAMS PER LITER (µg/L).
- GROUNDWATER ELEVATION MEASUREMENTS WERE NOT DISPLAYED DUE TO ANOMALOUS GROUNDWATER ELEVATION RESULTS FOR THE FEBRUARY 16, 2023 SAMPLING EVENT



CHEVRON SERVICE STATION 9-8944
1323 LEE BOULEVARD
RICHLAND, WASHINGTON

**GROUNDWATER ANALYTICAL
MAP
FEBRUARY 16, 2023**

ARCADIS

FIGURE **2**

ATTACHMENT A

Field Data Sheets and General Procedures



Groundwater Gauging Log

Project Number	30064311							
Client:	Chevron							
Site ID:	98944							
Site Location:	Kennewick, Washington							
Measuring Point:	Top of Casing							
Date(s):	02/16/2023							
Sampler(s):	Lee Bures							
Gauging Equipment:	Interface Probe							
Well ID	Date	Gauging Time	Static Water Level (ft bmp)	Depth to Product (ft bmp)	Total Depth (ft bmp)	PID Reading (ppm)	LNAPL Removed (gal)	Comments
MW-9	02/16/2023	10:55	5.68	ND	18.40	--	--	--
MW-10	02/16/2023	10:57	12.89	ND	18.15	--	--	--
MW-11	02/16/2023	10:59	7.94	ND	18.00	--	--	--

ft-bmp = feet below measuring point

ND = Not Detected

PID = Photoionization Detector Reading

ppm = parts per million

-- = Not Recorded

Project Number	30064311	Well ID	MW-9	Date	2/16/2023	
Site Location	Kennewick, Washington	Site ID	98944	Weather (°F)	Clear	Sampled by Lee Bures
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	8 to 18	Casing Diameter (in.)	2	Well Casing Material
Static Water Level (ft-bmp)	5.68	Total Depth (ft-bmp)	18.4	Water Column (ft)	12.72	Gallons in Well 2.07
Water Quality Meter Make/Model	Hach 2100Q, YSI 556 MP5	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	11:27	Well Volumes Purged	0.38	Sample ID	MW-9-23026	Purge Equipment Peristaltic
Purge Start	11:11	Gallons Purged	0.79	Duplicate ID	--	Sample Equipment Peristaltic
Purge End	11:26	Total Purge Time (h:m)	0:15			

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
11:14	200	5.69	6.88	0.241	14.0	0.83	7.76	-274.4	Clear	--
11:17	200	5.69	6.49	0.240	6.0	0.68	7.68	-258	Clear	--
11:20	200	5.7	6.50	0.241	5.0	0.67	7.65	-259.5	Clear	--
11:23	200	5.7	6.51	0.241	5.0	0.66	7.67	-259.3	Clear	--
11:26	200	5.7	6.53	0.241	5.0	0.64	7.66	-259.4	Clear	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = 1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
gallons per foot 1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-9-23026 Sample Time: 11:27 Sample Depth (ft-bmp): 11
Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Project Number	30064311	Well ID	MW-11	Date	2/16/2023	
Site Location	Kennewick, Washington	Site ID	98944	Weather (°F)	Clear	Sampled by Lee Bures
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	8 to 18	Casing Diameter (in.)	2	Well Casing Material
Static Water Level (ft-bmp)	7.94	Total Depth (ft-bmp)	18	Water Column (ft)	10.06	Gallons in Well 1.63
Water Quality Meter Make/Model	Hach 2100Q,YSI 556 MP5	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	12:50	Well Volumes Purged	0.49	Sample ID	MW-11-230216	Purge Equipment Peristaltic
Purge Start	12:33	Gallons Purged	0.79	Duplicate ID	--	Sample Equipment Peristaltic
Purge End	12:48	Total Purge Time (h:m)	0:15			

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
12:36	200	7.97	7.05	0.277	47.0	2.00	8.97	-308	Clear	--
12:39	200	7.97	7.05	0.274	28.0	1.09	8.71	-322.1	Clear	--
12:42	200	7.99	7.05	0.272	27.0	1.00	8.48	-326.9	Clear	--
12:45	200	7.99	7.05	0.271	25.0	0.98	8.51	-327.1	Clear	--
12:48	200	7.99	7.05	0.269	25.0	0.96	8.50	-327.3	Clear	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = 1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
gallons per foot 1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-11-230216 Sample Time: 12:50 Sample Depth (ft-bmp): 13

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Project Number	30064311	Well ID	MW-10	Date	2/16/2023	
Site Location	Kennewick, Washington	Site ID	98944	Weather (°F)	Clear	Sampled by Lee Bures
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	8 to 18	Casing Diameter (in.)	2	Well Casing Material
Static Water Level (ft-bmp)	12.89	Total Depth (ft-bmp)	18.15	Water Column (ft)	5.26	Gallons in Well 0.85
Water Quality Meter Make/Model	Hach 2100Q,YSI 556 MP5	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	12:04	Well Volumes Purged	0.93	Sample ID	MW-10-230216	Purge Equipment Peristaltic
Purge Start	11:47	Gallons Purged	0.79	Duplicate ID	Duplicate-1-181210	Sample Equipment Peristaltic
Purge End	12:02	Total Purge Time (h:m)	0:15			

