

Ms. Nancy Sawka
Oregon Department of Environmental Quality
4026 Fairview Industrial Drive
Salem, Oregon 97302

Arcadis U.S., Inc.
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Portland
Oregon 97232
Tel
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Subject:

**First Semi-Annual Status Report 2024
Former Chevron Bulk Terminal No. 1001782**

ENVIRONMENT

Dear Ms. Sawka:

On behalf of Chevron Environmental Management Company (CEMC), Arcadis U.S., Inc. (Arcadis) is submitting the enclosed First Semi-Annual Status Report of 2024 for the following facility:

Date:
May 15, 2024

Contact:
Christine Perez

<u>Chevron Site No.</u>	<u>DEQ Site No.</u>	<u>Location</u>
1001782	36-90-4071	SE Davis Street and SE Chandler Avenue, McMinnville, Oregon

Phone:
805-459-2391

Email:
Christine.Perez@arcadis.com

If you have any questions, please contact Christine Perez at 805-459-2391.

Our ref:
30063816

Sincerely,
Arcadis U.S., Inc.



Christine Perez
Project Manager

FIRST SEMI-ANNUAL STATUS REPORT 2024

Facility No:	<u>1001782</u>	Address:	<u>SE Davis Street and SE Chandler Avenue, McMinnville, OR</u>
Arcadis Contact Person / Phone No.:		Christine Perez / 805-459-2391	
Arcadis Project No.:		30063816	
Primary Agency/Regulatory ID No.:		Oregon Department of Environmental Quality (DEQ) / Nancy Sawka / Case No. 36-90-4071	

WORK CONDUCTED THIS PERIOD [FIRST HALF 2024]:

1. Conducted semi-annual groundwater gauging and sampling on February 15, 2024.
2. Prepared the First Semi-Annual Status Report of 2024.

WORK PROPOSED NEXT PERIOD [SECOND HALF 2024]:

1. Conduct semi-annual groundwater gauging and sampling during the second half of 2024.
2. Prepare the second Semi-Annual Status Report of 2024.

Current Phase of Project:	Groundwater Gauging and Sampling
Frequency of Monitoring/Sampling:	Semi-Annually
Is Separate Light Non-Aqueous Phase Liquid (LNAPL) Present on site?	No
LNAPL Detected During the monitoring period (thickness in feet):	None
Approximate Depth to Groundwater (feet below top of casing):	2.30 (MW-9) to 4.97 (MW-3)
Approximate Groundwater Elevation (feet relative to corresponding datum):	142.28 (MW-5) to 145.09 (MW-9)
Groundwater Flow Direction:	north-northwest
Groundwater Flow Magnitude (feet/foot):	0.025

DISCUSSION

Groundwater monitoring activities were conducted by Blaine Tech Service (BTS) on February 15, 2024. During the monitoring event, nine wells (MW-1 through MW-9) were gauged for depth to water elevations. LNAPL was not detected in any of the wells. Each well was then purged and sampled in general accordance with low-flow methodology. Field data sheets and the Technical Guidance Instructions for

Low Flow Sampling are included in Attachment A.

Groundwater samples were submitted to Pace Analytical, National Center for Testing and Innovation under standard chain-of-custody procedures. Groundwater samples were analyzed for total petroleum hydrocarbons (TPH) in the gasoline range (TPH-G) using Northwest Method NWTPH-Gx, TPH in the diesel range (TPH-D) and residual range (TPH-R) using Northwest Method NWTPHDx-SGT, volatile organic compounds (VOCs) using United States Environmental Protection Agency (USEPA) Method 8260D, and polynuclear aromatic hydrocarbons (PAHs) using USEPA Method 8270E-SIM.

The site location and site map are presented in Figures 1 and 2, respectively. Groundwater monitoring and analytical data are summarized in Tables 1, 2, and 3 and depicted on Figure 3. Copies of the laboratory analytical report and chain-of-custody are included in Attachment B.

Groundwater analytical results were compared to site specific exposure pathway Oregon DEQ Risk-Based Concentrations (RBCs).^{1,2,3} Groundwater analytical results exceeded at least one RBC in the following samples collected on February 15, 2024: TPH-G exceeded in MW-1 (1,350 micrograms per liter [$\mu\text{g/L}$]), MW-2 (5,020 $\mu\text{g/L}$), MW-3 (922 $\mu\text{g/L}$), MW-5 (3,670 $\mu\text{g/L}$), and MW-7 (4,570 $\mu\text{g/L}$). TPH-D exceeded in MW-2 (2,260 J3 $\mu\text{g/L}$)⁴ and MW-7 (7,130 J3 $\mu\text{g/L}$). Benzene exceeded in MW-2 (55.6 $\mu\text{g/L}$) and MW-7 (13.7 $\mu\text{g/L}$).

Based on a review of historical groundwater monitoring data collected at the site, Arcadis recommends continuing groundwater monitoring activities on a semi-annual basis to further evaluate groundwater quality and concentration trends. Arcadis will re-evaluate path forward following the soil vapor assessment activities planned in third quarter 2024.

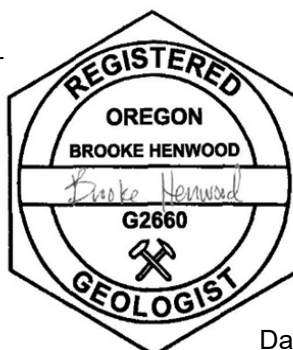


Christine Perez
Project Manager

Date: May 15, 2024



Brooke Henwood
Registered Geologist



Date: May 15, 2024

¹ RBCs include volatilization to outdoor air exposure pathways for residential, urban residential, and occupational receptors, vapor intrusion into buildings for commercial receptors, and groundwater in excavation for construction and excavation workers.

² Risk-Based Concentrations for Individual Chemicals; Revision: May 2018 revised August 2023

³ Chronic and Acute Vapor Intrusion Risk-Based Concentrations

⁴ J3 means the associated batch QC was outside the established quality control range for precision.

ATTACHMENTS:

Table 1 – Groundwater Gauging Results

Table 2 – Groundwater Analytical Results – TPH, Select Volatile Organic Compounds, and Lead

Table 3 – Groundwater Analytical Results – Select Semi-Volatile Organic Compounds

Figure 1 – Site Location Map

Figure 2 – Site Plan

Figure 3 – Groundwater Elevation Contour and Analytical Map – February 15, 2024

Attachment A – Field Data Sheets and Technical Guidance Instructions

Attachment B – Laboratory Report and Chain-of-Custody Documentation

TABLES



Well ID	Date	TOC* (ft.)	DTW (ft.)	LNAPL (ft.)	GWE (ft.)
MW-1	07/09/92	98.67	7.80	--	90.87
MW-1	10/04/00	98.67	7.80	--	90.87
MW-1	03/16/04	98.67	4.05	--	94.62
MW-1	12/02/04	98.67	6.03	--	92.64
MW-1	01/28/05	98.67	3.97	--	94.70
MW-1	04/22/05	98.67	3.87	--	94.80
MW-1	07/29/05	98.67	8.61	--	90.06
MW-1	11/10/05	98.67	5.28	--	93.39
MW-1	02/16/06	98.67	5.54	--	93.13
MW-1	06/23/06	98.67	7.30	--	91.37
MW-1	09/21/06	98.67	9.84	--	88.83
MW-1	06/08/10	98.67	3.58	--	95.09
MW-1	09/07/10	98.67	7.67	--	91.00
MW-1	12/08/10	98.67	3.58	--	95.09
MW-1	03/07/11	98.67	3.48	--	95.19
MW-1	06/30/11	98.67	7.51	--	91.16
MW-1	09/13/11	98.67	6.85	--	91.82
MW-1	12/08/11	98.67	4.95	--	93.72
MW-1	03/06/12	98.67	3.71	--	94.96
MW-1	06/06/12	98.67	5.51	--	93.16
MW-1	09/10/12	98.67	8.45	--	90.22
MW-1	12/04/12	98.67	2.54	--	96.13
MW-1	03/12/13	98.67	4.90	--	93.77
MW-1	06/12/13	98.67	6.17	--	92.50
MW-1	09/10/13	98.67	7.40	--	91.27
MW-1	01/18/14	98.67	4.40	--	94.27
MW-1	03/05/14	98.67	3.20	--	95.47
MW-1	06/05/14	98.67	6.78	--	91.89
MW-1	09/16/14	98.67	9.19	--	89.48
MW-1	10/12/14	98.67	3.30	--	95.37
MW-1	09/03/15	147.18	5.84	--	141.34
MW-1	10/06/15	147.18	7.19	--	139.99
MW-1	09/13/15	147.18	9.38	--	137.80
MW-1	06/12/15	147.18	2.95	--	144.23
MW-1	09/03/16	147.18	3.20	--	143.98
MW-1	06/15/16	147.18	6.05	--	141.13
MW-1	07/09/16	147.18	7.55	--	139.63
MW-1	06/12/16	147.18	2.70	--	144.48
MW-1	03/14/17	147.18	2.85	--	144.33
MW-1	06/15/17	147.18	5.94	--	141.24
MW-1	09/08/17	147.18	7.93	--	139.25
MW-1	12/02/17	147.18	3.20	--	143.98
MW-1	03/12/18	147.18	4.69	--	142.49
MW-1	06/23/18	147.18	7.71	--	139.47
MW-1	09/05/18	147.18	8.09	--	139.09
MW-1	12/02/18	147.18	4.40	--	142.78

Well ID	Date	TOC* (ft.)	DTW (ft.)	LNAPL (ft.)	GWE (ft.)
MW-1	03/09/19	147.18	4.52	--	142.66
MW-1	06/08/19	147.18	5.58	--	141.60
MW-1	09/10/19	147.18	6.88	--	140.30
MW-1	11/02/19	147.18	7.18	--	140.00
MW-1	03/09/20	147.18	5.40	--	141.78
MW-1	09/13/20	147.18	8.50	--	138.68
MW-1	03/08/21	147.18	4.15	--	143.03
MW-1	09/07/21	147.18	10.33	--	136.85
MW-1	02/16/22	147.18	6.95	--	140.23
MW-1	08/17/22	147.18	8.73	--	138.45
MW-1	02/22/23	147.18	6.38	--	140.80
MW-1	08/09/23	147.18	9.98	--	137.20
MW-1	02/15/24	147.18	3.90	--	143.28
MW-2	07/09/92	99.00	7.39	--	91.61
MW-2	10/04/00	99.00	7.57	--	91.43
MW-2	03/16/04	99.00	3.66	--	95.34
MW-2	12/02/04	99.00	5.61	--	93.39
MW-2	01/28/05	99.00	3.63	--	95.37
MW-2	04/22/05	99.00	3.43	--	95.57
MW-2	07/29/05	99.00	8.20	--	90.80
MW-2	11/10/05	99.00	5.31	--	93.69
MW-2	02/16/06	99.00	5.01	--	93.99
MW-2	06/23/06	99.00	7.18	--	91.82
MW-2	09/21/06	99.00	9.86	--	89.14
MW-2	06/30/11	99.00	7.85	--	91.15
MW-2	09/13/11	99.00	7.42	0.04	91.61**
MW-2	12/08/11	99.00	4.51	0.02	94.51**
MW-2	03/06/12	99.00	4.07	0.04	94.96**
MW-2	06/06/12	99.00	6.10	0.02	92.92**
MW-2	09/10/12	99.00	9.03	0.03	89.99**
MW-2	12/04/12	99.00	2.99	0.02	96.03**
MW-2	03/12/13	99.00	4.38	--	94.62
MW-2	06/12/13	99.00	6.56	--	92.44
MW-2	09/10/13	99.00	7.76	sheen	91.24
MW-2	01/18/14	99.00	4.86	--	94.14
MW-2	03/05/14	99.00	3.66	--	95.34
MW-2	06/05/14	99.00	7.18	0.02	91.82**
MW-2	09/16/14	99.00	9.44	--	89.56
MW-2	12/10/14	99.00	3.66	--	95.34
MW-2	03/09/15	147.50	6.27	--	141.23
MW-2	06/10/15	147.50	7.56	--	139.94
MW-2	09/13/15	147.50	9.76	0.03	137.74**
MW-2	12/06/15	147.50	3.34	--	144.16
MW-2	03/09/16	147.50	3.60	--	143.90
MW-2	06/15/16	147.50	6.79	--	140.71

Well ID	Date	TOC* (ft.)	DTW (ft.)	LNAPL (ft.)	GWE (ft.)
MW-2	09/07/16	147.50	8.16	--	139.34
MW-2	12/06/16	147.50	3.11	sheen	144.39
MW-2	03/14/17	147.50	2.86	sheen	144.64
MW-2	06/15/17	147.50	6.89	--	140.61
MW-2	09/08/17	147.50	8.26	sheen	139.24
MW-2	12/02/17	147.50	3.61	sheen	143.89
MW-2	03/12/18	147.50	5.12	sheen	142.38
MW-2	06/23/18	147.50	8.05	sheen	139.45
MW-2	09/05/18	147.50	8.41	sheen	139.09
MW-2	12/02/18	147.50	4.83	sheen	142.67
MW-2	03/09/19	147.50	4.96	--	142.54
MW-2	06/08/19	147.50	7.10	0.02	140.42
MW-2	09/10/19	147.50	7.28	--	140.22
MW-2	11/02/19	147.50	7.69	--	139.81
MW-2	03/09/20	147.50	5.85	--	141.65
MW-2	09/13/20	147.50	9.67	0.04	137.83
MW-2	03/08/21	147.50	4.98	--	142.52
MW-2	09/07/21	147.50	11.30	0.22	136.22
MW-2	02/16/22	147.50	6.64	--	140.86
MW-2	08/17/22	147.50	9.12	--	138.38
MW-2	02/22/23	147.50	5.85	--	141.65
MW-2	08/09/23	147.50	10.80	--	136.70
MW-2	02/15/24	147.50	4.28	--	143.22
MW-3	07/09/92	99.10	6.79	--	92.31
MW-3	10/04/00	99.10	7.04	--	92.06
MW-3	03/16/04	99.10	3.08	--	96.02
MW-3	12/02/04	99.10	5.02	--	94.08
MW-3	01/28/05	99.10	3.21	--	95.89
MW-3	04/22/05	99.10	2.85	--	96.25
MW-3	07/29/05	99.10	7.45	--	91.65
MW-3	11/10/05	99.10	4.11	--	94.99
MW-3	02/16/06	99.10	UNABLE TO LOCATE		
MW-3	06/23/06	99.10	UNABLE TO LOCATE		
MW-3	09/21/06	99.10	UNABLE TO LOCATE		
MW-3	06/08/10	99.10	2.71	--	96.39
MW-3	09/07/10	99.10	6.78	--	92.32
MW-3	12/08/10	99.10	NOT SAMPLED DUE TO FAILURE OF WELL INTEGRITY		
MW-3	03/07/11	99.10	NOT SAMPLED DUE TO FAILURE OF WELL INTEGRITY		
MW-3	06/30/11	99.10	7.85	--	91.25
MW-3	09/13/11	99.10	7.65	--	91.45
MW-3	12/08/11	99.10	NOT SAMPLED DUE TO FAILURE OF WELL INTEGRITY		
MW-3	03/06/12	99.10	5.21	--	93.89
MW-3	06/06/12	99.10	6.26	--	92.84
MW-3	09/10/12	99.10	9.17	--	89.93
MW-3	12/04/12	99.10	3.23	--	95.87

Well ID	Date	TOC* (ft.)	DTW (ft.)	LNAPL (ft.)	GWE (ft.)
MW-3	03/12/13	99.10	5.49	--	93.61
MW-3	06/12/13	99.10	6.58	--	92.52
MW-3	09/10/13	99.10	7.81	--	91.29
MW-3	01/18/14	99.10	5.05	--	94.05
MW-3	03/05/14	99.10	3.90	--	95.20
MW-3	06/05/14	99.10	7.17	--	91.93
MW-3	09/16/14	99.10	9.46	--	89.64
MW-3	12/10/14	99.10	3.90	--	95.20
MW-3	03/09/15	147.63	6.48	--	141.15
MW-3	06/10/15	147.63	7.71	--	139.92
MW-3	09/13/15	147.63	9.78	--	137.85
MW-3	12/06/15	147.63	3.55	--	144.08
MW-3	03/09/16	147.63	3.75	--	143.88
MW-3	06/15/16	147.63	7.02	--	140.61
MW-3	09/07/16	147.63	8.49	--	139.14
MW-3	12/06/16	147.63	3.28	--	144.35
MW-3	03/14/17	147.63	3.44	--	144.19
MW-3	06/15/17	147.63	6.79	--	140.84
MW-3	09/08/17	147.63	8.20	--	139.43
MW-3	12/02/17	147.63	3.83	--	143.80
MW-3	03/12/18	147.63	5.30	--	142.33
MW-3	06/23/18	147.63	8.10	--	139.53
MW-3	09/05/18	147.63	8.50	--	139.13
MW-3	12/02/18	147.63	5.05	--	142.58
MW-3	03/09/19	147.63	5.14	--	142.49
MW-3	06/08/19	147.63	6.71	--	140.92
MW-3	09/10/19	147.63	7.43	--	140.20
MW-3	11/02/19	147.63	7.74	--	139.89
MW-3	03/09/20	147.63	6.68	--	140.95
MW-3	09/13/20	147.63	9.77	--	137.86
MW-3	03/08/21	147.63	5.60	--	142.03
MW-3	09/07/21	147.63	11.28	--	136.35
MW-3	02/16/22	147.63	6.60	--	141.03
MW-3	08/17/22	147.63	9.29	--	138.34
MW-3	02/22/23	147.63	5.90	--	141.73
MW-3	08/09/23	147.63	10.81	--	136.82
MW-3	02/15/24	147.63	4.97	--	142.66
MW-4	07/09/92	99.57	7.18	--	92.39
MW-4	03/16/04	99.57	UNABLE TO LOCATE		
MW-4	01/28/05	99.57	UNABLE TO LOCATE		
MW-4	04/22/05	99.57	UNABLE TO LOCATE		
MW-4	07/29/05	99.57	UNABLE TO LOCATE		
MW-4	11/10/05	99.57	UNABLE TO LOCATE - AREA COVERED BY A ROCK PARKING LOT		
MW-4	02/16/06	99.57	UNABLE TO LOCATE		
MW-4	06/23/06	99.57	UNABLE TO LOCATE		

Well ID	Date	TOC* (ft.)	DTW (ft.)	LNAPL (ft.)	GWE (ft.)
MW-4	09/21/06	99.57	UNABLE TO LOCATE		
MW-4	12/04/12	99.57	UNABLE TO LOCATE		
MW-4	09/07/21	99.57	UNABLE TO LOCATE		
MW-4A	02/12/15	148.11	4.30	--	143.81
MW-4A	03/09/15	148.11	6.96	--	141.15
MW-4A	06/10/15	148.11	8.04	--	140.07
MW-4A	09/13/15	148.11	10.36	--	137.75
MW-4A	12/06/15	148.11	UNABLE TO ACCESS		
MW-4A	03/09/16	148.11	3.06	--	145.05
MW-4A	06/15/16	148.11	5.71	--	142.40
MW-4A	09/07/16	148.11	6.40	--	141.71
MW-4A	12/06/16	148.11	2.40	--	145.71
MW-4A	03/14/17	148.11	3.05	--	145.06
MW-4A	06/15/17	148.11	6.52	--	141.59
MW-4A	09/08/17	148.11	8.42	--	139.69
MW-4A	12/02/17	148.11	2.91	--	145.20
MW-4A	03/12/18	148.11	4.84	--	143.27
MW-4A	06/23/18	148.11	8.51	--	139.60
MW-4A	09/05/18	148.11	8.82	--	139.29
MW-4A	12/02/18	148.11	3.96	--	144.15
MW-4A	03/09/19	148.11	4.54	--	143.57
MW-4A	06/08/19	148.11	7.36	--	140.75
MW-4A	09/10/19	148.11	7.13	--	140.98
MW-4A	11/02/19	148.11	7.87	--	140.24
MW-4A	03/09/20	148.11	5.60	--	142.51
MW-4A	09/13/20	148.11	10.29	--	137.82
MW-4A	03/08/21	148.11	4.35	--	143.76
MW-4A	09/07/21	148.11	11.60	--	136.51
MW-4A	02/16/22	148.11	6.41	--	141.70
MW-4A	08/17/22	148.11	9.60	--	138.51
MW-4A	02/22/23	148.11	5.52	--	142.59
MW-4A	08/09/23	148.11	11.28	--	136.83
MW-4A	02/15/24	148.11	4.37	--	143.74
MW-5	07/09/92	97.62	7.24	--	90.38
MW-5	10/04/00	97.62	7.33	--	90.29
MW-5	03/16/04	97.62	UNABLE TO LOCATE		
MW-5	01/28/05	97.62	UNABLE TO LOCATE		
MW-5	04/22/05	97.62	UNABLE TO LOCATE		
MW-5	07/29/05	97.62	UNABLE TO LOCATE		
MW-5	11/10/05	97.62	UNABLE TO LOCATE - AREA COVERED BY A ROCK PARKING LOT		
MW-5	02/16/06	97.62	UNABLE TO LOCATE		
MW-5	06/23/06	97.62	6.19	--	91.43
MW-5	09/21/06	97.62	8.35	--	89.27
MW-5	06/08/10	97.62	2.90	--	94.72

Well ID	Date	TOC* (ft.)	DTW (ft.)	LNAPL (ft.)	GWE (ft.)
MW-5	09/07/10	97.62	6.38	--	91.24
MW-5	12/08/10	97.62	2.95	--	94.67
MW-5	03/07/11	97.62	2.80	--	94.82
MW-5	06/30/11	97.62	6.31	--	91.31
MW-5	09/13/11	97.62	5.87	--	91.75
MW-5	12/08/11	97.62	4.28	--	93.34
MW-5	03/06/12	97.62	2.98	--	94.64
MW-5	06/06/12	97.62	4.49	--	93.13
MW-5	09/10/12	97.62	7.31	--	90.31
MW-5	12/04/12	97.62	2.42	--	95.20
MW-5	03/12/13	97.62	4.02	--	93.60
MW-5	06/12/13	97.62	5.02	--	92.60
MW-5	09/10/13	97.62	6.22	--	91.40
MW-5	01/18/14	97.62	3.62	--	94.00
MW-5	03/05/14	97.62	2.54	--	95.08
MW-5	06/05/14	97.62	5.70	--	91.92
MW-5	09/16/14	97.62	7.86	--	89.76
MW-5	12/10/14	97.62	2.58	--	95.04
MW-5	03/09/15	146.13	4.81	--	141.32
MW-5	06/10/15	146.13	5.93	--	140.20
MW-5	09/13/15	146.13	8.04	--	138.09
MW-5	12/06/15	146.13	2.33	--	143.80
MW-5	03/09/16	146.13	2.56	--	143.57
MW-5	06/15/16	146.13	4.95	--	141.18
MW-5	09/07/16	146.13	6.38	--	139.75
MW-5	12/06/16	146.13	1.88	--	144.25
MW-5	03/14/17	146.13	2.08	--	144.05
MW-5	06/15/17	146.13	4.89	--	141.24
MW-5	09/08/17	146.13	6.53	--	139.60
MW-5	12/02/17	146.13	2.47	--	143.66
MW-5	03/12/18	146.13	3.70	--	142.43
MW-5	06/23/18	146.13	6.43	--	139.70
MW-5	09/05/18	146.13	6.69	--	139.44
MW-5	12/02/18	146.13	3.54	--	142.59
MW-5	03/09/19	146.13	5.55	--	140.58
MW-5	06/08/19	146.13	5.38	--	140.75
MW-5	09/10/19	146.13	5.64	--	140.49
MW-5	11/02/19	146.13	5.99	--	140.14
MW-5	03/09/20	146.13	4.32	--	141.81
MW-5	09/13/20	146.13	8.14	--	137.99
MW-5	03/08/21	146.13	3.31	--	142.82
MW-5	09/07/21	146.13	9.38	--	136.75
MW-5	02/16/22	146.13	4.90	--	141.23
MW-5	08/17/22	146.13	7.50	--	138.63
MW-5	02/22/23	146.13	5.82	--	140.31
MW-5	08/09/23	146.13	9.21	--	136.92

Well ID	Date	TOC* (ft.)	DTW (ft.)	LNAPL (ft.)	GWE (ft.)
MW-5	02/15/24	146.13	3.85	--	142.28
MW-6	02/12/15	147.87	3.84	--	144.03
MW-6	03/09/15	147.87	6.18	--	141.69
MW-6	06/10/15	147.87	7.71	--	140.16
MW-6	09/13/15	147.87	7.08	--	140.79
MW-6	12/06/15	147.87	2.87	--	145.00
MW-6	03/09/16	147.87	3.31	--	144.56
MW-6	06/15/16	147.87	5.32	--	142.55
MW-6	09/07/16	147.87	5.51	--	142.36
MW-6	12/06/16	147.87	2.69	--	145.18
MW-6	03/14/17	147.87	3.14	--	144.73
MW-6	06/15/17	147.87	5.90	--	141.97
MW-6	09/08/17	147.87	8.32	--	139.55
MW-6	12/02/17	147.87	3.41	--	144.46
MW-6	03/12/18	147.87	4.72	--	143.15
MW-6	06/23/18	147.87	7.84	--	140.03
MW-6	09/05/18	147.87	8.53	--	139.34
MW-6	12/02/18	147.87	4.37	--	143.50
MW-6	03/09/19	147.87	4.29	--	143.58
MW-6	06/08/19	147.87	6.64	--	141.23
MW-6	09/10/19	147.87	5.05	--	142.82
MW-6	11/02/19	147.87	7.46	--	140.41
MW-6	03/09/20	147.87	5.19	--	142.68
MW-6	09/13/20	147.87	9.99	--	137.88
MW-6	03/08/21	147.87	4.30	--	143.57
MW-6	09/07/21	147.87	11.12	--	136.75
MW-6	02/16/22	147.87	5.96	--	141.91
MW-6	08/17/22	147.87	9.35	--	138.52
MW-6	02/22/23	147.87	4.95	--	142.92
MW-6	08/09/23	147.87	10.97	--	136.90
MW-6	02/15/24	147.87	3.85	--	144.02
MW-7	02/12/15	147.02	2.96	--	144.06
MW-7	03/09/15	147.02	5.71	--	141.31
MW-7	06/10/15	147.02	6.86	--	140.16
MW-7	09/13/15	147.02	8.90	--	138.12
MW-7	12/06/15	147.02	3.23	--	143.79
MW-7	03/09/16	147.02	3.40	--	143.62
MW-7	06/15/16	147.02	5.43	--	141.59
MW-7	09/07/16	147.02	6.83	0.08	140.25**
MW-7	12/06/16	147.02	2.74	sheen	144.28
MW-7	03/14/17	147.02	2.89	sheen	144.13
MW-7	06/15/17	147.02	5.64	--	141.38
MW-7	09/08/17	147.02	7.16	0.05	139.90**
MW-7	12/02/17	147.02	3.33	--	143.69

