



2023 Groundwater Monitoring Program Report

Superior Terminal Superior, Wisconsin

Prepared for
Enbridge Energy

August 2023

ENBRIDGE ENERGY LIMITED PARTNERSHIP
GROUNDWATER MONITORING PROGRAM - REPORT FORM
 (Superior Terminal – Superior, WI)
 Sample Dates: May 16 – 18, 2023

I. Site Location

Site Name/Address: Superior Terminal, 2800 East 21st Street, Superior, WI, 54880
 Milepost: 1098 Location Map Attached? Yes No *See Figure 1*
 Legal Description: ¼, ¼, Sec 31, 36, T 49, R 13, 14 County: State: WI

II. Review of Physical Setting

Topography/Run-off Direction: South
 Surrounding Land Use: Industrial/Forest/Residential North
Forest/Nemadji River/Golf Course South
Industry/Forest West
Forest/Nemadji River East

Adjacent Water Bodies? Yes – to the South and East
 Name of water body (if applicable): Nemadji River

III. Monitoring Well Data

Monitoring Wells: 28 Site Map with Monitoring Well Locations Attached? Yes No *See Figure 2*
 # Private Wells: 3 Site Map with Private Well Locations Attached Yes No *See Figure 2*
 Key # 3382

Well Locations (GPS Coordinates):

MW-1R	N <u>46.68707°</u> W <u>-92.06922°</u>	MW-2	N <u>46.68069°</u> W <u>-92.06667°</u>	MW-5	N <u>46.68819°</u> W <u>-92.05092°</u>
MW-5B	N <u>46.68817°</u> W <u>-92.05091°</u>	MW-6	N <u>46.68393°</u> W <u>-92.06184°</u>	MW-6B	N <u>46.68392°</u> W <u>-92.06187°</u>
MW-10	N <u>46.68124°</u> W <u>-92.05694°</u>	MW-11	N <u>46.68428°</u> W <u>-92.05247°</u>	MW-11B	N <u>46.68419°</u> W <u>-92.05694°</u>
MW-12	N <u>46.69058°</u> W <u>-92.05075°</u>	MW-14	N <u>46.68348°</u> W <u>-92.06680°</u>	MW-15	N <u>46.68456°</u> W <u>-92.06717°</u>
MW-17	N <u>46.68977°</u> W <u>-92.04828°</u>	MW-17B	N <u>46.68978°</u> W <u>-92.04832°</u>	MW-18	N <u>46.69081°</u> W <u>-92.04665°</u>
MW-19A	N <u>46.69014°</u>	MW-19B	N <u>46.69015°</u>	MW-20A	N <u>46.68565°</u>

	W <u>-92.06411°</u>		W <u>-92.06409°</u>		W <u>-92.05740°</u>
MW-20B	N <u>46.68564°</u> W <u>-92.05738°</u>	MW-21A	N <u>46.68188°</u> W <u>-92.06080°</u>	MW-21B	N <u>46.68190°</u> W <u>-92.06079°</u>
MW-22B	N <u>46.68350°</u> W <u>-92.05313°</u>	MW-23B	N <u>46.68658°</u> W <u>-92.05070°</u>	MW-24A	N <u>46.69037°</u> W <u>-92.05623°</u>
MW-24B	N <u>46.69039°</u> W <u>-92.05620°</u>	MW-25A	N <u>46.69449°</u> W <u>-92.04603°</u>	MW-25B	N <u>46.69450°</u> W <u>-92.04604°</u>
MW-26	N <u>46.69683°</u> W <u>-92.05110°</u>				

Average Groundwater Depth (Shallow Wells): 4.66 feet below grade

Average Groundwater Depth (Deep Wells): 12.70 feet below grade

Groundwater Elevation and Survey Data Attached? Yes No *See Table 1*

Groundwater Samples Collected? Yes No #Sampling Events: 25

Analytical Laboratory Name & Location: Pace Analytical, Nashville, TN.

Analytical Parameters Submitted:

Groundwater: petroleum volatile organic compounds (PVOCs: 1,2,4 – trimethylbenzene; 1,3,5-trimethylbenzene; benzene; ethylbenzene; toluene; total xylenes; and methyl-tert-butyl ether (MTBE)) and naphthalene.

Private Wells: BTEX (benzene; toluene; ethylbenzene; total xylenes); chloride; iron; nitrate plus nitrite; total coliform; fecal coliform as *E. coli*; and pH.

Analytical Laboratory Reports Attached? Yes No - *See Appendix A, Laboratory Analytical Reports (monitoring well sampling) / Appendix D, Private Well Memo (private well sampling)*

Analytes Detected?

Groundwater: Yes No *See Table 2 and Appendix A*

Private Wells: Yes No *See Appendix D (Iron, chloride, and elevated pH)*

Free Product Encountered? Yes No Location: _____

IV. Monitoring Well Conditions (well by well)

- MW-1R was in good condition, recovery rate was poor, purge water was clear to slightly turbid, no evidence of impacts (i.e., odor, discoloration, sheen) was observed.
- MW-2 was in good condition, recovery rate was poor, purge water was clear to slightly turbid, no evidence of impacts was observed. Overgrown vegetation around the monitoring well was removed prior to sampling.
- MW-5 was in good condition, paint has faded, recovery rate was poor, purge water was clear to slightly turbid, no evidence of impacts was observed.
- MW-5B was in good condition, paint has faded, recovery rate was poor, purge water was clear, no evidence of impacts was observed.
- MW-6 was in good condition, recovery rate was poor, purge water was clear, no evidence of impacts was observed.
- MW-6B was in good condition, recovery rate was poor, purge water was clear to turbid, no evidence of impacts was observed.
- MW-10 was in good condition, recovery rate was poor, purge water was clear, no evidence of impacts was observed.
- MW-11 was in good condition, recovery rate was poor, purge water was clear, no evidence of impacts was observed. Frost action loosened the concrete around the steel protective casing, and it appears the concrete and steel casing have heaved slightly.
- MW-11B was in good condition, recovery rate was poor, purge water was clear to slightly turbid, no evidence of impacts was observed.
- MW-12 was in good condition, recovery rate was poor, purge water was clear, no evidence of impacts was observed.
- MW-14 was in good condition, recovery rate was poor, purge water was clear to slightly turbid, some small plant roots were observed in the purge water, no evidence of impacts was observed.
- MW-15 was in good condition, recovery rate was poor, purge water was clear, no evidence of impacts was observed.
- MW-17 was in good condition, recovery rate was poor, purge water was clear, no evidence of impacts was observed.
- MW-17B was in good condition, recovery rate was poor, purge water was clear, no evidence of impacts was observed.
- MW-18 was in good condition, recovery rate was poor, purge water was clear to slightly turbid, no evidence of impacts was observed.
- MW-19A was in good condition, recovery rate was poor, purge water was clear, no evidence of impacts was observed.
- MW-19B was in good condition, recovery rate was poor, purge water was clear, no evidence of impacts was observed.
- MW-20A was in good condition, recovery rate was poor, purge water was clear to slightly turbid, no evidence of impacts was observed.
- MW-20B was in good condition, recovery rate was poor, purge water was clear, no evidence of impacts was observed.
- MW-21A was in good condition, recovery rate was poor, purge water was clear, no evidence of impacts was observed.
- MW-21B was in good condition, recovery rate was poor, purge water was clear to slightly turbid, no evidence of impacts was observed.
- MW-22B was in good condition, paint has faded, recovery rate was poor, purge water was clear to slightly turbid, no evidence of impacts was observed.

- MW-23B was in good condition, paint has faded, recovery rate was poor, purge water was clear, no evidence of impacts was observed. Frost action loosened the concrete around the steel protective casing, and it appears the concrete and steel casing have heaved slightly.
- MW-24A was in good condition, paint has faded, recovery rate was poor, purge water was clear to turbid, no evidence of impacts was observed. Loose concrete around the well and bollards was removed on May 15, 2023.
- MW-24B was in good condition, paint has faded, recovery rate was poor, purge water was clear to slightly turbid, no evidence of impacts was observed. Loose concrete around the well and bollards was removed on May 15, 2023.
- MW-25A was in good condition, recovery rate was poor, purge water was slightly turbid to turbid, no evidence of impacts was observed.
- MW-25B was in good condition, recovery rate was poor, purge water was clear to turbid, no evidence of impacts was observed.
- MW-26 was in good condition, recovery rate was poor, purge water was clear to slightly turbid, no evidence of impacts was observed. Loose concrete around the well and bollards was removed on May 18, 2023.

V. Conclusions

- Each monitoring well was photographed and the general condition of each well was documented. Photographs of each monitoring well are provided in Appendix B.
- Barr measured water levels and well depths in each well on May 15, 2023 prior to groundwater sample collection.
- Well purging documentation is provided in Appendix C.
- Groundwater samples were collected from each monitoring well following purging as documented on the field sampling forms in Appendix C. Groundwater samples were collected from each well using new disposable bailers.
- Groundwater sample collection in 2023 occurred between May 16 and 18.
- Groundwater samples collected from each monitoring well were analyzed by Pace Analytical for PVOCs and naphthalene.
- No analytes were detected above laboratory detection limits in groundwater from the monitoring wells (Table 2).
 - No analytes were detected above laboratory detection limits from the duplicate samples collected at MW-2, MW-12 and MW-23B.
- Groundwater contours of the shallow and deep wells are provided in Figures 3 and 4, respectively.
 - Both shallow and deep groundwater flow directions are generally to the east, southeast except north of Tanks 1 and 2 where groundwater flow direction is northwest towards the unnamed creek within the Terminal.
 - Observations are consistent with previous sampling events.
- The overgrown vegetation around MW-2 was trimmed on May 15, 2023 prior to groundwater sampling at the location.
- The private wells were sampled on May 17, 2023. Private well sampling documentation and laboratory results are provided in Appendix D.

VI. Recommendations

- Check monitoring well conditions and measure water levels annually.
- Continue to sample monitoring wells for PVOC plus naphthalene annually.
- Repaint wells and bollards where paint has faded: MW-1R, MW-5, MW-5B, MW-17, MW-19A, MW-19B, MW-21A, MW-21B, MW-22B, MW-23B, MW-24A and MW-24B.
- Assess and remove the loose concrete around MW-11; evaluate the condition of the pro-top to confirm they remain secure.

Company Name: Barr Engineering Co.