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
11:50	200	12.9	7.07	0.307	6.0	2.20	9.58	-301.1	Clear	--
11:53	200	12.9	7.07	0.309	6.0	2.17	9.52	-299.3	Clear	--
11:56	200	12.91	7.06	0.308	6.0	2.00	9.50	-294.7	Clear	--
11:59	200	12.91	7.06	0.308	6.0	1.98	9.48	-294.4	Clear	--
12:02	200	12.91	7.04	0.308	6.0	1.96	9.47	-294.2	Clear	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = 1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
gallons per foot 1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-10-230216 Sample Time: 12:04 Sample Depth (ft-bmp): 15

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Arcadis - Chevron - WA

1100 Olive Way
Suite 800
Seattle, WA 98101

Report to:
Ada Hamilton

Project Description:
98944

Phone: 206-325-5254

Collected by (print):
Fonda De Santos

Collected by (signature):
Fonda De Santos

Immediately Packed on Ice N Y X

Billing Information:
Attn: Accounts Payable
630 Plaza Dr., Ste. 600
Highlands Ranch, CO 80129

Email To:
ada.hamilton@arcadis.com; Sean.Parry@arcadis

City/State Collected: _____ Please Circle: PT MT CT ET

Client Project # **30064311** Lab Project # **CHEVARCWA-98944**

Site/Facility ID # **1323 LEE BLVD. RICHLAND WA** P.O. # _____

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day
 Date Results Needed _____

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1



MT JULIET, TN

12065 Lection Rd. Mount Juliet, TN 37122
 Submitting a sample with this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: www.pace-labs.com/hubs/pace-standards/terms.pdf

SDG # _____
 Table # _____
 Acctnum: **CHEVARCWA**
 Template: **T224053**
 Prelogin: **P979061**
 PM: **110 - Brian Ford**
 PB: _____

Shipped Via: _____
 Remarks: _____ Sample # (Lab Only): _____

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	* Nitrate, Sulfate 125ml HDPE-NoPres	BTEX 8260 40ml/Amb-HCl	FF Diss Mn 6020 250ml HDPE HNO3	Methane RSK175 40ml/Amb HCl	NWTPHDX no silica 40ml/Amb-HCl-BT	NWTPHDX w/ silica 40ml/Amb-HCl-BT	NWTPHGX 40ml/Amb HCl	Total Fe, Mn, Pb 6020 250ml HDPE-HNO3
MW-9-230216	GRAB	GW	—	02/16/23	1127	14	X	X	X	X	X	X	X	X
MW-10-230216	↓	GW	—	02/16/23	1204	14	X	X	X	X	X	X	X	X
MW-11-230216	↓	GW	—	02/16/23	1250	14	X	X	X	X	X	X	X	X
Duplicate-1-181210	↓	GW	—	02/16/23	1200	14	X	X	X	X	X	X	X	X
TRIP BLANK-1-180626			—	02/16/23	1200	2								

Remarks: *Nitrate has a 48 hour holding time.

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other _____

pH _____ Temp _____
 Flow _____ Other _____

COC Seal Present/Intact:	___ NP ___ Y ___ N
COC Signed/Accurate:	___ Y ___ N
Bottles arrive intact:	___ Y ___ N
Correct bottles used:	___ Y ___ N
Sufficient volume sent:	___ Y ___ N
If Applicable	
VOA Zero Headspace:	___ Y ___ N
Preservation Correct/Checked:	___ Y ___ N
R&D Screen <0.5 mR/hr:	___ Y ___ N

Samples returned via: _____ Tracking # _____
 UPS FedEx Courier _____

Relinquished by: (Signature) <i>Fonda De Santos</i>	Date: 02/16/23	Time: 1400	Received by: (Signature) SHIPPED VIA FEDEX	Trip Blank Received: Yes / No HCL / MeOH TBR	Temp: _____ °C	Bottles Received: _____	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Hold:	Condition: NCF / OK
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date:	Time:	Hold:	Condition: NCF / OK

WELLHEAD INSPECTION FORM

Client: ARCADIS Site: RICHLAND-1323 LEE ST. Date: 02/16/23
 Job #: 230216-FDI Technician: FD Page 1 of 1

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency											Well Not Inspected (explain in notes)	Notes <small>(list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)</small>			
		Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade			Other (explain in notes)		
MW-9	X																
MW-10	X																
MW-11	X																

NOTES: _____

CHEVRON-WASHINGTON/OREGON TYPE **A** BILL OF LADING

SOURCE RECORD **BILL OF LADING**

FOR PURGEWATER RECOVERED FROM GROUNDWATER WELLS AT CHEVRON FACILITIES IN THE STATE OF WASHINGTON AND OREGON. THE PURGE- WATER WHICH HAS BEEN RECOVERED FROM GROUND- WATER WELLS IS COLLECTED BY THE CONTRACTOR AND HAULED TO THEIR FACILITY IN KENT, WASHINGTON FOR TEMPORARILY HOLDING PENDING TRANSPORT BY OTHERS TO FINAL DESTINATION.