Well ID	Date	TOC* (ft.)	DTW (ft.)	LNAPL (ft.)	GWE (ft.)
MW-7	03/12/18	147.02	4.56	--	142.46
MW-7	06/23/18	147.02	7.28	0.02	139.76**
MW-7	09/05/18	147.02	7.37	sheen	139.65
MW-7	12/02/18	147.02	4.47	sheen	142.55
MW-7	03/09/19	147.02	4.40	--	142.62
MW-7	06/08/19	147.02	6.20	0.02	140.84**
MW-7	09/10/19	147.02	6.22	0.02	140.82**
MW-7	11/02/19	147.02	6.74	--	140.28
MW-7	03/09/20	147.02	5.05	--	141.97
MW-7	09/13/20	147.02	8.99	0.02	138.03
MW-7	03/08/21	147.02	4.15	--	142.87
MW-7	09/07/21	147.02	10.12	0.04	136.90
MW-7	02/16/22	147.02	5.58	--	141.44
MW-7	08/17/22	147.02	8.35	--	138.67
MW-7	02/22/23	147.02	5.23	--	141.79
MW-7	08/09/23	147.02	10.23	--	136.79
MW-7	02/15/24	147.02	3.95	--	143.07
MW-8	12/02/18	147.39	5.24	--	142.15
MW-8	03/09/19	147.39	4.44	--	142.95
MW-8	06/08/19	147.39	6.20	--	141.19
MW-8	09/10/19	147.39	6.85	--	140.54
MW-8	11/02/19	147.39	7.49	--	139.90
MW-8	03/09/20	147.39	4.90	--	142.49
MW-8	09/13/20	147.39	9.77	--	137.62
MW-8	03/08/21	147.39	3.82	--	143.57
MW-8	09/07/21	147.39	10.42	--	136.97
MW-8	02/16/22	147.39	5.55	--	141.84
MW-8	08/17/22	147.39	9.14	--	138.25
MW-8	02/22/23	147.39	5.08	--	142.31
MW-8	08/09/23	147.39	10.73	--	136.66
MW-8	02/15/24	147.39	3.35	--	144.04
MW-9	09/10/19	147.48	5.05	--	142.43
MW-9	11/02/19	147.48	6.53	--	140.95
MW-9	03/09/20	147.48	4.32	--	143.16
MW-9	09/13/20	147.48	8.24	--	139.24
MW-9	03/08/21	147.48	2.20	--	145.28
MW-9	09/07/21	147.39	9.93	--	137.46
MW-9	02/16/22	147.39	4.74	--	142.65
MW-9	08/17/22	147.39	UNABLE TO LOCATE		
MW-9	02/22/23	147.39	4.65	--	142.74
MW-9	08/09/23	147.39	9.03	--	138.36
MW-9	02/15/24	147.39	2.30	--	145.09

Table 1. Groundwater Gauging Results

Former Chevron Bulk Terminal No. 1001782

SE Davis Street and SE Chandler Avenue

McMinnville, Oregon

EXPLANATIONS:

DTW = Depth to Water

ft. = Feet

LNAPL = Light Non-Aqueous Phase Liquid

GWE = Groundwater Elevation

-- = Not Measured

TOC = Top of Casing

NOTES:

* TOC elevations are expressed in feet above mean sea level. TOC elevations were surveyed on February 18, 2015 to Yamhill County Benchmark No. 32, Elev. = 147.50

Table 2. Groundwater Analytical Results- TPH, Select Volatile Organic Compounds, and Lead
Former Chevron Bulk Terminal No. 1001782
SE Davis Street and SE Chandler Avenue
McMinnville, Oregon



Date	Well ID/Date	TPH-G	TPH-D	TPH-O	TPH-R	Benzene	Toluene	Ethyl-benzene	Total Xylenes	1,2-Dichloroethane (EDO)	1,2-Dibromoethane (EDB)	Isopropylbenzene	n-Propylbenzene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	Naphthalene	MTBE	Total Lead	Dissolved Lead	
MW-1	07/09/92 ⁺	--	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--
MW-1	10/04/00 ⁺	--	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	ND	--	--
MW-1	03/16/04 ⁺	70	120 ⁺	<94 ⁺	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<0.5	--	--	--
MW-1	12/02/04 ⁺	200	<76	<95	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<0.5	--	--	--
MW-1	01/28/05 ⁺	440	160 ⁺	<100 ⁺	--	<0.5	<0.5	0.5	<1.0	<0.5	<0.5	2	1	<1	<1	<1	<0.5	--	--	--
MW-1	04/22/05 ⁺	72	420 ⁺	390 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--	--
MW-1	07/29/05	330	510 ⁺	<99 ⁺	--	<2.0	0.5	<0.5	<1.5	--	--	--	--	--	--	--	<2.5	--	--	--
MW-1	11/10/05	82	<180 ⁺	<220 ⁺	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	--	--	<2.5	--	--	--
MW-1	02/18/06	960	660 ⁺	99 ⁺	--	<0.5	1.0	4.7	2.3	--	--	--	--	--	--	--	<2.5	--	--	--
MW-1	06/23/06	580	660 ⁺	300 ⁺	--	<0.5	0.6	1.7	<3.0	--	--	--	--	--	--	--	<10	--	--	--
MW-1	09/21/06	130	470 ⁺	200 ⁺	--	0.8	0.5	0.3	<3.0	--	--	--	--	--	--	--	<0.3	--	--	--
MW-1	06/08/10 ^{9/10}	280	360 ⁺	200 ⁺	--	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	1	<1	<1	<1	<1	<0.5	--	--	--
MW-1	09/07/10 ^{10/10}	550	470 ⁺	<69 ⁺	--	<0.5 ¹¹	<0.5 ¹¹	0.7 ¹¹	0.8 ¹¹	<0.5	<0.5	2	2	<1	<1	<1	1.8 ¹¹	--	--	--
MW-1	12/08/10 ^{10/10}	620	490 ⁺	220 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2	<1	<1	<1	<1	<0.5	--	--	--
MW-1	03/07/11 ¹⁰	970	650 ⁺	250 ⁺	--	<0.5	<0.5	2	<0.5	<0.5	<0.5	4	<1	<1	<1	<1	<0.5	--	--	--
MW-1	06/30/11 ¹⁰	1,000	130 ⁺	<69 ⁺	--	<0.5	<0.5	0.9	0.5	<0.5	<0.5	6	6	<1	<1	<1	<0.5	--	--	--
MW-1	09/13/11 ¹⁰	990	150 ^{11/11}	67 ^{11/11}	--	<0.5	<0.5	1	--	<0.5	<0.5	3	3	<1	<1	<1	<0.5	--	--	--
MW-1	12/08/11 ¹⁰	640	63 ⁺	84 ⁺	--	<0.5	<0.5	<0.5	2	<0.5	<0.5	2	<1	<1	<1	<1	<0.5	--	--	--
MW-1	03/06/12 ⁺	1,100	81 ⁺	100 ⁺	--	<0.5	<0.5	2	0.7	<0.5	<0.5	2	2	<1	<1	<1	<0.5	--	--	--
MW-1	06/06/12 ⁺	640	120 ⁺	<68 ⁺	--	<0.5	<0.5	<1	<0.5	<0.5	<0.5	4	4	<1	<1	<1	<0.5	--	--	--
MW-1	09/10/12 ⁺	1,500	110 ⁺	<69 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3	1	1	<1	<1	<0.5	--	--	--
MW-1	12/04/12 ⁺	580	41 ⁺	<67 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<1	<1	<1	<1	<0.5	--	--	--
MW-1	03/12/13 ⁺	480	50 ⁺	<70 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<1	<1	<1	<1	<0.5	--	--	--
MW-1	06/12/13 ⁺	630	33 ⁺	<67 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3	3	<1	<1	<1	<0.5	--	--	--
MW-1	09/10/13 ⁺	440	40 ⁺	<70 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2	<1	<1	<1	<1	<0.5	--	--	--
MW-1	01/18/14 ⁺	750	51 ⁺	<67 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2	<1	<1	<1	<1	<0.5	--	--	--
MW-1	03/05/14 ⁺	880	57 ⁺	<67 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	1	<1	<1	<1	<0.5	--	--	--
MW-1	06/05/14	1,300	74 ⁺	<67 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5	5	<1	<1	<1	<0.5	--	--	--
MW-1	09/16/14	310	71 ⁺	<66 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--	--
MW-1	12/10/14	120	<28 ⁺	<66 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--	--
MW-1	03/09/15	930	59 ⁺	<100 ⁺	--	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	3	2	<1	<1	<1	<0.5	--	--	--
MW-1	06/10/15	1,300	69 ⁺	<100 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4	3	<1	<1	<1	<0.5	--	--	--
MW-1	09/13/15	1,800	58 ⁺	<100 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2	<1	<1	<1	<1	<0.5	--	--	--
MW-1	12/06/15	2,400	77 ⁺	<100 ⁺	--	<0.5	<0.5	1	1	<0.5	<0.5	5	3	<1	<1	<1	<0.5	--	--	--
MW-1	03/09/16	2,400	50 ⁺	<100 ⁺	--	<0.5	<0.5	1	0.8	<0.5	<0.5	4	3	<1	<1	<1	<0.5	--	--	--
MW-1	06/15/16	860	59 ⁺	<100 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2	<1	<1	<1	<1	<0.5	--	--	--
MW-1	09/07/16	1,700	66 ⁺	<100 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5	2	<1	<1	<1	<0.5	--	--	--
MW-1	12/06/16	1,200	56 ⁺	<100 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2	<1	<1	<1	<1	<0.5	--	--	--
MW-1	03/14/17	2,400	61 ⁺	<100 ⁺	--	<0.5	<0.5	0.9	0.6	<0.5	<0.5	5	4	<1	<1	<1	<0.5	--	--	--
MW-1	06/15/17	350	<46 ⁺	<100 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--	--
MW-1	09/08/17	3,000	82 ⁺	<100 ⁺	--	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	6	3	<1	<1	<1	<0.5	--	--	--
MW-1	12/02/17	300	<48 ⁺	<110 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--	--
MW-1	03/12/18	2,100	50 ⁺	<100 ⁺	--	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--	--
MW-1	06/23/18	2,000	48 ⁺	<100 ⁺	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5	4	<1	<1	<1	<0.5	--	--	--
MW-1	09/05/18	2,600	110 ⁺	<100 ⁺	--	<0.2	0.2	0.6	0.5	<2	<0.3	5	4	<0.3	<0.3	<4	<0.2	--	--	--
MW-1	12/02/18	1,000	<45 ⁺	<100 ⁺	--	<0.2	<0.2	0.2	<0.5	<2	<0.3	2	0.5	<0.3	<0.3	<4	<0.2	--	--	--
MW-1	03/09/19	1,200	380 ⁺	180 ⁺	--	<0.2	0.2 J	0.5 J	0.6 J	<2	<0.3	1 J	0.6 J	<0.3	<0.3	<4	<0.2	--	--	--
MW-1	06/08/19 ⁺	300	<45 ⁺	<100 ⁺	--	<0.2	<0.2	<0.2	<0.3	<2	<0.3	2 J	2 J	<0.3	<0.3	<4	<0.2	--	--	--
MW-1	09/10/19 ⁺	1,800	<46 ⁺	<100 ⁺	--	<0.2	0.5 J	<2	<0.3	<2	<0.3	3 J	3 J	<0.3	<0.3	<4	<0.2	--	--	--
MW-1	11/2/2019 ⁺	920	<45	<100	--	<0.2	<0.2	<0.2	<0.3	<2	<0.3	5	5	0.7 J	<0.3	<4	<0.2	--	--	--
MW-1	03/09/20	1,380	<100	<250	--	<1.00	<1.00	0.838 J	<3.00	<1.00	<1.00	4.24	1.88	<1.00	<1.00	<5.00 J0	<1.00	--	--	--
MW-1	09/13/20	1,560	149	--	<250	<1.00	<1.00	<1.00	<3.00	<1.00	<1.00	3.19	1.75	<1.00	<1.00	<5.00	<1.00	--	--	--
MW-1	03/08/21	2,560	110	--	<250	<1.00	<1.00	0.599 J	0.585 J	--	--	--	--	--	--	--	<1.00	3.79 J	<6.00	--
MW-1	09/07/21	1,660	115	--	<250	0.248 J	<1.00	0.313 J	0.453 J	<1.00	<1.00	3.20	0.828 J	<1.00	<1.00	<5.00	<1.00	--	--	--
MW-1	2/16/2022 ¹⁶	1,580	113	--	<250	0.0943 J	0.293 J	0.433 J	0.538 J	<1.00	<1.00	3.91	2.63	0.106 J	<1.00	<5.00	<1.00	--	--	--
MW-1	8/17/2022 ¹⁶	1,990	57.2 J	--	<250	0.132 J	<1.00	0.226 J	0.503 J	<1.00	<1.00	1.76	0.515 J	<1.00	<1.00	<5.00	<1.00	--	--	--
MW-1	2/22/2023 ¹⁶	1,070	87.7 B J	--	<100	<1.00	<1.00	0.289 J	0.286 J	<1.00	<1.00	1.28	2.89	<1.00	<1.00	<5.00 C3	<1.00	--	--	--
MW-1	8/09/2023 ¹⁶	1,530	136	--	<250	0.123 J	<1.00	0.447 J	0.523 J	<1.00	<1.00	4.82	2.44	<1.00	<1.00	1.78 C3 J	<1.00	--	--	--
MW-1	2/15/2024 ¹⁶	1,350	35.3 J 33	--	<250	<1.00	0.294 J	0.495 J	0.731 J	<1.00	<1.00	3.64	3.00	<1.00	<1.00	<5.00	<1.00	--	--	--
MW-2	07/09/92 ⁺	--	--	--	--	315	39	36	65	--	--	--	--	--	--	--	--	--	--	--
MW-2	10/04/00 ⁺	--	--	--	--	168	40.1	155	230	--	--	--	--	--	--	--	--	ND	--	--
MW-2	03/16/04 ⁺	9,700	4,700 ⁺	330 ⁺	--	130	43	110	120	--	--	--	--	--	--	--	<0.5	--	--	--
MW-2	12/02/04 ⁺	5,500	3,600	<95	--	190	44	--	130	--	--	--	--	--	--	--	<0.5	--	--	--
MW-2	01/28/05 ⁺	13,000	77,000 ⁺	<4,800 ⁺	--	200	37	52	126	<0.5	<0.5	48	48	68	120	3	<0.5	--	--	--
MW-2	04/22/05 ⁺	8,400	72,000 ¹¹	12,000 ⁺	--	81	25	54	115	<0.5	<0.5	48	48	4	78	2	<0.5	--	--	--
MW-2	07/29/05	7,300																		

McMinnville, Oregon

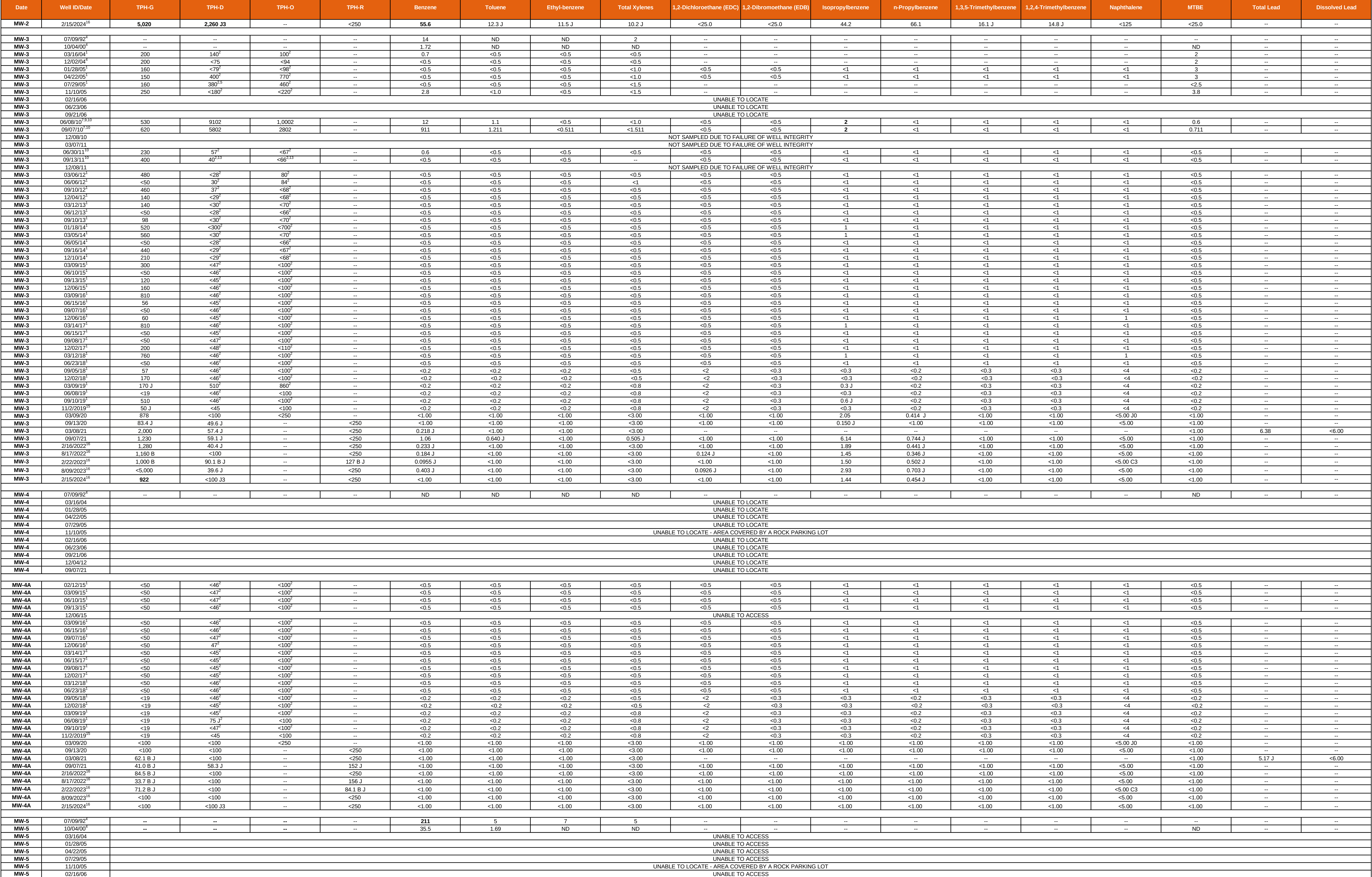


Table 2. Groundwater Analytical Results- TPH, Select Volatile Organic Compounds, and Lead

Former Chevron Bulk Terminal No. 1001782

SE Davis Street and SE Chandler Avenue

McMinnville, Oregon



Date	Well ID/Date	TPH-G	TPH-D	TPH-O	TPH-R	Benzene	Toluene	Ethyl-benzene	Total Xylenes	1,2-Dichloroethane (EDO)	1,2-Dibromoethane (EDB)	Isopropylbenzene	n-Propylbenzene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	Naphthalene	MTBE	Total Lead	Dissolved Lead
MW-5	06/23/06	930	3,400 ²	1,900 ²	--	36	2.8	<1.0	3.2	--	--	--	--	--	--	--	<20	--	--
MW-5	09/21/06	1,500	2,800 ²	740 ²	--	47	4.3	2.9	6.3	--	--	--	--	--	--	--	<25	--	--
MW-5	06/08/10 ^{9,10}	2,000	2,900 ^{9,8}	1,400 ⁸	--	53	3.1	0.6	0.6	<0.5	<0.5	10	3	<1	<1	<1	<0.5	--	--
MW-5	09/07/10 ¹⁰	2,200	1,300 ²	330 ²	--	23 ¹¹	4.1 ¹¹	<0.5 ¹¹	<7.5 ¹¹	<0.5	<0.5	7	2	<1	<1	<1	<0.5 ¹¹	--	--
MW-5	12/08/10 ¹⁰	1,800	600 ²	660 ²	--	17	1	<0.5	2.8	<0.5	<0.5	7	2	<1	<1	<1	<0.5	--	--
MW-5	03/07/11 ¹⁰	1,500	640 ²	850 ²	--	7	1	<0.5	1.7	<0.5	<0.5	6	1	<1	<1	<1	<0.5	--	--
MW-5	06/30/11 ¹⁰	1,800	69 ²	<68 ²	--	4	0.8	<0.5	1.6	<0.5	<0.5	7	2	<1	<1	<1	<0.5	--	--
MW-5	09/13/11 ¹⁰	2,400	39 ^{2,11}	<66 ¹¹	--	20	1	<0.5	--	<0.5	<0.5	8	2	<1	<1	<1	<0.5	--	--
MW-5	12/08/11 ¹⁰	1,200	38 ²	<68 ²	--	4	0.7	<0.5	--	<0.5	<0.5	5	1	<1	<1	<1	<0.5	--	--
MW-5	03/06/12 ¹	2,300	37 ²	<67 ²	--	3	0.8	<0.5	1.6	<0.5	<0.5	7	2	<1	<1	<1	<0.5	--	--
MW-5	06/06/12 ¹	2,300	57 ²	<68 ²	--	1	<0.5	<0.5	0.8	<0.5	<0.5	7	2	<1	<1	<1	<0.5	--	--
MW-5	09/10/12 ¹	2,200	54 ²	<69 ²	--	2	0.5	<0.5	<0.5	<0.5	<0.5	7	<1	1	<1	<1	<0.5	--	--
MW-5	12/04/12 ¹	1,800	35 ²	<68 ²	--	54	1	0.7	0.9	<0.5	<0.5	10	3	<1	<1	<1	<0.5	--	--
MW-5	03/12/13 ¹	2,200	41 ²	<71 ²	--	1	<1 ¹¹	<1 ¹¹	<1 ¹¹	1	<1	5	<2	<2	<2	<2	<1 ¹¹	--	--
MW-5	06/12/13 ¹	2,300	54 ²	<67 ²	--	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	7	3	<1	<1	<1	<0.5	--	--
MW-5	09/10/13 ¹	860	<30 ²	<69 ²	--	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	5	1	<1	<1	<1	<0.5	--	--
MW-5	01/18/14 ¹	2,200	<150 ²	<350 ²	--	3	<0.5	<0.5	0.9	<0.5	<0.5	5	1	<1	<1	<1	<0.5	--	--
MW-5	03/06/14 ¹	99	<30 ²	<71 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--
MW-5	06/05/14 ¹	2,500	35 ²	<67 ²	--	6	<1	<1	<1	<1	<1	5	<2	<2	<2	<2	<1	--	--
MW-5	09/16/14 ¹	2,700	<29 ²	<68 ²	--	2	<0.5	<0.5	0.9	<0.5	<0.5	4	<1	<1	<1	<1	<0.5	--	--
MW-5	12/10/14 ¹	1,400	31 ²	<67 ²	--	<1	<1	<1	<1	<1	<1	4	<2	<2	<2	<2	<1	--	--
MW-5	03/09/15 ¹	1,500	<46 ²	<100 ²	--	1	<0.5	<0.5	0.6	<0.5	<0.5	3	<1	<1	<1	<1	<0.5	--	--
MW-5	06/10/15 ¹	2,300	<46 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5	1	<1	<1	<1	<0.5	--	--
MW-5	09/13/15 ¹	2,700	<45 ²	<100 ²	--	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	5	1	<1	<1	<1	<0.5	--	--
MW-5	12/06/15 ¹	2,900	<45 ²	<100 ²	--	0.8	<0.5	<0.5	0.8	<0.5	<0.5	6	2	<1	<1	<1	<0.5	--	--
MW-5	03/09/16 ¹	2,900	<46 ²	<100 ²	--	<1	<1	<1	<1	<1	<1	3	<2	<2	<2	<2	<1	--	--
MW-5	06/15/16 ¹	2,800	<45 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4	2	<1	<1	<1	<0.5	--	--
MW-5	09/07/16 ¹	2,200	<45 ²	<100 ²	--	0.6	<0.5	<0.5	0.8	<0.5	<0.5	6	0.5	<1	<1	<1	<0.5	--	--
MW-5	12/06/16 ¹	3,300	<45 ²	<100 ²	--	0.5	<0.5	<0.5	0.5	<0.5	<0.5	3	1	<1	<1	<1	<0.5	--	--
MW-5	03/14/17 ¹	1,000	<45 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--
MW-5	06/15/17 ¹	1,900	<45 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2	<1	<1	<1	<1	<0.5	--	--
MW-5	09/08/17 ¹	2,600	54 ²	<100 ²	--	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	7	2	<1	<1	<1	<0.5	--	--
MW-5	12/02/17 ¹	2,600	<46 ²	<100 ²	--	<3	<3	<3	<3	<3	<3	<5	<5	<5	<5	<5	<3	--	--
MW-5	03/12/18 ¹	3,500	<46 ²	<100 ²	--	<1	<1	<1	<1	<1	<1	5	<2	<2	<2	<2	<1	--	--
MW-5	06/23/18 ¹	4,000	<45 ²	<100 ²	--	<1	<1	<1	<1	<1	<1	5	<2	<2	<2	<2	<1	--	--
MW-5	09/05/18 ¹	3,200	<46 ²	<100 ²	--	0.4	<0.2	<0.2	<0.5	<2	<0.3	5	1	<0.3	<0.3	<4	<0.2	--	--
MW-5	12/02/18 ¹	1,800	<46 ²	<100 ²	--	0.3	0.2	0.3	<0.5	<2	<0.3	2	0.9	<0.3	<0.3	<4	<0.2	--	--
MW-5	03/09/19 ¹	1,100	120 ²	<100 ²	--	0.4 J	<0.2	<0.8	<0.3	<2	<0.3	3	<0.2	<0.3	<0.3	<4	<0.2	--	--
MW-5	06/08/19 ¹	2,100	140 ²	<100 ²	--	0.3 J	<0.2	0.3 J	<0.8	<2	<0.3	3	<0.3	<0.3	<0.3	<4	<0.2	--	--
MW-5	09/10/19 ¹	2,500	<46 ²	<100 ²	--	<1	<1	<1	<5	<10	<2	3 J	<1	<2	<2	<20	<1	--	--
MW-5	11/2/2019 ¹⁵	2,200	<45	<100	--	0.4 J	<0.4	<0.4	<1.6	<4	<0.6	5 J	2 J	0.7 J	<0.6	<8	<0.4	--	--
MW-5	03/09/20	2,800	<100	<250	--	<1.00	<1.00	<1.00	<3.00	<1.00	<1.00	3.74	0.941 J	<1.00	<1.00	<5.00 J0	<1.00	--	--
MW-5	09/13/20	7,740	<100	--	<250	<1.00	<1.00	<1.00	0.256 J	<1.00	<1.00	5.72	1.23	<1.00	<1.00	<5.00	<1.00	--	--
MW-5	03/08/21	7,550	58.1 J	--	<250	1.94	0.346 J	<1.00	0.509 J	--	--	--	--	--	--	--	<1.00	<6.00	<6.00
MW-5	09/07/21	3,870 B	45.6 J	--	<250	1.25	0.536 J	<1.00	0.629 J	<1.00	<1.00	5.50	0.984 J	<1.00	<1.00	<5.00	<1.00	--	--
MW-5	2/16/2022 ¹⁶	5,510	87.4 J	--	<250	0.443 J	0.416 J	<1.00	0.442 J	<1.00	<1.00	3.86	0.112 J	<1.00	<1.00	<5.00	<1.00	--	--
MW-5	8/17/2022 ¹⁶	4,850	<100	--	<250	0.627 J	<1.00	<1.00	0.449 J	<1.00	<1.00	4.11	1.27	<1.00	<1.00	<5.00	<1.00	--	--
MW-5	2/22/2023 ¹⁶	2,870 B	128 B	--	208 B J	0.253 J	0.355 J	<1.00	0.376 J	<1.00	<1.00	3.65	1.26	<1.00	<1.00	<5.00 C3	<1.00	--	--
MW-5	8/09/2023 ¹⁶	<5,000	<100	--	<250	0.436 J	0.293 J	<1.00	0.540 J	<1.00	<1.00	3.56	0.996 J	<1.00	<1.00	<5.00	<1.00	--	--
MW-5	2/15/2024 ¹⁶	3,670	<100 J3	--	<250	0.472 J	<1.00	<1.00	0.343 J	<1.00	<1.00	<1.00	1.54	0.105 J	<1.00	<5.00	<1.00	--	--
MW-6	02/12/15 ¹	<50	<47 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--
MW-6	03/09/15 ¹	<50	<47 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--
MW-6	06/10/15 ¹	<50	<45 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--
MW-6	09/13/15 ¹	<50	<46 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--
MW-6	12/06/15 ¹	<50	<46 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--
MW-6	03/09/16 ¹	<50	<46 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--
MW-6	06/15/16 ¹	<50	<46 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--
MW-6	09/07/16 ¹	<50	<46 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--
MW-6	12/06/16 ¹	<50	<45 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--
MW-6	03/14/17 ¹	<50	<47 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--
MW-6	06/15/17 ¹	<50	<45 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--
MW-6	09/08/17 ¹	<50	<45 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	--	--
MW-6	12/02/17 ¹	<50	<46 ²	<100 ²	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<						