Prepared By: Kaitlin Montz  August 10, 2023
Printed Name Signature Date

Reviewed By: Lynette Carney  August 10, 2023
Printed Name Signature Date

Tables

Table 1: Groundwater Elevation Data
Enbridge Energy Limited Partnership - Superior, WI Terminal

Location	Date	Surface Elevation	TOC Elevation	Depth to Water	Total Well Depth	Depth of Water Below Grade	Relative Water Elevation	Screened Interval*				Screen Submerged?
		(ft)†	(ft)†	(ft bTOC)	(ft bTOC)	(ft bgs)	(ft)	TOS		BOS		Yes / No
MW-1	See Previous Reports for data prior to 2018											
	29-May-18	663.46	665.22	5.13	22.28	3.37	660.09	10	653.46	20	643.46	Yes
	15-Nov-18	663.46	665.22	6.54	22.31	4.78	658.68	10	653.46	20	643.46	Yes
	27-May-19	663.46	665.22	4.98	22.30	3.22	660.24	10	653.46	20	643.46	Yes
MW-1 Abandoned on June 18, 2019												
MW-1R	29-Oct-19	660.95	663.90	12.1	17.54	9.15	651.80	4.5	656.45	14.5	646.45	No
	18-May-20	660.95	663.90	5.83	17.55	2.88	658.07	4.5	656.45	14.5	646.45	Yes
	19-Oct-20	660.95	663.90	7.21	17.55	4.26	656.69	4.5	656.45	14.5	646.45	Yes
	10-May-21	660.95	663.90	5.75	17.55	2.80	658.15	4.5	656.45	14.5	646.45	Yes
	5-May-22	660.95	663.90	5.50	17.53	2.55	658.40	4.5	656.45	14.5	646.45	Yes
	15-May-23	660.95	663.90	5.76	17.54	2.81	658.14	4.5	656.45	14.5	646.45	Yes
MW-2	See Previous Reports for data prior to 2018											
	29-May-18	657.06	659.37	3.72	27.18	1.41	655.65	14.5	642.56	24.5	632.56	Yes
	14-Nov-18	657.06	659.37	3.30	27.19	0.99	656.07	14.5	642.56	24.5	632.56	Yes
	30-May-19	657.06	659.37	3.51	27.17	1.20	655.86	14.5	642.56	24.5	632.56	Yes
	29-Oct-19	654.98	657.33	3.28	27.18	0.93	654.05	14.5	640.48	24.5	630.48	Yes
	19-May-20	654.98	657.33	3.84	27.20	1.49	653.49	14.5	640.48	24.5	630.48	Yes
	19-Oct-20	654.98	657.33	7.01	27.20	4.66	650.32	14.5	640.48	24.5	630.48	Yes
	10-May-21	654.98	657.33	4.11	28.20	1.76	653.22	14.5	640.48	24.5	630.48	Yes
	9-May-22	654.98	657.33	3.28	27.19	0.93	654.05	14.5	640.48	24.5	630.48	Yes
15-May-23	654.98	657.33	3.16	27.42	0.81	654.17	14.5	640.48	24.5	630.48	Yes	
MW-5	See Previous Reports for data prior to 2018											
	31-May-18	642.85	645.37	2.79	27.02	0.27	642.58	14.4	630.97	24.4	620.97	Yes
	15-Nov-18	642.85	645.37	3.19	27.30	0.67	642.18	14.4	630.97	24.4	620.97	Yes
	29-May-19	642.85	645.37	3.00	27.03	0.48	642.37	14.4	630.97	24.4	620.97	Yes
	30-Oct-19	640.69	643.41	3.16	27.03	0.44	640.25	14.4	629.01	24.4	619.01	Yes
	19-May-20	640.69	643.41	3.55	27.04	0.83	639.86	14.4	629.01	24.4	619.01	Yes
	21-Oct-20	640.69	643.41	7.10	27.02	4.38	636.31	14.4	629.01	24.4	619.01	Yes
	10-May-21	640.69	643.41	3.41	27.03	0.69	640.00	14.4	629.01	24.4	619.01	Yes
	9-May-22	640.69	643.41	2.96	27.02	0.24	640.45	14.4	629.01	24.4	619.01	Yes
15-May-23	640.69	643.41	3.15	27.00	0.43	640.26	14.4	629.01	24.4	619.01	Yes	
MW-5B	See Previous Reports for data prior to 2018											
	31-May-18	640.89	644.20	6.53	57.91	3.22	637.67	49	595.20	54	590.20	Yes
	15-Nov-18	640.89	644.20	6.80	57.30	3.49	637.40	49	595.20	54	590.20	Yes
	29-May-19	640.89	644.20	6.82	57.95	3.51	637.38	49	595.20	54	590.20	Yes
	30-Oct-19	640.82	644.31	7.04	57.95	3.55	637.27	49	595.31	54	590.31	Yes
	19-May-20	640.82	644.31	6.81	57.94	3.32	637.50	49	595.31	54	590.31	Yes
	21-Oct-20	640.82	644.31	9.57	57.90	6.08	634.74	49	595.31	54	590.31	Yes
	10-May-21	640.82	644.31	7.10	57.91	3.61	637.21	49	595.31	54	590.31	Yes
	9-May-22	640.82	644.31	6.34	57.91	2.85	637.97	49	595.31	54	590.31	Yes
15-May-23	640.82	644.31	7.40	58.02	3.91	636.91	49	595.31	54	590.31	Yes	
MW-6	See Previous Reports for data prior to 2018											
	30-May-18	645.79	648.01	7.14	26.68	4.92	640.87	14	634.01	24	624.01	Yes
	16-Nov-18	645.79	648.01	7.47	26.69	5.25	640.54	14	634.01	24	624.01	Yes
	28-May-19	645.79	648.01	7.37	26.70	5.15	640.64	14	634.01	24	624.01	Yes
	29-Oct-19	643.73	646.04	7.51	26.70	5.20	638.53	14	632.04	24	622.04	Yes
	20-May-20	643.73	646.04	7.73	27.70	5.42	638.31	14	632.04	24	622.04	Yes
	20-Oct-20	643.73	646.04	10.02	26.69	7.71	636.02	14	632.04	24	622.04	Yes
	10-May-21	643.73	646.04	9.82	26.70	7.51	636.22	14	632.04	24	622.04	Yes
	9-May-22	643.73	646.04	7.53	26.67	5.22	638.51	14	632.04	24	622.04	Yes
15-May-23	643.73	646.04	7.66	26.66	5.35	638.38	14	632.04	24	622.04	Yes	

Table 1: Groundwater Elevation Data
Enbridge Energy Limited Partnership - Superior, WI Terminal

Location	Date	Surface Elevation	TOC Elevation	Depth to Water	Total Well Depth	Depth of Water Below Grade	Relative Water Elevation	Screened Interval*				Screen Submerged?
		(ft)†	(ft)†	(ft bTOC)	(ft bTOC)	(ft bgs)	(ft)	TOS		BOS		Yes / No
								(ft bgs)	(ft)	(ft bgs)	(ft)	
MW-6B	See Previous Reports for data prior to 2018											
	30-May-18	644.23	646.77	8.91	58.23	6.37	637.86	50	596.77	55	591.77	Yes
	16-Nov-18	644.23	646.77	9.00	58.26	6.46	637.77	50	596.77	55	591.77	Yes
	28-May-19	644.23	646.77	9.00	58.25	6.46	637.77	50	596.77	55	591.77	Yes
	29-Oct-19	644.06	646.77	9.98	58.25	7.27	636.79	50	596.77	55	591.77	Yes
	20-May-20	644.06	646.77	9.42	58.29	6.71	637.35	50	596.77	55	591.77	Yes
	20-Oct-20	644.06	646.77	11.29	58.48	8.58	635.48	50	596.77	55	591.77	Yes
	10-May-21	644.06	646.77	10.06	58.28	7.35	636.71	50	596.77	55	591.77	Yes
	9-May-22	644.06	646.77	10.42	58.48	7.71	636.35	50	596.77	55	591.77	Yes
15-May-23	644.06	646.77	9.69	58.15	6.98	637.08	50	596.77	55	591.77	Yes	
MW-10	See Previous Reports for data prior to 2018											
	30-May-18	660.11	662.01	6.28	30.43	4.38	655.73	18.6	643.41	28.6	633.41	Yes
	16-Nov-18	660.11	662.01	5.24	30.43	3.34	656.77	18.6	643.41	28.6	633.41	Yes
	28-May-19	660.11	662.01	5.00	30.43	3.10	657.01	18.6	643.41	28.6	633.41	Yes
	29-Oct-19	658.65	660.05	4.22	30.44	2.82	655.83	19.1	640.95	29.1	630.95	Yes
	20-Oct-20	658.65	660.05	6.08	30.44	4.68	653.97	19.1	640.95	29.1	630.95	Yes
	10-May-21	658.65	660.05	6.34	30.45	4.94	653.71	19.1	640.95	29.1	630.95	Yes
	9-May-22	658.65	660.05	5.69	30.45	4.29	654.36	19.1	640.95	29.1	630.95	Yes
	15-May-23	658.65	660.05	4.68	30.42	3.28	655.37	19.1	640.95	29.1	630.95	Yes
MW-11	See Previous Reports for data prior to 2018											
	30-May-18	654.06	656.33	7.75	18.18	5.48	648.58	6.23	650.10	16.23	640.10	No
	16-Nov-18	654.06	656.33	8.09	18.18	5.82	648.24	6.23	650.10	16.23	640.10	No
	29-May-19	654.06	656.33	8.06	18.20	5.79	648.27	6.23	650.10	16.23	640.10	No
	31-Oct-19	651.83	654.38	8.10	18.19	5.55	646.28	5.95	648.43	15.95	638.43	No
	20-May-20	651.83	654.38	8.29	18.18	5.74	646.09	5.95	648.43	15.95	638.43	No
	21-Oct-20	651.83	654.38	8.94	18.18	6.39	645.44	5.95	648.43	15.95	638.43	No
	10-May-21	651.83	654.38	8.56	18.19	6.01	645.82	5.95	648.43	15.95	638.43	No
	9-May-22	651.83	654.38	7.81	18.16	5.26	646.57	5.95	648.43	15.95	638.43	No
15-May-23	651.83	654.38	8.56	18.18	6.01	645.82	5.95	648.43	15.95	638.43	No	
MW-11B	See Previous Reports for data prior to 2018											
	30-May-18	653.86	655.91	22.31	57.50	20.26	633.60	50	605.91	55	600.91	Yes
	16-Nov-18	653.86	655.91	24.70	57.52	22.65	631.21	50	605.91	55	600.91	Yes
	29-May-19	653.86	655.91	23.00	57.83	20.95	632.91	50	605.91	55	600.91	Yes
	28-Oct-19	651.85	653.97	25.60	57.83	23.48	628.37	50	603.97	55	598.97	Yes
	20-May-20	651.85	653.97	23.42	57.51	21.30	630.55	50	603.97	55	598.97	Yes
	21-Oct-20	651.85	653.97	25.92	57.52	23.80	628.05	50	603.97	55	598.97	Yes
	10-May-21	651.85	653.97	23.56	57.52	21.44	630.41	50	603.97	55	598.97	Yes
	9-May-22	651.85	653.97	21.08	57.51	18.96	632.89	50	603.97	55	598.97	Yes
15-May-23	651.85	653.97	19.20	57.52	17.08	634.77	50	603.97	55	598.97	Yes	
MW-12	See Previous Reports for data prior to 2018											
	31-May-18	645.36	649.17	4.62	22.47	0.81	644.55	8.69	636.67	18.69	626.67	Yes
	19-Nov-18	645.36	649.17	4.64	22.18	0.83	644.53	8.69	636.67	18.69	626.67	Yes
	29-May-19	645.36	649.17	4.32	22.18	0.51	644.85	8.69	636.67	18.69	626.67	Yes
	28-Oct-19	643.25	647.15	4.57	22.19	0.67	642.58	8.6	634.65	18.6	624.65	Yes
	21-May-20	643.25	647.15	4.70	22.23	0.80	642.45	8.6	634.65	18.6	624.65	Yes
	20-Oct-20	643.25	647.15	7.22	22.20	3.32	639.93	8.6	634.65	18.6	624.65	Yes
	23-Oct-20	643.25	648.15	top of casing elevation resurveyed after well repair								
	10-May-21	643.25	648.15	4.52	21.05	-0.38	643.63	7.6	635.65	17.6	625.65	Yes
9-May-22	643.25	648.15	3.40	21.06	-1.50	644.75	7.6	635.65	17.6	625.65	Yes	
15-May-23	643.25	648.15	3.47	21.05	-1.43	644.68	7.6	635.65	17.6	625.65	Yes	

Table 1: Groundwater Elevation Data
Enbridge Energy Limited Partnership - Superior, WI Terminal