The contractor performing this work is BLAINE TECH SERVICES, INC. (BLAINE TECH), 22727 72ND Ave South, Suite D - 102, Kent, WA 98032. BLAINE TECH. is authorized by Chevron Environmental Management Company (CHEVRON EMC) to recover, collect, apportion into loads, and haul the purgewater that is drawn from wells at the CHEVRON EMC facility indicated below and to deliver that purgewater to BLAINE TECH for temporarily holding. Transport routing of the purgewater may be direct from one CHEVRON EMC facility to BLAINE TECH; from one CHEVRON EMC facility to BLAINE TECH via another CHEVRON EMC facility; or any combination thereof. The well purgewater is and remains the property of CHEVRON EMC.

This Source Record **BILL OF LADING** was initiated to cover the recovery of Non-Hazardous Well Purgewater from wells at the Chevron facility described below:

98944
 CHEVRON # _____ Chevron Project Manager
 1323 LEE BLVD RICHLAND WA
 Street number street name city state

WELL I.D.	GALS.	WELL I.D.	GALS.
MW-9	/ 1		/
MW-10	/ 1		/
MW-11	/ 1		/
	/		/
	/		/
	/		/
	/		/
	/		/
	/		/
	/		/

added equip. rinse water 1 +.5 gal

any other adjustments / _____

TOTAL GALS. RECOVERED 3.5 gal

loaded onto BTS vehicle # 148

BTS event # 230216-FD1 time 1815 date 02 / 16 / 23

signature Fonda DeSan

Permit To Work

for Chevron EMC Sites

Client: ARCADIS Date 02/16/23

Site Address: 1323 LEE BLVD

Job Number: 230216-FD1 Technician(s): FD

Pre-Job Safety Review

1. JMP reviewed, site restrictions and parking/access issues addressed.	Reviewed: <input checked="" type="checkbox"/>
2. Special Permit Required Task Review	
Are there any conditions or tasks that would require:	Yes No
Confined space entry	<input type="checkbox"/> <input checked="" type="checkbox"/>
Working at height	<input type="checkbox"/> <input checked="" type="checkbox"/>
Lock-out/Tag-out	<input type="checkbox"/> <input checked="" type="checkbox"/>
Excavations greater than 4 feet deep	<input type="checkbox"/> <input checked="" type="checkbox"/>
Excavations within 3 feet of a buried active electrical line or product piping or within 10 feet of a high pressure gas line.	<input type="checkbox"/> <input checked="" type="checkbox"/>
Use of overhead equipment within 15 feet of an overhead electrical power line or pole supporting one	<input type="checkbox"/> <input checked="" type="checkbox"/>
Hot work	<input type="checkbox"/> <input checked="" type="checkbox"/>
If "Yes" was the answer to any of the Special Permit Required Tasks above, the Project Manager will contact the client and arrange to modify the Scope of Work so that the Special Permit Required Tasks are not required to be performed by Blaine Tech Services employees.	
3. Is a Traffic Control Permit required for today's work?	Yes No <input type="checkbox"/> <input checked="" type="checkbox"/>
If so is it in the folder?	<input type="checkbox"/> <input type="checkbox"/>
Is it current?	<input type="checkbox"/> <input type="checkbox"/>
Do you understand the Traffic Control Plan and what equipment you will need?	<input type="checkbox"/> <input type="checkbox"/>

On site Pre-Job Safety Review

1. Reviewed and signed the site specific HASP.	<input checked="" type="checkbox"/>
2. Route to hospital understood.	<input checked="" type="checkbox"/>
3. Reviewed "Groundwater Monitoring Well Sampling General Job Safety Analysis included in the HASP.	<input checked="" type="checkbox"/>
4. Exceptional circumstances today that are not covered by the HASP, JSA or JMP have been addressed and mitigated.	<input checked="" type="checkbox"/>
5. Understands procedure to follow, if site circumstances change, to address new site hazards.	<input checked="" type="checkbox"/>
6. There are no unexpected conditions which would make your task a Special Permit Required Task. If there is, contact your Project Manager.	<input checked="" type="checkbox"/>
7. All site hazards have been communicated to all necessary onsite personnel during tailgate safety meeting.	<input checked="" type="checkbox"/>
8. After lunch tailgate safety meeting refresher conducted.	<input checked="" type="checkbox"/>
If Checklist Task cannot be completed, explain:	

Permit To Work Authority:

Name	Title	Date	Time

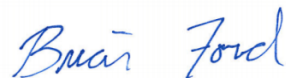
ATTACHMENT B

**Laboratory Report and Chain-of-Custody
Documentation**

Arcadis - Chevron - WA

Sample Delivery Group: L1586675
Samples Received: 02/17/2023
Project Number: 30064311
Description: 98944
Site: 1323 LEE BLVD. RICHLAND WA
Report To: Ada Hamilton
1100 Olive Way
Suite 800
Seattle, WA 98101

Entire Report Reviewed By:

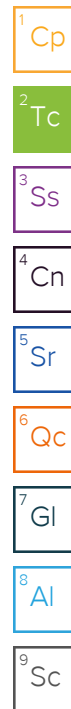


Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

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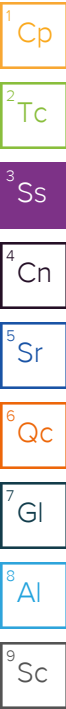


SAMPLE SUMMARY

MW-9-230216 L1586675-01 GW

Collected by Fonda Desantos Collected date/time 02/16/23 11:27 Received date/time 02/17/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2007985	1	02/17/23 17:14	02/17/23 17:14	GEB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2008021	10	02/20/23 12:19	02/20/23 16:28	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2008045	1	02/18/23 14:52	02/19/23 14:11	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2009651	5	02/21/23 11:13	02/21/23 11:13	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2008663	1	02/18/23 14:17	02/18/23 14:17	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2009552	5	02/21/23 03:43	02/21/23 03:43	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2010971	5	02/22/23 17:17	02/22/23 17:17	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2010424	1	02/23/23 09:23	02/24/23 05:58	MWS	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2010427	1	02/23/23 09:25	02/24/23 12:44	MWS	Mt. Juliet, TN



MW-10-230216 L1586675-02 GW

Collected by Fonda Desantos Collected date/time 02/16/23 12:04 Received date/time 02/17/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2007985	1	02/17/23 17:52	02/17/23 17:52	GEB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2008021	1	02/20/23 12:19	02/20/23 15:29	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2008045	1	02/18/23 14:52	02/19/23 14:14	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2009651	1	02/21/23 10:51	02/21/23 10:51	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2008663	1	02/18/23 14:19	02/18/23 14:19	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2008180	1	02/17/23 22:15	02/17/23 22:15	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2010424	1	02/23/23 09:23	02/24/23 06:18	MWS	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2010427	1	02/23/23 09:25	02/24/23 13:06	MWS	Mt. Juliet, TN

MW-11-230216 L1586675-03 GW

Collected by Fonda Desantos Collected date/time 02/16/23 12:50 Received date/time 02/17/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2007985	1	02/17/23 18:05	02/17/23 18:05	GEB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2008021	5	02/20/23 12:19	02/20/23 16:32	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2008045	1	02/18/23 14:52	02/19/23 14:17	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2008913	1	02/19/23 12:52	02/19/23 12:52	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2008663	1	02/18/23 14:23	02/18/23 14:23	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2008180	1	02/17/23 22:36	02/17/23 22:36	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2010424	1	02/23/23 09:23	02/24/23 06:39	MWS	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2010427	1	02/23/23 09:25	02/24/23 13:29	MWS	Mt. Juliet, TN

DUPLICATE-1-181210 L1586675-04 GW

Collected by Fonda Desantos Collected date/time 02/16/23 12:00 Received date/time 02/17/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2007985	1	02/17/23 18:18	02/17/23 18:18	GEB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2008021	1	02/20/23 12:19	02/20/23 16:12	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2008045	1	02/18/23 14:52	02/19/23 14:21	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2008913	1	02/19/23 13:14	02/19/23 13:14	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2008663	1	02/18/23 14:27	02/18/23 14:27	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2008180	1	02/17/23 22:56	02/17/23 22:56	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2010424	1	02/23/23 09:23	02/24/23 07:00	MWS	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2010427	1	02/23/23 09:25	02/24/23 13:52	MWS	Mt. Juliet, TN

SAMPLE SUMMARY

TRIP BLANK-1-180626 L1586675-05 GW

Collected by: Fonda Desantos
Collected date/time: 02/16/23 12:00
Received date/time: 02/17/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
--------	-------	----------	-----------------------	--------------------	---------	----------

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc


⁷Gl

⁸Al

⁹Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Nitrate as (N)	U		48.0	100	1	02/17/2023 17:14	WG2007985
Sulfate	621	J	594	5000	1	02/17/2023 17:14	WG2007985

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Iron	1670		28.1	100	1	02/19/2023 14:11	WG2008045
Lead	U		0.849	2.00	1	02/19/2023 14:11	WG2008045
Manganese	1420		0.704	5.00	1	02/19/2023 14:11	WG2008045
Manganese,Dissolved	1540		7.04	50.0	10	02/20/2023 16:28	WG2008021

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	5920		158	500	5	02/21/2023 11:13	WG2009651
(S) a,a,a-Trifluorotoluene(FID)	107			78.0-120		02/21/2023 11:13	WG2009651

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Methane	4220		2.91	10.0	1	02/18/2023 14:17	WG2008663