McMinnville, Oregon

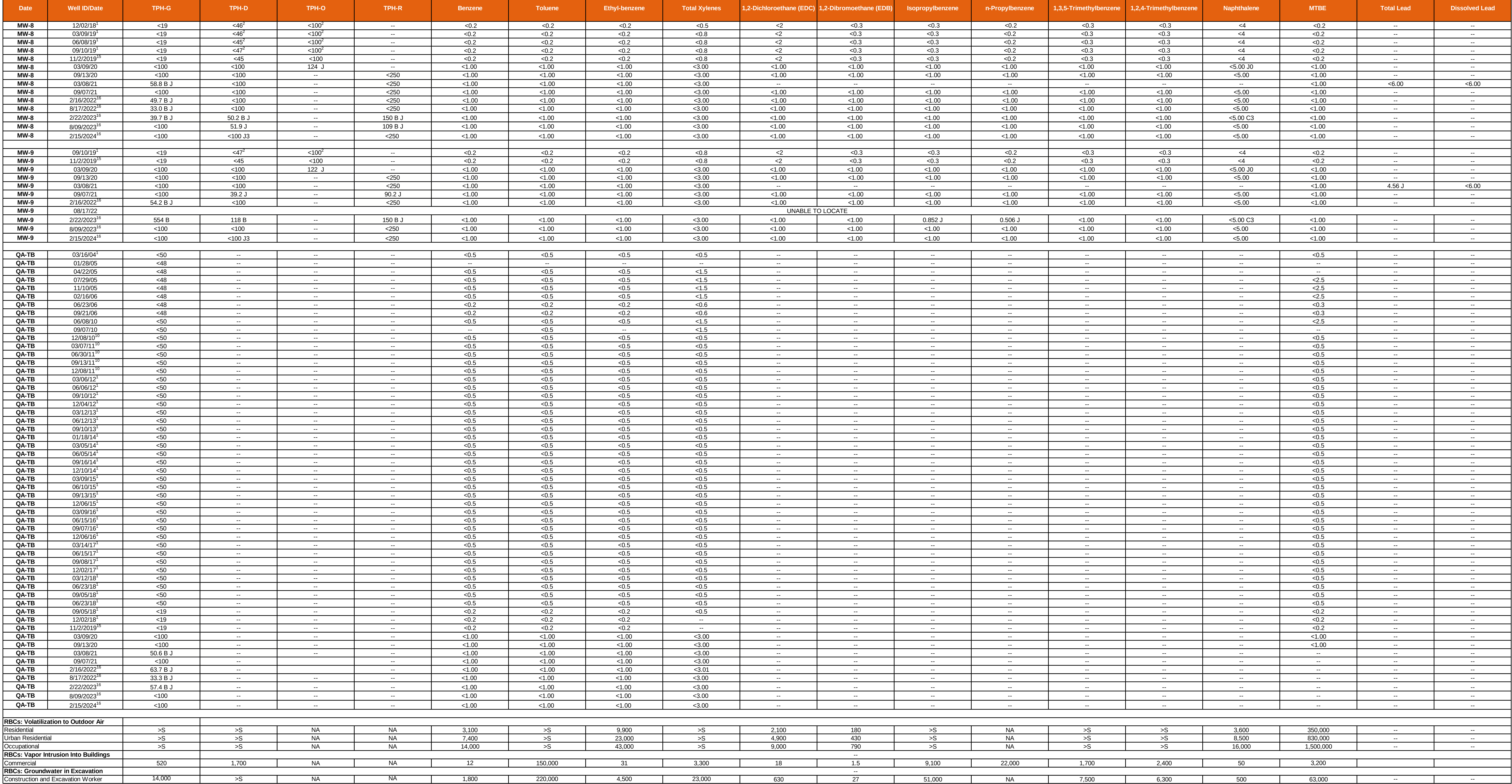


Table 2. Groundwater Analytical Results- TPH, Select Volatile Organic Compounds, and Lead

Former Chevron Bulk Terminal No. 1001782

SE Davis Street and SE Chandler Avenue

McMinnville, Oregon



EXPLANATIONS:

All concentrations are in micrograms per Liter (µg/L)

Results in bold indicate analyte detected above one or more generic RBCs

RBCs are based on values presented in Appendix A of the Oregon DEQ's Risk-Based Decision Making for the Remediation of Petroleum Contaminated Sites (Oregon DEQ, 2003; updated November 1, 2015).

The RBCs for vapor intrusion into buildings was updated by the Oregon DEQ in June 2023. The results starting in August 2023 are bolded based on the updated RBCs. Results prior to August 2023 are bolded based on the previous RBC values.

DEQ = Department of Environmental Quality

LNAPL = Light Non-Aqueous Phase Liquid

NA = A generic RBC has not been established

ND = Not Detected

QA = Quality Assurance/Trip Blank

QC = Quality Control

RBCs = Risk-Based Concentrations

TB = Trip Blank

VOC = Volatile Organic Compounds

µg/L = Micrograms per liter

-- = Not Analyzed

<1.00 = Not Detected at or above the reported detection limit (RDL)

>S = The groundwater RBC exceeds the solubility limit. Groundwater concentrations in excess of S indicate that free product may be present.

J = Estimated value between the method detection limit (MDL) and RDL

J3= The associated batch QC was outside the established quality control range for precision.

B = The same analyte is found in the associated blank.

As of January 2020, the laboratory for this site was changed from Eurofins Calscience to Pace Analytical

Pace Analytical reports the following carbon ranges: TPH-g as C5-C12, TPH-d as C12-C22

TPH-G = Total Petroleum Hydrocarbons as gasoline range analyzed by GC by Northwest Method NWTPH-Gx

TPH-D = Total Petroleum Hydrocarbons as Diesel Range analyzed by Method NWTPHDX-SGT

TPH-R = Total Petroleum Hydrocarbons as Residual range organics analyzed by Method NWTPGDX-SGT

TPH-O = Total Petroleum Hydrocarbons as Oil range organics analyzed by Method NWTPHDX-SGT

BTEX (Benzene, Toluene, Ethylbenzene, Total Xylenes) Analyzed by United States Environmental Protection Agency (USEPA) Method 8260D

MTBE = Methyl tert-butyl ether Analyzed by USEPA Method 8260D

ANALYTICAL METHOD:

VOCs analyzed by (GC/MS) by Method 8260D

Oregon RBCA VOC by 8260.

- NOTES:**
- 1 BTEX and MTBE by USEPA Method 8260.
 - 2 Analyzed with silica-gel cleanup.
 - 3 Laboratory report indicates the observed sample pattern is not typical of diesel/#2 fuel oil.
 - 4 Data provided by Secor International.
 - 5 Laboratory report indicates the observed sample pattern is not typical of #2 fuel/diesel. It elutes in the DRO range later than #2 fuel.
 - 6 Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier in the DRO range.
 - 7 Tubing in well.
 - 8 Laboratory report indicates the surrogate data is outside the QC limits for the first extraction. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction. The DRO result for the first extraction is 600 µg/L, the HRO result for the first extraction is 520 µg/L. The reextracted data is reported as per client request.
 - 9 Well re-development performed.
 - 10 BTEX and MTBE run by USEPA Method 8021B and 8260B. Where analyte is detected, the highest result is reported. Please refer to lab reports for additional data.
 - 11 Laboratory report indicates due to the presence of an sample matrix interference, the reporting limit was raised.
 - 12 Laboratory report indicates that due to dilution necessary to bring target analytes into the calibration range of the analytical system, recovery for the reverse surrogate, capric acid, could not be determined.
 - 12 Laboratory report indicates that capric acid recovery could not be determined.
 - 13 The surrogate data is outside of QC limits in the blank, LCS and LCSD associated with this sample. The surrogate data is also outside QC limits in this sample. The LCS/LCSD recoveries for DRO are outside of QC limits. Surrogate and spike results from the reextraction are within QC limits. The hold time had expired prior to reextraction so all results reported are from the original extract. Similar results were observed between the two extractions.
 - 14 LNAPL in well following purging.
 - 15 BTEX and MTBE analyzed by USEPA Method 8260B.
 - 16 BTEX and MTBE analyzed USEPA Method 8260D.

Table 3. Groundwater Analytical Results - Select Semi-Volatile Organic Compounds

Former Chevron Bulk Terminal No. 1001782
SE Davis Street and SE Chandler Avenue
McMinnville, Oregon



Well ID	Date	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1,2,3-cd) pyrene	Dibenz (a,h) anthracene	Benzo (g,h,i) perylene
MW-1	09/21/06	0.065	<0.02	<0.01	0.022	0.013	0.038	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02
MW-1	06/08/10	0.12	<0.025 ¹	0.083	0.23	0.014	0.027	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097
MW-1	09/07/10	0.46	<0.010 ¹	0.1	0.22	0.012	0.024	0.012	0.013	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	12/08/10	0.25	0.027	0.18	0.48	<0.0096	0.039	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096
MW-1	03/07/11	<0.029	<0.0096	0.22	0.41	0.091	0.061	0.014	0.029	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096
MW-1	06/30/11	1	0.048	0.29	0.59	0.098	0.056	0.027	0.028	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095
MW-1	09/13/11	0.029	0.036	0.19	0.72	0.045	0.042	0.014	0.012	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095
MW-1	12/08/11	0.7	0.018	0.15	0.26	<0.029	0.035	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098
MW-1	03/06/12	<0.029	0.049	0.19	0.39	0.07	0.04	0.014	0.013	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096
MW-1	06/06/12	0.34	0.026	0.11	0.24	0.087	0.028	0.032	0.041	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098
MW-1	09/10/12	1.5	0.02	0.13	0.61	0.033	0.037	0.035	0.046	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098
MW-1	12/04/12	0.28	0.025	0.17	0.3	<0.029	0.025	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096
MW-1	03/12/13	0.41	0.013	0.045	0.096	<0.030	0.026	0.015	0.017	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099
MW-1	06/12/13	0.37	0.021	0.11	0.28	0.04	0.021	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	09/10/13	<0.032	<0.011	0.04	0.065	<0.032	<0.011	<0.011	0.013	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011
MW-1	01/18/14	<0.032	<0.011	0.089	0.15	<0.032	0.012	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011
MW-1	03/05/14	0.81	0.028	0.17	0.3	<0.031	0.027	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	06/05/14	<0.031	<0.010	0.14	0.39	<0.031	0.014	<0.010	0.013	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	09/16/14	0.48	<0.010	0.11	0.38	<0.030	0.016	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	12/10/14	0.038	<0.010	<0.010	<0.010	<0.031	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	03/09/15	0.34	<0.010	0.1	0.17	0.04	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	06/10/15	<0.030	<0.010	0.083	0.27	0.061	0.041	<0.010	0.02	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	09/13/15	<0.030	0.03	0.12	0.45	0.12	0.055	<0.010	0.013	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	12/06/15	<0.030	0.059	0.27	0.63	0.097	0.041	<0.010	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	03/09/16	<0.031	0.027	0.19	0.48	0.076	0.034	0.014	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	06/15/16	<0.030	<0.010	0.13	0.29	0.039	0.035	<0.010	0.013	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	09/07/16	<0.030	0.021	<0.010	1.3	0.043	0.013	0.017	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	12/06/16	<0.030	<0.010	0.19	0.38	<0.030	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	03/14/17	<0.030	<0.010	0.2	0.51	0.064	0.024	<0.010	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	06/15/17	<0.030	<0.010	0.032	0.11	<0.030	0.014	0.011	0.027	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	09/08/17	<0.030	<0.010	0.24	0.75	0.077	0.038	0.011	0.04	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	12/02/17	0.048	<0.010	0.071	0.094	<0.031	0.028	<0.010	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	03/12/18	<0.03	0.03	0.2	0.4	0.08	0.05	0.03	0.02	0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MW-1	06/23/18	<0.03	0.04	0.2	0.6	0.05	0.04	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MW-1	09/05/18	<0.03	<0.010	0.2	0.8	0.05	0.04	0.02	0.02	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-1	12/02/18	<0.03	0.02	0.1	0.1	<0.03	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-1	03/09/19	<0.03	<0.01	0.2	0.5	0.1	0.05 J	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-1	09/10/19	<0.03	<0.01	0.2	0.6	0.03 J	0.03 J	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-1	11/02/19	<0.03	0.02 J	0.2	0.6	<0.03	0.03 J	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-1	03/09/20	0.651 J	<0.0500	0.134	0.327	0.0392 J	0.0245 J	<0.05	<0.05	0.00615 J	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-1	09/13/20	2.53	<0.0500	0.422	1.49	0.172	0.0400 J	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-1	09/07/21	1.44	<0.0500	0.205	0.510	0.0802	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-1	02/16/22	1.25	<0.0500	0.223	0.656	0.0628	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<					

Former Chevron Bulk Terminal No. 1001782
SE Davis Street and SE Chandler Avenue
McMinnville, Oregon



Well ID	Date	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1,2,3-cd) pyrene	Dibenz (a,h) anthracene	Benzo (g,h,i) perylene
MW-2	12/06/16	<0.030	<0.010	2.2	4	0.47	0.31	1.1	0.85	0.16	0.19	0.089	0.032	0.056	0.021	<0.010	0.032
MW-2	03/14/17	<0.030	<0.010	1	1.8	0.29	0.14	0.1	0.15	0.027	0.035	0.018	<0.010	0.014	<0.010	<0.010	0.013
MW-2	06/15/17	<0.030	<0.010	1.3	2.1	0.29	0.15	0.17	0.17	0.023	0.03	0.017	<0.010	<0.010	<0.010	<0.010	<0.010
MW-2	09/08/17	<0.030	<0.010	2.2	4.7	4.2	<0.010	0.48	0.44	0.07	0.1	0.033	0.014	0.023	<0.010	<0.010	<0.010
MW-2	12/02/17	2.2	<0.010	1.4	1.6	0.3	0.23	0.21	0.22	0.036	0.049	0.023	<0.010	0.018	<0.010	<0.010	0.012
MW-2	03/12/18	<0.3	1	5	11	9	0.9	1	1	0.3	0.4	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-2	06/23/18	<0.3	<0.1	5	17	11	0.9	1	1	0.2	0.3	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-2	09/05/18	<0.03	<0.01	2	6	3	0.4	0.4	0.3	0.06	0.08	0.03	0.01	0.01	<0.01	<0.01	<0.01
MW-2	12/02/18	<0.03	0.5	3	5	3	0.4	0.7	0.5	0.09	0.1	0.04	0.02	0.03	0.01	<0.02	0.01
MW-2	03/09/19	<0.3	<0.1	56	140	95	20	25	21	3	5	2	0.6	1	0.4 J	<0.2	0.6
MW-2	06/08/19	<0.03	0.02 J	0.1	0.2	<0.03	0.04 J	0.01 J	0.02 J	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-2	09/10/19	<0.3	<0.1	13	30	32	2	4	4	0.6	0.9	0.3 J	0.1 J	0.2 J	<0.1	<0.2	<0.1
MW-2	11/02/19	<0.03	<0.01	1	2	3	0.4	0.3	0.2	0.04 J	0.05	0.02 J	<0.01	0.01 J	<0.01	<0.02	<0.01
MW-2	03/09/20	137	<0.500	82.6	166	167	20.0	20.5	19.5	2.95	3.04	1.70	0.627	0.920	0.373 J	0.136 J	0.464 J
MW-2	09/13/20	LNAPL IN WELL															
MW-2	09/07/21	LNAPL IN WELL															
MW-2	02/16/22	1.98	0.189	1.54	2.95	1.64	0.0677	0.0913 J	0.0859	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-2	08/17/22	2.13	<0.0500	1.27	2.35	0.970	<0.0500	0.0713 J	0.0677	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-2	02/22/23	2.77	0.178	1.60	3.10	1.52	0.0621	0.108	0.0900	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-2	08/09/23	3.54	<0.0500	1.23	1.92	1.45	<0.0500	0.404	0.427	0.0538	0.0441 J	0.0254 J	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-2	02/15/24	<0.250	<0.0500	3.35	6.70	4.52	<0.0500	0.452	0.404	0.0579	0.0511	0.0242 J	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-3	09/21/06	UNABLE TO LOCATE															
MW-3	06/08/10	0.16	<0.0097	<0.0097	0.013	<0.0097	0.041	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097
MW-3	09/07/10	0.3	<0.010	0.011	0.028	0.016	0.036	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	12/08/10	NOT SAMPLED DUE TO FAILURE OF WELL INTEGRITY															
MW-3	03/07/11	NOT SAMPLED DUE TO FAILURE OF WELL INTEGRITY															
MW-3	06/30/11	0.16	<0.0096	<0.0096	0.035	<0.029	0.035	0.019	0.041	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096
MW-3	09/13/11	0.029	<0.0096	<0.0096	0.061	<0.029	0.022	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096
MW-3	12/08/11	NOT SAMPLED DUE TO FAILURE OF WELL INTEGRITY															
MW-3	03/06/12	<0.029	<0.0096	<0.0096	0.019	<0.029	0.028	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096
MW-3	06/06/12	0.039	<0.0096	<0.0096	<0.0096	<0.029	0.023	<0.0096	0.015	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096
MW-3	09/10/12	0.085	<0.010	<0.010	0.017	<0.030	0.027	<0.010	0.024	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	12/04/12	0.079	<0.0097	<0.0097	0.021	<0.029	0.019	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097
MW-3	03/12/13	0.23	<0.0097	<0.0097	0.014	<0.029	0.031	<0.0097	0.01	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097
MW-3	06/12/13	<0.031	<0.010	<0.010	<0.010	<0.031	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	09/10/13	<0.032	<0.011	<0.011	<0.011	<0.032	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011
MW-3	01/18/14	<0.030	<0.010	<0.010	0.022	<0.030	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	03/05/14	0.15	<0.010	<0.010	0.017	<0.030	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.016	0.016	0.02
MW-3	06/05/14	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	09/16/14	0.048	<0.010	<0.010	0.012	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	12/10/14	0.047	<0.010	<0.010	0.012	<0.031	0.012	<0.010	0.013	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	03/09/15	0.058	<0.010	<0.010	0.011	<0.031	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	06/10/15	<0.030	<0.010	<0.010	<0.010	<0.030	0.017	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	09/13/15	<0.031	<0.010	<0.010	0.016	<0.031	0.022	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	12/06/15	<0.030	<0.010	<0.010	0.013	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	03/09/16	<0.030	<0.010	<0.010	0.014	<0.030	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	06/15/16	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	09/07/16	<0.030	<0.010	<0.010	0.021	<0.030	0.019	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	12/06/16	0.042	<0.010	<0.010	<0.010	<0.030	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	03/14/17	<0.030	<0.010	<0.010	0.023	<0.030	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	06/15/17	<0.031	<0.010	<0.010	<0.010	<0.031	0.012	<0.010	0.027	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	09/08/17	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	0.029	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	12/02/17	0.068	<0.010	<0.010	0.011	<0.031	0.015	<0.010	0.017	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-3	03/12/18	<0.03	<0.01	<0.01	0.02	<0.03	0.02	<0.01	<0.01	0.02	0.03	0.02	0.02	<0.01	<0.01	<0.01	<0.01
MW-3	06/23/18	<0.03	<0.01	<0.01	<0.01	<0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MW-3	09/05/18	<0.03	<0.01	<0.01	<0.01	<0.03	0.02	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MW-3	12/02/18	<0.03	<0.01	<0.01	<0.01	<0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-3	03/09/19	<0.03	<0.01	<0.01	0.02 J	<0.03	0.02 J	<0.01	0.02 J	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-3	06/08/19	<0.03	<0.01	<0.01	<0.01	<0.03	0.02 J	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-3	09/10/19	0.08	<0.01	<0.01	0.03 J	<0.03	0.01 J	<0.01	0.01 J	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-3	11/02/19	<0.03	<0.01	<0.01	<0.01	<0.03	0.02 J	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-3	03/09/20	0.184 J	<0.0500	0.0118 J	0.0269 J	0.0104 J	<0.0500	<0.05	<0.05	0.00688 J	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-3	09/13/20	0.244 J	<0.0500	<0.0500	0.0285J	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-3	09/07/21	0.372	<0.0500	<0.0500	<0.0500	0.0210 J	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-3	02/16/22	0.246 J	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	&	

Former Chevron Bulk Terminal No. 1001782
SE Davis Street and SE Chandler Avenue
McMinnville, Oregon



Well ID	Date	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1,2,3-cd) pyrene	Dibenz (a,h) anthracene	Benzo (g,h,i) perylene
MW-4	03/16/04	UNABLE TO LOCATE															
MW-4	09/21/06	UNABLE TO LOCATE															
MW-4	09/07/21	UNABLE TO LOCATE															
MW-4A	02/12/15	<0.032	<0.011	<0.011	<0.011	<0.032	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--
MW-4A	03/09/15	0.066	<0.011	<0.011	<0.011	<0.032	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011
MW-4A	06/10/15	<0.030	<0.010	<0.010	<0.010	<0.030	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-4A	09/13/15	<0.031	<0.010	<0.010	<0.010	<0.031	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-4A	12/06/15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4A	03/09/16	<0.031	<0.010	<0.010	<0.010	<0.031	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-4A	06/15/16	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-4A	09/07/16	<0.031	<0.010	<0.010	<0.010	<0.031	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-4A	12/06/16	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-4A	03/14/17	0.031	<0.010	<0.010	0.011	<0.030	<0.010	0.013	0.011	0.014	0.013	0.013	0.012	0.011	0.012	0.012	0.011
MW-4A	06/15/17	<0.031	<0.010	<0.010	<0.010	<0.031	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-4A	09/08/17	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	0.016	<0.010	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-4A	12/02/17	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-4A	03/12/18	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MW-4A	06/23/18	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MW-4A	09/05/18	0.04	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MW-4A	12/02/18	<0.03	<0.01	<0.01	<0.01	<0.03	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-4A	03/09/19	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-4A	06/08/19	0.100	<0.01	<0.01	<0.01	<0.03	0.01 J	<0.01	0.01 J	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-4A	09/10/19	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-4A	11/02/19	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-4A	03/09/20	0.0257 J	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.05	<0.05	0.00647 J	<0.0500	0.00273 J	<0.0500	<0.05000	<0.0500	<0.0500	0.00308 J
MW-4A	09/13/20	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-4A	09/07/21	<0.250	<0.0500	<0.0500	0.0202 J	0.0336 J	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-4A	02/16/22	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-4A	08/17/22	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-4A	02/22/23	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-4A	08/09/23	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-4A	02/15/24	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-5	09/21/06	<0.01	<0.02	0.031	0.13	0.067	0.075	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02
MW-5	06/08/10	0.29	<0.0096	0.039	0.13	0.06	0.049	<0.0096	0.014	<0.0096	0.012	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096
MW-5	09/07/10	0.39	0.011	0.052	0.2	0.049	0.021	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	12/08/10	0.36	0.015	0.086	0.24	0.067	0.028	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	03/07/11 ²	<0.029	<0.0095	0.11	0.33	0.072	0.027	0.013	0.018	<0.0095	0.027	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095
MW-5	06/30/11	0.33	0.02	0.12	0.37	0.12	0.025	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095
MW-5	09/13/11	0.35	0.024	0.11	0.33	0.11	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096
MW-5	12/08/11	0.75	0.017	0.11	0.26	0.092	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	03/06/12	<0.029	<0.0095	0.096	0.29	0.16	0.016	0.032	0.022	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095
MW-5	06/06/12	0.44	0.014	0.12	0.33	0.091	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098
MW-5	09/10/12	0.6	0.013	0.089	0.23	0.076	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098
MW-5	12/04/12	0.42	0.028	0.11	0.34	0.14	<0.0096	0.031	0.022	<0.0096	0.011	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096
MW-5	03/12/13	0.46	<0.010	0.063	0.17	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	06/12/13	0.36	0.012	0.085	0.25	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	09/10/13	<0.031	<0.010	0.057	0.11	<0.031	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	01/18/14	<0.030	<0.010	0.069	0.12	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	03/05/14	0.11	<0.010	<0.010	0.019	<0.030	<0.010	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	06/05/14	<0.030	<0.010	0.078	0.17	0.06	<0.010	0.024	0.031	<0.010	0.027	0.016	<0.010	<0.010	<0.010	<0.010	0.014
MW-5	09/16/14	0.47	<0.010	0.1	0.15	0.07	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	12/10/14	0.4	<0.010	0.11	0.2	0.11	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	03/09/15	0.19	<0.010	0.064	0.19	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	06/10/15	<0.030	<0.010	0.16	0.37	0.11	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	09/13/15	<0.030	<0.010	0.13	0.25	0.081	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	12/06/15	<0.031	0.019	0.1	0.3	0.071	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	03/09/16	<0.031	0.014	0.071	0.18	0.047	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	06/15/16	<0.030	<0.010	0.12	0.47	0.079	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	09/07/16	<0.031	0.029	0.02	0.41	0.11	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	12/06/16	<0.030	<0.010	0.085	0.23	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-5	03/14/17	0.053	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	<0								