Location	Date	Surface Elevation	TOC Elevation	Depth to Water	Total Well Depth	Depth of Water Below Grade	Relative Water Elevation	Screened Interval*				Screen Submerged?
		(ft)†	(ft)†	(ft bTOC)	(ft bTOC)	(ft bgs)	(ft)	TOS		BOS		Yes / No
								(ft bgs)	(ft)	(ft bgs)	(ft)	
MW-14	See Previous Reports for data prior to 2018											
	29-May-18	659.27	661.15	5.25	18.35	3.37	655.90	6.6	652.65	16.6	642.65	Yes
	14-Nov-18	659.27	661.15	4.91	18.35	3.03	656.24	6.6	652.65	16.6	642.65	Yes
	27-May-19	659.27	661.15	4.67	18.35	2.79	656.48	6.6	652.65	16.6	642.65	Yes
	29-Oct-19	657.06	659.11	5.01	18.34	2.96	654.10	6.4	650.61	16.4	640.61	Yes
	19-May-20	657.06	659.11	5.55	18.34	3.50	653.56	6.4	650.61	16.4	640.61	Yes
	21-Oct-20	657.06	659.11	7.30	18.35	5.25	651.81	6.4	650.61	16.4	640.61	Yes
	10-May-21	657.06	659.11	5.06	18.35	3.01	654.05	6.4	650.61	16.4	640.61	Yes
	9-May-22	657.06	659.11	4.53	18.33	2.48	654.58	6.4	650.61	16.4	640.61	Yes
15-May-23	657.06	659.11	4.40	18.31	2.35	654.71	6.4	650.61	16.4	640.61	Yes	
MW-15	See Previous Reports for data prior to 2018											
	29-May-18	659.10	660.88	3.92	17.32	2.14	656.96	5.7	653.38	15.7	643.38	Yes
	14-Nov-18	659.10	660.88	2.91	17.31	1.13	657.97	5.7	653.38	15.7	643.38	Yes
	27-May-19	659.10	660.88	3.07	17.32	1.29	657.81	5.7	653.38	15.7	643.38	Yes
	29-Oct-19	657.20	659.03	3.04	17.30	1.21	655.99	5.7	651.53	15.7	641.53	Yes
	19-May-20	657.20	659.03	3.88	17.31	2.05	655.15	5.7	651.53	15.7	641.53	Yes
	21-Oct-20	657.20	659.03	7.16	17.30	5.33	651.87	5.7	651.53	15.7	641.53	Yes
	10-May-21	657.20	659.03	3.98	17.31	2.15	655.05	5.7	651.53	15.7	641.53	Yes
	9-May-22	657.20	659.03	2.96	17.29	1.13	656.07	5.7	651.53	15.7	641.53	Yes
15-May-23	657.20	659.03	3.02	17.31	1.19	656.01	5.7	651.53	15.7	641.53	Yes	
MW-17	See Previous Reports for data prior to 2018											
	31-May-18	640.70	643.19	5.95	17.46	3.46	637.24	5	635.70	15	625.70	Yes
	15-Nov-18	640.70	643.19	3.88	17.49	1.39	639.31	5	635.70	15	625.70	Yes
	29-May-19	640.70	643.19	3.79	17.47	1.30	639.40	5	635.70	15	625.70	Yes
	30-Oct-19	638.72	641.10	4.06	17.47	1.68	637.04	5	633.72	15	623.72	Yes
	19-May-20	638.72	641.10	5.53	17.48	3.15	635.57	5	633.72	15	623.72	Yes
	22-Oct-20	638.72	641.10	7.61	17.47	5.23	633.49	5	633.72	15	623.72	No
	10-May-21	638.72	641.10	4.81	17.48	2.43	636.29	5	633.72	15	623.72	Yes
	9-May-22	638.72	641.10	5.76	17.46	3.38	635.34	5	633.72	15	623.72	Yes
15-May-23	638.72	641.10	4.05	17.45	1.67	637.05	5	633.72	15	623.72	Yes	
MW-17B	See Previous Reports for data prior to 2018											
	31-May-18	640.95	643.27	16.50	44.88	14.18	626.77	39.5	601.45	42.5	598.45	Yes
	15-Nov-18	640.95	643.27	20.10	44.97	17.78	623.17	39.5	601.45	42.5	598.45	Yes
	29-May-19	640.95	643.27	18.11	44.94	15.79	625.16	39.5	601.45	42.5	598.45	Yes
	30-Oct-19	638.89	641.27	20.45	44.94	18.07	620.82	39.5	599.39	42.5	596.39	Yes
	19-May-20	638.89	641.27	17.83	44.88	15.45	623.44	39.5	599.39	42.5	596.39	Yes
	22-Oct-20	638.89	641.27	20.16	44.97	17.78	621.11	39.5	599.39	42.5	596.39	Yes
	10-May-21	638.89	641.27	18.42	44.95	16.04	622.85	39.5	599.39	42.5	596.39	Yes
	9-May-22	638.89	641.27	15.81	44.91	13.43	625.46	39.5	599.39	42.5	596.39	Yes
15-May-23	638.89	641.27	15.37	45.93	12.99	625.90	39.5	599.39	42.5	596.39	Yes	
MW-18	See Previous Reports for data prior to 2018											
	31-May-18	641.80	644.23	7.64	17.22	5.21	636.59	5	636.80	15	626.80	No
	15-Nov-18	641.80	644.23	5.43	17.23	3.00	638.80	5	636.80	15	626.80	Yes
	29-May-19	641.80	644.23	5.73	17.25	3.30	638.50	5	636.80	15	626.80	Yes
	30-Oct-19	639.83	642.25	5.39	17.25	2.97	636.86	5	634.83	15	624.83	Yes
	19-May-20	639.83	642.25	6.01	17.25	3.59	636.24	5	634.83	15	624.83	Yes
	21-Oct-20	639.83	642.25	6.29	17.25	3.87	635.96	5	634.83	15	624.83	Yes
	10-May-21	639.83	642.25	6.12	17.25	3.70	636.13	5	634.83	15	624.83	Yes
	9-May-22	639.83	642.25	7.86	17.23	5.44	634.39	5	634.83	15	624.83	No
15-May-23	639.83	642.25	5.68	17.23	3.26	636.57	5	634.83	15	624.83	Yes	

Table 1: Groundwater Elevation Data
Enbridge Energy Limited Partnership - Superior, WI Terminal

Location	Date	Surface Elevation	TOC Elevation	Depth to Water	Total Well Depth	Depth of Water Below Grade	Relative Water Elevation	Screened Interval*				Screen Submerged?
		(ft)†	(ft)†	(ft bTOC)	(ft bTOC)	(ft bgs)	(ft)	TOS		BOS		Yes / No
								(ft bgs)	(ft)	(ft bgs)	(ft)	
MW-19A	See Previous Reports for data prior to 2018											
	29-May-18	656.15	658.12	3.53	24.14	1.56	654.59	12	644.15	22	634.15	Yes
	14-Nov-18	656.15	658.12	3.15	24.15	1.18	654.97	12	644.15	22	634.15	Yes
	27-May-19	656.15	658.12	3.51	24.15	1.54	654.61	12	644.15	22	634.15	Yes
	29-Oct-19	654.76	656.06	2.91	24.13	1.61	653.15	12	642.76	22	632.76	Yes
	18-May-20	654.76	656.06	3.16	24.15	1.86	652.90	12	642.76	22	632.76	Yes
	19-Oct-20	654.76	656.06	3.10	24.16	1.80	652.96	12	642.76	22	632.76	Yes
	10-May-21	654.76	656.06	3.26	24.17	1.96	652.80	12	642.76	22	632.76	Yes
	9-May-22	654.76	656.06	3.05	24.15	1.75	653.01	12	642.76	22	632.76	Yes
15-May-23	654.76	656.06	3.32	24.20	2.02	652.74	12	642.76	22	632.76	Yes	
MW-19B	See Previous Reports for data prior to 2018											
	29-May-18	656.19	658.22	12.52	59.93	10.49	645.70	53	603.19	58	598.19	Yes
	14-Nov-18	656.19	658.22	8.76	59.93	6.73	649.46	53	603.19	58	598.19	Yes
	27-May-19	656.19	658.22	7.47	60.30	5.44	650.75	53	603.19	58	598.19	Yes
	29-Oct-19	654.79	656.19	7.56	59.94	6.16	648.63	53	601.79	58	596.79	Yes
	18-May-20	654.79	656.19	7.64	59.94	6.24	648.55	53	601.79	58	596.79	Yes
	19-Oct-20	654.79	656.19	8.46	59.97	7.06	647.73	53	601.79	58	596.79	Yes
	10-May-21	654.79	656.19	8.50	59.95	7.10	647.69	53	601.79	58	596.79	Yes
	9-May-22	654.79	656.19	8.70	59.94	7.30	647.49	53	601.79	58	596.79	Yes
15-May-23	654.79	656.19	9.25	60.35	7.85	646.94	53	601.79	58	596.79	Yes	
MW-20A	See Previous Reports for data prior to 2018											
	30-May-18	648.98	651.04	5.28	24.18	3.22	645.76	12	636.98	22	626.98	Yes
	16-Nov-18	648.98	651.04	4.46	24.20	2.40	646.58	12	636.98	22	626.98	Yes
	28-May-19	648.98	651.04	4.09	24.19	2.03	646.95	12	636.98	22	626.98	Yes
	30-Oct-19	647.10	649.16	4.88	24.19	2.82	644.28	12	635.10	22	625.10	Yes
	18-May-20	647.10	649.16	5.09	24.20	3.03	644.07	12	635.10	22	625.10	Yes
	19-Oct-20	647.10	649.16	8.82	24.20	6.76	640.34	12	635.10	22	625.10	Yes
	10-May-21	647.10	649.16	4.88	24.20	2.82	644.28	12	635.10	22	625.10	Yes
	9-May-22	647.10	649.16	5.75	24.20	3.69	643.41	12	635.10	22	625.10	Yes
15-May-23	647.10	649.16	4.40	24.44	2.34	644.76	12	635.10	22	625.10	Yes	
MW-20B	See Previous Reports for data prior to 2018											
	30-May-18	649.36	651.34	17.04	60.16	15.06	634.30	53	596.36	58	591.36	Yes
	16-Nov-18	649.36	651.34	18.33	60.05	16.35	633.01	53	596.36	58	591.36	Yes
	28-May-19	649.36	651.34	17.68	60.18	15.70	633.66	53	596.36	58	591.36	Yes
	30-Oct-19	647.47	649.44	18.57	60.18	16.60	630.87	53	594.47	58	589.47	Yes
	18-May-20	647.47	649.44	17.66	60.18	15.69	631.78	53	594.47	58	589.47	Yes
	19-Oct-20	647.47	649.44	18.39	60.19	16.42	631.05	53	594.47	58	589.47	Yes
	10-May-21	647.47	649.44	17.86	60.19	15.89	631.58	53	594.47	58	589.47	Yes
	9-May-22	647.47	649.44	16.85	60.17	14.88	632.59	53	594.47	58	589.47	Yes
15-May-23	647.47	649.44	17.09	61.41	15.12	632.35	53	594.47	58	589.47	Yes	
MW-21A	See Previous Reports for data prior to 2018											
	30-May-18	646.86	648.84	4.11	24.55	2.13	644.73	12	634.86	22	624.86	Yes
	16-Nov-18	646.86	648.84	3.89	24.55	1.91	644.95	12	634.86	22	624.86	Yes
	28-May-19	646.86	648.84	4.64	24.50	2.66	644.20	12	634.86	22	624.86	Yes
	31-Oct-19	644.72	646.82	4.04	24.50	1.94	642.78	12	632.72	22	622.72	Yes
	20-May-20	644.72	646.82	4.09	24.54	1.99	642.73	12	632.72	22	622.72	Yes
	20-Oct-20	644.72	646.82	6.02	24.55	3.92	640.80	12	632.72	22	622.72	Yes
	10-May-21	644.72	646.82	4.31	24.55	2.21	642.51	12	632.72	22	622.72	Yes
	9-May-22	644.72	646.82	6.63	24.54	4.53	640.19	12	632.72	22	622.72	Yes
15-May-23	644.72	646.82	4.01	24.52	1.91	642.81	12	632.72	22	622.72	Yes	

Table 1: Groundwater Elevation Data
Enbridge Energy Limited Partnership - Superior, WI Terminal