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Benzene	U		0.471	5.00	5	02/22/2023 17:17	WG2010971
Toluene	2.88	J	1.39	5.00	5	02/21/2023 03:43	WG2009552
Ethylbenzene	79.6		0.685	5.00	5	02/21/2023 03:43	WG2009552
Total Xylenes	16.5		0.870	15.0	5	02/21/2023 03:43	WG2009552
(S) Toluene-d8	99.1			80.0-120		02/21/2023 03:43	WG2009552
(S) Toluene-d8	104			80.0-120		02/22/2023 17:17	WG2010971
(S) 4-Bromofluorobenzene	88.9			77.0-126		02/21/2023 03:43	WG2009552
(S) 4-Bromofluorobenzene	102			77.0-126		02/22/2023 17:17	WG2010971
(S) 1,2-Dichloroethane-d4	94.6			70.0-130		02/21/2023 03:43	WG2009552
(S) 1,2-Dichloroethane-d4	103			70.0-130		02/22/2023 17:17	WG2010971

Sample Narrative:

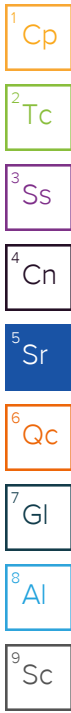
L1586675-01 WG2009552: Non-target compounds too high to run at a lower dilution.

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	1130		66.7	200	1	02/24/2023 05:58	WG2010424
Residual Range Organics (RRO)	392		83.3	250	1	02/24/2023 05:58	WG2010424
(S) o-Terphenyl	110			52.0-156		02/24/2023 05:58	WG2010424

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	647		66.7	200	1	02/24/2023 12:44	WG2010427
Residual Range Organics (RRO)	U		83.3	250	1	02/24/2023 12:44	WG2010427
(S) o-Terphenyl	78.4			52.0-156		02/24/2023 12:44	WG2010427



Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Nitrate as (N)	2790		48.0	100	1	02/17/2023 17:52	WG2007985
Sulfate	52400		594	5000	1	02/17/2023 17:52	WG2007985

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Iron	80.6	J	28.1	100	1	02/19/2023 14:14	WG2008045
Lead	U		0.849	2.00	1	02/19/2023 14:14	WG2008045
Manganese	93.9		0.704	5.00	1	02/19/2023 14:14	WG2008045
Manganese,Dissolved	29.8		0.704	5.00	1	02/20/2023 15:29	WG2008021

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	105	B	31.6	100	1	02/21/2023 10:51	WG2009651
(S) a,a,a-Trifluorotoluene(FID)	97.9			78.0-120		02/21/2023 10:51	WG2009651

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Methane	12.4		2.91	10.0	1	02/18/2023 14:19	WG2008663

Volatile Organic Compounds (GC/MS) by Method 8260D

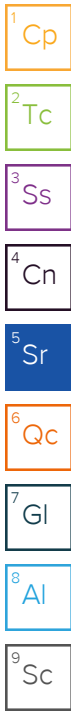
Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Benzene	U		0.0941	1.00	1	02/17/2023 22:15	WG2008180
Toluene	U		0.278	1.00	1	02/17/2023 22:15	WG2008180
Ethylbenzene	0.278	J	0.137	1.00	1	02/17/2023 22:15	WG2008180
Total Xylenes	U		0.174	3.00	1	02/17/2023 22:15	WG2008180
(S) Toluene-d8	109			80.0-120		02/17/2023 22:15	WG2008180
(S) 4-Bromofluorobenzene	101			77.0-126		02/17/2023 22:15	WG2008180
(S) 1,2-Dichloroethane-d4	105			70.0-130		02/17/2023 22:15	WG2008180

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	118	J	66.7	200	1	02/24/2023 06:18	WG2010424
Residual Range Organics (RRO)	501		83.3	250	1	02/24/2023 06:18	WG2010424
(S) o-Terphenyl	97.9			52.0-156		02/24/2023 06:18	WG2010424

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	U		66.7	200	1	02/24/2023 13:06	WG2010427
Residual Range Organics (RRO)	U		83.3	250	1	02/24/2023 13:06	WG2010427
(S) o-Terphenyl	66.3			52.0-156		02/24/2023 13:06	WG2010427



Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Nitrate as (N)	129		48.0	100	1	02/17/2023 18:05	WG2007985
Sulfate	7430		594	5000	1	02/17/2023 18:05	WG2007985

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Iron	2920		28.1	100	1	02/19/2023 14:17	WG2008045
Lead	U		0.849	2.00	1	02/19/2023 14:17	WG2008045
Manganese	934		0.704	5.00	1	02/19/2023 14:17	WG2008045
Manganese,Dissolved	850		3.52	25.0	5	02/20/2023 16:32	WG2008021

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	621		31.6	100	1	02/19/2023 12:52	WG2008913
(S) a,a,a-Trifluorotoluene(FID)	97.4			78.0-120		02/19/2023 12:52	WG2008913