Table 3. Groundwater Analytical Results - Select Semi-Volatile Organic Compounds

Former Chevron Bulk Terminal No. 1001782
SE Davis Street and SE Chandler Avenue
McMinnville, Oregon



Well ID	Date	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1,2,3-cd) pyrene	Dibenz (a,h) anthracene	Benzo (g,h,i) perylene
MW-5	12/02/18	<0.03	0.02	0.08	0.2	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-5	03/09/19	<0.03	<0.01	0.06	0.05 J	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-5	06/08/19	0.200	<0.01	0.1	0.1	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02 J	<0.02	0.01 J
MW-5	09/10/19	<0.03	<0.01	0.05 J	0.1	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-5	11/02/19	<0.03	0.01 J	0.1	0.2	0.05 J	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-5	03/09/20	0.259	<0.0500	0.0947	0.231	0.0161 J	<0.0500	<0.05	<0.05	0.00482 J	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-5	09/13/20	0.515	<0.0500	0.146	0.259	0.0251J	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-5	09/07/21	0.407	<0.0500	0.0838	0.143	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-5	02/16/22	0.586	<0.0500	0.158	0.357	0.1060	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-5	08/17/22	0.514	<0.0500	0.115	0.264	0.0808	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-5	02/22/23	0.535	<0.0500	0.104	0.252	0.0755	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-5	08/09/23	0.446	<0.0500	0.101	0.222	0.0583	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-5	02/15/24	0.569	<0.0500	0.147	0.347	0.0667	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-6	02/12/15	<0.035	<0.012	<0.012	<0.012	<0.035	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	--
MW-6	03/09/15	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-6	06/10/15	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-6	09/13/15	<0.031	<0.010	<0.010	<0.010	<0.031	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-6	12/06/15	<0.031	<0.010	<0.010	<0.010	<0.031	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-6	03/09/16	<0.031	<0.010	<0.010	<0.010	<0.031	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-6	06/15/16	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-6	09/07/16	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-6	12/06/16	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-6	03/14/17	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-6	06/15/17	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-6	09/08/17	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-6	12/02/17	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-6	03/12/18	0.06	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MW-6	06/23/18	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MW-6	09/05/18	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MW-6	12/02/18	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-6	03/09/19	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-6	06/08/19	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	0.02 J	<0.01	0.01 J	0.02 J	<0.02	0.02 J
MW-6	09/10/19	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-6	11/02/19	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-6	03/09/20	0.0237 J	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.05	<0.05	0.00563 J	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-6	09/13/20	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-6	09/07/21	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-6	02/16/22	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-6	08/17/22	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-6	02/22/23	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.050		

Table 3. Groundwater Analytical Results - Select Semi-Volatile Organic Compounds

Former Chevron Bulk Terminal No. 1001782
SE Davis Street and SE Chandler Avenue
McMinnville, Oregon



Well ID	Date	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1,2,3-cd) pyrene	Dibenz (a,h) anthracene	Benzo (g,h,i) perylene
MW-7	08/09/23	3.22	<0.0500	2.43	5.78	4.63	<0.0500	0.371	0.891	0.0834	0.151	0.0479 J	<0.0500	0.0388 J	<0.0500	<0.0500	0.0239 J
MW-7	02/15/24	3.06	0.360	1.73	4.16	4.10	<0.0500	0.128	0.208	0.0249 J	0.0511	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-8	12/02/18	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-8	03/09/19	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-8	06/08/19	0.070	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	0.01 J	<0.01	<0.01	<0.01	<0.02	<0.01
MW-8	09/10/19	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-8	11/02/19	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-8	03/09/20	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.05	<0.05	0.00561 J	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-8	09/13/20	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-8	09/07/21	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-8	02/16/22	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-8	08/17/22	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-8	02/22/23	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-8	08/09/23	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-8	02/15/24	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-9	09/10/19	<0.03	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-9	11/02/19	<0.03	<0.01	<0.01	<0.01	<0.03	0.02 J	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
MW-9	03/09/20	0.0320 J	<0.0500	<0.0500	0.00873 J	0.0172 J	0.0414 J	<0.05	<0.05	0.00673 J	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.00452 J
MW-9	09/13/20	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	0.057	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-9	09/07/21	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	0.0678	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-9	02/16/22	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	0.0228 J	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-9	08/17/22	UNABLE TO LOCATE															
MW-9	02/22/23	0.422	<0.0500	0.0746	0.152	0.0364 J	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-9	08/09/23	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
MW-9	02/15/24	<0.250	<0.0500	<0.0500	<0.0500	<0.0500	0.0216 J	<0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
RBCs: Volatilization to Outdoor Air																	
Residential		3,600	NA	>S	>S	NA	>S	NV	>S	>S	NV	NV	NV	NV	NV	NV	NA
Urban Residential		8,500	NA	>S	>S	NA	>S	NV	>S	>S	NV	NV	NV	NV	NV	NV	NA
Occupational		16,000	NA	>S	>S	NA	>S	NV	>S	>S	NV	NV	NV	NV	NV	NV	NA
RBCs: Vapor Intrusion Into Buildings																	
Commercial		50	NA	NITI	NITI	NA	NITI	NITI, NV	NITI	2,300	NV	NV	NV	NV	NV	NV	NA
RBCs: Groundwater in Excavation																	
Construction and Excavation Worker		500	NA	>S	>S	NA	>S	>S	>S	>S	>S	>S	>S	>S	>S	>S	NA

EXPLANATIONS:

Concentrations reported in µg/L
Results in bold indicate analyte detected above one or more generic RBCs
RBCs are based on values presented in Appendix A of the Oregon DEQ's Risk-Based Decision Making for the Remediation of Petroleum Contaminated Sites (Oregon DEQ, 2003; updated June 2012).
The RBCs for vapor intrusion into buildings was updated by the Oregon DEQ in June 2023. The results starting in August 2023 are bolded based on the updated RBCs. Results prior to August 2023 are bolded based on the previous RBC values.
All concentrations are in micrograms per Liter
DEQ = Department of Environmental Quality
MDL = Method Detection Limit
NA = A generic RBC has not been established
NITI = No inhalation toxicity information
NV = Non-volatile. This chemical is considered non-volatile for purposes of the exposure calculations.
PAHs = Polynuclear aromatic hydrocarbons
RBCs = Risk-Based Concentrations
QC = Quality Control
J = Estimated value between the method detection limit (MDL) and RDL.
J3= The associated batch QC was outside the established quality
<1.00 = Not Detected at or above the reported detection limit (RDL)

SIM = Selective ion monitoring
SVOCs = Semi-Volatile Organic Compounds
µg/L = Micrograms per liter

-- = Not Analyzed
>S = The groundwater RBC exceeds the solubility limit. Groundwater concentrations in excess of S indicate that free product may be present.

ANALYTICAL METHOD:

Selected SVOCs by 8270E-SIM.

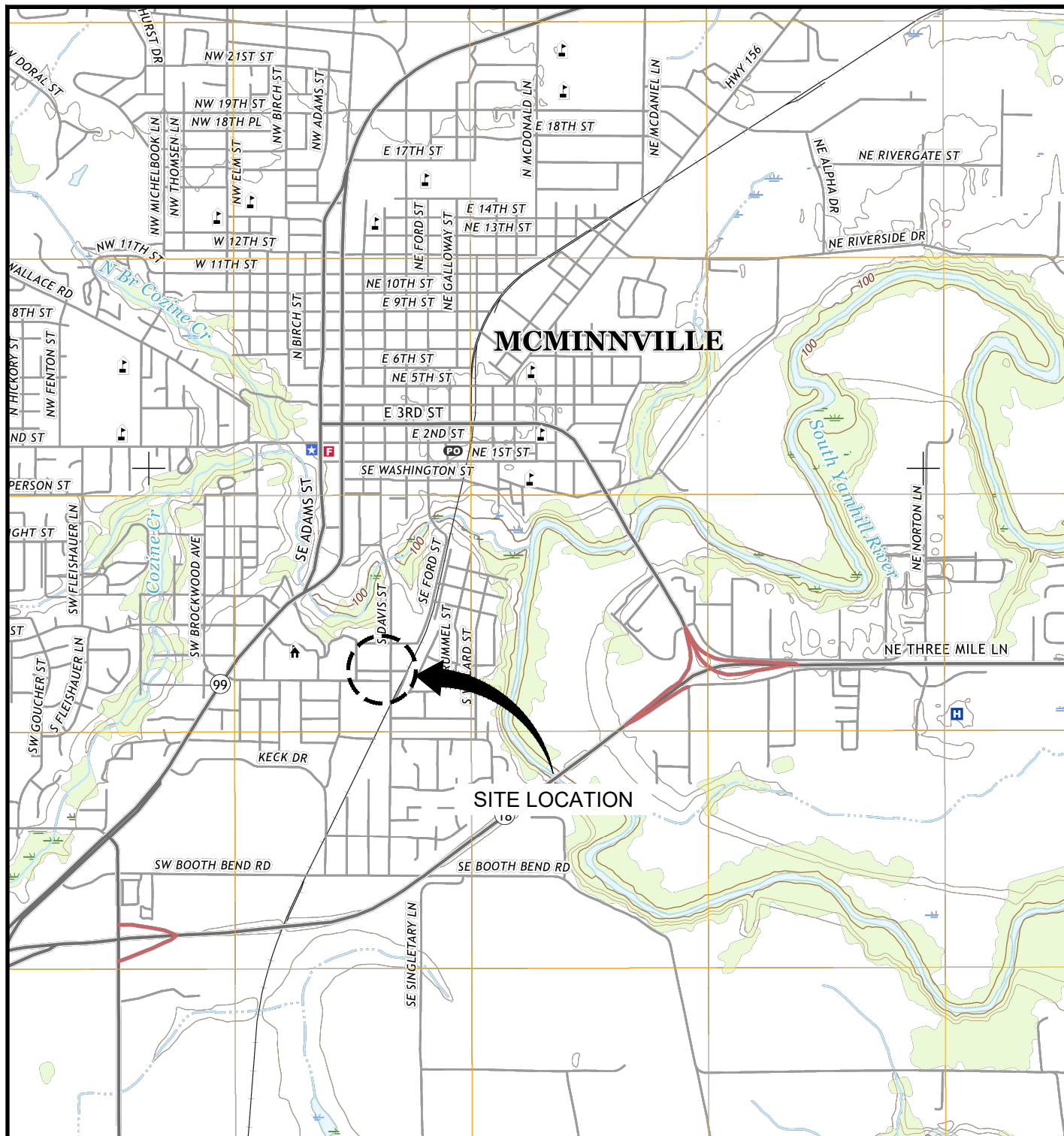
NOTES:

- Laboratory report indicates due to the presence of an interferent near the retention time of acenaphthylene, the reporting limit was raised. This was due to the fact that the interferent had a significant abundance of ions at or near the mass of acenaphthylene.
- The laboratory report indicates the surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.
- Laboratory report indicates the reporting limits were raised due to interference from the sample matrix.

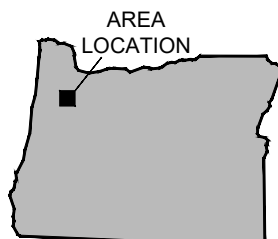
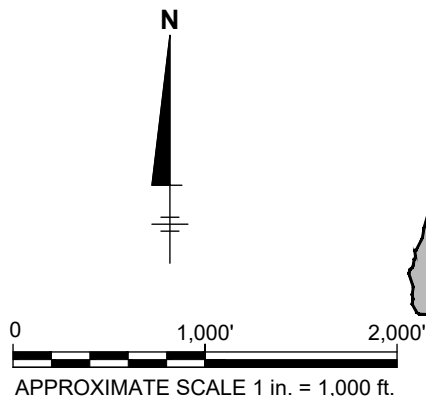
FIGURES



C:\Users\ar10071\Documents\aradis\ACC_USIAUS-99999999-CHEV_1001782_MCMINNIVILLE_OR\Project Files\10_WIP\10T_ARC_EN\2024\01-DWG\GEN-F01-SITE LOCATION MAP.dwg LAYOUT: 1. SAVED: 9/13/2023 4:20 PM ACADVER: 24.2S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: ---
PLOTTED: 3/11/2024 1:14 AM BY: R. ANITA
XREFS: IMAGES: PROJECTNAME: ---
GEN-X-BASE\Aradis logo.png



SOURCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., MCMINNIVILLE, OREGON 2017.



OREGON

FORMER CHEVRON BULK TERMINAL NO. 1001782
SE DAVIS STREET AND SE CHANDLER AVENUE
MCMINNIVILLE, OREGON
1SA24 GROUNDWATER MONITORING REPORT

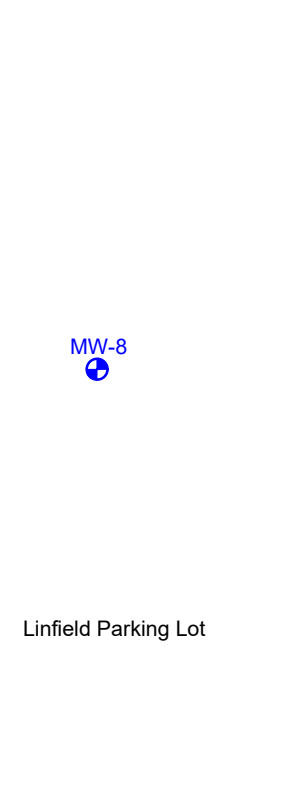
SITE LOCATION MAP



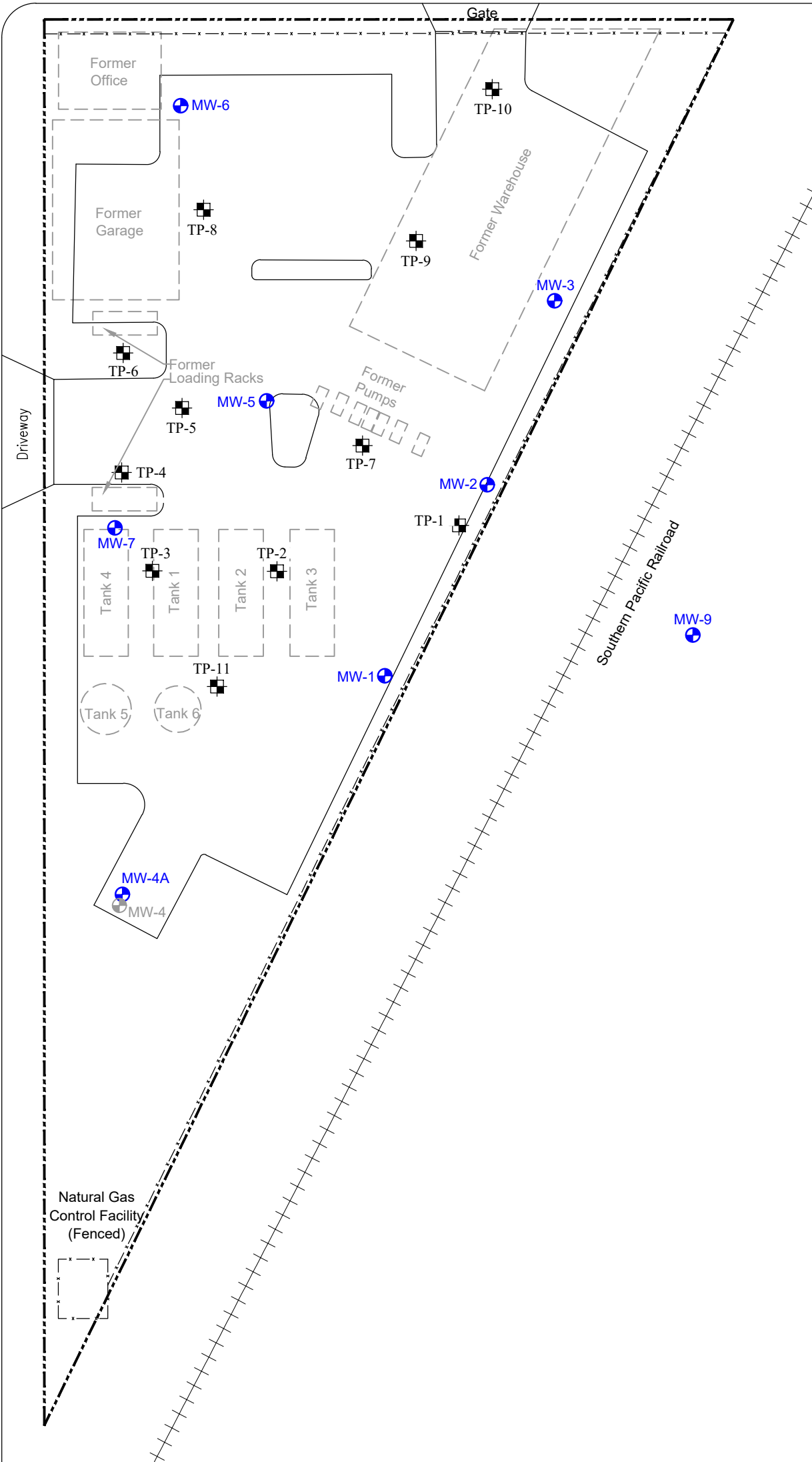
FIGURE

1

SE CHANDLER AVENUE



SE DAVIS STREET



LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- FENCE LINE
- FORMER BULK TERMINAL FEATURES

- GROUNDWATER MONITORING WELL
- ABANDONED GROUNDWATER MONITORING WELL
- TEST PITS

REFERENCE

- BASE MAP PROVIDED BY LEIDOS, DATED 10-1-2018.



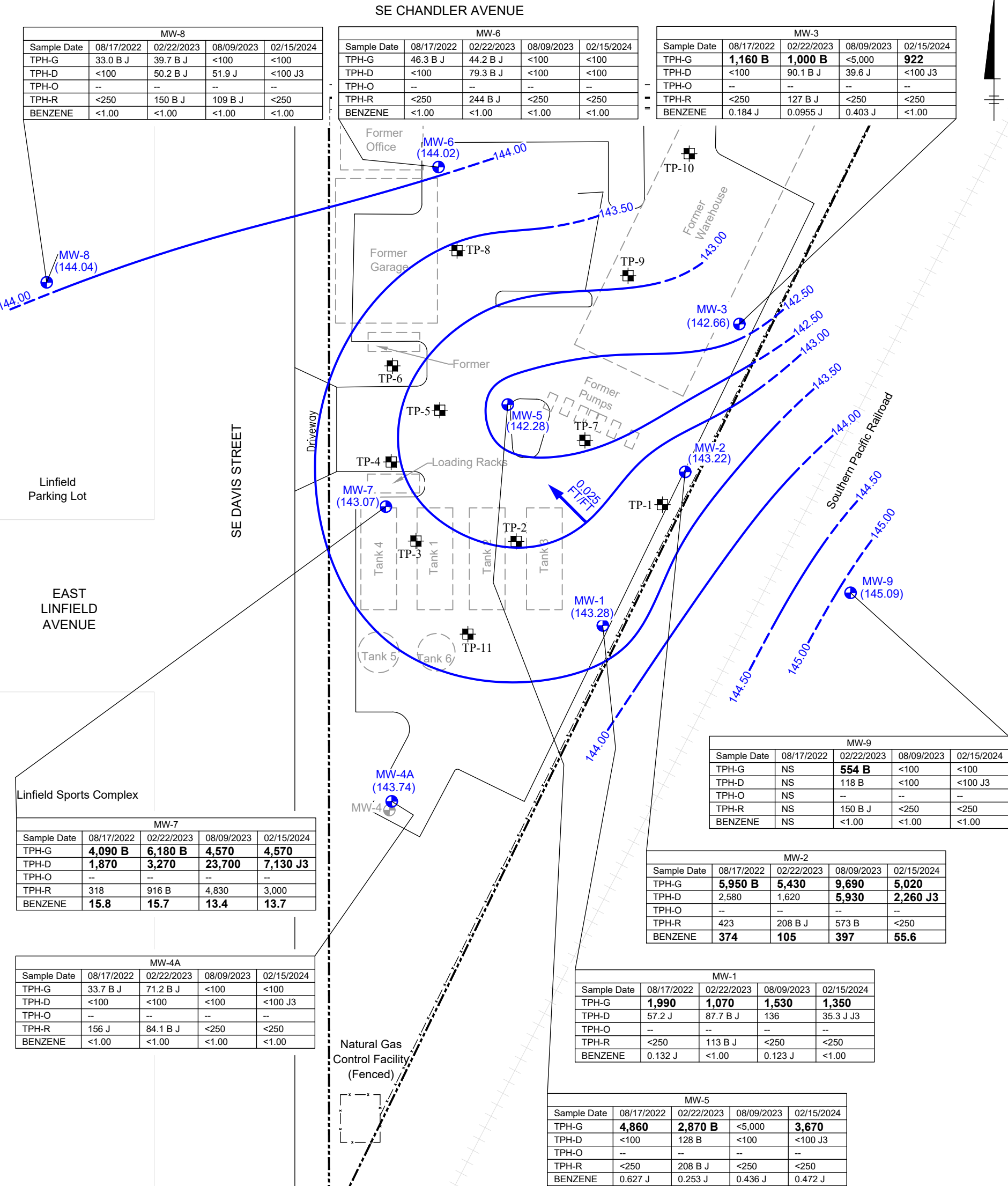
FORMER CHEVRON BULK TERMINAL NO. 1001782
SE DAVIS STREET AND SE CHANDLER AVENUE
McMINNVILLE, OREGON
1SA24 GROUNDWATER MONITORING REPORT

SITE PLAN

 **ARCADIS**

FIGURE
2

XREFS: IMAGES: PROJECTNAME: ----
GEN-X-BASEArcadis logo.png



ATTACHMENT A

Field Data Sheets and Technical Guidance Instructions





GROUNDWATER SAMPLING SPECIALISTS
SINCE 1985

March 5, 2024

ARCADIS
Christine Perez
320 Commerce, Suite 200
Irvine, CA 92602, CA

First Quarter 2024 Monitoring at
Site Number 1001782
SE Chandler Avenue & SE Davis Street
MCMINNVILLE, OR

Monitoring performed on February 15, 2024

Blaine Tech Services, Inc. Groundwater Monitoring Event 240215-DO1

This submission covers the routine monitoring of groundwater wells conducted on February 15, 2024 at this location. Nine monitoring wells were measured for depth to groundwater (DTW) and presence of separate-phase hydrocarbons (SPH). Nine monitoring wells were sampled. All sampling activities were performed in accordance with local, state and federal guidelines.

Water levels and separate-phase measurements were collected using an electronic water or oil-water interface detector. All sampled wells were purged of three case volumes or until water temperature, pH and conductivity stabilized. Purging was accomplished using electric submersible pumps, positive air-displacement pumps or stainless steel, Teflon or disposable bailers. Subsequent sample collection and sample handling was performed in accordance with EPA protocols using disposable bailers. Alternately, where applicable, wells were sampled utilizing no-purge methodology. All reused equipment was decontaminated in an integrated stainless steel sink with de-ionized water supplied Hotsy pressure washer and Liquinox or equivalent.

Samples were delivered under chain-of-custody to Pace Analytical for analysis. Monitoring well purgewater and equipment rinsate water was collected and transported under bill of lading to Blaine Tech Services, Inc.'s yard in Auburn, Washington, and bulked for future transportation (within 90 days) under non-hazardous manifest for disposal at a licensed facility.

First Quarter 2022 Groundwater Monitoring at Chevron 1001782 SE Chandler Avenue & SE Davis Street, MCMINNVILLE, OR

SAN JOSE SACRAMENTO LOS ANGELES SAN DIEGO SEATTLE
1680 ROGERS AVENUE SAN JOSE, CA (408) 573-0555 FAX (408) 573-7771 LIC. 746684 WWW.BLAINETECH.COM

Enclosed documentation from this event includes copies of the Well Gauging Sheet, Well Monitoring Data Sheets, Bill of Lading, and Chain-of-Custody.

Blaine Tech Services, Inc.'s activities at this site consisted of objective data and sample collection only. No interpretation of analytical results, defining of hydrogeologic conditions or formulation of recommendations was performed.

Please call if you have any questions.

Thank you,

A handwritten signature in black ink, appearing to read 'Lee Bures', with a stylized, flowing script.