Location	Date	Surface Elevation	TOC Elevation	Depth to Water	Total Well Depth	Depth of Water Below Grade	Relative Water Elevation	Screened Interval*				Screen Submerged?
		(ft)†	(ft)†	(ft bTOC)	(ft bTOC)	(ft bgs)	(ft)	TOS		BOS		Yes / No
								(ft bgs)	(ft)	(ft bgs)	(ft)	
MW-21B	See Previous Reports for data prior to 2018											
	30-May-18	646.68	648.83	17.81	60.65	15.66	631.02	53	593.68	58	588.68	Yes
	16-Nov-18	646.68	648.83	18.90	61.60	16.75	629.93	53	593.68	58	588.68	Yes
	28-May-19	646.68	648.83	17.99	60.65	15.84	630.84	53	593.68	58	588.68	Yes
	31-Oct-19	644.63	646.80	19.06	60.65	16.89	627.74	53	591.63	58	586.63	Yes
	20-May-20	644.63	646.80	18.13	60.70	15.96	628.67	53	591.63	58	586.63	Yes
	20-Oct-20	644.63	646.80	19.23	60.65	17.06	627.57	53	591.63	58	586.63	Yes
	10-May-21	644.63	646.80	18.57	60.68	16.40	628.23	53	591.63	58	586.63	Yes
	9-May-22	644.63	646.80	17.90	60.70	15.73	628.90	53	591.63	58	586.63	Yes
15-May-23	644.63	646.80	17.63	62.25	15.46	629.17	53	591.63	58	586.63	Yes	
MW-22B	See Previous Reports for data prior to 2018											
	30-May-18	655.49	658.35	17.91	57.70	15.05	640.44	49	606.49	54	601.49	Yes
	16-Nov-18	655.49	658.35	17.93	57.74	15.07	640.42	49	606.49	54	601.49	Yes
	28-May-19	655.49	658.35	18.39	57.71	15.53	639.96	49	606.49	54	601.49	Yes
	28-Oct-19	655.55	658.48	18.58	58.35	15.65	639.90	49	606.55	54	601.55	Yes
	20-May-20	655.55	658.48	18.84	57.74	15.91	639.64	49	606.55	54	601.55	Yes
	21-Oct-20	655.55	658.48	19.47	57.71	16.54	639.01	49	606.55	54	601.55	Yes
	10-May-21	655.55	658.48	19.36	57.75	16.43	639.12	49	606.55	54	601.55	Yes
	9-May-22	655.55	658.48	19.31	57.72	16.38	639.17	49	606.55	54	601.55	Yes
15-May-23	655.55	658.48	19.40	58.14	16.47	639.08	49	606.55	54	601.55	Yes	
MW-23B	See Previous Reports for data prior to 2018											
	31-May-18	643.51	646.22	7.90	58.27	5.19	638.32	49	594.51	54	589.51	Yes
	15-Nov-18	643.51	646.22	7.23	57.30	4.52	638.99	49	594.51	54	589.51	Yes
	29-May-19	643.51	646.22	6.71	57.28	4.00	639.51	49	594.51	54	589.51	Yes
	30-Oct-19	643.82	646.32	6.57	57.28	4.07	639.75	49	594.82	54	589.82	Yes
	19-May-20	643.82	646.32	7.03	57.29	4.53	639.29	49	594.82	54	589.82	Yes
	21-Oct-20	643.82	646.32	13.01	57.26	10.51	633.31	49	594.82	54	589.82	Yes
	10-May-21	643.82	646.32	5.62	57.30	3.12	640.70	49	594.82	54	589.82	Yes
	9-May-22	643.82	646.32	6.71	57.30	4.21	639.61	49	594.82	54	589.82	Yes
15-May-23	643.82	646.32	8.63	58.20	6.13	637.69	49	594.82	54	589.82	Yes	
MW-24A	See Previous Reports for data prior to 2018											
	31-May-18	649.09	651.69	4.51	19.03	1.91	647.18	6	643.09	16	633.09	Yes
	15-Nov-18	649.09	651.69	3.85	19.05	1.25	647.84	6	643.09	16	633.09	Yes
	27-May-19	649.09	651.69	3.68	19.03	1.08	648.01	6	643.09	16	633.09	Yes
	28-Oct-19	649.48	652.32	3.97	19.02	1.13	648.35	6	643.48	16	633.48	Yes
	18-May-20	649.48	652.32	4.99	19.50	2.15	647.33	6	643.48	16	633.48	Yes
	19-Oct-20	649.48	652.32	6.19	19.06	3.35	646.13	6	643.48	16	633.48	Yes
	10-May-21	649.48	652.32	4.72	19.03	1.88	647.60	6	643.48	16	633.48	Yes
	11-May-21	649.48	652.14	0.18 feet removed from top of casing								
	9-May-22	650.48	652.32	4.16	20.82	2.32	648.16	6	644.48	16	634.48	Yes
15-May-23	650.48	652.14	4.20	18.82	2.54	647.94	6	644.48	16	634.48	Yes	
MW-24B	See Previous Reports for data prior to 2018											
	31-May-18	648.86	651.45	10.82	49.35	8.23	640.63	41	607.86	46	602.86	Yes
	15-Nov-18	648.86	651.45	11.03	49.81	8.44	640.42	41	607.86	46	602.86	Yes
	27-May-19	648.86	651.45	14.95	49.38	12.36	636.50	41	607.86	46	602.86	Yes
	28-Oct-19	649.09	651.91	11.32	49.37	8.50	640.59	41	608.09	46	603.09	Yes
	18-May-20	649.09	651.91	7.76	49.37	4.94	644.15	41	608.09	46	603.09	Yes
	19-Oct-20	649.09	651.91	15.42	49.41	12.60	636.49	41	608.09	46	603.09	Yes
	10-May-21	649.09	651.91	8.84	49.38	6.02	643.07	41	608.09	46	603.09	Yes
	9-May-22	649.09	651.91	5.25	49.35	2.43	646.66	41	608.09	46	603.09	Yes
15-May-23	649.09	651.91	6.71	49.93	3.89	645.20	41	608.09	46	603.09	Yes	

Table 1: Groundwater Elevation Data
Enbridge Energy Limited Partnership - Superior, WI Terminal

Location	Date	Surface Elevation (ft) [‡]	TOC Elevation (ft) [‡]	Depth to Water (ft bTOC)	Total Well Depth (ft bTOC)	Depth of Water Below Grade (ft bgs)	Relative Water Elevation (ft)	Screened Interval*				Screen Submerged? Yes / No
								TOS		BOS		
								(ft bgs)	(ft)	(ft bgs)	(ft)	
MW-25A	See Previous Reports for data prior to 2018											
	31-May-18	635.91	638.31	2.99	19.22	0.59	635.32	6	629.91	16	619.91	Yes
	19-Nov-18	635.91	638.31	3.59	19.22	1.19	634.72	6	629.91	16	619.91	Yes
	30-May-19	635.91	638.31	3.33	19.21	0.93	634.98	6	629.91	16	619.91	Yes
	28-Oct-19	636.57	639.16	3.45	19.23	0.86	635.71	6	630.57	16	620.57	Yes
	20-May-20	636.57	639.16	3.98	19.25	1.39	635.18	6	630.57	16	620.57	Yes
	20-Oct-20	636.57	639.16	6.01	19.23	3.42	633.15	6	630.57	16	620.57	Yes
	10-May-21	636.57	639.16	3.98	19.26	1.39	635.18	6	630.57	16	620.57	Yes
	9-May-22	636.57	639.16	3.47	19.27	0.88	635.69	6	630.57	16	620.57	Yes
15-May-23	636.57	639.16	3.66	19.50	1.07	635.50	6	630.57	16	620.57	Yes	
MW-25B	See Previous Reports for data prior to 2018											
	31-May-18	635.85	638.52	7.62	49.43	4.95	630.90	41	594.85	46	589.85	Yes
	19-Nov-18	635.85	638.52	8.69	49.45	6.02	629.83	41	594.85	46	589.85	Yes
	30-May-19	635.85	638.52	8.32	49.42	5.65	630.20	41	594.85	46	589.85	Yes
	28-Oct-19	636.59	638.81	9.32	49.42	7.10	629.49	41	595.59	46	590.59	Yes
	20-May-20	636.59	638.81	8.54	49.48	6.32	630.27	41	595.59	46	590.59	Yes
	20-Oct-20	636.59	638.81	9.59	49.45	7.37	629.22	41	595.59	46	590.59	Yes
	10-May-21	636.59	638.81	9.29	50.45	7.07	629.52	41	595.59	46	590.59	Yes
	9-May-22	636.59	638.81	9.21	49.42	6.99	629.60	41	595.59	46	590.59	Yes
15-May-23	636.59	638.81	9.33	50.25	7.11	629.48	41	595.59	46	590.59	Yes	
MW-26	See Previous Reports for data prior to 2018											
	31-May-18	643.44	646.17	7.65	18.90	4.92	638.52	6	637.44	16	627.44	Yes
	19-Nov-18	643.44	646.17	6.90	18.92	4.17	639.27	6	637.44	16	627.44	Yes
	30-May-19	643.44	646.17	7.55	18.91	4.82	638.62	6	637.44	16	627.44	Yes
	28-Oct-19	643.64	646.44	6.88	18.90	4.08	639.56	6	637.64	16	627.64	Yes
	21-May-20	643.64	646.44	6.70	18.91	3.90	639.74	6	637.64	16	627.64	Yes
	20-Oct-20	643.64	646.44	7.83	18.90	5.03	638.61	6	637.64	16	627.64	Yes
	10-May-21	643.64	646.44	8.78	18.92	5.98	637.66	6	637.64	16	627.64	Yes
	9-May-22	643.64	646.44	8.14	18.90	5.34	638.30	6	637.64	16	627.64	Yes
15-May-23	643.64	646.44	6.03	18.87	3.23	640.41	6	637.64	16	627.64	Yes	

Notes: ft = feet bTOC = Below top of casing bgs = below ground surface
 + = When well construction records were not available, the well screen was assumed to be 10 feet (MW-10, MW-11, MW-12, MW-14 and MW-15)
 ‡ = Elevations measured from 2015 to present in NAVD88 (North America Vertical Datum)

Table 2: Groundwater Quality Data
Enbridge Energy Limited Partnership - Superior, WI Terminal

Location	Sampling Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (m,o,p) (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	Naphthalene (µg/L)
MW-1	See Previous Reports for data prior to 2018							
	29-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	15-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	27-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
MW-1 Abandoned on June 18, 2019								
MW-1R	29-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	18-May-20	NA	NA	NA	NA	NA	NA	NA
	19-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	12-May-21	<1.0	<1.0	<1.0	<3.1	<1.0	<1.0	<5.1
	10-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	16-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
MW-2	See Previous Reports for data prior to 2018							
	29-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	14-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	30-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	29-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	19-May-20	NA	NA	NA	NA	NA	NA	NA
	19-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	11-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	13-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
16-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
MW-5	See Previous Reports for data prior to 2018							
	31-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	15-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	29-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	30-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	19-May-20	NA	NA	NA	NA	NA	NA	NA
	21-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	13-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	10-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
16-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
MW-5B	See Previous Reports for data prior to 2018							
	31-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	15-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	29-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	30-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	19-May-20	NA	NA	NA	NA	NA	NA	NA
	21-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	13-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	10-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
16-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
MW-6	See Previous Reports for data prior to 2018							
	30-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	16-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	28-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	29-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	20-May-20	NA	NA	NA	NA	NA	NA	NA
	20-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	11-May-21	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<25.0
	13-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
17-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
MW-6B	See Previous Reports for data prior to 2018							
	30-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	16-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	28-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	29-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	20-May-20	NA	NA	NA	NA	NA	NA	NA
	20-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	11-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	13-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
17-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	

Table 2: Groundwater Quality Data
Enbridge Energy Limited Partnership - Superior, WI Terminal