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Methane	221		2.91	10.0	1	02/18/2023 14:23	WG2008663

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Benzene	U		0.0941	1.00	1	02/17/2023 22:36	WG2008180
Toluene	U		0.278	1.00	1	02/17/2023 22:36	WG2008180
Ethylbenzene	U		0.137	1.00	1	02/17/2023 22:36	WG2008180
Total Xylenes	U		0.174	3.00	1	02/17/2023 22:36	WG2008180
(S) Toluene-d8	103			80.0-120		02/17/2023 22:36	WG2008180
(S) 4-Bromofluorobenzene	92.3			77.0-126		02/17/2023 22:36	WG2008180
(S) 1,2-Dichloroethane-d4	108			70.0-130		02/17/2023 22:36	WG2008180

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	197	J	66.7	200	1	02/24/2023 06:39	WG2010424
Residual Range Organics (RRO)	351		83.3	250	1	02/24/2023 06:39	WG2010424
(S) o-Terphenyl	100			52.0-156		02/24/2023 06:39	WG2010424

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	86.3	J	66.7	200	1	02/24/2023 13:29	WG2010427
Residual Range Organics (RRO)	U		83.3	250	1	02/24/2023 13:29	WG2010427
(S) o-Terphenyl	78.9			52.0-156		02/24/2023 13:29	WG2010427

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Nitrate as (N)	2790		48.0	100	1	02/17/2023 18:18	WG2007985
Sulfate	52000		594	5000	1	02/17/2023 18:18	WG2007985

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Iron	92.3	J	28.1	100	1	02/19/2023 14:21	WG2008045
Lead	U		0.849	2.00	1	02/19/2023 14:21	WG2008045
Manganese	99.2		0.704	5.00	1	02/19/2023 14:21	WG2008045
Manganese,Dissolved	31.4		0.704	5.00	1	02/20/2023 16:12	WG2008021

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	290		31.6	100	1	02/19/2023 13:14	WG2008913
(S) a,a,a-Trifluorotoluene(FID)	105			78.0-120		02/19/2023 13:14	WG2008913

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Methane	22.1		2.91	10.0	1	02/18/2023 14:27	WG2008663

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Benzene	U		0.0941	1.00	1	02/17/2023 22:56	WG2008180
Toluene	U		0.278	1.00	1	02/17/2023 22:56	WG2008180
Ethylbenzene	0.342	J	0.137	1.00	1	02/17/2023 22:56	WG2008180
Total Xylenes	U		0.174	3.00	1	02/17/2023 22:56	WG2008180
(S) Toluene-d8	108			80.0-120		02/17/2023 22:56	WG2008180
(S) 4-Bromofluorobenzene	103			77.0-126		02/17/2023 22:56	WG2008180
(S) 1,2-Dichloroethane-d4	105			70.0-130		02/17/2023 22:56	WG2008180

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	114	J	66.7	200	1	02/24/2023 07:00	WG2010424
Residual Range Organics (RRO)	420		83.3	250	1	02/24/2023 07:00	WG2010424
(S) o-Terphenyl	97.9			52.0-156		02/24/2023 07:00	WG2010424

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	U		66.7	200	1	02/24/2023 13:52	WG2010427
Residual Range Organics (RRO)	U		83.3	250	1	02/24/2023 13:52	WG2010427
(S) o-Terphenyl	77.4			52.0-156		02/24/2023 13:52	WG2010427

Method Blank (MB)

(MB) R3894249-1 02/17/23 10:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate	U		48.0	100
Sulfate	U		594	5000

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1586694-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1586694-01 02/17/23 13:23 • (DUP) R3894249-3 02/17/23 13:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate	56000	53900	1	3.83	☒	15
Sulfate	379000	365000	1	3.73	☒	15

L1586679-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1586679-02 02/17/23 18:44 • (DUP) R3894249-6 02/17/23 18:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate	U	U	1	0.000		15

Laboratory Control Sample (LCS)

(LCS) R3894249-2 02/17/23 10:54

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate	8000	7860	98.2	80.0-120	
Sulfate	40000	39800	99.5	80.0-120	

L1586694-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1586694-01 02/17/23 13:23 • (MS) R3894249-4 02/17/23 13:49 • (MSD) R3894249-5 02/17/23 14:02

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Nitrate	5000	56000	57500	56100	30.4	2.24	1	80.0-120	EV	EV	2.48	15

L1586679-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1586679-02 02/17/23 18:44 • (MS) R3894249-7 02/17/23 19:10

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Nitrate	5000	U	5030	101	1	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3892788-1 02/20/23 15:22

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Manganese,Dissolved	U		0.704	5.00

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3892788-2 02/20/23 15:26

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Manganese,Dissolved	50.0	49.4	98.9	80.0-120	

4 Cn

5 Sr

L1586675-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1586675-02 02/20/23 15:29 • (MS) R3892788-4 02/20/23 15:42 • (MSD) R3892788-5 02/20/23 15:46