Lee Bures
Blaine Tech Services, Inc
Operations Manager

attachments: Well Gauging Sheet
Individual Well Monitoring Data Sheets
Chain of Custody Forms
Wellhead Inspection Form
Bill of Lading

First Quarter 2022 Groundwater Monitoring at Chevron 1001782 SE Chandler Avenue & SE Davis Street, MC MINNVILLE, OR

SAN JOSE	SACRAMENTO	LOS ANGELES	SAN DIEGO	SEATTLE
1680 ROGERS AVENUE	SAN JOSE, CA	(408) 573-0555	FAX (408) 573-7771	LIC. 746684
WWW.BLAINETECH.COM				



Groundwater Gauging Log

Project Number		30063816						
Client:		Chevron						
Site ID:		1001782						
Site Location:		Mcminnville, Oregon						
Measuring Point:		Top of Casing						
Date(s):		02/15/2024						
Sampler(s):		Diana Ojeda, 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-1	02/15/2024	07:21	3.90	ND	19.56	--	--	--
MW-2	02/15/2024	07:25	4.28	ND	20.00	--	--	--
MW-3	02/15/2024	07:22	4.97	ND	20.83	--	--	--
MW-4A	02/15/2024	07:19	4.37	ND	17.02	--	--	--
MW-5	02/15/2024	07:24	3.85	ND	15.34	--	--	--
MW-6	02/15/2024	07:20	3.85	ND	17.01	--	--	--
MW-7	02/15/2024	07:27	3.95	ND	17.00	--	--	--
MW-8	02/15/2024	07:29	3.35	ND	17.03	--	--	--
MW-9	02/15/2024	07:41	2.30	ND	16.57	--	--	--

ft-bmp = feet below measuring point

ND = Not Detected

PID = Photoionization Detector Reading

ppm = parts per million

-- = Not Recorded

Project Number	30063816	Well ID	MW-1	Date	2/15/2024	
Site Location	Mcminnville, Oregon	Site ID	1001782	Weather (°F)	Cloudy	Sampled by Diana Ojeda
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	5 to 20	Casing Diameter (in.)	2	Well Casing Material
Static Water Level (ft-bmp)	3.9	Total Depth (ft-bmp)	19.56	Water Column (ft)	15.66	Gallons in Well 2.54
Water Quality Meter Make/Model	Hach 2100Q, Hanna HI 98129	Purge Method	Low-Flow	Collection Type	Grab	
Sample Time	08:43	Well Volumes Purged	0.31	Sample ID	MW-1-W-20240215	Purge Equipment Peristaltic
Purge Start	08:25	Gallons Purged	0.79	Duplicate ID	--	Sample Equipment Peristaltic
Purge End	08:40	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
08:28	200	4.02	6.26	0.360	40.0	2.41	13.77	38.6	--	--
08:31	200	4.09	6.27	0.358	32.0	2.44	12.71	37.4	--	--
08:34	200	4.11	6.27	0.359	34.0	2.47	12.18	35.9	--	--
08:37	200	4.17	6.28	0.358	33.0	2.46	12.31	34.9	--	--
08:40	200	4.21	6.27	0.358	31.0	2.44	12.49	33.7	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-1-W-20240215 Sample Time: 08:43 Sample Depth (ft-bmp) 12
(e.g. pump intake):
Analytes and Methods: See Chain-of-Custody. Depth to Water at Time of Sampling

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	30063816	Well ID	MW-2	Date	2/15/2024		
Site Location	Mcminnville, Oregon	Site ID	1001782	Weather (°F)	Cloudy	Sampled by	Lee Bures
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	5 to 20	Casing Diameter (in.)	2	Well Casing Material	
Static Water Level (ft-bmp)	4.28	Total Depth (ft-bmp)	20	Water Column (ft)	15.72	Gallons in Well	2.55
Water Quality Meter Make/Model	Hanna HI 98129	Purge Method	Low-Flow	Collection Type	Grab		
Sample Time	09:23	Well Volumes Purged	0.31	Sample ID	MW-2-W-20240215	Purge Equipment	Peristaltic
Purge Start	09:05	Gallons Purged	0.79	Duplicate ID	--	Sample Equipment	Peristaltic
Purge End	09:20	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
09:08	200	4.3	6.72	0.311	17.0	0.94	12.59	-20.7	Clear	--
09:11	200	4.31	6.50	0.290	13.0	0.13	12.65	-25.5	Clear	--
09:14	200	4.31	6.42	0.284	10.0	0.06	12.69	-29.3	Clear	--
09:17	200	4.32	6.39	0.283	9.0	0.04	12.70	-30	Clear	--
09:20	200	4.33	6.37	0.280	9.0	0.01	12.72	-34.5	Clear	--

Comments: Heavy Sheen/Odor

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-2-W-20240215	Sample Time:	09:23	Sample Depth (ft-bmp) (e.g. pump intake):	12
Analytes and Methods:	See Chain-of-Custody.	Depth to Water at Time of Sampling	4.33		

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	30063816	Well ID	MW-3	Date	2/15/2024		
Site Location	Mcminnville, Oregon	Site ID	1001782	Weather (°F)	Cloudy	Sampled by	Lee Bures
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	6 to 21	Casing Diameter (in.)	2	Well Casing Material	
Static Water Level (ft-bmp)	4.97	Total Depth (ft-bmp)	20.83	Water Column (ft)	15.86	Gallons in Well	2.58
Water Quality Meter Make/Model	Hanna HI 98129	Purge Method	Low-Flow	Collection Type	Grab		
Sample Time	08:53	Well Volumes Purged	0.31	Sample ID	MW-3-W-20240215	Purge Equipment	Peristaltic
Purge Start	08:35	Gallons Purged	0.79	Duplicate ID	--	Sample Equipment	Peristaltic
Purge End	08:50	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
08:38	200	4.99	6.33	0.776	25.0	0.43	14.25	41.4	Clear	--
08:41	200	5	6.47	0.776	21.0	0.12	13.89	13	Clear	--
08:44	200	5.02	6.50	0.776	18.0	0.07	13.83	8.1	Clear	--
08:47	200	5.02	6.54	0.776	17.0	0.05	13.81	6.5	Clear	--
08:50	200	5.03	6.56	0.776	17.0	0.02	13.78	3.9	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-3-W-20240215	Sample Time:	08:53	Sample Depth (ft-bmp) (e.g. pump intake):	13
Analyses and Methods:	See Chain-of-Custody.	Depth to Water at Time of Sampling	5.03		

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	30063816	Well ID	MW-4A	Date	2/15/2024	
Site Location	Mcminnville, Oregon	Site ID	1001782	Weather (°F)	Cloudy	Sampled by Diana Ojeda
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	2 to 17	Casing Diameter (in.)	2	Well Casing Material
Static Water Level (ft-bmp)	4.37	Total Depth (ft-bmp)	17.02	Water Column (ft)	12.65	Gallons in Well 2.06
Water Quality Meter Make/Model	Hach 2100Q, Hanna HI 98129	Purge Method	Low-Flow	Collection Type	Grab	
Sample Time	08:11	Well Volumes Purged	0.38	Sample ID	MW-4A-W-20240215	Purge Equipment Peristaltic
Purge Start	07:53	Gallons Purged	0.79	Duplicate ID	--	Sample Equipment Peristaltic
Purge End	08:08	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
07:56	200	4.46	6.04	0.182	28.0	2.61	11.16	150	--	--
07:59	200	4.51	6.01	0.180	26.0	2.60	11.11	151.4	--	--
08:02	200	4.56	5.97	0.180	25.0	2.58	11.13	153.1	--	--
08:05	200	4.6	5.94	0.180	24.0	2.57	11.15	154.2	--	--
08:08	200	4.65	5.91	0.179	23.0	2.55	11.20	155.5	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-4A-W-20240215 Sample Time: 08:11 Sample Depth (ft-bmp) (e.g. pump intake): 10.5
Analytes and Methods: See Chain-of-Custody. Depth to Water at Time of Sampling

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	30063816	Well ID	MW-5	Date	2/15/2024	
Site Location	Mcminnville, Oregon	Site ID	1001782	Weather (°F)	Cloudy	Sampled by Diana Ojeda
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	5 to 20	Casing Diameter (in.)	2	Well Casing Material
Static Water Level (ft-bmp)	3.85	Total Depth (ft-bmp)	15.34	Water Column (ft)	11.49	Gallons in Well 1.87
Water Quality Meter Make/Model	Hach 2100Q, Hanna HI 98129	Purge Method	Low-Flow	Collection Type	Grab	
Sample Time	09:15	Well Volumes Purged	0.42	Sample ID	MW-5-W-20240215	Purge Equipment Peristaltic
Purge Start	08:57	Gallons Purged	0.79	Duplicate ID	--	Sample Equipment Peristaltic
Purge End	09:12	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
09:00	200	3.93	6.61	0.194	22.0	2.37	14.30	-1.5	--	--
09:03	200	3.99	6.61	0.194	20.0	2.36	14.33	-2.9	--	--
09:06	200	4.05	6.60	0.195	19.0	2.36	14.36	-4	--	--
09:09	200	4.11	6.61	0.195	18.0	2.37	14.39	-5.7	--	--
09:12	200	4.16	6.60	0.194	18.0	2.38	14.47	-7.2	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-5-W-20240215 Sample Time: 09:15 Sample Depth (ft-bmp) (e.g. pump intake): 9.5
Analytes and Methods: See Chain-of-Custody. Depth to Water at Time of Sampling

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	30063816	Well ID	MW-6	Date	2/15/2024		
Site Location	Mcminnville, Oregon	Site ID	1001782	Weather (°F)	Raining	Sampled by	Lee Bures
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	2 to 17	Casing Diameter (in.)	2	Well Casing Material	
Static Water Level (ft-bmp)	3.85	Total Depth (ft-bmp)	17.01	Water Column (ft)	13.16	Gallons in Well	2.14
Water Quality Meter Make/Model	Hanna HI 98129	Purge Method	Low-Flow	Collection Type	Grab		
Sample Time	08:16	Well Volumes Purged	0.37	Sample ID	MW-6-W-20240215	Purge Equipment	Peristaltic
Purge Start	07:58	Gallons Purged	0.79	Duplicate ID	--	Sample Equipment	Peristaltic
Purge End	08:13	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
08:01	200	3.86	6.65	0.244	33.0	1.96	10.58	117.8	Clear	--
08:04	200	3.88	6.02	0.240	30.0	0.85	10.70	143.7	Clear	--
08:07	200	3.88	5.91	0.237	27.0	0.79	10.73	152.5	Clear	--
08:10	200	3.88	5.89	0.236	26.0	0.76	10.78	155.3	Clear	--
08:13	200	3.89	5.86	0.233	25.0	0.74	10.75	159.1	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-6-W-20240215	Sample Time:	08:16	Sample Depth (ft-bmp) (e.g. pump intake):	10.5
Analytes and Methods:	See Chain-of-Custody.	Depth to Water at Time of Sampling	3.89		

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	30063816	Well ID	MW-7	Date	2/15/2024	
Site Location	Mcminnville, Oregon	Site ID	1001782	Weather (°F)	Cloudy	Sampled by Diana Ojeda
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	2 to 17	Casing Diameter (in.)	2	Well Casing Material
Static Water Level (ft-bmp)	3.95	Total Depth (ft-bmp)	17	Water Column (ft)	13.05	Gallons in Well 2.12
Water Quality Meter Make/Model	Hach 2100Q, Hanna HI 98129	Purge Method	Low-Flow	Collection Type	Grab	
Sample Time	09:51	Well Volumes Purged	0.37	Sample ID	MW-7-W-20240215	Purge Equipment Peristaltic
Purge Start	09:33	Gallons Purged	0.79	Duplicate ID	--	Sample Equipment Peristaltic
Purge End	09:48	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
09:36	200	4.05	6.20	0.593	35.0	2.52	13.49	9.1	--	--
09:39	200	4.14	6.21	0.595	31.0	2.49	13.53	7.3	--	--
09:42	200	4.18	6.21	0.596	29.0	2.46	13.51	2.5	--	--
09:45	200	4.23	6.21	0.598	27.0	2.45	13.40	1	--	--
09:48	200	4.27	6.21	0.600	27.0	2.46	13.25	-0.8	Clear	--

Comments: Heavy sheen and odor

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-7-W-20240215 Sample Time: 09:51 Sample Depth (ft-bmp) (e.g. pump intake): 10.5
Analytes and Methods: See Chain-of-Custody. Depth to Water at Time of Sampling

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	30063816	Well ID	MW-8	Date	2/15/2024	
Site Location	Mcminnville, Oregon	Site ID	1001782	Weather (°F)	Raining	Sampled by Lee Bures
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	2 to 17	Casing Diameter (in.)	2	Well Casing Material
Static Water Level (ft-bmp)	3.35	Total Depth (ft-bmp)	17.03	Water Column (ft)	13.68	Gallons in Well 2.22
Water Quality Meter Make/Model	Hanna HI 98129	Purge Method	Low-Flow	Collection Type	Grab	
Sample Time	09:54	Well Volumes Purged	0.36	Sample ID	MW-8-W-20240215	Purge Equipment Peristaltic
Purge Start	09:36	Gallons Purged	0.79	Duplicate ID	--	Sample Equipment Peristaltic
Purge End	09:51	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
09:39	200	3.37	6.74	0.108	14.0	6.62	11.24	3.6	Clear	--
09:42	200	3.38	6.41	0.108	12.0	5.93	11.25	15.6	Clear	--
09:45	200	3.38	6.34	0.108	11.0	5.88	11.26	19.3	Clear	--
09:48	200	3.39	6.33	0.108	10.0	5.83	11.27	21.5	Clear	--
09:51	200	3.4	6.29	0.108	10.0	5.79	11.27	25.2	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-8-W-20240215	Sample Time:	09:54	Sample Depth (ft-bmp) (e.g. pump intake):	10
Analytes and Methods:	See Chain-of-Custody.	Depth to Water at Time of Sampling	3.4		

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	30063816	Well ID	MW-9	Date	2/15/2024		
Site Location	Mcminnville, Oregon	Site ID	1001782	Weather (°F)	Raining	Sampled by	Lee Bures
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	2 to 17	Casing Diameter (in.)	2	Well Casing Material	
Static Water Level (ft-bmp)	2.3	Total Depth (ft-bmp)	16.57	Water Column (ft)	14.27	Gallons in Well	2.32
Water Quality Meter Make/Model	Hanna HI 98129	Purge Method	Low-Flow	Collection Type	Grab		
Sample Time	10:43	Well Volumes Purged	0.34	Sample ID	MW-9-W-20240215	Purge Equipment	Peristaltic
Purge Start	10:25	Gallons Purged	0.79	Duplicate ID	--	Sample Equipment	Peristaltic
Purge End	10:40	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
10:28	200	2.31	6.31	0.153	793	7.69	10.55	23.7	Clear	--
10:31	200	2.33	6.38	0.154	703	7.95	9.23	47.6	Clear	--
10:34	200	2.33	6.43	0.154	695	7.97	9.13	52.7	Clear	--
10:37	200	2.34	6.45	0.155	672	8.01	9.10	55.5	Clear	--
10:40	200	2.36	6.48	0.155	662	8.04	9.07	59.2	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

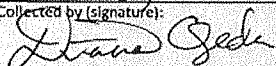
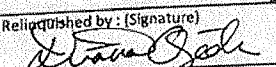
Sample Information

Sample ID:	MW-9-W-20240215	Sample Time:	10:43	Sample Depth (ft-bmp) (e.g. pump intake):	9.5
Analytes and Methods:	See Chain-of-Custody.			Depth to Water at Time of Sampling	2.36

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

Company Name/Address: Arcadis - Chevron - OR 111 SW Columbia St Portland, OR 97201			Billing Information: Accounts Payable 630 Plaza Dr STE 600 Highlands Ranch, CO 80129			Pres Chk		Analysis / Container / Preservative										Chain of Custody Page <u>1</u> of <u>1</u>		
Report to: Christine Perez/Carl Donovan			Email To: Elysha.Nygaard@arcadis.com; Christine.Perez@a															 MT JULIET, TN 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/Products/pace-standards-terms.pdf		
Project Description: 1001782			City/State Collected: McMinnville, OR			Please Circle: PT MT CT ET														
Phone: 503-785-9405			Client Project # 30063816 19.45-EXEC			Lab Project # CHEVARCOR-1001782														
Collected by (print): Diana Ojeda			Site/Facility ID # SE CHANDLER AVE & SE DAVIS			P.O. #														
Collected by (signature): 			Rush? (Lab MUST Be Notified) Same Day _____ Five Day _____ Next Day _____ 5 Day (Rad Only) _____ Two Day _____ 10 Day (Rad Only) _____ Three Day _____			Quote #														
Immediately Packed on Ice N <u> </u> Y <u>X</u>			Date Results Needed			No. of Cntrs														
Sample ID			Comp/Grab	Matrix *	Depth	Date	Time													
MW-1 -W-20240215			G	GW	-	2/15/24	0843	10												
MW-2 -W-20240215				GW	-		0923	10		X	X	X	X							
MW-3 -W-20240215				GW	-		0853	10		X	X	X	X							
MW-4A -W-20240215				GW	-		0811	10		X	X	X	X							
MW-5 -W-20240215				GW	-		0915	10		X	X	X	X							
MW-6 -W-20240215				GW	-		0816	10		X	X	X	X							
MW-7 -W-20240215				GW	-		0951	10		X	X	X	X							
MW-8 -W-20240215				GW	-		0954	10		X	X	X	X							
MW-9 -W-20240215				GW	-		1043	10		X	X	X	X							
TB-W-20240215				GW	-		0900	2	X			X								
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other			Remarks:			pH _____ Temp _____ Flow _____ Other _____														
Relinquished by: (Signature) 			Date: 2/15/24			Time:			Received by: (Signature) Shipped via FedEx			Trip Blank Received: Yes/No HCL / MeOH TBR			Bottles Received:			If preservation required by Login: Date/Time		
Relinquished by: (Signature)			Date:			Time:			Received by: (Signature)			Temp: °C								
Relinquished by: (Signature)			Date:			Time:			Received for lab by: (Signature)			Date:			Time:			Hold:		

Client:		Chevron										
Site ID:		1001782										
Site Location:		Mcminnville, Oregon										
Date(s):		2/15/2024										
Inspector(s):		Diana Ojeda, Lee Bures										
Well ID	Date	Easy to Locate?	Area Prone to Flooding?	Well Type	Well Housing/P ad in Good Condition?	Well Labels Present Outside Well?	Well Labels Present Inside Well?	Lock Present?	Lock Functioning?	Well Locked at Arrival?	Photos Taken?	Comments
MW-1	02/15/2024	yes	no	flushm ount	yes	no	yes	yes	yes	yes	No	--
MW-2	02/15/2024	yes	no	flushm ount	yes	yes	yes	yes	yes	yes	No	--
MW-3	02/15/2024	yes	no	flushm ount	yes	yes	yes	yes	yes	yes	No	--
MW-4A	02/15/2024	yes	no	flushm ount	yes	no	yes	yes	yes	yes	No	--
MW-5	02/15/2024	yes	no	flushm ount	yes	no	yes	yes	yes	yes	No	--
MW-6	02/15/2024	yes	no	flushm ount	yes	yes	yes	yes	yes	yes	No	--
MW-7	02/15/2024	yes	no	flushm ount	yes	no	yes	yes	yes	yes	No	--
MW-8	02/15/2024	yes	no	flushm ount	yes	yes	yes	yes	yes	yes	No	--
MW-9	02/15/2024	yes	no	flushm ount	yes	yes	yes	yes	yes	yes	No	--

Well Inspection Log Photographs



Well ID	Date	Photo	Comments
MW-1	02/15/2024	 A photograph of a circular metal well cover set into a concrete slab on a paved surface. The cover has a central handle and some markings. The surrounding area is slightly weathered.	None
MW-2	02/15/2024	 A photograph of a circular metal well cover set into a concrete slab. The cover is surrounded by a square concrete frame. There is some green vegetation and fallen leaves around the well.	Heavy Sheen/Odor
MW-3	02/15/2024	 A photograph of a circular metal well cover set into a concrete slab. The cover is surrounded by a square concrete frame. The surface appears slightly weathered.	None
MW-4A	02/15/2024	 A photograph of a circular metal well cover set into a concrete slab. The cover is surrounded by a square concrete frame. The surface appears slightly weathered.	None

MW-5	02/15/2024			None
MW-6	02/15/2024			None
MW-7	02/15/2024			Heavy sheen and odor
MW-8	02/15/2024			None

TEST EQUIPMENT CALIBRATION LOG

[illegible]

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:

1001782 Christine Perez
 CHEVRON # _____ Chevron Project Manager
 SE Chandler Ave, McMinnville, OR
 Street number street name city state

WELL I.D.	GALS.	WELL I.D.	GALS.
MW-1	1		
MW-2	1		
MW-3	1		
MW-4A	1		
MW-5	1		
MW-6	1		
MW-7	1		
MW-8	1		
MW-9	1		

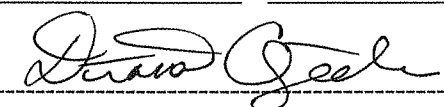
added equip.
 rinse water 1 0.2

any other
 adjustments /

TOTAL GALS.
RECOVERED 9.02

loaded onto
 BTS vehicle # 90

BTS event # 240215-001 time 1630 date 2/15/24

signature 

Permit To Work

for Chevron EMC Sites

Client: ArcadisDate 2/15/24Site Address: SE Chandler Ave & SE Davis StJob Number: 240215-001 Technician(s): DO, MH**Pre-Job Safety Review**

1. JMP reviewed, site restrictions and parking/access issues addressed.		Reviewed: ☒
2. Special Permit Required Task Review		
Are there any conditions or tasks that would require:	Yes	No
Confined space entry	☐	☒
Working at height	☐	☒
Lock-out/Tag-out	☐	☒
Excavations greater than 4 feet deep	☐	☒
Excavations within 3 feet of a buried active electrical line or product piping or within 10 feet of a high pressure gas line.	☐	☒
Use of overhead equipment within 15 feet of an overhead electrical power line or pole supporting one	☐	☒
Hot work	☐	☒
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
	☐	☒
If so is it in the folder?	☐	☐
Is it current?	☐	☐
Do you understand the Traffic Control Plan and what equipment you will need?	☐	☐

On site Pre-Job Safety Review

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

Permit To Work Authority: <u>Diana Gieda</u>	Technician: <u>DO, MH</u>	Date: <u>2/15/24</u>	Time: <u>0630</u>
Name	Title	Date	Time

TGI – Low-Flow Groundwater Purging and Sampling Procedures for Monitoring Wells

Rev: 3

Rev Date: April 5, 2023

Version Control

Issue	Revision No.	Date Issued	Page No.	Description	Reviewed By
	0	October 12, 2018	All	Updated and re-written as TGI with new branding and content	Marc Killingstad
	1	May 8, 2020	Pages 5, 10-11	Added clarification/details for equipment requirements and procedure steps based on USEPA guidance	Marc Killingstad
	2	April 5, 2022	All	Updated to new branding template and minor edits	Marc Killingstad
	3	April 5, 2023	All	Annual review completed by SME. Document version number and document date updated.	Marc Killingstad

Approval Signatures

Prepared by:

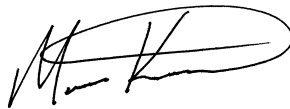
4/5/2023



Xuan Xu (Preparer)

Date

Reviewed by:



4/5/2023

Marc Killingstad (Subject Matter Expert)

Date

1 Introduction

Groundwater samples are collected from monitoring wells to evaluate groundwater quality. The protocol presented in this Technical Guidance Instruction (TGI) describes the procedures to purge monitoring wells and collect groundwater samples using the low flow purging/sampling methodology. This protocol has been developed in accordance with the United States Environmental Protection Agency (USEPA) Region I *Low Stress (Low Flow) Purging and Sampling Procedures for the Collection of Groundwater Samples from Monitoring Wells* (EQASOP-GW4; September 19, 2017).

2 Intended Use and Responsibilities

This document describes general and/or specific procedures, methods, actions, steps, and considerations to be used and observed by Arcadis staff when performing work, tasks, or actions under the scope and relevancy of this document. This document may describe expectations, requirements, guidance, recommendations, and/or instructions pertinent to the service, work task, or activity it covers.

It is the responsibility of the Arcadis Certified Project Manager (CPM) to provide this document to the persons conducting services that fall under the scope and purpose of this procedure, instruction, and/or guidance. The Arcadis CPM will also ensure that the persons conducting the work falling under this document are appropriately trained and familiar with its content. The persons conducting the work under this document are required to meet the minimum competency requirements outlined herein, and inquire to the CPM regarding any questions, misunderstanding, or discrepancy related to the work under this document.

This document is not considered to be all inclusive nor does it apply to all projects. It is the CPM's responsibility to determine the proper scope and personnel required for each project. There may be project- and/or client- and/or state-specific requirements that may be more or less stringent than what is described herein. The CPM is responsible for informing Arcadis and/or Subcontractor personnel of omissions and/or deviations from this document that may be required for the project. In turn, project staff are required to inform the CPM if or when there is a deviation or omission from work performed as compared to what is described herein.

In following this document to execute the scope of work for a project, it may be necessary for staff to make professional judgment decisions to meet the project's scope of work based upon site conditions, staffing expertise, regulation-specific requirements, health and safety concerns, etc. Staff are required to consult with the CPM when or if a deviation or omission from this document is required that has not already been previously approved by the CPM. Upon approval by the CPM, the staff can perform the deviation or omission as confirmed by the CPM.

3 Scope and Application

Both filtered and unfiltered groundwater samples may be collected using this low-flow sampling method. Filtered samples will be obtained using a 0.45-micron disposable filter. Project teams will evaluate the last time the monitoring wells were developed and determine if additional development might be necessary. Water samples will not be taken immediately following well development. Sufficient time will be allowed for the groundwater flow regime in the vicinity of the monitoring well to stabilize and to approach chemical equilibrium with the well

construction materials. This lag time will depend on site conditions and methods of installation but often exceeds one week.

4 Personnel Qualifications

Arcadis field sampling personnel will have completed or are in the process of completing site-specific training as well as having current health and safety training as required by Arcadis, client, or regulations, such as 40-hour HAZWOPER training and/or OSHA HAZWOPER site supervisor training. Arcadis personnel will also have current training as identified in the site-specific Health and Safety Plan (HASP) which may include first aid, cardiopulmonary resuscitation (CPR), Blood Borne Pathogens (BBP) as needed. The HASP will also identify any access control requirements.

Prior to mobilizing to the field, the groundwater sampling team will review and be thoroughly familiar with relevant site-specific documents including but not limited to the task-specific work plan or field implementation plan (FIP)/field sampling plan, Quality Assurance Project Plan (QAPP), HASP, historical information, and other relevant site documents.

Arcadis field sampling personnel will be knowledgeable in the relevant processes, procedures, and TGIs and possess the demonstrated required skills and experience necessary to successfully complete the desired field work. Additionally, the groundwater sampling team will review and be thoroughly familiar with documentation provided by equipment manufacturers and become familiar with the operation of (i.e., hands-on experience) all equipment that will be used in the field prior to mobilization.

5 Equipment List

Specific to this activity, the following materials (or equivalent) will be used:

- Site-specific HASP and health and safety documents identified in the HASP
- Field Implementation Plan (FIP) that includes site map, well construction records, sampling plan (sample analyses, sample volume required, and sample holding time), and prior groundwater sampling records (if available)
- Field notebook and/or smart device (phone or tablet)
- Low-flow sampling field forms (**Attachment A**)
- Appropriate personal protective equipment (PPE) (e.g., latex or nitrile gloves, safety glasses, etc.) as specified in the HASP
- Well keys and other tools to remove manhole covers (manual torque wrench with 9/16" socket and flat head screwdriver typical)
- Photoionization detector (PID) or Flame ionization detector (FID) (as appropriate, depending on site-specific constituents of concern)
- Electronic water-level indicator (e.g., Solinst Model 101) or oil/water interface probe with 0.01- foot accuracy (oil/water as appropriate, note that sampling will not be performed when sheen or light non-aqueous phase liquid [LNAPL] is present)
- Down-hole multi-parameter water-quality sonde (temperature/pH/specific conductivity/oxidation reduction [ORP]/turbidity/dissolved oxygen) meter coupled with flow-through-cell for measurements, for example:

- YSI 6-Series Multi-Parameter Instrument
- Horiba U-22 Multi-Parameter Instrument.
- Hydrolab Series 3 or Series 4a Multiprobe and Display.