Location	Sampling Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (m,o,p) (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	Naphthalene (µg/L)
MW-10	See Previous Reports for data prior to 2018							
	30-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	16-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	28-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	31-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	20-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	12-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	10-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
16-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
MW-11	See Previous Reports for data prior to 2018							
	30-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	16-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	29-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	28-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	20-May-20	NA	NA	NA	NA	NA	NA	NA
	21-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	12-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
10-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
17-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
MW-11B	See Previous Reports for data prior to 2018							
	30-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	16-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	29-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	28-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	20-May-20	NA	NA	NA	NA	NA	NA	NA
	21-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	12-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
10-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
17-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
MW-12	See Previous Reports for data prior to 2018							
	31-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	19-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	29-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	28-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	21-May-20	NA	NA	NA	NA	NA	NA	NA
	20-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	12-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
11-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
18-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
MW-14	See Previous Reports for data prior to 2018							
	29-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	14-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	27-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	29-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	19-May-20	NA	NA	NA	NA	NA	NA	NA
	21-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	12-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
13-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
18-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
MW-15	See Previous Reports for data prior to 2018							
	29-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	14-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	27-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	29-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	19-May-20	NA	NA	NA	NA	NA	NA	NA
	21-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	12-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
13-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
18-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	

Table 2: Groundwater Quality Data
Enbridge Energy Limited Partnership - Superior, WI Terminal

Location	Sampling Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (m,o,p) (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	Naphthalene (µg/L)
MW-17	See Previous Reports for data prior to 2018							
	31-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	15-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	29-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	30-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	19-May-20	NA	NA	NA	NA	NA	NA	NA
	22-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	13-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	10-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
16-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
MW-17B	See Previous Reports for data prior to 2018							
	31-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	15-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	29-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	30-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	19-May-20	NA	NA	NA	NA	NA	NA	NA
	22-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	13-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	10-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
16-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
MW-18	See Previous Reports for data prior to 2018							
	31-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	15-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	29-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	30-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	19-May-20	NA	NA	NA	NA	NA	NA	NA
	21-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	13-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	10-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
16-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
MW-19A	See Previous Reports for data prior to 2018							
	29-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	14-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	27-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	29-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	18-May-20	NA	NA	NA	NA	NA	NA	NA
	19-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	11-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	13-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
16-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
MW-19B	See Previous Reports for data prior to 2018							
	29-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	14-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	27-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	29-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	18-May-20	NA	NA	NA	NA	NA	NA	NA
	23-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	11-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	13-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
16-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
MW-20A	See Previous Reports for data prior to 2018							
	30-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	16-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	28-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	30-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	18-May-20	NA	NA	NA	NA	NA	NA	NA
	23-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	11-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	11-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
17-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	

Table 2: Groundwater Quality Data
Enbridge Energy Limited Partnership - Superior, WI Terminal

Location	Sampling Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (m,o,p) (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	Naphthalene (µg/L)
MW-20B	See Previous Reports for data prior to 2018							
	30-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	16-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	28-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	30-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	18-May-20	NA	NA	NA	NA	NA	NA	NA
	19-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	11-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
MW-21A	See Previous Reports for data prior to 2018							
	30-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	16-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	28-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	31-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	20-May-20	NA	NA	NA	NA	NA	NA	NA
	20-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	12-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
MW-21B	See Previous Reports for data prior to 2018							
	30-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	16-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	28-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	31-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	20-May-20	NA	NA	NA	NA	NA	NA	NA
	20-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	12-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
MW-22B	See Previous Reports for data prior to 2018							
	30-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	16-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	28-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	28-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	20-May-20	NA	NA	NA	NA	NA	NA	NA
	21-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	12-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
MW-23B	See Previous Reports for data prior to 2018							
	31-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	15-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	29-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	30-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	19-May-20	NA	NA	NA	NA	NA	NA	NA
	21-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	14-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
MW-24A	See Previous Reports for data prior to 2018							
	31-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	15-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	27-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	28-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	18-May-20	NA	NA	NA	NA	NA	NA	NA
	19-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	11-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
17-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	

Table 2: Groundwater Quality Data
Enbridge Energy Limited Partnership - Superior, WI Terminal

Location	Sampling Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (m,o,p) (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	Naphthalene (µg/L)
MW-24B	See Previous Reports for data prior to 2018							
	31-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	15-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	27-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	28-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	18-May-20	NA	NA	NA	NA	NA	NA	NA
	19-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	11-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
MW-25A	See Previous Reports for data prior to 2018							
	31-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	19-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	30-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	28-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	20-May-20	NA	NA	NA	NA	NA	NA	NA
	20-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	12-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
MW-25B	See Previous Reports for data prior to 2018							
	31-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	19-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	30-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	28-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	20-May-20	NA	NA	NA	NA	NA	NA	NA
	20-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	12-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
MW-26	See Previous Reports for data prior to 2018							
	31-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	19-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	30-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	28-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	21-May-20	NA	NA	NA	NA	NA	NA	NA
	20-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	12-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
Trip Blank	See Previous Reports for data prior to 2018							
	29-May-18	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<1.6
	14-Nov-18	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<4.0
	27-May-19	<1.0	<5.0	<1.0	<3.0	<2.8	<2.9	<5.0
	31-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	<5.5
	31-Oct-19	<0.34	<0.28	<0.46	<1.0	<0.65	<0.41	0.15J
	18-Mar-20	NA	NA	NA	NA	NA	NA	NA
	18-Mar-20	NA	NA	NA	NA	NA	NA	NA
	19-Oct-20	<1.0	<1.0	<1.1	<3.0	<2.8	<2.9	<5.0
	11-May-21	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
10-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
13-May-22	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
16-May-23	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	

Notes:

Analytical parameter methyl-tert-butyl ether (MTBE) is not summarized on the table but no detections have historically been observed

µg/L = micrograms per liter (parts per billion)

NA = Not analyzed for this parameter

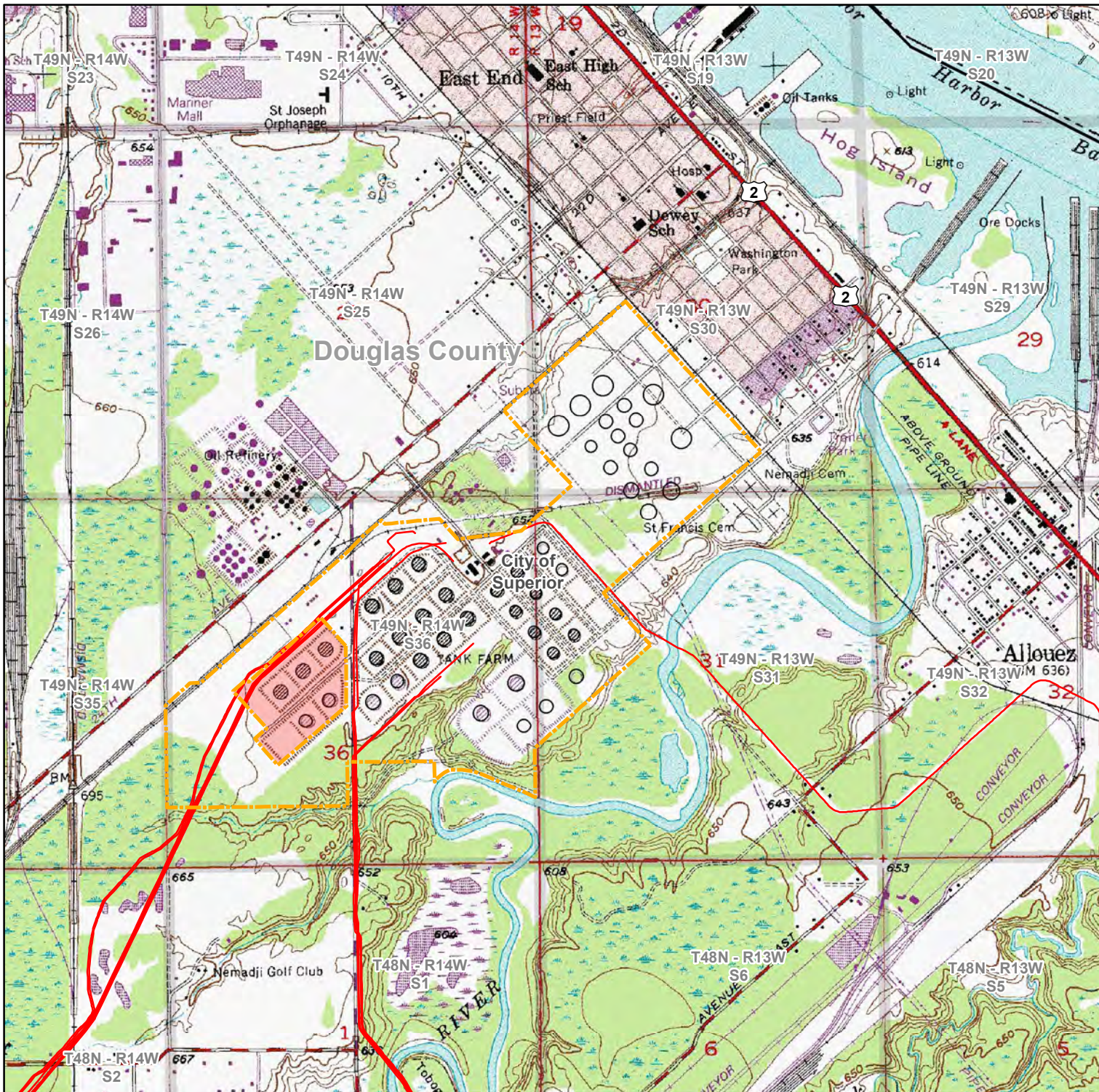
NS = Not sampled for this parameter

<1.0 = not detected above the laboratory practical quantitation limit or reporting limit

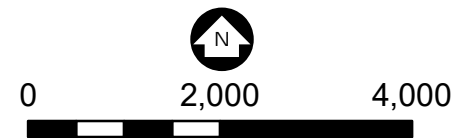
J = Estimated concentration at or above the Limit of Detection and below the Limit of Quantitation

2022 laboratory report and chain of custody include prefix "SR-" to sample location names.

Figures

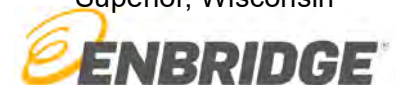


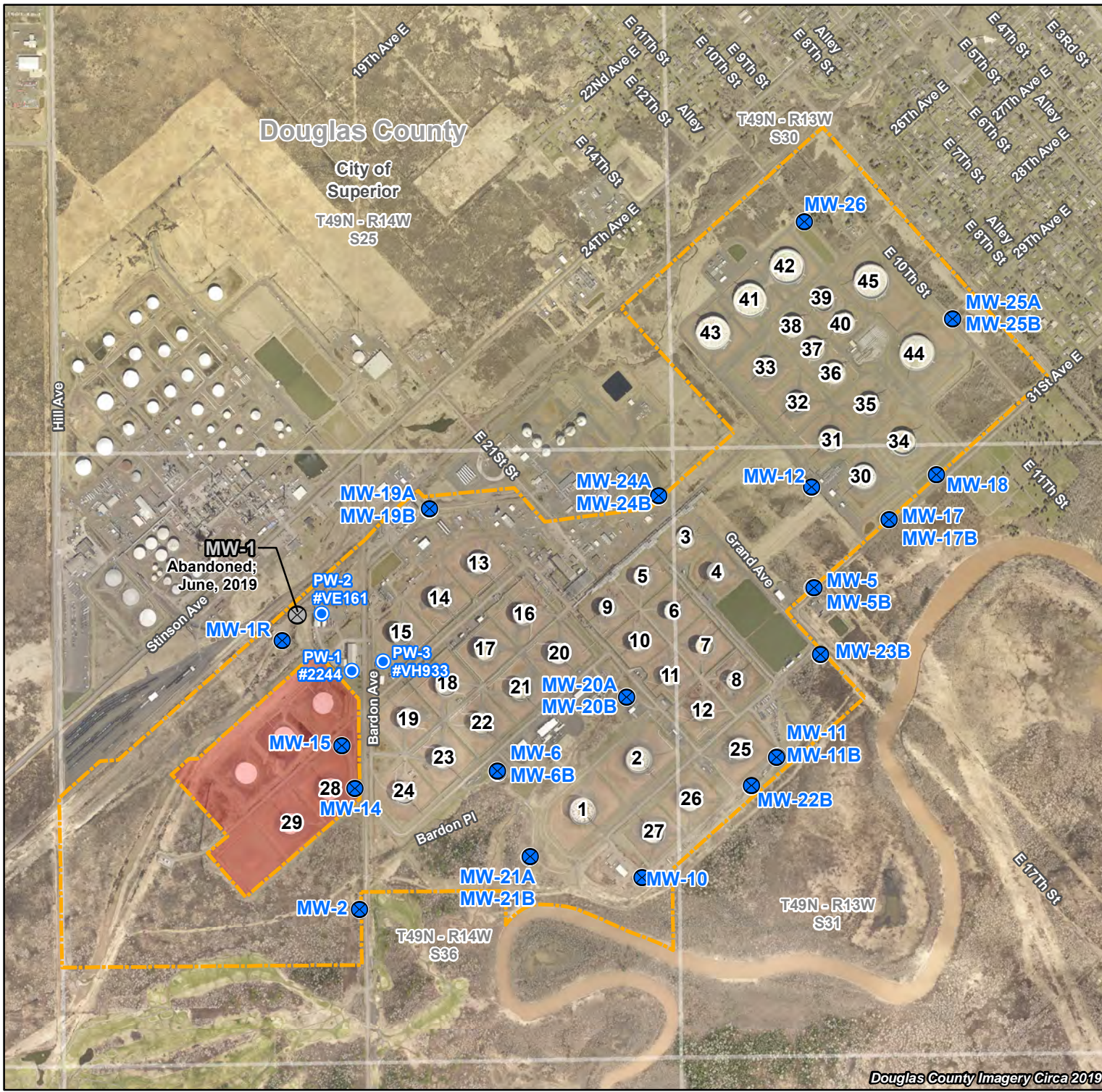
- ★ Site Location
- Enbridge Pipelines
- Terminal Property Boundary
- Non-Enbridge Owned Property