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Manganese,Dissolved	50.0	29.8	79.0	79.3	98.3	98.9	1	75.0-125			0.399	20

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3892403-1 02/19/23 13:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Iron	U		28.1	100
Lead	U		0.849	2.00
Manganese	U		0.704	5.00

Laboratory Control Sample (LCS)

(LCS) R3892403-2 02/19/23 13:35

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Iron	5000	5090	102	80.0-120	
Lead	50.0	48.1	96.1	80.0-120	
Manganese	50.0	51.3	103	80.0-120	

L1585315-37 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1585315-37 02/19/23 13:38 • (MS) R3892403-4 02/19/23 13:45 • (MSD) R3892403-5 02/19/23 13:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l		ug/l	ug/l	%	%		%			%	%
Iron	5000		4940	4920	96.7	96.3	1	75.0-125			0.318	20
Lead	50.0		49.9	48.5	99.9	97.0	1	75.0-125			2.88	20
Manganese	50.0		52.3	52.0	98.9	98.3	1	75.0-125			0.583	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3892901-2 02/19/23 11:27

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	109			78.0-120

Laboratory Control Sample (LCS)

(LCS) R3892901-1 02/19/23 10:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	5410	98.4	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			103	78.0-120	

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3893290-3 02/21/23 10:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	32.8	↓	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	97.8			78.0-120

Laboratory Control Sample (LCS)

(LCS) R3893290-2 02/21/23 08:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	5090	92.5	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			101	78.0-120	

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3892315-2 02/18/23 14:07

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		2.91	10.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1586675-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1586675-03 02/18/23 14:23 • (DUP) R3892315-3 02/18/23 14:43

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	221	224	1	1.35		20

L1587179-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1587179-03 02/18/23 14:58 • (DUP) R3892315-4 02/18/23 15:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	1480	1520	1	2.67		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3892315-1 02/18/23 14:03 • (LCSD) R3892315-7 02/18/23 15:45

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	69.4	68.7	102	101	85.0-115			1.01	20

L1587179-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1587179-01 02/18/23 14:52 • (MS) R3892315-5 02/18/23 15:36 • (MSD) R3892315-6 02/18/23 15:41

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Methane	67.8	U	60.1	75.6	88.6	112	1	50.0-150		J3	22.8	20

Method Blank (MB)

(MB) R3892789-3 02/17/23 15:58

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	113			80.0-120
(S) 4-Bromofluorobenzene	101			77.0-126
(S) 1,2-Dichloroethane-d4	112			70.0-130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3892789-1 02/17/23 13:55 • (LCSD) R3892789-2 02/17/23 14:15

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Benzene	5.00	4.75	4.88	95.0	97.6	70.0-123			2.70	20
Toluene	5.00	4.83	5.15	96.6	103	79.0-120			6.41	20
Ethylbenzene	5.00	4.97	5.06	99.4	101	79.0-123			1.79	20
Xylenes, Total	15.0	14.9	15.9	99.3	106	79.0-123			6.49	20
(S) Toluene-d8				102	107	80.0-120				
(S) 4-Bromofluorobenzene				95.7	99.7	77.0-126				
(S) 1,2-Dichloroethane-d4				123	126	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3893632-3 02/20/23 21:53

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Xylenes, Total	U		0.174	3.00
<i>(S) Toluene-d8</i>	105			80.0-120
<i>(S) 4-Bromofluorobenzene</i>	86.8			77.0-126
<i>(S) 1,2-Dichloroethane-d4</i>	94.9			70.0-130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3893632-1 02/20/23 20:48 • (LCSD) R3893632-2 02/20/23 21:09

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Toluene	5.00	5.08	4.91	102	98.2	79.0-120			3.40	20
Ethylbenzene	5.00	5.07	4.78	101	95.6	79.0-123			5.89	20
Xylenes, Total	15.0	15.0	14.4	100	96.0	79.0-123			4.08	20
<i>(S) Toluene-d8</i>				104	103	80.0-120				
<i>(S) 4-Bromofluorobenzene</i>				91.3	90.6	77.0-126				
<i>(S) 1,2-Dichloroethane-d4</i>				93.1	90.0	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3893955-3 02/22/23 12:07

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
(S) Toluene-d8	104			80.0-120
(S) 4-Bromofluorobenzene	102			77.0-126
(S) 1,2-Dichloroethane-d4	101			70.0-130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3893955-1 02/22/23 11:29 • (LCSD) R3893955-2 02/22/23 11:48

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	4.53	4.71	90.6	94.2	70.0-123			3.90	20
(S) Toluene-d8				101	103	80.0-120				
(S) 4-Bromofluorobenzene				99.0	104	77.0-126				
(S) 1,2-Dichloroethane-d4				98.5	103	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3894503-1 02/23/23 23:54

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	109			52.0-156

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3894503-2 02/24/23 00:14 • (LCSD) R3894503-3 02/24/23 00:35

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Diesel Range Organics (DRO)	1500	1630	1550	109	103	50.0-150			5.03	20
<i>(S) o-Terphenyl</i>				111	106	52.0-156				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3894504-1 02/24/23 00:55

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	122			52.0-156

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3894504-2 02/24/23 01:15 • (LCSD) R3894504-3 02/24/23 01:35

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	1500	1400	1340	93.3	89.3	50.0-150			4.38	20
(S) o-Terphenyl				93.5	94.0	52.0-156				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

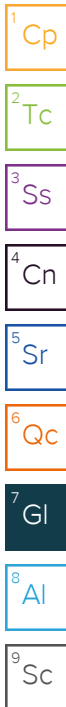
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
V	The sample concentration is too high to evaluate accurate spike recoveries.