NOTE: *Transparent, small volume flow-through-cells (e.g., 250 milliliters or less) are preferred as they allow for easy detection of air bubbles and sediment buildup in the cell, which can interfere with the monitoring instrument probes. A small volume cell also allows for quick turnover of water in the cell between measurements of the indicator field parameters. It is recommended to use a flow-through-cell and monitoring probes from the same manufacturer and model to avoid incompatibility between the probes and flow-through-cell.*

- Plastic sheeting (e.g., Weatherall Visqueen) to protect all down-hole sampling equipment from contact with potential sources of contamination.
- Decontamination equipment
 - Non-phosphate laboratory soap (Alconox or equivalent), brushes, and clean buckets, and/or clean wash tubs—new buckets or tubs will be purchased if it cannot be determined if the present items are clean
 - Distilled or de-ionized water for equipment decontamination
- Indelible ink pen
- 150-foot measuring tape (or sufficient length for the maximum site depth requirement)
- Sampling pump, which may consist of one or more of the following:
 - Submersible pump (e.g., Grundfos Redi-Flo 2)
 - Peristaltic pump (e.g., ISCO Model 150)
 - Bladder pump (e.g., Marschalk System 1, QED Micropurge, Geotech)
- Appropriate controller and power source for pump:
 - Submersible and peristaltic pumps require electric power from either a generator or a deep cell battery
 - Submersible pumps such as Grundfos require a pump controller to run the pump
 - Bladder pumps require a pump controller and a gas source (e.g., air compressor or compressed N₂ or CO₂ gas cylinders)
- Teflon® tubing or Teflon®-lined polyethylene tubing of an appropriate size for the pump being used
 - For peristaltic pumps, dedicated Tygon® tubing (or other type as specified by the manufacturer) will be used through the pump apparatus
 - Teflon® will not be used when sampling for per- and polyfluoroalkyl substances (PFAS)
- Graduated cylinder and stopwatch or other device to measure time to determine pumping rate
- Appropriate water sample containers (supplied by the laboratory)
- Appropriate blanks (trip blank supplied by the laboratory)
- Sample labels and Chain-of-Custody forms (COC)
- 0.45-micron disposable filters (if field filtering is required)

- A supplemental turbidity meter (e.g., Horiba U-10, Hach 2100P, LaMotte 2020) may be required for specific projects and will be specified in the project FIP/ work plan and the kick-off notes.
 - If used, in-line 'T' and valve allows for collection of water for turbidity measurements before the pump discharge enters the flow-through cell

NOTE: The maintenance requirements for the above equipment generally involve decontamination or periodic cleaning, battery charging, and proper storage, as specified by the manufacturer. For operational difficulties, the equipment will be serviced by a qualified technician.

6 Cautions

Different USEPA regions and/or state regulatory agencies may stipulate deviations from this document. It is the responsibility of the Project Team (Project Manager and Technical Lead) to be fully aware of the requirements from the applicable regulatory framework.

Weather

- If heavy precipitation occurs, and no cover over the sampling area and monitoring well can be erected, sampling may be discontinued until adequate cover is provided. Rainwater could compromise groundwater samples.
- Avoid extreme weather situations. Be aware that thermal currents and vertical mixing of cold and warm water inside the well casing could create a convection cell within the well and compromise data collection (e.g., biological mechanisms).
 - Direct sunlight and hot ambient temperatures may cause the groundwater in the tubing or flow-through-cell to heat up and de-gas. This may result in the loss of volatile organic compounds (VOCs) and dissolved gases. Shade the equipment from direct sunlight, keep the tubing as short as possible and avoid the hottest times of the day.
 - Sampling during freezing conditions may adversely impact the data quality objectives. USEPA recommends low-flow sampling be conducted at air temperatures above 32°F (0°C) or taking special precautions to prevent groundwater from freezing in the equipment.

Cross-Contamination

- To mitigate potential cross-contamination, groundwater samples are to be collected in a pre-determined order from least impacted to impacted based on previous analytical data. If no analytical data are available, collect samples in order of up-gradient, then furthest down-gradient to source area locations.
- Note that permanent markers could introduce volatile constituents into the samples; *therefore, indelible ink is recommended* to be used for labels on sample containers or sample coolers.
- When using a gasoline generator, this power source will be set-up at least 30 feet downwind from the well to avoid exhaust fumes to contaminate samples.

Pumps

- Preferred methods of extracting groundwater are adjustable rate, submersible pumps - such as centrifugal pumps or bladder pumps – constructed of stainless steel or polytetrafluoroethylene (PTFE, i.e., Teflon®). However, *PTFE will not be used when sampling for per- and polyfluoroalkyl substances (PFAS). PTFE could contain PFAS.*

- When using a bladder pump for collecting VOCs and dissolved gases, “best practice” is to set-up the pump to deliver sufficient water to fill a 40 mL VOC vial.
- The use of peristaltic pumps will be based on the type of data to be collected. *Because the use of a peristaltic pump can result in de-gassing of VOC and / or dissolved gases from groundwater, a different type of pump will be considered if these compounds are of concern.*
- *Manual or motor driven inertial pumping devices are not recommended because they cause greater disturbance during purging and pumping than regular pumps and are less easily controlled. This could cause a higher degree of data variability.*

Tubing

- When sampling for VOCs, SVOCs, pesticides, PCBs and inorganics, use of PTFE (Teflon®) or PTFE-lined tubing is preferred. However, PTFE tubing will not be used when sampling for PFAS.
- PVC, polypropylene or polyethylene tubing may be used when sampling for metals or other inorganics.
- Tubing with inside diameters of 1/4 or 3/8 inch is recommended because this will help ensure tubing remains water filled when operating at very low pumping rates.

General Precautions

- Store and/or stage empty and full sample containers and coolers out of direct sunlight.
- It may be necessary to field filter the groundwater for some parameters (e.g., metals) during collection, depending on preservation, analytical method, and project quality objectives. The task-kick-off notes and the FIP/work plan will list the samples that require field filtering.
- Be careful not to overtighten lids with Teflon® liners or septa (e.g., 40 mL vials). Over-tightening can cause the glass to shatter or impair the integrity of the Teflon® seal.

7 Health and Safety Considerations

The HASP will be followed, as appropriate, to ensure the safety of field personnel.

Appropriate personal protective equipment (PPE) will be always worn in line with the task and the site-specific HASP.

Review all site-specific and procedural hazards as they are provided in the HASP, and review Job Safety Analysis (JSA) documents in the field each day prior to beginning work.

Access to wells may expose field personnel to hazardous materials such as contaminated groundwater or non-aqueous phase liquid (NAPL) (e.g., oil). Other potential hazards include pressurized wells, stinging insects that may inhabit well heads, other biologic hazards (e.g. ticks in long grass/weeds around well head), and potentially the use of sharp cutting tools (scissors, knife)—open well caps slowly and keep face and body away to allow to vent any built-up pressure; only use non-toxic peppermint oil spray for stinging insect nests; review client-specific health and safety requirements, which may preclude the use of fixed/folding-blade knives, and use appropriate hand protection.

Generators and cord and plug equipment will employ an overcurrent protection device such as an integrated ground fault circuit interrupter (GFCI) cord. Grundfos pump controllers will not run properly with a GFCI, so the power source will be equipped with other overcurrent protection means.

Overtightening of lids with Teflon® liners can cause the glass to shatter and create a risk for hand injuries.

8 Procedure

Field personnel will set up and perform low-flow sampling in accordance with the following procedures.

1. Review FIP and groundwater sampling records from previous sampling events (if available) prior to mobilization to estimate the optimum pumping rate and anticipated drawdown for each well to perform sampling as efficiently as possible (i.e., reach a stabilized pumping condition).
2. Calibrate field instruments according to manufacturer procedures for calibration and record calibration procedure and results in field log.
3. All equipment will either be new or decontaminated in accordance with appropriate guidance document (*TGI – Groundwater and Soil Sampling Equipment Decontamination*) prior to use.
4. Visually inspect the well to ensure that it is undamaged, properly labeled and secured
 - a. Damage or other conditions that may affect the integrity of the well will be recorded in the Field Activity Daily Log and brought to the attention of the designated Field Manager and/or Project Manager
 - b. Record well construction and conditions on the Low-Flow Sampling Field Form (**Attachment A**).
5. Place clean plastic sheeting on the ground near the well to keep monitoring and sampling equipment off the surface unless the equipment is elevated above the ground (e.g., on a table).
6. Open the well cover while standing upwind of the well. Remove the well cap and place it on the plastic sheeting. If appropriate or required for site-specific conditions, insert the photoionization detector (PID) probe approximately 4 to 6 inches into the casing or the well headspace and cover it with a gloved hand. Record the PID reading in the field log. Perform air monitoring in the breathing zone according to the HASP and/or JSA.
7. Measure and record the initial depth to groundwater prior to placing the pumps.
8. Prepare and install the pump in the well.

NOTE: Groundwater will be purged from the wells using an appropriate pump. If the depth to water is below the sampling range of a peristaltic pump (approximately 25 feet below ground surface), a submersible or bladder pump will be used, provided that the well is constructed with a casing diameter of at least two (2) inches (the minimum well diameter capable of accommodating such pumps). For smaller diameter wells, where the depth to water is below the sampling range of a peristaltic pump, alternative sampling methods (i.e., bailing or small diameter bladder pumps) will be used to purge and sample the groundwater. Bladder pumps are preferred over peristaltic and submersible pumps to prevent volatilization if sampling of VOCs and/or dissolved gasses is required. Purge water will be collected and containerized according to the direction of the project team.

- a. For submersible and non-dedicated bladder pumps, decontaminate the pump according to site decontamination procedures. Non-dedicated bladder pumps will require a new bladder and attachment of an air-line, sample discharge line, and safety cable prior to placement in the well. Attach the air-line tubing to the air-port on the top of the bladder pump. Attach the sample discharge tubing to the water port on the top of the bladder pump. Take care not to reverse the air and discharge tubing lines during bladder pump setup, as this could result in bladder failure or rupture. Attach and secure a safety cable to the eyebolt on the top of pump (if present, depending on pump model used). Slowly lower the pump, safety cable, tubing, and electrical lines into the well to a depth corresponding to the approximate center of the saturated screen section of the well. Avoid twisting

and tangling of safety cable, tubing, and electrical lines while lowering the pump into the well; twisted and tangled lines could result in the pump becoming stuck in the well casing. Also, make sure to keep tubing and lines from touching the ground or other surfaces while introducing them into the well, as this could lead to unintended contamination.

- b. If using a bladder pump, connect the air-line to the pump controller output port. The pump controller will be connected to a supply line from an air compressor or compressed gas cylinder using an appropriate regulator and air hose. Tighten the regulator connector onto the gas cylinder (if used) to prevent leaks. Teflon® tape may be used on the threads of the cylinder to provide a tighter seal. Once the air compressor or gas cylinder is connected to the pump controller, turn on the compressor or open the valve on the cylinder to begin the gas flow. Turn on the pump controller power (if an on/off switch is present) and verify that all batteries are charged and fully functioning before starting the pump.
 - c. If a peristaltic pump is being used, slowly lower the sampling tubing into the well to a depth corresponding to the approximate center of the saturated screen section of the well. The pump intake or sampling tube must be kept at least two (2) feet above the bottom of the well to prevent mobilization of any sediment present in the bottom of the well.
 - d. If using an in-line 'T' and valve, install between pump discharge water line and the bottom inlet port of the flow-through cell. Attach a short piece of tubing to the outlet. This set-up will be used to collect samples for turbidity readings.
9. Connect the pump discharge water line to the bottom inlet port on the flow-through cell connected to the multi-parameter water-quality sonde and make sure to record equipment/instrument identification (manufacturer and model number).
 10. Before starting the pump, ensure that the water level inside the well has stabilized (i.e., measure the water level multiple times after deploying the pump in the well).
 11. Start pumping the well at 200 to 500 milliliters (mL) per minute (or at lower site-specific rate if specified) and adjust the pumping rate to cause little or no water level drawdown in the well (less than 0.3 feet below the initial static depth to water measurement): the water level should stabilize, however, this is not always possible.
 12. If the well diameter is of sufficient size, measure the water level every 3 to 5 minutes (or as appropriate, lower flow rates may require longer time between readings) during pumping.
 13. Maintain a steady flow rate to the extent practicable and do not break pump suction or cause entrainment of air in the sample.
 14. Record pumping rate adjustments and depths to water.

If necessary, reduce pumping rates to the minimum capabilities of the pump to avoid pumping the well dry and/or to stabilize indicator parameters; if the recharge rate of the well is very low, use alternative purging techniques, which will vary based on the well construction and screen position.

For wells screened across the water table, the well may be pumped dry, and sampling can commence as soon as the volume in the well has recovered sufficiently to permit collection of samples.

For wells screened entirely below the water table, the well can be pumped until a stabilized level (which may be greater than the maximum displacement goal of 0.3 feet) is maintained and monitoring for stabilization of field indicator parameters can commence; if a lower stabilization level cannot be

maintained, the well may be pumped until the drawdown is at a level slightly higher than top of the well screen.

15. After water levels have stabilized and a sufficient volume has been purged (see note below), continue pumping and begin monitoring field indicator parameters using a multi-parameter water-quality sonde coupled with a flow-through-cell.

NOTE: The final purge volume must be greater than the stabilized drawdown volume plus the pump's tubing volume. If the drawdown has exceeded 0.3 feet and stabilizes, calculate the volume of water between the initial water level and the stabilized water level. Add the volume of the water which occupies the pump's tubing to this calculation. This combined volume of water needs to be purged from the well after the water level has stabilized before samples are collected.

16. Use the flow to measure all indicator field parameters, except for turbidity, every 3 to 5 minutes (or after each volume of the flow-through cell has been purged or other appropriate interval); turbidity samples will be collected before the flow-through-cell using the T-valve and a clean container such as a glass beaker.
17. Record field indicator parameters on the groundwater sampling log.
18. The well is considered stabilized and ready for sample collection when three consecutive readings are within the following limits:
 - **Turbidity** within $\pm 10\%$ for values greater than 5 nephelometric turbidity units [NTUs] or if three turbidity values are less than 5 NTUs, consider the values stabilized
 - **Dissolved Oxygen (DO)** within $\pm 10\%$ for values greater than 0.5 mg/L or if three DO values are less than 0.5 mg/L, consider the values stabilized
 - **Specific Conductance** within $\pm 3\%$
 - **Temperature** within $\pm 3\%$
 - **pH** within ± 0.1 unit
 - **Oxidation/Reduction Potential (ORP)** within ± 10 millivolts (mV)

NOTE: Alternate stabilization goals may exist in different geographic regions, consult the site-specific FIP/work plan for stabilization criteria).

NOTE: While achieving turbidity levels less than 5 NTU and a stable drawdown of less than 0.3 feet is desirable, sample collection may still take place provided the indicator field parameter criteria in this procedure are met.

19. If the parameters have stabilized but turbidity remains relatively high (e.g., greater than 50 NTUs), the pump flow rate may be decreased to a minimum rate of 100 mL/min to reduce turbidity levels as low as possible. If groundwater turbidity has been minimized (i.e., consecutive readings within $\pm 10\%$) and the values for all other parameters have stabilized, the well may be sampled; however, consult specifications in the FIP/work plan and/or the project technical lead prior to sampling.
20. If after one (1) hour of purging indicator field parameters have not stabilized, consult specifications in the FIP/work plan and/or the project technical lead prior to sampling.

In general, three potential options are available if stabilization criteria are not met:

 - a. Continue purging until stabilization is achieved.
 - b. Discontinue purging, do not collect any samples, and record in field logbook/on the sampling form that stabilization could not be achieved (documentation must describe attempts to achieve stabilization).

- c. Discontinue purging, collect samples, and provide full explanation of attempts to achieve stabilization. There is a risk that the analytical data obtained under these conditions, particularly metals and hydrophobic organic analytes, may reflect a sampling bias and, as a result, the data may not meet the data quality objectives of the sampling event.

NOTE: DO is extremely susceptible to various external influences (including temperature or the presence of bubbles on the DO meter); therefore, great care will be taken to minimize the agitation or other disturbance of water within the flow-through cell while collecting these measurements. If air bubbles are present on the DO probe or in the discharge tubing, remove them before taking a measurement. If DO values are not within acceptable range for the temperature of groundwater, again check for and remove air bubbles on the probe before re-measuring. The table below may be used as a general guide for DO values under various temperatures; however, understand that the table corresponds to freshwater solubility and groundwater contaminants may affect oxygen solubility. If DO value is 0.00 or less, then the meter will be serviced and re-calibrated. If DO values are above possible results, then the meter will be serviced and re-calibrated.

NOTE: During extreme weather conditions, stabilization of field indicator parameters may be difficult to attain. Modifications to the sampling procedures to alleviate these conditions (e.g., measuring the water temperature in the well adjacent to the pump intake) will be documented in the field logbook/on the sampling form.

NOTE: If other field conditions are suspected of preventing stabilization of certain parameters, detailed observations will be documented in the field logbook/on the sampling form.

Oxygen Solubility in Fresh Water

Temperature (degrees C)	Dissolved Oxygen (mg/L)
0	14.6
1	14.19
2	13.81
3	13.44
4	13.09
5	12.75
6	12.43
7	12.12
8	11.83
9	11.55
10	11.27
11	11.01
12	10.76
13	10.52
14	10.29
15	10.07
16	9.85
17	9.65
18	9.45
19	9.26
20	9.07
21	8.9
22	8.72
23	8.56
24	8.4
25	8.24
26	8.09
27	7.95
28	7.81
29	7.67
30	7.54
31	7.41
32	7.28
33	7.16
34	7.05
35	6.93

*Reference: Vesilind, P.A., Introduction to
Environmental Engineering, PWS Publishing
Company, Boston, 468 pages (1996)*

21. Complete the sample label(s) and cover the label(s) with clear packing tape to secure the label onto the container.
22. After the indicator parameters have stabilized, collect groundwater samples by diverting flow out of the unfiltered discharge tubing into the appropriate labeled sample container.
 - a. If a flow-through analytical cell is being used to measure field parameters, the flow-through cell will be disconnected after stabilization of the field indicator parameters and prior to groundwater sample collection.
 - b. Under no circumstances will analytical samples be collected from the discharge of the flow- through cell.
 - c. If an in-line 'T' and valve are used, the valve needs to be removed as well.

- d. Samples will be collected in the following order: VOCs, total organic carbon (TOC), semi-volatile organic compounds (SVOCs), metals and cyanide, and others (or other order as defined in the site-specific FIP/work plan).
 - e. When the container is full, tightly screw on the cap.
23. If sampling for total and filtered metals and/or polychlorinated biphenyls (PCBs), a filtered and unfiltered sample will be collected.
- a. Install an in-line, disposable 0.45-micron particle filter on the discharge tubing after the appropriate unfiltered groundwater sample has been collected.
 - b. Continue to run the pump until an initial volume of “flush” water has been run through the filter in accordance with the manufacturer’s directions (generally 100 to 300 mL).
 - c. Collect the filtered groundwater sample by diverting flow out of the filter into the appropriately labeled sample container.
 - d. When the container is full, tightly screw on the cap.
24. Secure with packing material and store the samples on ice in an insulated transport container provided by the laboratory and include a temperature blank in each container to be shipped.
25. Record on the Low-Flow Sampling Field Form (and bound field logbook) the time at which sampling procedures were completed, any pertinent observations of the sample (e.g., physical appearance and the presence or lack of odors or sheens), and the values of the stabilized field indicator parameters as measured during the final reading during purging (**see Attachment A**).
26. Turn off the pump and air compressor or close the gas cylinder valve if using a bladder pump setup.
27. Slowly remove the pump, tubing, lines, and safety cable from the well.
- a. If using dedicated tubing, do not allow the tubing or lines to touch the ground or any other surfaces which could contaminate them.
 - b. If using dedicated tubing, it will be folded - without pinching it - to a length that will allow the well to be capped and also facilitate retrieval of the tubing during later sampling events.
 - c. Use a length of rope or string to tie the tubing to the well cap.
 - d. Alternatively, if tubing and safety line are to be saved and reused for sampling the well at a later date, coil the tubing neatly and placed in a clean plastic bag that is clearly labeled with the well ID ensuring the bag is tightly sealed before placing it in storage.
28. Secure the well and properly dispose of personal protective equipment (PPE) and disposable equipment.
29. Complete the procedures for packaging, shipping, and handling with the associated Chain-of-Custody.
30. Complete decontamination for flow-through analytical cell and submersible or bladder pump, as appropriate (*TGI – Groundwater and Soil Sampling Equipment Decontamination*).
31. At the end of each day of the sampling event, perform calibration check of field instruments and record procedure and results in field log.

9 Waste Management

Materials generated during groundwater sampling activities, including disposable equipment and excess purge water, will be stored on site in appropriately labeled containers and disposed of properly. Waste will be managed in accordance with the *TGI – Investigation-Derived Waste Handling and Storage*, the procedures identified in the

FIP or QAPP as well as state-, federal- or client-specific requirements. Be certain that waste containers are properly labeled and documented in the field logbook.

10 Data Recording and Management

Digital data collection is the Arcadis standard using available FieldNow® applications that enable real-time, paperless data collection, entry, and automated reporting. Paper forms should only be used as backup to FieldNow® digital data collection and/or as necessary to collect data not captured by available FieldNow® applications. The Field Now® digital form applications follow a standardized approach, correlate to most TGIs and are available to all projects accessible with a PC or capable mobile device. Once the digital forms are saved within FieldNow®, the data is instantly available for review on a web interface. This facilitates review by project management team members and SMEs enabling error or anomalous data detection for correction while the staff are still in the field. Continual improvements of FieldNow® applications are ongoing, and revisions are made as necessary in response to feedback from users and subject matter experts.

Management of the original documents from the field will be completed in accordance with the site- specific QAPP.

In general, forms (e.g., Low-Flow Sampling Field Forms), logs/notes (including daily field and calibration logs), digital records, and Chain-of-Custody records will be maintained by the field team lead.

Field logs and Chain-of-Custody records will be transmitted to the Arcadis Project Manager and/or Task Manager, as appropriate, at the end of each day unless otherwise directed. Electronic data files will be sent to the project team and uploaded to the electronic project folder daily.

Records generated as a result of this TGI will be controlled and maintained in the project record files in accordance with project requirements.

11 Quality Assurance

Quality assurance procedures shall be conducted in accordance with the Arcadis Quality Management System or the site-specific QAPP.

Unless described otherwise in the project-specific FIP/work plan, QAPP, or Sampling and Analysis Plan, quality assurance/quality control samples will be collected as follows:

- One duplicate for every 10 samples
- One laboratory matrix/matrix spike sample for every 20 samples
- In addition to the quality control samples to be collected in accordance with this TGI, the following quality control procedures will be observed in the field:
- Collect samples from monitoring wells, in order of increasing concentration, to the extent known based on review of historical site information if available
- Equipment blanks will include the pump and tubing (if using disposable tubing) or the pump only (if using tubing dedicated to each well)
- Collect equipment blanks after wells with higher concentrations (if known) have been sampled

- Operate all monitoring instrumentation in accordance with manufacturer's instructions and calibration procedures—calibrate instruments at the beginning of each day, verify the calibration at the end of each day, and record all calibration activities in the field notebook
- Clean all groundwater sampling equipment prior to use in the first well and after each subsequent well following the procedure for equipment decontamination

12 References

USEPA. 1986. *RCRA Groundwater Monitoring Technical Enforcement Guidance Document* (September 1986).

USEPA. 1991. *Handbook Groundwater, Volume II Methodology*, Office of Research and Development, Washington, DC. USEPN62S, /6-90/016b (July 1991).

USEPA Region I. 2017. *Low Stress (Low Flow) Purging and Sampling Procedures for the Collection of Groundwater Samples from Monitoring Wells* (EQASOP-GW4; September 19, 2017).

U.S. Geological Survey (USGS). 1977. *National Handbook of Recommended Methods for Water-Data Acquisition: USGS Office of Water Data Coordination*. Reston, Virginia.