Feet
 1 Inch = 2,000 Feet
 Figure 1

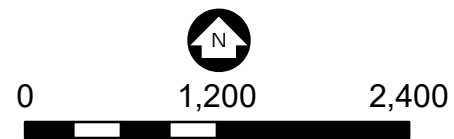
SITE LOCATION
 Superior Terminal
 Enbridge Energy, L.P.
 Superior, Wisconsin





-  Monitoring Well Location
-  Private Well Location
-  Abandonend Monitoring Well
-  Terminal Property Boundary
-  Non-Enbridge Owned Property

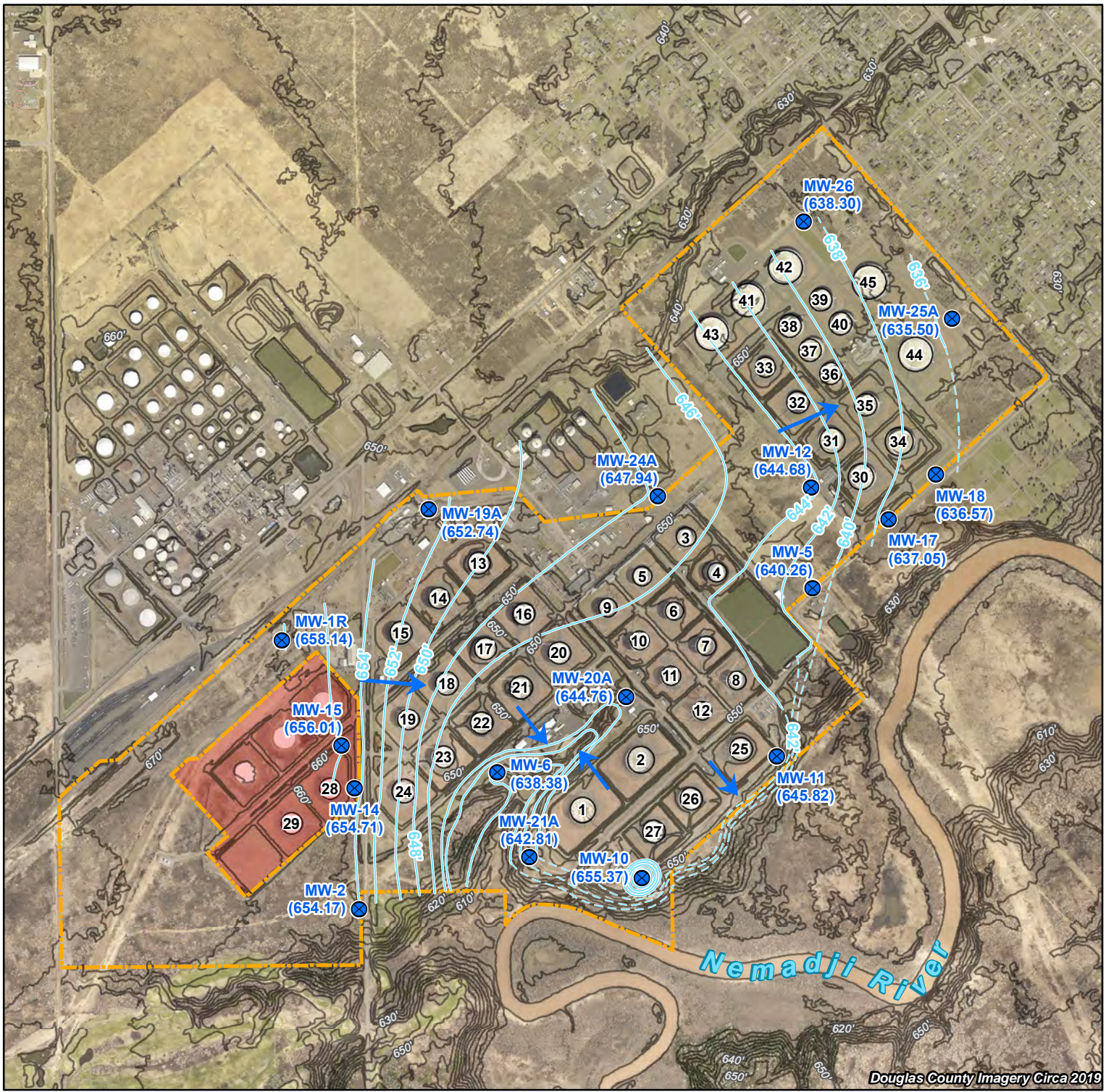
Note:
Monitoring well locations with "B" are deep wells (piezometers).



Feet
1 Inch = 1,200 Feet
Figure 2

MONITORING WELL LOCATIONS
Superior Terminal
Enbridge Energy, L.P.
Superior, Wisconsin





- ★ Site Location
- Monitoring Wells
- Groundwater Elevation (ft NAVD)
- Groundwater Elevation (ft)
- Contour Interval = 2-Foot (Dashed Where Inferred)
- ➔ Groundwater Flow Direction
- ~ 5-Foot Topographic Contours
- Terminal Property Boundary
- Non-Enbridge Owned Property

Groundwater elevations measured on 5/9/22.

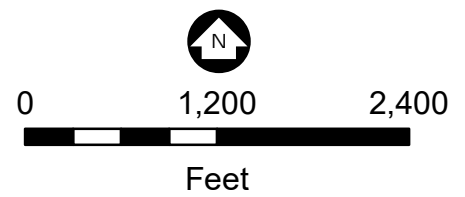
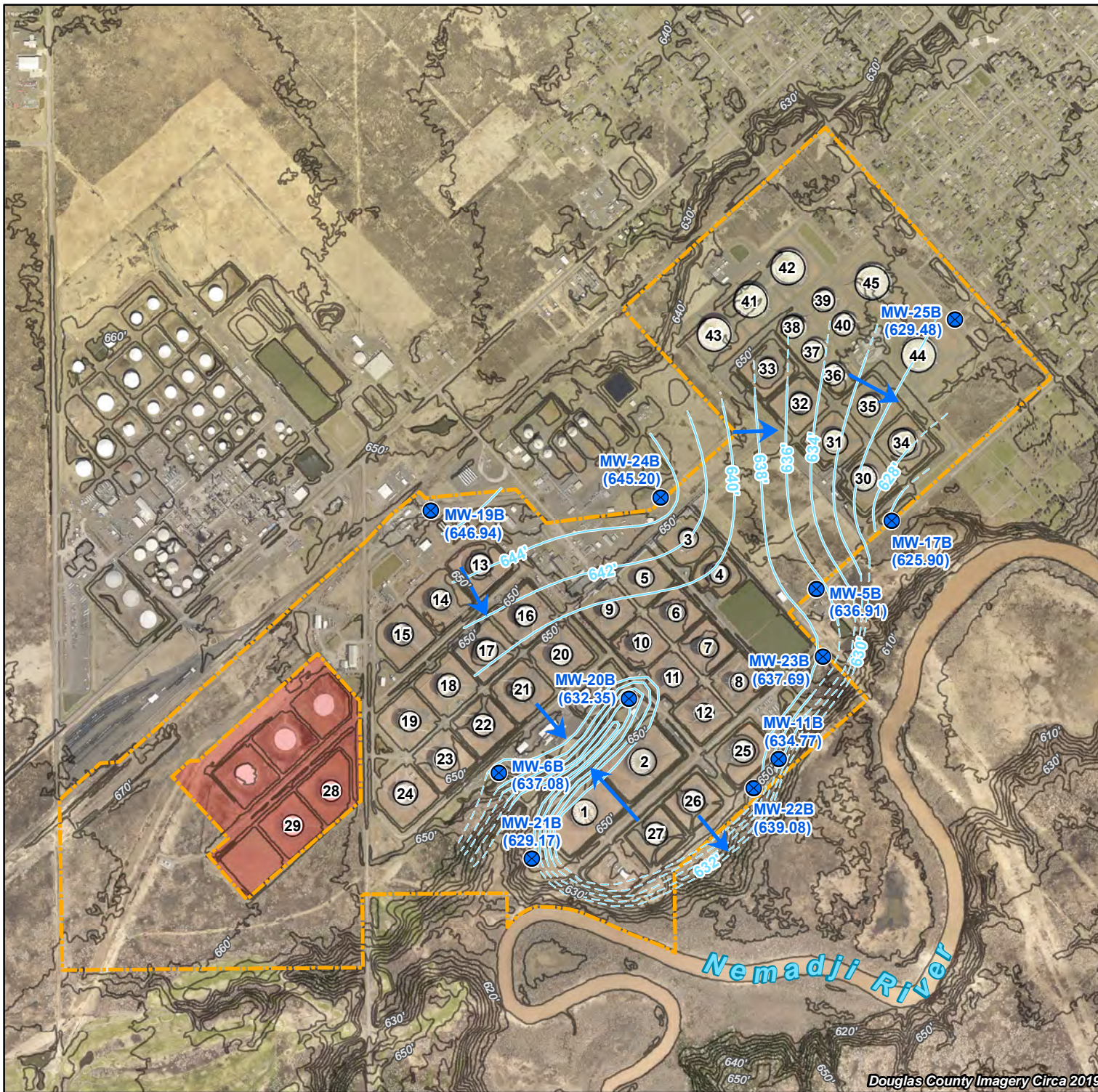


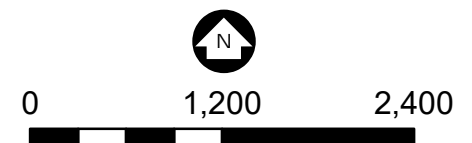
Figure 3
SPRING 2023
SHALLOW GROUNDWATER
ELEVATION CONTOURS
 Superior Terminal
 Enbridge Energy, L.P.
 Superior, Wisconsin





- ★ Site Location
- ⊗ Monitoring Wells - Piezometer
Groundwater Elevation (ft NAVD)
- Groundwater Elevation (ft)
Contour Interval = 2-Foot
(Dashed Where Inferred)
- Groundwater Flow Direction
- ~ 5-Foot Topographic Contours
- - - Terminal Property Boundary
- Non-Enbridge Owned Property

Groundwater elevations measured on 5/9/22.