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address: Arcadis - Chevron - WA				Billing Information: Attn: Accounts Payable 630 Plaza Dr., Ste. 600 Highlands Ranch, CO 80129				Analysis / Container / Preservative				Chain of Custody Page 1 of 1																
1100 Olive Way Suite 800 Seattle, WA 98101				Email To: ada.hamilton@arcadis.com; Sean.Parry@arcadis				<table border="1" style="width:100%; text-align: center;"> <tr> <td>Pres Chk</td> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td>2</td> </tr> <tr> <td>* Nitrate, Sulfate 125mlHDPE-NoPres</td> <td>BTEX 8260 40mlAmb-HCl</td> <td>FF Diss Mn 6020 250mlHDPE HNO3</td> <td>Methane RSK175 40mlAmb HCl</td> <td>NWTPHDX no silica 40mlAmb-HCl-BT</td> <td>NWTPHDX w/ silica 40mlAmb-HCl-BT</td> <td>NWTPHGX 40mlAmb HCl</td> <td>Total Fe, Mn, Pb 6020 250mlHDPE-HNO3</td> </tr> </table>				Pres Chk	2					2	* Nitrate, Sulfate 125mlHDPE-NoPres	BTEX 8260 40mlAmb-HCl	FF Diss Mn 6020 250mlHDPE HNO3	Methane RSK175 40mlAmb HCl	NWTPHDX no silica 40mlAmb-HCl-BT	NWTPHDX w/ silica 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	Total Fe, Mn, Pb 6020 250mlHDPE-HNO3	PEOPLE ADVANCING SCIENCE MT JULIET, TN <small>12065 Lebanon Rd Mount Juliet, TN 37122 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf</small> SDG # L1586075 F207 Acctnum: CHEVARCWA Template: T224053 Prelogin: P979061 PM: 110 - Brian Ford PB: Shipped Via:	
Pres Chk	2					2																						
* Nitrate, Sulfate 125mlHDPE-NoPres	BTEX 8260 40mlAmb-HCl	FF Diss Mn 6020 250mlHDPE HNO3	Methane RSK175 40mlAmb HCl	NWTPHDX no silica 40mlAmb-HCl-BT	NWTPHDX w/ silica 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	Total Fe, Mn, Pb 6020 250mlHDPE-HNO3																					
Report to: Ada Hamilton		City/State Collected:		Please Circle: PT MT CT ET																								
Project Description: 98944		Client Project # 30064311		Lab Project # CHEVARCWA-98944																								
Phone: 206-325-5254		Site/Facility ID # 1323 LEE BLVD. RICHLAND WA		P.O. #																								
Collected by (print): <i>Fonda DeSantos</i>		Collected by (signature): <i>Fonda DeSantos</i>		Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day		Quote #		Date Results Needed		No. of Cntrs																		
Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>																												
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time							Remarks	Sample # (lab only)															
MW-9-230216	GRAB	GW	—	02/16/23	1127	14	X	X	X	X	X	X	X		-01													
MW-10-230216	↓	GW	—	02/16/23	1204	14	X	X	X	X	X	X	X		-02													
MW-11-230216	↓	GW	—	02/16/23	1250	14	X	X	X	X	X	X	X		-03													
Duplicate-1-181210	↓	GW	—	02/16/23	1200	14	X	X	X	X	X	X	X		-04													
TRIP BLANK-1-180626			—	02/16/23	1200	2									-05													
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other				Remarks: *Nitrate has a 48 hour holding time.				pH _____ Temp _____ Flow _____ Other _____				Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> NP <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headspace: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N RAD Screen <0.5 mR/hr: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N																
Relinquished by: (Signature) <i>Fonda DeSantos</i>		Date: 02/16/23		Time: 1400		Received by: (Signature) SHIPPED VIA FEDEX		Trip Blank Received: 2		Bottles Received: 56		If preservation required by Login: Date/Time																
Relinquished by: (Signature)		Date:		Time:		Received by: (Signature)		Temp: 2.5 to 2.5 °C		Date: 2-17-23		Time: 0845																
Relinquished by: (Signature)		Date:		Time:		Received for lab by: (Signature) <i>Halt</i>		Date: 2-17-23		Time: 0845		Hold: Condition: NCF / OK																