13 Attachments

Attachment A – Low Flow Sampling Field Form

Attachment A

Low-Flow Sampling Field Form

GROUNDWATER SAMPLING FORM



Page ____ of ____

Project No. _____ Well ID _____ Date _____

Project Name/Location _____ Weather _____

Measuring Pt. Description _____ Screen Setting (ft-bmp) _____ Casing Diameter (in.) _____ Well Material _____ PVC _____ SS _____

Static Water Level (ft-bmp) _____ Total Depth (ft-bmp) _____ Water Column (ft) _____ Gallons in Well _____

MP Elevation _____ Pump Intake (ft-bmp) _____ Purge Method: _____ Centrifugal _____ Submersible _____ Other _____ Sample Method _____

Pump On/Off _____

Sample Time: _____ Volume Purged _____ Purge Start _____ Gallons Purged _____ Sample ID _____ Sampled by _____ Purge End _____ Replicate/Code No. _____

Time	Minutes Elapsed	Rate (gpm)/(mL/min) 200mL/min +	Depth to Water (ft) -0.3	Gallons Purged	pH ± 0.1	Cond. (µMhos)/(mS/cm) ± 3%	Turbidity (NTU) ± 10%	DO (mg/L) ± 10%	Temp. (°C)/(°F) ± 3%	Redox (mV) ± 10mV	Appearance	
											Color	Odor
Stabilization Calculations (±)												
Stabilization Criteria					± 0.1 s.u.	±3%	± 10% or within 1 NTU ⁽¹⁾	± 10%	±3%	±10 mV		

(1) Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative

Comments _____

Well Casing Volumes					
Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location:	_____	Well Locked at Arrival:	Yes / No
Condition of Well:	_____	Well Locked at Departure:	Yes / No
Well Completion:	Flush Mount / Stick Up	Key Number To Well:	_____

GW Samp Form
6/17/2022

Arcadis U.S., Inc.
630 Plaza Drive, Suite 200
Highlands Ranch
Colorado 80129
Phone: 720 344 3500
Fax: 720 344 3535
www.arcadis.com

ATTACHMENT B

Laboratory Report and Chain-of-Custody Documentation



Arcadis - Chevron - OR

Sample Delivery Group: L1706710
Samples Received: 02/16/2024
Project Number: 30063816 19.45-EXEC
Description: 1001782
Site: SE CHANDLER AVE & SE DAVIS ST
Report To: Christine Perez/Carl Donovan
111 SW Columbia St
Portland, OR 97201

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.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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

SAMPLE SUMMARY

MW-1-W-20240215 L1706710-01 GW

Collected by
Diana Ojeda

Collected date/time
02/15/24 08:43

Received date/time
02/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2232425	1	02/24/24 07:39	02/24/24 07:39	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2230108	1	02/20/24 15:30	02/20/24 15:30	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2228988	1	02/21/24 06:40	02/22/24 16:28	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2229619	1	02/21/24 09:59	02/21/24 19:29	JRM	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

MW-2-W-20240215 L1706710-02 GW

Collected by
Diana Ojeda

Collected date/time
02/15/24 09:23

Received date/time
02/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2232425	10	02/24/24 08:22	02/24/24 08:22	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2230108	25	02/20/24 19:33	02/20/24 19:33	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2228988	1	02/21/24 06:40	02/22/24 16:48	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2229619	1	02/21/24 09:59	02/21/24 19:46	JRM	Mt. Juliet, TN

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

MW-3-W-20240215 L1706710-03 GW

Collected by
Diana Ojeda

Collected date/time
02/15/24 08:53

Received date/time
02/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2234379	1	02/26/24 16:50	02/26/24 16:50	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2230108	1	02/20/24 15:49	02/20/24 15:49	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2228988	1	02/21/24 06:40	02/22/24 17:09	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2229619	1	02/21/24 09:59	02/21/24 20:03	JRM	Mt. Juliet, TN

⁹ Sc

MW-4A-W-20240215 L1706710-04 GW

Collected by
Diana Ojeda

Collected date/time
02/15/24 08:11

Received date/time
02/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2232425	1	02/24/24 08:01	02/24/24 08:01	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2230108	1	02/20/24 16:07	02/20/24 16:07	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2228988	1	02/21/24 06:40	02/22/24 17:29	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2229619	1	02/21/24 09:59	02/21/24 20:21	JRM	Mt. Juliet, TN

Collected by
Diana Ojeda

Collected date/time
02/15/24 09:15

Received date/time
02/16/24 09:00

MW-5-W-20240215 L1706710-05 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2234379	5	02/26/24 17:12	02/26/24 17:12	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2230108	1	02/20/24 16:26	02/20/24 16:26	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2228988	1	02/21/24 06:40	02/22/24 18:21	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2229619	1	02/21/24 09:59	02/21/24 20:38	JRM	Mt. Juliet, TN

Collected by
Diana Ojeda

Collected date/time
02/15/24 08:16

Received date/time
02/16/24 09:00

MW-6-W-20240215 L1706710-06 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2232436	1	02/23/24 14:11	02/23/24 14:11	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2230108	1	02/20/24 16:44	02/20/24 16:44	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2234568	1	02/27/24 07:41	02/27/24 21:24	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2229620	1	02/21/24 09:56	02/21/24 20:46	LS	Mt. Juliet, TN

SAMPLE SUMMARY

MW-7-W-20240215 L1706710-07 GW

Collected by
Diana Ojeda

Collected date/time
02/15/24 09:51

Received date/time
02/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2232440	10	02/23/24 22:36	02/23/24 22:36	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2230108	10	02/20/24 19:51	02/20/24 19:51	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2228988	1	02/21/24 06:40	02/22/24 21:08	MAA	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2228988	1	02/21/24 06:40	02/28/24 09:22	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2229620	1	02/21/24 09:56	02/21/24 21:04	LS	Mt. Juliet, TN



MW-8-W-20240215 L1706710-08 GW

Collected by
Diana Ojeda

Collected date/time
02/15/24 09:54

Received date/time
02/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2232440	1	02/23/24 15:45	02/23/24 15:45	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2230108	1	02/20/24 17:03	02/20/24 17:03	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2228988	1	02/21/24 06:40	02/22/24 21:29	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2229620	1	02/21/24 09:56	02/21/24 21:22	LS	Mt. Juliet, TN



MW-9-W-20240215 L1706710-09 GW

Collected by
Diana Ojeda

Collected date/time
02/15/24 10:43

Received date/time
02/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2232440	1	02/23/24 16:07	02/23/24 16:07	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2230108	1	02/20/24 17:22	02/20/24 17:22	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2228988	1	02/21/24 06:40	02/22/24 21:49	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2229620	1	02/21/24 09:56	02/21/24 21:40	LS	Mt. Juliet, TN



TB-W-20240215 L1706710-10 GW

Collected by
Diana Ojeda

Collected date/time
02/15/24 09:00

Received date/time
02/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2232440	1	02/23/24 14:39	02/23/24 14:39	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2230108	1	02/20/24 15:11	02/20/24 15:11	JHH	Mt. Juliet, TN

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

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	1350		31.6	100	1	02/24/2024 07:39	WG2232425
(S) a,a,a-Trifluorotoluene(FID)	94.9			78.0-120		02/24/2024 07:39	WG2232425

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0941	1.00	1	02/20/2024 15:30	WG2230108
Ethylbenzene	0.495	J	0.137	1.00	1	02/20/2024 15:30	WG2230108
Toluene	0.294	J	0.278	1.00	1	02/20/2024 15:30	WG2230108
Xylenes, Total	0.731	J	0.174	3.00	1	02/20/2024 15:30	WG2230108
Methyl tert-butyl ether	U		0.101	1.00	1	02/20/2024 15:30	WG2230108
Naphthalene	U		1.00	5.00	1	02/20/2024 15:30	WG2230108
1,2-Dibromoethane	U		0.126	1.00	1	02/20/2024 15:30	WG2230108
1,2-Dichloroethane	U		0.0819	1.00	1	02/20/2024 15:30	WG2230108
Isopropylbenzene	3.64		0.105	1.00	1	02/20/2024 15:30	WG2230108
n-Propylbenzene	3.00		0.0993	1.00	1	02/20/2024 15:30	WG2230108
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/20/2024 15:30	WG2230108
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/20/2024 15:30	WG2230108
(S) Toluene-d8	87.4			80.0-120		02/20/2024 15:30	WG2230108
(S) 4-Bromofluorobenzene	94.2			77.0-126		02/20/2024 15:30	WG2230108
(S) 1,2-Dichloroethane-d4	106			70.0-130		02/20/2024 15:30	WG2230108

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	35.3	J J3	33.3	100	1	02/22/2024 16:28	WG2228988
Residual Range Organics (RRO)	U		83.3	250	1	02/22/2024 16:28	WG2228988
(S) o-Terphenyl	59.0			31.0-160		02/22/2024 16:28	WG2228988

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	02/21/2024 19:29	WG2229619
Acenaphthene	0.371		0.0190	0.0500	1	02/21/2024 19:29	WG2229619
Acenaphthylene	U		0.0171	0.0500	1	02/21/2024 19:29	WG2229619
Benzo(a)anthracene	U		0.0203	0.0500	1	02/21/2024 19:29	WG2229619
Benzo(a)pyrene	U		0.0184	0.0500	1	02/21/2024 19:29	WG2229619
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/21/2024 19:29	WG2229619
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/21/2024 19:29	WG2229619
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/21/2024 19:29	WG2229619
Chrysene	U		0.0179	0.0500	1	02/21/2024 19:29	WG2229619
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/21/2024 19:29	WG2229619
Fluoranthene	U		0.0270	0.100	1	02/21/2024 19:29	WG2229619
Fluorene	0.410		0.0169	0.0500	1	02/21/2024 19:29	WG2229619
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/21/2024 19:29	WG2229619
Naphthalene	U		0.0917	0.250	1	02/21/2024 19:29	WG2229619
Phenanthrene	0.0899		0.0180	0.0500	1	02/21/2024 19:29	WG2229619
Pyrene	U		0.0169	0.0500	1	02/21/2024 19:29	WG2229619
1-Methylnaphthalene	2.14		0.0687	0.250	1	02/21/2024 19:29	WG2229619
2-Methylnaphthalene	U		0.0674	0.250	1	02/21/2024 19:29	WG2229619
2-Chloronaphthalene	U		0.0682	0.250	1	02/21/2024 19:29	WG2229619
(S) Nitrobenzene-d5	128			31.0-160		02/21/2024 19:29	WG2229619
(S) 2-Fluorobiphenyl	107			48.0-148		02/21/2024 19:29	WG2229619

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
(S) p-Terphenyl-d14	105			37.0-146		02/21/2024 19:29	WG2229619

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	5020		316	1000	10	02/24/2024 08:22	WG2232425
(S) a,a,a-Trifluorotoluene(FID)	96.1			78.0-120		02/24/2024 08:22	WG2232425

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	55.6		2.35	25.0	25	02/20/2024 19:33	WG2230108
Ethylbenzene	11.5	J	3.43	25.0	25	02/20/2024 19:33	WG2230108
Toluene	12.3	J	6.95	25.0	25	02/20/2024 19:33	WG2230108
Xylenes, Total	10.2	J	4.35	75.0	25	02/20/2024 19:33	WG2230108
Methyl tert-butyl ether	U		2.53	25.0	25	02/20/2024 19:33	WG2230108
Naphthalene	U		25.0	125	25	02/20/2024 19:33	WG2230108
1,2-Dibromoethane	U		3.15	25.0	25	02/20/2024 19:33	WG2230108
1,2-Dichloroethane	U		2.05	25.0	25	02/20/2024 19:33	WG2230108
Isopropylbenzene	44.2		2.63	25.0	25	02/20/2024 19:33	WG2230108
n-Propylbenzene	66.1		2.48	25.0	25	02/20/2024 19:33	WG2230108
1,2,4-Trimethylbenzene	14.8	J	8.05	25.0	25	02/20/2024 19:33	WG2230108
1,3,5-Trimethylbenzene	16.1	J	2.60	25.0	25	02/20/2024 19:33	WG2230108
(S) Toluene-d8	95.1			80.0-120		02/20/2024 19:33	WG2230108
(S) 4-Bromofluorobenzene	97.6			77.0-126		02/20/2024 19:33	WG2230108
(S) 1,2-Dichloroethane-d4	96.6			70.0-130		02/20/2024 19:33	WG2230108

Sample Narrative:

L1706710-02 WG2230108: Non-target compounds too high to run at a lower dilution.

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2260	J3	33.3	100	1	02/22/2024 16:48	WG2228988
Residual Range Organics (RRO)	U		83.3	250	1	02/22/2024 16:48	WG2228988
(S) o-Terphenyl	82.4			31.0-160		02/22/2024 16:48	WG2228988

Sample Narrative:

L1706710-02 WG2228988: Sample resembles laboratory standards for Gasoline and Diesel.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	02/21/2024 19:46	WG2229619
Acenaphthene	3.35		0.0190	0.0500	1	02/21/2024 19:46	WG2229619
Acenaphthylene	U		0.0171	0.0500	1	02/21/2024 19:46	WG2229619
Benzo(a)anthracene	0.0579		0.0203	0.0500	1	02/21/2024 19:46	WG2229619
Benzo(a)pyrene	U		0.0184	0.0500	1	02/21/2024 19:46	WG2229619
Benzo(b)fluoranthene	0.0242	J	0.0168	0.0500	1	02/21/2024 19:46	WG2229619
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/21/2024 19:46	WG2229619
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/21/2024 19:46	WG2229619
Chrysene	0.0511		0.0179	0.0500	1	02/21/2024 19:46	WG2229619
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/21/2024 19:46	WG2229619
Fluoranthene	0.452		0.0270	0.100	1	02/21/2024 19:46	WG2229619
Fluorene	6.70		0.0169	0.0500	1	02/21/2024 19:46	WG2229619
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/21/2024 19:46	WG2229619
Naphthalene	U		0.0917	0.250	1	02/21/2024 19:46	WG2229619
Phenanthrene	4.52		0.0180	0.0500	1	02/21/2024 19:46	WG2229619

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Pyrene	0.404		0.0169	0.0500	1	02/21/2024 19:46	WG2229619
1-Methylnaphthalene	56.3		0.0687	0.250	1	02/21/2024 19:46	WG2229619
2-Methylnaphthalene	58.8		0.0674	0.250	1	02/21/2024 19:46	WG2229619
2-Chloronaphthalene	U		0.0682	0.250	1	02/21/2024 19:46	WG2229619
(S) Nitrobenzene-d5	0.000	J2		31.0-160		02/21/2024 19:46	WG2229619
(S) 2-Fluorobiphenyl	112			48.0-148		02/21/2024 19:46	WG2229619
(S) p-Terphenyl-d14	105			37.0-146		02/21/2024 19:46	WG2229619

Sample Narrative:

L1706710-02 WG2229619: Surrogate failure due to matrix interference

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	922		31.6	100	1	02/26/2024 16:50	WG2234379
(S) a,a,a-Trifluorotoluene(FID)	80.2			78.0-120		02/26/2024 16:50	WG2234379

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0941	1.00	1	02/20/2024 15:49	WG2230108
Ethylbenzene	U		0.137	1.00	1	02/20/2024 15:49	WG2230108
Toluene	U		0.278	1.00	1	02/20/2024 15:49	WG2230108
Xylenes, Total	U		0.174	3.00	1	02/20/2024 15:49	WG2230108
Methyl tert-butyl ether	U		0.101	1.00	1	02/20/2024 15:49	WG2230108
Naphthalene	U		1.00	5.00	1	02/20/2024 15:49	WG2230108
1,2-Dibromoethane	U		0.126	1.00	1	02/20/2024 15:49	WG2230108
1,2-Dichloroethane	U		0.0819	1.00	1	02/20/2024 15:49	WG2230108
Isopropylbenzene	1.44		0.105	1.00	1	02/20/2024 15:49	WG2230108
n-Propylbenzene	0.454	J	0.0993	1.00	1	02/20/2024 15:49	WG2230108
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/20/2024 15:49	WG2230108
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/20/2024 15:49	WG2230108
(S) Toluene-d8	89.3			80.0-120		02/20/2024 15:49	WG2230108
(S) 4-Bromofluorobenzene	93.8			77.0-126		02/20/2024 15:49	WG2230108
(S) 1,2-Dichloroethane-d4	81.3			70.0-130		02/20/2024 15:49	WG2230108

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U	J3	33.3	100	1	02/22/2024 17:09	WG2228988
Residual Range Organics (RRO)	U		83.3	250	1	02/22/2024 17:09	WG2228988
(S) o-Terphenyl	59.0			31.0-160		02/22/2024 17:09	WG2228988

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	02/21/2024 20:03	WG2229619
Acenaphthene	U		0.0190	0.0500	1	02/21/2024 20:03	WG2229619
Acenaphthylene	U		0.0171	0.0500	1	02/21/2024 20:03	WG2229619
Benzo(a)anthracene	U		0.0203	0.0500	1	02/21/2024 20:03	WG2229619
Benzo(a)pyrene	U		0.0184	0.0500	1	02/21/2024 20:03	WG2229619
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/21/2024 20:03	WG2229619
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/21/2024 20:03	WG2229619
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/21/2024 20:03	WG2229619
Chrysene	U		0.0179	0.0500	1	02/21/2024 20:03	WG2229619
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/21/2024 20:03	WG2229619
Fluoranthene	U		0.0270	0.100	1	02/21/2024 20:03	WG2229619
Fluorene	0.0226	J	0.0169	0.0500	1	02/21/2024 20:03	WG2229619
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/21/2024 20:03	WG2229619
Naphthalene	U		0.0917	0.250	1	02/21/2024 20:03	WG2229619
Phenanthrene	U		0.0180	0.0500	1	02/21/2024 20:03	WG2229619
Pyrene	U		0.0169	0.0500	1	02/21/2024 20:03	WG2229619
1-Methylnaphthalene	U		0.0687	0.250	1	02/21/2024 20:03	WG2229619
2-Methylnaphthalene	U		0.0674	0.250	1	02/21/2024 20:03	WG2229619
2-Chloronaphthalene	U		0.0682	0.250	1	02/21/2024 20:03	WG2229619
(S) Nitrobenzene-d5	116			31.0-160		02/21/2024 20:03	WG2229619
(S) 2-Fluorobiphenyl	103			48.0-148		02/21/2024 20:03	WG2229619

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
(S) p-Terphenyl-d14	93.2			37.0-146		02/21/2024 20:03	WG2229619

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	02/24/2024 08:01	WG2232425
(S) a,a,a-Trifluorotoluene(FID)	101			78.0-120		02/24/2024 08:01	WG2232425

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0941	1.00	1	02/20/2024 16:07	WG2230108
Ethylbenzene	U		0.137	1.00	1	02/20/2024 16:07	WG2230108
Toluene	U		0.278	1.00	1	02/20/2024 16:07	WG2230108
Xylenes, Total	U		0.174	3.00	1	02/20/2024 16:07	WG2230108
Methyl tert-butyl ether	U		0.101	1.00	1	02/20/2024 16:07	WG2230108
Naphthalene	U		1.00	5.00	1	02/20/2024 16:07	WG2230108
1,2-Dibromoethane	U		0.126	1.00	1	02/20/2024 16:07	WG2230108
1,2-Dichloroethane	U		0.0819	1.00	1	02/20/2024 16:07	WG2230108
Isopropylbenzene	U		0.105	1.00	1	02/20/2024 16:07	WG2230108
n-Propylbenzene	U		0.0993	1.00	1	02/20/2024 16:07	WG2230108
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/20/2024 16:07	WG2230108
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/20/2024 16:07	WG2230108
(S) Toluene-d8	96.5			80.0-120		02/20/2024 16:07	WG2230108
(S) 4-Bromofluorobenzene	96.6			77.0-126		02/20/2024 16:07	WG2230108
(S) 1,2-Dichloroethane-d4	98.3			70.0-130		02/20/2024 16:07	WG2230108

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U	J3	33.3	100	1	02/22/2024 17:29	WG2228988
Residual Range Organics (RRO)	U		83.3	250	1	02/22/2024 17:29	WG2228988
(S) o-Terphenyl	43.6			31.0-160		02/22/2024 17:29	WG2228988

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	02/21/2024 20:21	WG2229619
Acenaphthene	U		0.0190	0.0500	1	02/21/2024 20:21	WG2229619
Acenaphthylene	U		0.0171	0.0500	1	02/21/2024 20:21	WG2229619
Benzo(a)anthracene	U		0.0203	0.0500	1	02/21/2024 20:21	WG2229619
Benzo(a)pyrene	U		0.0184	0.0500	1	02/21/2024 20:21	WG2229619
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/21/2024 20:21	WG2229619
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/21/2024 20:21	WG2229619
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/21/2024 20:21	WG2229619
Chrysene	U		0.0179	0.0500	1	02/21/2024 20:21	WG2229619
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/21/2024 20:21	WG2229619
Fluoranthene	U		0.0270	0.100	1	02/21/2024 20:21	WG2229619
Fluorene	U		0.0169	0.0500	1	02/21/2024 20:21	WG2229619
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/21/2024 20:21	WG2229619
Naphthalene	U		0.0917	0.250	1	02/21/2024 20:21	WG2229619
Phenanthrene	U		0.0180	0.0500	1	02/21/2024 20:21	WG2229619
Pyrene	U		0.0169	0.0500	1	02/21/2024 20:21	WG2229619
1-Methylnaphthalene	U		0.0687	0.250	1	02/21/2024 20:21	WG2229619
2-Methylnaphthalene	U		0.0674	0.250	1	02/21/2024 20:21	WG2229619
2-Chloronaphthalene	U		0.0682	0.250	1	02/21/2024 20:21	WG2229619
(S) Nitrobenzene-d5	122			31.0-160		02/21/2024 20:21	WG2229619
(S) 2-Fluorobiphenyl	107			48.0-148		02/21/2024 20:21	WG2229619

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
(S) p-Terphenyl-d14	94.2			37.0-146		02/21/2024 20:21	WG2229619

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	3670		158	500	5	02/26/2024 17:12	WG2234379
(S) a,a,a-Trifluorotoluene(FID)	84.0			78.0-120		02/26/2024 17:12	WG2234379

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	0.472	<u>J</u>	0.0941	1.00	1	02/20/2024 16:26	WG2230108
Ethylbenzene	U		0.137	1.00	1	02/20/2024 16:26	WG2230108
Toluene	U		0.278	1.00	1	02/20/2024 16:26	WG2230108
Xylenes, Total	0.343	<u>J</u>	0.174	3.00	1	02/20/2024 16:26	WG2230108
Methyl tert-butyl ether	U		0.101	1.00	1	02/20/2024 16:26	WG2230108
Naphthalene	U		1.00	5.00	1	02/20/2024 16:26	WG2230108
1,2-Dibromoethane	U		0.126	1.00	1	02/20/2024 16:26	WG2230108
1,2-Dichloroethane	U		0.0819	1.00	1	02/20/2024 16:26	WG2230108
Isopropylbenzene	3.47		0.105	1.00	1	02/20/2024 16:26	WG2230108
n-Propylbenzene	1.54		0.0993	1.00	1	02/20/2024 16:26	WG2230108
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/20/2024 16:26	WG2230108
1,3,5-Trimethylbenzene	0.105	<u>J</u>	0.104	1.00	1	02/20/2024 16:26	WG2230108
(S) Toluene-d8	70.9	<u>J2</u>		80.0-120		02/20/2024 16:26	WG2230108
(S) 4-Bromofluorobenzene	70.3	<u>J2</u>		77.0-126		02/20/2024 16:26	WG2230108
(S) 1,2-Dichloroethane-d4	92.1			70.0-130		02/20/2024 16:26	WG2230108

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U	<u>J3</u>	33.3	100	1	02/22/2024 18:21	WG2228988
Residual Range Organics (RRO)	U		83.3	250	1	02/22/2024 18:21	WG2228988
(S) o-Terphenyl	46.0			31.0-160		02/22/2024 18:21	WG2228988

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	02/21/2024 20:38	WG2229619
Acenaphthene	0.147		0.0190	0.0500	1	02/21/2024 20:38	WG2229619
Acenaphthylene	U		0.0171	0.0500	1	02/21/2024 20:38	WG2229619
Benzo(a)anthracene	U		0.0203	0.0500	1	02/21/2024 20:38	WG2229619
Benzo(a)pyrene	U		0.0184	0.0500	1	02/21/2024 20:38	WG2229619
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/21/2024 20:38	WG2229619
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/21/2024 20:38	WG2229619
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/21/2024 20:38	WG2229619
Chrysene	U		0.0179	0.0500	1	02/21/2024 20:38	WG2229619
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/21/2024 20:38	WG2229619
Fluoranthene	U		0.0270	0.100	1	02/21/2024 20:38	WG2229619
Fluorene	0.347		0.0169	0.0500	1	02/21/2024 20:38	WG2229619
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/21/2024 20:38	WG2229619
Naphthalene	0.569		0.0917	0.250	1	02/21/2024 20:38	WG2229619
Phenanthrene	0.0667		0.0180	0.0500	1	02/21/2024 20:38	WG2229619
Pyrene	U		0.0169	0.0500	1	02/21/2024 20:38	WG2229619
1-Methylnaphthalene	3.72		0.0687	0.250	1	02/21/2024 20:38	WG2229619
2-Methylnaphthalene	0.131	<u>J</u>	0.0674	0.250	1	02/21/2024 20:38	WG2229619
2-Chloronaphthalene	U		0.0682	0.250	1	02/21/2024 20:38	WG2229619
(S) Nitrobenzene-d5	125			31.0-160		02/21/2024 20:38	WG2229619
(S) 2-Fluorobiphenyl	109			48.0-148		02/21/2024 20:38	WG2229619

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
(S) p-Terphenyl-d14	105			37.0-146		02/21/2024 20:38	WG2229619

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	02/23/2024 14:11	WG2232436
(S) a,a,a-Trifluorotoluene(FID)	103			78.0-120		02/23/2024 14:11	WG2232436

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0941	1.00	1	02/20/2024 16:44	WG2230108
Ethylbenzene	U		0.137	1.00	1	02/20/2024 16:44	WG2230108
Toluene	U		0.278	1.00	1	02/20/2024 16:44	WG2230108
Xylenes, Total	U		0.174	3.00	1	02/20/2024 16:44	WG2230108
Methyl tert-butyl ether	U		0.101	1.00	1	02/20/2024 16:44	WG2230108
Naphthalene	U		1.00	5.00	1	02/20/2024 16:44	WG2230108
1,2-Dibromoethane	U		0.126	1.00	1	02/20/2024 16:44	WG2230108
1,2-Dichloroethane	U		0.0819	1.00	1	02/20/2024 16:44	WG2230108
Isopropylbenzene	U		0.105	1.00	1	02/20/2024 16:44	WG2230108
n-Propylbenzene	U		0.0993	1.00	1	02/20/2024 16:44	WG2230108
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/20/2024 16:44	WG2230108
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/20/2024 16:44	WG2230108
(S) Toluene-d8	95.3			80.0-120		02/20/2024 16:44	WG2230108
(S) 4-Bromofluorobenzene	94.5			77.0-126		02/20/2024 16:44	WG2230108
(S) 1,2-Dichloroethane-d4	95.2			70.0-130		02/20/2024 16:44	WG2230108

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		33.3	100	1	02/27/2024 21:24	WG2234568
Residual Range Organics (RRO)	U		83.3	250	1	02/27/2024 21:24	WG2234568
(S) o-Terphenyl	48.4			31.0-160		02/27/2024 21:24	WG2234568

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	02/21/2024 20:46	WG2229620
Acenaphthene	U		0.0190	0.0500	1	02/21/2024 20:46	WG2229620
Acenaphthylene	U		0.0171	0.0500	1	02/21/2024 20:46	WG2229620
Benzo(a)anthracene	U		0.0203	0.0500	1	02/21/2024 20:46	WG2229620
Benzo(a)pyrene	U		0.0184	0.0500	1	02/21/2024 20:46	WG2229620
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/21/2024 20:46	WG2229620
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/21/2024 20:46	WG2229620
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/21/2024 20:46	WG2229620
Chrysene	U		0.0179	0.0500	1	02/21/2024 20:46	WG2229620
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/21/2024 20:46	WG2229620
Fluoranthene	U		0.0270	0.100	1	02/21/2024 20:46	WG2229620
Fluorene	U		0.0169	0.0500	1	02/21/2024 20:46	WG2229620
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/21/2024 20:46	WG2229620
Naphthalene	U		0.0917	0.250	1	02/21/2024 20:46	WG2229620
Phenanthrene	U		0.0180	0.0500	1	02/21/2024 20:46	WG2229620
Pyrene	U		0.0169	0.0500	1	02/21/2024 20:46	WG2229620
1-Methylnaphthalene	U		0.0687	0.250	1	02/21/2024 20:46	WG2229620
2-Methylnaphthalene	U		0.0674	0.250	1	02/21/2024 20:46	WG2229620
2-Chloronaphthalene	U		0.0682	0.250	1	02/21/2024 20:46	WG2229620
(S) Nitrobenzene-d5	106			31.0-160		02/21/2024 20:46	WG2229620
(S) 2-Fluorobiphenyl	79.5			48.0-148		02/21/2024 20:46	WG2229620