Feet
1 Inch = 1,200 Feet
Figure 4
**SPRING 2023
DEEP GROUNDWATER
ELEVATION CONTOURS**
Superior Terminal
Enbridge Energy, L.P.
Superior, Wisconsin



Douglas County Imagery Circa 2019

Appendices

Appendix A

Laboratory Analytical Reports

Enbridge - Houston, TX

Sample Delivery Group: L1618283
Samples Received: 05/19/2023
Project Number: COC-014017
Description: Superior - Terminal OIL 10076-Texas Eastern
Transmission, LP
Report To: Joe Bauer
915 N. Eldridge Parkway
Suite 1100
Houston, TX 77079

Entire Report Reviewed By:



Jennifer Gambill
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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Volatile Organic Compounds (GC/MS) by Method 8260B

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Sc: Sample Chain of Custody

47

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

SAMPLE SUMMARY

COC-014017-01 SR-MW-1R L1618283-01 GW

Collected by
Collected date/time
Received date/time

05/16/23 14:02
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 11:32	05/27/23 11:32	JAH	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

COC-014017-02 SR-MW-2 L1618283-02 GW

Collected by
Collected date/time
Received date/time

05/16/23 13:15
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 11:51	05/27/23 11:51	JAH	Mt. Juliet, TN

⁴ Cn

⁵ Sr

COC-014017-03 SR-MW-5 L1618283-03 GW

Collected by
Collected date/time
Received date/time

05/16/23 10:04
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 12:10	05/27/23 12:10	JAH	Mt. Juliet, TN

⁶ Qc

⁷ Is

COC-014017-04 SR-MW-5B L1618283-04 GW

Collected by
Collected date/time
Received date/time

05/16/23 10:47
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 12:29	05/27/23 12:29	JAH	Mt. Juliet, TN

⁸ Gl

⁹ Al

COC-014017-05 SR-MW-6 L1618283-05 GW

Collected by
Collected date/time
Received date/time

05/17/23 13:10
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 12:48	05/27/23 12:48	JAH	Mt. Juliet, TN

¹⁰ Sc

COC-014017-06 SR-MW-6B L1618283-06 GW

Collected by
Collected date/time
Received date/time

05/17/23 13:00
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 13:08	05/27/23 13:08	JAH	Mt. Juliet, TN

COC-014017-07 SR-MW-10 L1618283-07 GW

Collected by
Collected date/time
Received date/time

05/16/23 16:16
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 13:27	05/27/23 13:27	JAH	Mt. Juliet, TN

COC-014017-08 SR-MW-11 L1618283-08 GW

Collected by
Collected date/time
Received date/time

05/17/23 14:42
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 13:46	05/27/23 13:46	JAH	Mt. Juliet, TN

SAMPLE SUMMARY

COC-014017-09 SR-MW-11B L1618283-09 GW

Collected by
Collected date/time
Received date/time

05/17/23 15:04
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 14:05	05/27/23 14:05	JAH	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

COC-014017-10 SR-MW-12 L1618283-10 GW

Collected by
Collected date/time
Received date/time

05/18/23 09:20
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 14:24	05/27/23 14:24	JAH	Mt. Juliet, TN

4 Cn

5 Sr

COC-014017-11 SR-MW-14 L1618283-11 GW

Collected by
Collected date/time
Received date/time

05/18/23 10:55
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 14:43	05/27/23 14:43	JAH	Mt. Juliet, TN

6 Qc

7 Is

COC-014017-12 SR-MW-15 L1618283-12 GW

Collected by
Collected date/time
Received date/time

05/18/23 11:27
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 15:02	05/27/23 15:02	JAH	Mt. Juliet, TN

8 Gl

9 Al

COC-014017-13 SR-MW-17 L1618283-13 GW

Collected by
Collected date/time
Received date/time

05/16/23 11:15
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 15:21	05/27/23 15:21	JAH	Mt. Juliet, TN

10 Sc

COC-014017-14 SR-MW-17B L1618283-14 GW

Collected by
Collected date/time
Received date/time

05/16/23 11:40
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 15:40	05/27/23 15:40	JAH	Mt. Juliet, TN

COC-014017-15 SR-MW-18 L1618283-15 GW

Collected by
Collected date/time
Received date/time

05/16/23 12:10
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 15:59	05/27/23 15:59	JAH	Mt. Juliet, TN

COC-014017-16 SR-MW-19A L1618283-16 GW

Collected by
Collected date/time
Received date/time

05/16/23 15:32
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 16:18	05/27/23 16:18	JAH	Mt. Juliet, TN

SAMPLE SUMMARY

COC-014017-17 SR-MW-19B L1618283-17 GW

Collected by
Collected date/time
Received date/time

05/16/23 15:10
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 16:38	05/27/23 16:38	JAH	Mt. Juliet, TN

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Is

8
Gl

9
Al

10
Sc

COC-014017-18 SR-MW-20A L1618283-18 GW

Collected by
Collected date/time
Received date/time

05/17/23 15:42
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 16:57	05/27/23 16:57	JAH	Mt. Juliet, TN

COC-014017-19 SR-MW-20B L1618283-19 GW

Collected by
Collected date/time
Received date/time

05/17/23 15:57
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 17:16	05/27/23 17:16	JAH	Mt. Juliet, TN

COC-014017-20 SR-MW-21A L1618283-20 GW

Collected by
Collected date/time
Received date/time

05/17/23 13:54
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067657	1	05/27/23 17:35	05/27/23 17:35	JAH	Mt. Juliet, TN

COC-014017-21 SR-MW-21B L1618283-21 GW

Collected by
Collected date/time
Received date/time

05/17/23 14:00
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067682	1	05/28/23 15:11	05/28/23 15:11	KSD	Mt. Juliet, TN

COC-014017-22 SR-MW-22B L1618283-22 GW

Collected by
Collected date/time
Received date/time

05/16/23 17:02
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067682	1	05/28/23 15:30	05/28/23 15:30	KSD	Mt. Juliet, TN

COC-014017-23 SR-MW-23B L1618283-23 GW

Collected by
Collected date/time
Received date/time

05/16/23 09:15
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067682	1	05/28/23 15:50	05/28/23 15:50	KSD	Mt. Juliet, TN

COC-014017-24 SR-MW-24A L1618283-24 GW

Collected by
Collected date/time
Received date/time

05/17/23 16:45
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067682	1	05/28/23 16:09	05/28/23 16:09	KSD	Mt. Juliet, TN

SAMPLE SUMMARY

COC-014017-25 SR-MW-24B L1618283-25 GW

Collected by
Collected date/time
Received date/time

05/17/23 17:05
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067682	1	05/28/23 16:28	05/28/23 16:28	KSD	Mt. Juliet, TN

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Is

8
Gl

9
Al

10
Sc

COC-014017-26 SR-MW-25A L1618283-26 GW

Collected by
Collected date/time
Received date/time

05/18/23 08:47
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067682	1	05/28/23 16:48	05/28/23 16:48	KSD	Mt. Juliet, TN

COC-014017-27 SR-MW-25B L1618283-27 GW

Collected by
Collected date/time
Received date/time

05/18/23 08:30
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067682	1	05/28/23 17:07	05/28/23 17:07	KSD	Mt. Juliet, TN

COC-014017-28 SR-MW-26 L1618283-28 GW

Collected by
Collected date/time
Received date/time

05/18/23 07:40
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067682	1	05/28/23 17:26	05/28/23 17:26	KSD	Mt. Juliet, TN

COC-014017-29 MISC DUP-1 L1618283-29 GW

Collected by
Collected date/time
Received date/time

05/16/23 00:00
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067682	1	05/28/23 17:46	05/28/23 17:46	KSD	Mt. Juliet, TN

COC-014017-30 MISC DUP-2 L1618283-30 GW

Collected by
Collected date/time
Received date/time

05/16/23 00:00
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067682	1	05/28/23 18:05	05/28/23 18:05	KSD	Mt. Juliet, TN

COC-014017-31 MISC DUP-3 L1618283-31 GW

Collected by
Collected date/time
Received date/time

05/18/23 00:00
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067682	1	05/28/23 18:25	05/28/23 18:25	KSD	Mt. Juliet, TN

COC-014017-32 MISC TRIP BLANK 1 L1618283-32 GW

Collected by
Collected date/time
Received date/time

05/16/23 00:00
05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2067682	1	05/28/23 13:34	05/28/23 13:34	KSD	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.



Jennifer Gambill
Project Manager

Sample Delivery Group (SDG) Narrative

pH outside of method requirement.

<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L1618283-07	COC-014017-07 SR-MW-10	8260B



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 11:32	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 11:32	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 11:32	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 11:32	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 11:32	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 11:32	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 11:32	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 11:32	WG2067657
<i>(S) Toluene-d8</i>	116		80.0-120		05/27/2023 11:32	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	101		77.0-126		05/27/2023 11:32	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	112		70.0-130		05/27/2023 11:32	WG2067657

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

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 11:51	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 11:51	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 11:51	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 11:51	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 11:51	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 11:51	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 11:51	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 11:51	WG2067657
<i>(S) Toluene-d8</i>	116		80.0-120		05/27/2023 11:51	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	97.9		77.0-126		05/27/2023 11:51	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	108		70.0-130		05/27/2023 11:51	WG2067657

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 12:10	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 12:10	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 12:10	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 12:10	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 12:10	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 12:10	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 12:10	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 12:10	WG2067657
<i>(S) Toluene-d8</i>	119		80.0-120		05/27/2023 12:10	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	102		77.0-126		05/27/2023 12:10	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	108		70.0-130		05/27/2023 12:10	WG2067657

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 12:29	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 12:29	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 12:29	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 12:29	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 12:29	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 12:29	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 12:29	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 12:29	WG2067657
<i>(S) Toluene-d8</i>	117		80.0-120		05/27/2023 12:29	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	98.9		77.0-126		05/27/2023 12:29	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	108		70.0-130		05/27/2023 12:29	WG2067657

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 12:48	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 12:48	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 12:48	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 12:48	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 12:48	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 12:48	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 12:48	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 12:48	WG2067657
<i>(S) Toluene-d8</i>	116		80.0-120		05/27/2023 12:48	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	99.1		77.0-126		05/27/2023 12:48	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	107		70.0-130		05/27/2023 12:48	WG2067657

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

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 13:08	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 13:08	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 13:08	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 13:08	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 13:08	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 13:08	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 13:08	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 13:08	WG2067657
<i>(S) Toluene-d8</i>	114		80.0-120		05/27/2023 13:08	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	99.4		77.0-126		05/27/2023 13:08	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	104		70.0-130		05/27/2023 13:08	WG2067657

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 13:27	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 13:27	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 13:27	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 13:27	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 13:27	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 13:27	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 13:27	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 13:27	WG2067657
<i>(S) Toluene-d8</i>	115		80.0-120		05/27/2023 13:27	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	98.6		77.0-126		05/27/2023 13:27	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	106		70.0-130		05/27/2023 13:27	WG2067657

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 13:46	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 13:46	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 13:46	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 13:46	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 13:46	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 13:46	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 13:46	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 13:46	WG2067657
<i>(S) Toluene-d8</i>	119		80.0-120		05/27/2023 13:46	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	101		77.0-126		05/27/2023 13:46	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	107		70.0-130		05/27/2023 13:46	WG2067657

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 14:05	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 14:05	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 14:05	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 14:05	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 14:05	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 14:05	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 14:05	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 14:05	WG2067657
<i>(S) Toluene-d8</i>	113		80.0-120		05/27/2023 14:05	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	99.6		77.0-126		05/27/2023 14:05	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	108		70.0-130		05/27/2023 14:05	WG2067657

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

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 14:24	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 14:24	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 14:24	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 14:24	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 14:24	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 14:24	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 14:24	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 14:24	WG2067657
<i>(S) Toluene-d8</i>	120		80.0-120		05/27/2023 14:24	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	97.9		77.0-126		05/27/2023 14:24	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	108		70.0-130		05/27/2023 14:24	WG2067657