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
(S) p-Terphenyl-d14	47.1			37.0-146		02/21/2024 20:46	WG2229620

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	4570		316	1000	10	02/23/2024 22:36	WG2232440
(S) a,a,a-Trifluorotoluene(FID)	97.3			78.0-120		02/23/2024 22:36	WG2232440

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	13.7		0.941	10.0	10	02/20/2024 19:51	WG2230108
Ethylbenzene	4.61	J	1.37	10.0	10	02/20/2024 19:51	WG2230108
Toluene	3.26	J	2.78	10.0	10	02/20/2024 19:51	WG2230108
Xylenes, Total	2.48	J	1.74	30.0	10	02/20/2024 19:51	WG2230108
Methyl tert-butyl ether	U		1.01	10.0	10	02/20/2024 19:51	WG2230108
Naphthalene	U		10.0	50.0	10	02/20/2024 19:51	WG2230108
1,2-Dibromoethane	U		1.26	10.0	10	02/20/2024 19:51	WG2230108
1,2-Dichloroethane	U		0.819	10.0	10	02/20/2024 19:51	WG2230108
Isopropylbenzene	100		1.05	10.0	10	02/20/2024 19:51	WG2230108
n-Propylbenzene	224		0.993	10.0	10	02/20/2024 19:51	WG2230108
1,2,4-Trimethylbenzene	U		3.22	10.0	10	02/20/2024 19:51	WG2230108
1,3,5-Trimethylbenzene	U		1.04	10.0	10	02/20/2024 19:51	WG2230108
(S) Toluene-d8	94.2			80.0-120		02/20/2024 19:51	WG2230108
(S) 4-Bromofluorobenzene	96.9			77.0-126		02/20/2024 19:51	WG2230108
(S) 1,2-Dichloroethane-d4	98.7			70.0-130		02/20/2024 19:51	WG2230108

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	7130	J3	33.3	100	1	02/22/2024 21:08	WG2228988
Residual Range Organics (RRO)	3000		83.3	250	1	02/28/2024 09:22	WG2228988
(S) o-Terphenyl	95.1			31.0-160		02/28/2024 09:22	WG2228988
(S) o-Terphenyl	51.9			31.0-160		02/22/2024 21:08	WG2228988

Sample Narrative:

L1706710-07 WG2228988: Sample resembles laboratory standards for Gasoline, Diesel, and Motor Oil.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	02/21/2024 21:04	WG2229620
Acenaphthene	1.73		0.0190	0.0500	1	02/21/2024 21:04	WG2229620
Acenaphthylene	0.360		0.0171	0.0500	1	02/21/2024 21:04	WG2229620
Benzo(a)anthracene	0.0249	J	0.0203	0.0500	1	02/21/2024 21:04	WG2229620
Benzo(a)pyrene	U		0.0184	0.0500	1	02/21/2024 21:04	WG2229620
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/21/2024 21:04	WG2229620
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/21/2024 21:04	WG2229620
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/21/2024 21:04	WG2229620
Chrysene	0.0511		0.0179	0.0500	1	02/21/2024 21:04	WG2229620
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/21/2024 21:04	WG2229620
Fluoranthene	0.128		0.0270	0.100	1	02/21/2024 21:04	WG2229620
Fluorene	4.16		0.0169	0.0500	1	02/21/2024 21:04	WG2229620
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/21/2024 21:04	WG2229620
Naphthalene	3.06		0.0917	0.250	1	02/21/2024 21:04	WG2229620
Phenanthrene	4.10		0.0180	0.0500	1	02/21/2024 21:04	WG2229620
Pyrene	0.208		0.0169	0.0500	1	02/21/2024 21:04	WG2229620
1-Methylnaphthalene	87.4		0.0687	0.250	1	02/21/2024 21:04	WG2229620

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2-Methylnaphthalene	87.9		0.0674	0.250	1	02/21/2024 21:04	WG2229620
2-Chloronaphthalene	U		0.0682	0.250	1	02/21/2024 21:04	WG2229620
(S) Nitrobenzene-d5	66.8			31.0-160		02/21/2024 21:04	WG2229620
(S) 2-Fluorobiphenyl	106			48.0-148		02/21/2024 21:04	WG2229620
(S) p-Terphenyl-d14	98.9			37.0-146		02/21/2024 21:04	WG2229620

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	02/23/2024 15:45	WG2232440
(S) a,a,a-Trifluorotoluene(FID)	102			78.0-120		02/23/2024 15:45	WG2232440

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0941	1.00	1	02/20/2024 17:03	WG2230108
Ethylbenzene	U		0.137	1.00	1	02/20/2024 17:03	WG2230108
Toluene	U		0.278	1.00	1	02/20/2024 17:03	WG2230108
Xylenes, Total	U		0.174	3.00	1	02/20/2024 17:03	WG2230108
Methyl tert-butyl ether	U		0.101	1.00	1	02/20/2024 17:03	WG2230108
Naphthalene	U		1.00	5.00	1	02/20/2024 17:03	WG2230108
1,2-Dibromoethane	U		0.126	1.00	1	02/20/2024 17:03	WG2230108
1,2-Dichloroethane	U		0.0819	1.00	1	02/20/2024 17:03	WG2230108
Isopropylbenzene	U		0.105	1.00	1	02/20/2024 17:03	WG2230108
n-Propylbenzene	U		0.0993	1.00	1	02/20/2024 17:03	WG2230108
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/20/2024 17:03	WG2230108
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/20/2024 17:03	WG2230108
(S) Toluene-d8	96.4			80.0-120		02/20/2024 17:03	WG2230108
(S) 4-Bromofluorobenzene	94.6			77.0-126		02/20/2024 17:03	WG2230108
(S) 1,2-Dichloroethane-d4	98.8			70.0-130		02/20/2024 17:03	WG2230108

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U	J3	33.3	100	1	02/22/2024 21:29	WG2228988
Residual Range Organics (RRO)	U		83.3	250	1	02/22/2024 21:29	WG2228988
(S) o-Terphenyl	49.1			31.0-160		02/22/2024 21:29	WG2228988

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	02/21/2024 21:22	WG2229620
Acenaphthene	U		0.0190	0.0500	1	02/21/2024 21:22	WG2229620
Acenaphthylene	U		0.0171	0.0500	1	02/21/2024 21:22	WG2229620
Benzo(a)anthracene	U		0.0203	0.0500	1	02/21/2024 21:22	WG2229620
Benzo(a)pyrene	U		0.0184	0.0500	1	02/21/2024 21:22	WG2229620
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/21/2024 21:22	WG2229620
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/21/2024 21:22	WG2229620
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/21/2024 21:22	WG2229620
Chrysene	U		0.0179	0.0500	1	02/21/2024 21:22	WG2229620
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/21/2024 21:22	WG2229620
Fluoranthene	U		0.0270	0.100	1	02/21/2024 21:22	WG2229620
Fluorene	U		0.0169	0.0500	1	02/21/2024 21:22	WG2229620
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/21/2024 21:22	WG2229620
Naphthalene	U		0.0917	0.250	1	02/21/2024 21:22	WG2229620
Phenanthrene	U		0.0180	0.0500	1	02/21/2024 21:22	WG2229620
Pyrene	U		0.0169	0.0500	1	02/21/2024 21:22	WG2229620
1-Methylnaphthalene	U		0.0687	0.250	1	02/21/2024 21:22	WG2229620
2-Methylnaphthalene	U		0.0674	0.250	1	02/21/2024 21:22	WG2229620
2-Chloronaphthalene	U		0.0682	0.250	1	02/21/2024 21:22	WG2229620
(S) Nitrobenzene-d5	128			31.0-160		02/21/2024 21:22	WG2229620
(S) 2-Fluorobiphenyl	106			48.0-148		02/21/2024 21:22	WG2229620

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
(S) p-Terphenyl-d14	97.9			37.0-146		02/21/2024 21:22	WG2229620

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	02/23/2024 16:07	WG2232440
(S) a,a,a-Trifluorotoluene(FID)	101			78.0-120		02/23/2024 16:07	WG2232440

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0941	1.00	1	02/20/2024 17:22	WG2230108
Ethylbenzene	U		0.137	1.00	1	02/20/2024 17:22	WG2230108
Toluene	U		0.278	1.00	1	02/20/2024 17:22	WG2230108
Xylenes, Total	U		0.174	3.00	1	02/20/2024 17:22	WG2230108
Methyl tert-butyl ether	U		0.101	1.00	1	02/20/2024 17:22	WG2230108
Naphthalene	U		1.00	5.00	1	02/20/2024 17:22	WG2230108
1,2-Dibromoethane	U		0.126	1.00	1	02/20/2024 17:22	WG2230108
1,2-Dichloroethane	U		0.0819	1.00	1	02/20/2024 17:22	WG2230108
Isopropylbenzene	U		0.105	1.00	1	02/20/2024 17:22	WG2230108
n-Propylbenzene	U		0.0993	1.00	1	02/20/2024 17:22	WG2230108
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/20/2024 17:22	WG2230108
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/20/2024 17:22	WG2230108
(S) Toluene-d8	95.1			80.0-120		02/20/2024 17:22	WG2230108
(S) 4-Bromofluorobenzene	97.8			77.0-126		02/20/2024 17:22	WG2230108
(S) 1,2-Dichloroethane-d4	96.6			70.0-130		02/20/2024 17:22	WG2230108

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U	J3	33.3	100	1	02/22/2024 21:49	WG2228988
Residual Range Organics (RRO)	U		83.3	250	1	02/22/2024 21:49	WG2228988
(S) o-Terphenyl	10.6	J2		31.0-160		02/22/2024 21:49	WG2228988

Sample Narrative:

L1706710-09 WG2228988: Sample produced emulsion during Extraction process, low surr/spike recoveries due to matrix.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	0.0216	J	0.0190	0.0500	1	02/21/2024 21:40	WG2229620
Acenaphthene	U		0.0190	0.0500	1	02/21/2024 21:40	WG2229620
Acenaphthylene	U		0.0171	0.0500	1	02/21/2024 21:40	WG2229620
Benzo(a)anthracene	U		0.0203	0.0500	1	02/21/2024 21:40	WG2229620
Benzo(a)pyrene	U		0.0184	0.0500	1	02/21/2024 21:40	WG2229620
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/21/2024 21:40	WG2229620
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/21/2024 21:40	WG2229620
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/21/2024 21:40	WG2229620
Chrysene	U		0.0179	0.0500	1	02/21/2024 21:40	WG2229620
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/21/2024 21:40	WG2229620
Fluoranthene	U		0.0270	0.100	1	02/21/2024 21:40	WG2229620
Fluorene	U		0.0169	0.0500	1	02/21/2024 21:40	WG2229620
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/21/2024 21:40	WG2229620
Naphthalene	U		0.0917	0.250	1	02/21/2024 21:40	WG2229620
Phenanthrene	U		0.0180	0.0500	1	02/21/2024 21:40	WG2229620
Pyrene	U		0.0169	0.0500	1	02/21/2024 21:40	WG2229620
1-Methylnaphthalene	U		0.0687	0.250	1	02/21/2024 21:40	WG2229620
2-Methylnaphthalene	U		0.0674	0.250	1	02/21/2024 21:40	WG2229620

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2-Chloronaphthalene	U		0.0682	0.250	1	02/21/2024 21:40	WG2229620
(S) Nitrobenzene-d5	122			31.0-160		02/21/2024 21:40	WG2229620
(S) 2-Fluorobiphenyl	104			48.0-148		02/21/2024 21:40	WG2229620
(S) p-Terphenyl-d14	90.0			37.0-146		02/21/2024 21:40	WG2229620

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	02/23/2024 14:39	WG2232440
(S) a,a,a-Trifluorotoluene(FID)	101			78.0-120		02/23/2024 14:39	WG2232440

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0941	1.00	1	02/20/2024 15:11	WG2230108
Toluene	U		0.278	1.00	1	02/20/2024 15:11	WG2230108
Ethylbenzene	U		0.137	1.00	1	02/20/2024 15:11	WG2230108
Total Xylenes	U		0.174	3.00	1	02/20/2024 15:11	WG2230108
(S) Toluene-d8	93.1			80.0-120		02/20/2024 15:11	WG2230108
(S) 4-Bromofluorobenzene	96.9			77.0-126		02/20/2024 15:11	WG2230108
(S) 1,2-Dichloroethane-d4	109			70.0-130		02/20/2024 15:11	WG2230108

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4038376-2 02/24/24 01:49

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)	101			78.0-120

Laboratory Control Sample (LCS)

(LCS) R4038376-1 02/24/24 00:10

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5000	5360	107	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			105	78.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4037601-4 02/23/24 10:58

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	62.0	J	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	104			78.0-120

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

(LCS) R4037601-2 02/23/24 09:49 • (LCSD) R4037601-3 02/23/24 10:12

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 %
Gasoline Range Organics-NWTPH	5000	5190	4820	104	96.4	70.0-124			7.39	20
(S) a,a,a-Trifluorotoluene(FID)				108	111	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) R4037961-3 02/23/24 11:24

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)	102			78.0-120

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

(LCS) R4037961-1 02/23/24 10:19 • (LCSD) R4037961-2 02/23/24 10:41

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 %
Gasoline Range Organics-NWTPH	5000	4880	4870	97.6	97.4	70.0-124			0.205	20
(S) a,a,a-Trifluorotoluene(FID)				103	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) R4038807-3 02/26/24 13:19

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)	100			78.0-120

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

(LCS) R4038807-1 02/26/24 12:14 • (LCSD) R4038807-2 02/26/24 12:36

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 %
Gasoline Range Organics-NWTPH	5000	5500	5440	110	109	70.0-124			1.10	20
(S) a,a,a-Trifluorotoluene(FID)				105	106	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) R4038373-3 02/20/24 14:28

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Total Xylenes	U		0.174	3.00
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
1,2-Dibromoethane	U		0.126	1.00
1,2-Dichloroethane	U		0.0819	1.00
Isopropylbenzene	U		0.105	1.00
n-Propylbenzene	U		0.0993	1.00
1,2,4-Trimethylbenzene	U		0.322	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
(S) Toluene-d8	95.5			80.0-120
(S) 4-Bromofluorobenzene	96.4			77.0-126
(S) 1,2-Dichloroethane-d4	98.4			70.0-130

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

(LCS) R4038373-1 02/20/24 13:32 • (LCSD) R4038373-2 02/20/24 13:51

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	5.04	5.37	101	107	70.0-123			6.34	20
Toluene	5.00	4.85	5.16	97.0	103	79.0-120			6.19	20
Ethylbenzene	5.00	4.70	5.00	94.0	100	79.0-123			6.19	20
Total Xylenes	15.0	13.8	14.2	92.0	94.7	79.0-123			2.86	20
Methyl tert-butyl ether	5.00	4.39	4.64	87.8	92.8	68.0-125			5.54	20
Naphthalene	5.00	4.09	4.18	81.8	83.6	54.0-135			2.18	20
1,2-Dibromoethane	5.00	4.37	4.70	87.4	94.0	80.0-122			7.28	20
1,2-Dichloroethane	5.00	5.12	5.13	102	103	70.0-128			0.195	20
Isopropylbenzene	5.00	4.76	4.86	95.2	97.2	76.0-127			2.08	20
n-Propylbenzene	5.00	5.05	4.84	101	96.8	77.0-124			4.25	20
1,2,4-Trimethylbenzene	5.00	4.56	4.72	91.2	94.4	76.0-121			3.45	20
1,3,5-Trimethylbenzene	5.00	4.68	5.04	93.6	101	76.0-122			7.41	20
(S) Toluene-d8				94.8	95.6	80.0-120				
(S) 4-Bromofluorobenzene				102	100	77.0-126				
(S) 1,2-Dichloroethane-d4				105	103	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4036959-1 02/22/24 11:06

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		33.3	100
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	53.0			31.0-160

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

(LCS) R4036959-2 02/22/24 12:51 • (LCSD) R4036959-3 02/22/24 13:11

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	945	771	63.0	51.4	50.0-150		J3	20.3	20
(S) o-Terphenyl				69.5	58.5	31.0-160				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4039050-1 02/27/24 18:55

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		33.3	100
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	62.5			31.0-160

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

(LCS) R4039050-2 02/27/24 19:43 • (LCSD) R4039050-3 02/27/24 20:03

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	1130	1120	75.3	74.7	50.0-150			0.889	20
(S) o-Terphenyl				57.5	55.5	31.0-160				

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R4037201-3 02/21/24 17:10

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0190	0.0500
Acenaphthene	U		0.0190	0.0500
Acenaphthylene	U		0.0171	0.0500
Benzo(a)anthracene	U		0.0203	0.0500
Benzo(a)pyrene	U		0.0184	0.0500
Benzo(b)fluoranthene	U		0.0168	0.0500
Benzo(g,h,i)perylene	U		0.0184	0.0500
Benzo(k)fluoranthene	U		0.0202	0.0500
Chrysene	U		0.0179	0.0500
Dibenz(a,h)anthracene	U		0.0160	0.0500
Fluoranthene	U		0.0270	0.100
Fluorene	U		0.0169	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500
Naphthalene	U		0.0917	0.250
Phenanthrene	U		0.0180	0.0500
Pyrene	U		0.0169	0.0500
1-Methylnaphthalene	U		0.0687	0.250
2-Methylnaphthalene	U		0.0674	0.250
2-Chloronaphthalene	U		0.0682	0.250
(S) Nitrobenzene-d5	123			31.0-160
(S) 2-Fluorobiphenyl	107			48.0-148
(S) p-Terphenyl-d14	102			37.0-146

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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

(LCS) R4037201-1 02/21/24 16:35 • (LCSD) R4037201-2 02/21/24 16:53

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 %
Anthracene	2.00	2.33	2.34	117	117	67.0-150			0.428	20
Acenaphthene	2.00	2.09	2.08	104	104	65.0-138			0.480	20
Acenaphthylene	2.00	2.42	2.39	121	119	66.0-140			1.25	20
Benzo(a)anthracene	2.00	2.27	2.28	114	114	61.0-140			0.440	20
Benzo(a)pyrene	2.00	2.07	2.12	104	106	60.0-143			2.39	20
Benzo(b)fluoranthene	2.00	1.95	1.97	97.5	98.5	58.0-141			1.02	20
Benzo(g,h,i)perylene	2.00	1.88	2.01	94.0	100	52.0-153			6.68	20
Benzo(k)fluoranthene	2.00	1.90	1.97	95.0	98.5	58.0-148			3.62	20
Chrysene	2.00	2.19	2.22	109	111	64.0-144			1.36	20
Dibenz(a,h)anthracene	2.00	1.93	2.04	96.5	102	52.0-155			5.54	20
Fluoranthene	2.00	2.39	2.36	119	118	69.0-153			1.26	20

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

(LCS) R4037201-1 02/21/24 16:35 • (LCSD) R4037201-2 02/21/24 16:53

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	2.32	2.26	116	113	64.0-136			2.62	20
Indeno(1,2,3-cd)pyrene	2.00	1.98	2.10	99.0	105	54.0-153			5.88	20
Naphthalene	2.00	2.14	2.13	107	106	61.0-137			0.468	20
Phenanthrene	2.00	2.18	2.16	109	108	62.0-137			0.922	20
Pyrene	2.00	2.15	2.18	107	109	60.0-142			1.39	20
1-Methylnaphthalene	2.00	2.28	2.26	114	113	66.0-142			0.881	20
2-Methylnaphthalene	2.00	2.22	2.17	111	108	62.0-136			2.28	20
2-Chloronaphthalene	2.00	2.18	2.18	109	109	64.0-140			0.000	20
(S) Nitrobenzene-d5				120	119	31.0-160				
(S) 2-Fluorobiphenyl				105	105	48.0-148				
(S) p-Terphenyl-d14				97.5	99.5	37.0-146				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4036721-3 02/21/24 16:52

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0190	0.0500
Acenaphthene	U		0.0190	0.0500
Acenaphthylene	U		0.0171	0.0500
Benzo(a)anthracene	U		0.0203	0.0500
Benzo(a)pyrene	U		0.0184	0.0500
Benzo(b)fluoranthene	U		0.0168	0.0500
Benzo(g,h,i)perylene	U		0.0184	0.0500
Benzo(k)fluoranthene	U		0.0202	0.0500
Chrysene	U		0.0179	0.0500
Dibenz(a,h)anthracene	U		0.0160	0.0500
Fluoranthene	U		0.0270	0.100
Fluorene	U		0.0169	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500
Naphthalene	U		0.0917	0.250
Phenanthrene	U		0.0180	0.0500
Pyrene	U		0.0169	0.0500
1-Methylnaphthalene	U		0.0687	0.250
2-Methylnaphthalene	U		0.0674	0.250
2-Chloronaphthalene	U		0.0682	0.250
(S) Nitrobenzene-d5	126			31.0-160
(S) 2-Fluorobiphenyl	110			48.0-148
(S) p-Terphenyl-d14	105			37.0-146

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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

(LCS) R4036721-1 02/21/24 16:16 • (LCSD) R4036721-2 02/21/24 16:34

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 %
Anthracene	2.00	2.20	2.19	110	109	67.0-150			0.456	20
Acenaphthene	2.00	2.04	2.05	102	103	65.0-138			0.489	20
Acenaphthylene	2.00	2.26	2.27	113	114	66.0-140			0.442	20
Benzo(a)anthracene	2.00	2.23	2.24	111	112	61.0-140			0.447	20
Benzo(a)pyrene	2.00	1.97	1.97	98.5	98.5	60.0-143			0.000	20
Benzo(b)fluoranthene	2.00	2.01	2.05	100	103	58.0-141			1.97	20
Benzo(g,h,i)perylene	2.00	2.04	2.06	102	103	52.0-153			0.976	20
Benzo(k)fluoranthene	2.00	1.86	1.85	93.0	92.5	58.0-148			0.539	20
Chrysene	2.00	2.15	2.19	107	109	64.0-144			1.84	20
Dibenz(a,h)anthracene	2.00	2.09	2.06	104	103	52.0-155			1.45	20
Fluoranthene	2.00	2.28	2.33	114	117	69.0-153			2.17	20

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

(LCS) R4036721-1 02/21/24 16:16 • (LCSD) R4036721-2 02/21/24 16:34

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	2.15	2.20	107	110	64.0-136			2.30	20
Indeno(1,2,3-cd)pyrene	2.00	2.04	2.04	102	102	54.0-153			0.000	20
Naphthalene	2.00	2.21	2.23	111	111	61.0-137			0.901	20
Phenanthrene	2.00	2.22	2.26	111	113	62.0-137			1.79	20
Pyrene	2.00	2.14	2.17	107	108	60.0-142			1.39	20
1-Methylnaphthalene	2.00	2.25	2.30	112	115	66.0-142			2.20	20
2-Methylnaphthalene	2.00	2.20	2.21	110	111	62.0-136			0.454	20
2-Chloronaphthalene	2.00	2.12	2.14	106	107	64.0-140			0.939	20
(S) Nitrobenzene-d5				126	127	31.0-160				
(S) 2-Fluorobiphenyl				105	107	48.0-148				
(S) p-Terphenyl-d14				98.5	98.5	37.0-146				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

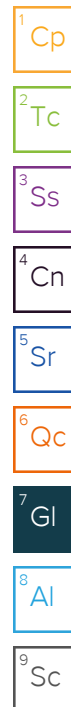
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.



ACCREDITATIONS & LOCATIONS

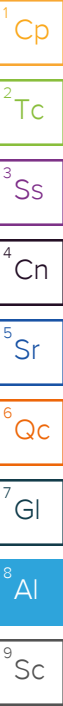
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 - OR 111 SW Columbia St Portland, OR 97201				Billing Information: Accounts Payable 630 Plaza Dr STE 600 Highlands Ranch, CO 80129				Analysis / Container / Preservative 8260 BTEX 40mlAmb-HCl 8260 RBDM VOCs 40mlAmb-HCl NWTPHDX w/ silica 100ml Amb-HCl NWTPHGX 40mlAmb HCl PAHs 8270SIM 40mlAmb-NoPres-WT				Chain of Custody Page 1 of 1 MT JULIET, TN 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/hubs/pas-standard-terms.pdf SDG # 1706710 H145 Acctnum: CHEVARCOR Template: T235142 Prelogin: P1054687 PM: 110 - Brian Ford PB: Shipped Via:			
Report to: Christine Perez/Carl Donovan				Email To: Elysha.Nygaard@arcadis.com;Christine.Perez@a				Pres Chk							
Project Description: 1001782		City/State Collected: McMinnville, OR		Please Circle: PT MT CT ET											
Phone: 503-785-9405		Client Project # 30063816 19.45-EXEC		Lab Project # CHEVARCOR-1001782											
Collected by (print): Diana Ojeda		Site/Facility ID # SE CHANDLER AVE & SE DAVIS		P.O. #											
Collected by (signature): 		Rush? (Lab MUST Be Notified) ☐ Same Day ☐ Five Day ☐ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day		Quote #		Date Results Needed		No. of Cntrs							
Immediately Packed on Ice N ☐ Y ☒		Date		Time											
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time									
MW-1-W-20240215		G	GW	-	2/15/24	0843	10	X	X	X	X			-01	
MW-2-W-20240215			GW	-		0923	10	X	X	X	X			-02	
MW-3-W-20240215			GW	-		0853	10	X	X	X	X			-03	
MW-4A-W-20240215			GW	-		0811	10	X	X	X	X			-04	
MW-5-W-20240215			GW	-		0915	10	X	X	X	X			-05	
MW-6-W-20240215			GW	-		0816	10	X	X	X	X			-06	
MW-7-W-20240215			GW	-		0951	10	X	X	X	X			-07	
MW-8-W-20240215			GW	-		0954	10	X	X	X	X			-08	
MW-9-W-20240215			GW	-		1043	10	X	X	X	X			-09	
TB-W-20240215			GW	-		0900	2	X		X				-10	

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

Remarks:

Samples returned via:
☐ UPS ☐ FedEx ☐ Courier

Tracking # **7123 3310 3864**

Relinquished by: (Signature)

Relinquished by: (Signature)

Relinquished by: (Signature)

Date: **2/15/24** Time: **1400**

Date: Time:

Date: Time:

Received by: (Signature)
Shipped via Fedex

Received by: (Signature)

Received for lab by: (Signature)

Trip Blank Received: ☒ Yes ☐ No
 HD / MeOH TBR

Temp: **PP46°C** Bottles Received: **90**

Date: **2/16/24** Time: **900**

Sample Receipt Checklist

COC Seal Present/Intact: ☒ 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

RAD Screen <0.5 mR/hr: ☒ Y ☐ N

If preservation required by Login: Date/Time

Hold:

Condition: **NCF / OK**