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 14:43	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 14:43	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 14:43	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 14:43	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 14:43	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 14:43	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 14:43	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 14:43	WG2067657
<i>(S) Toluene-d8</i>	117		80.0-120		05/27/2023 14:43	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	101		77.0-126		05/27/2023 14:43	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	111		70.0-130		05/27/2023 14:43	WG2067657

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 15:02	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 15:02	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 15:02	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 15:02	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 15:02	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 15:02	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 15:02	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 15:02	WG2067657
<i>(S) Toluene-d8</i>	118		80.0-120		05/27/2023 15:02	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	97.7		77.0-126		05/27/2023 15:02	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	108		70.0-130		05/27/2023 15:02	WG2067657

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 15:21	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 15:21	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 15:21	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 15:21	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 15:21	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 15:21	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 15:21	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 15:21	WG2067657
<i>(S) Toluene-d8</i>	118		80.0-120		05/27/2023 15:21	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	95.7		77.0-126		05/27/2023 15:21	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	109		70.0-130		05/27/2023 15:21	WG2067657

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 15:40	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 15:40	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 15:40	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 15:40	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 15:40	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 15:40	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 15:40	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 15:40	WG2067657
<i>(S) Toluene-d8</i>	114		80.0-120		05/27/2023 15:40	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	97.3		77.0-126		05/27/2023 15:40	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	110		70.0-130		05/27/2023 15:40	WG2067657

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

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 15:59	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 15:59	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 15:59	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 15:59	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 15:59	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 15:59	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 15:59	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 15:59	WG2067657
<i>(S) Toluene-d8</i>	115		80.0-120		05/27/2023 15:59	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	96.8		77.0-126		05/27/2023 15:59	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	104		70.0-130		05/27/2023 15:59	WG2067657

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 16:18	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 16:18	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 16:18	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 16:18	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 16:18	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 16:18	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 16:18	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 16:18	WG2067657
<i>(S) Toluene-d8</i>	117		80.0-120		05/27/2023 16:18	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	99.2		77.0-126		05/27/2023 16:18	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	110		70.0-130		05/27/2023 16:18	WG2067657

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

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 16:38	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 16:38	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 16:38	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 16:38	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 16:38	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 16:38	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 16:38	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 16:38	WG2067657
<i>(S) Toluene-d8</i>	118		80.0-120		05/27/2023 16:38	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	98.8		77.0-126		05/27/2023 16:38	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	109		70.0-130		05/27/2023 16:38	WG2067657

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

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 16:57	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 16:57	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 16:57	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 16:57	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 16:57	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 16:57	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 16:57	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 16:57	WG2067657
<i>(S) Toluene-d8</i>	117		80.0-120		05/27/2023 16:57	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	94.9		77.0-126		05/27/2023 16:57	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	110		70.0-130		05/27/2023 16:57	WG2067657

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 17:16	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 17:16	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 17:16	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 17:16	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 17:16	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 17:16	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 17:16	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 17:16	WG2067657
<i>(S) Toluene-d8</i>	118		80.0-120		05/27/2023 17:16	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	98.9		77.0-126		05/27/2023 17:16	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	109		70.0-130		05/27/2023 17:16	WG2067657

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/27/2023 17:35	WG2067657
Ethylbenzene	<1.00		1.00	1	05/27/2023 17:35	WG2067657
Methyl tert-butyl ether	<1.00		1.00	1	05/27/2023 17:35	WG2067657
Naphthalene	<5.00		5.00	1	05/27/2023 17:35	WG2067657
Toluene	<1.00		1.00	1	05/27/2023 17:35	WG2067657
1,2,4-Trimethylbenzene	<1.00		1.00	1	05/27/2023 17:35	WG2067657
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/27/2023 17:35	WG2067657
Xylenes, Total	<3.00		3.00	1	05/27/2023 17:35	WG2067657
<i>(S) Toluene-d8</i>	118		80.0-120		05/27/2023 17:35	WG2067657
<i>(S) 4-Bromofluorobenzene</i>	102		77.0-126		05/27/2023 17:35	WG2067657
<i>(S) 1,2-Dichloroethane-d4</i>	109		70.0-130		05/27/2023 17:35	WG2067657

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/28/2023 15:11	WG2067682
Ethylbenzene	<1.00		1.00	1	05/28/2023 15:11	WG2067682
Methyl tert-butyl ether	<1.00		1.00	1	05/28/2023 15:11	WG2067682
Naphthalene	<5.00		5.00	1	05/28/2023 15:11	WG2067682
Toluene	<1.00		1.00	1	05/28/2023 15:11	WG2067682
1,2,4-Trimethylbenzene	<1.00	J4	1.00	1	05/28/2023 15:11	WG2067682
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/28/2023 15:11	WG2067682
Xylenes, Total	<3.00		3.00	1	05/28/2023 15:11	WG2067682
<i>(S) Toluene-d8</i>	90.6		80.0-120		05/28/2023 15:11	WG2067682
<i>(S) 4-Bromofluorobenzene</i>	82.1		77.0-126		05/28/2023 15:11	WG2067682
<i>(S) 1,2-Dichloroethane-d4</i>	109		70.0-130		05/28/2023 15:11	WG2067682

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

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/28/2023 15:30	WG2067682
Ethylbenzene	<1.00		1.00	1	05/28/2023 15:30	WG2067682
Methyl tert-butyl ether	<1.00		1.00	1	05/28/2023 15:30	WG2067682
Naphthalene	<5.00		5.00	1	05/28/2023 15:30	WG2067682
Toluene	<1.00		1.00	1	05/28/2023 15:30	WG2067682
1,2,4-Trimethylbenzene	<1.00	J4	1.00	1	05/28/2023 15:30	WG2067682
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/28/2023 15:30	WG2067682
Xylenes, Total	<3.00		3.00	1	05/28/2023 15:30	WG2067682
<i>(S) Toluene-d8</i>	92.1		80.0-120		05/28/2023 15:30	WG2067682
<i>(S) 4-Bromofluorobenzene</i>	87.6		77.0-126		05/28/2023 15:30	WG2067682
<i>(S) 1,2-Dichloroethane-d4</i>	114		70.0-130		05/28/2023 15:30	WG2067682

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/28/2023 15:50	WG2067682
Ethylbenzene	<1.00		1.00	1	05/28/2023 15:50	WG2067682
Methyl tert-butyl ether	<1.00		1.00	1	05/28/2023 15:50	WG2067682
Naphthalene	<5.00		5.00	1	05/28/2023 15:50	WG2067682
Toluene	<1.00		1.00	1	05/28/2023 15:50	WG2067682
1,2,4-Trimethylbenzene	<1.00	J4	1.00	1	05/28/2023 15:50	WG2067682
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/28/2023 15:50	WG2067682
Xylenes, Total	<3.00		3.00	1	05/28/2023 15:50	WG2067682
<i>(S) Toluene-d8</i>	92.1		80.0-120		05/28/2023 15:50	WG2067682
<i>(S) 4-Bromofluorobenzene</i>	78.1		77.0-126		05/28/2023 15:50	WG2067682
<i>(S) 1,2-Dichloroethane-d4</i>	113		70.0-130		05/28/2023 15:50	WG2067682

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/28/2023 16:09	WG2067682
Ethylbenzene	<1.00		1.00	1	05/28/2023 16:09	WG2067682
Methyl tert-butyl ether	<1.00		1.00	1	05/28/2023 16:09	WG2067682
Naphthalene	<5.00		5.00	1	05/28/2023 16:09	WG2067682
Toluene	<1.00		1.00	1	05/28/2023 16:09	WG2067682
1,2,4-Trimethylbenzene	<1.00	J4	1.00	1	05/28/2023 16:09	WG2067682
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/28/2023 16:09	WG2067682
Xylenes, Total	<3.00		3.00	1	05/28/2023 16:09	WG2067682
<i>(S) Toluene-d8</i>	93.3		80.0-120		05/28/2023 16:09	WG2067682
<i>(S) 4-Bromofluorobenzene</i>	77.8		77.0-126		05/28/2023 16:09	WG2067682
<i>(S) 1,2-Dichloroethane-d4</i>	121		70.0-130		05/28/2023 16:09	WG2067682

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/28/2023 16:28	WG2067682
Ethylbenzene	<1.00		1.00	1	05/28/2023 16:28	WG2067682
Methyl tert-butyl ether	<1.00		1.00	1	05/28/2023 16:28	WG2067682
Naphthalene	<5.00		5.00	1	05/28/2023 16:28	WG2067682
Toluene	<1.00		1.00	1	05/28/2023 16:28	WG2067682
1,2,4-Trimethylbenzene	<1.00	J4	1.00	1	05/28/2023 16:28	WG2067682
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/28/2023 16:28	WG2067682
Xylenes, Total	<3.00		3.00	1	05/28/2023 16:28	WG2067682
<i>(S) Toluene-d8</i>	96.9		80.0-120		05/28/2023 16:28	WG2067682
<i>(S) 4-Bromofluorobenzene</i>	76.9	J2	77.0-126		05/28/2023 16:28	WG2067682
<i>(S) 1,2-Dichloroethane-d4</i>	115		70.0-130		05/28/2023 16:28	WG2067682

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

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/28/2023 16:48	WG2067682
Ethylbenzene	<1.00		1.00	1	05/28/2023 16:48	WG2067682
Methyl tert-butyl ether	<1.00		1.00	1	05/28/2023 16:48	WG2067682
Naphthalene	<5.00		5.00	1	05/28/2023 16:48	WG2067682
Toluene	<1.00		1.00	1	05/28/2023 16:48	WG2067682
1,2,4-Trimethylbenzene	<1.00	J4	1.00	1	05/28/2023 16:48	WG2067682
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/28/2023 16:48	WG2067682
Xylenes, Total	<3.00		3.00	1	05/28/2023 16:48	WG2067682
<i>(S) Toluene-d8</i>	98.3		80.0-120		05/28/2023 16:48	WG2067682
<i>(S) 4-Bromofluorobenzene</i>	80.7		77.0-126		05/28/2023 16:48	WG2067682
<i>(S) 1,2-Dichloroethane-d4</i>	113		70.0-130		05/28/2023 16:48	WG2067682

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

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/28/2023 17:07	WG2067682
Ethylbenzene	<1.00		1.00	1	05/28/2023 17:07	WG2067682
Methyl tert-butyl ether	<1.00		1.00	1	05/28/2023 17:07	WG2067682
Naphthalene	<5.00		5.00	1	05/28/2023 17:07	WG2067682
Toluene	<1.00		1.00	1	05/28/2023 17:07	WG2067682
1,2,4-Trimethylbenzene	<1.00	J4	1.00	1	05/28/2023 17:07	WG2067682
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/28/2023 17:07	WG2067682
Xylenes, Total	<3.00		3.00	1	05/28/2023 17:07	WG2067682
<i>(S) Toluene-d8</i>	97.9		80.0-120		05/28/2023 17:07	WG2067682
<i>(S) 4-Bromofluorobenzene</i>	84.4		77.0-126		05/28/2023 17:07	WG2067682
<i>(S) 1,2-Dichloroethane-d4</i>	115		70.0-130		05/28/2023 17:07	WG2067682

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

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/28/2023 17:26	WG2067682
Ethylbenzene	<1.00		1.00	1	05/28/2023 17:26	WG2067682
Methyl tert-butyl ether	<1.00		1.00	1	05/28/2023 17:26	WG2067682
Naphthalene	<5.00		5.00	1	05/28/2023 17:26	WG2067682
Toluene	<1.00		1.00	1	05/28/2023 17:26	WG2067682
1,2,4-Trimethylbenzene	<1.00	<u>J4</u>	1.00	1	05/28/2023 17:26	WG2067682
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/28/2023 17:26	WG2067682
Xylenes, Total	<3.00		3.00	1	05/28/2023 17:26	WG2067682
<i>(S) Toluene-d8</i>	97.0		80.0-120		05/28/2023 17:26	WG2067682
<i>(S) 4-Bromofluorobenzene</i>	82.1		77.0-126		05/28/2023 17:26	WG2067682
<i>(S) 1,2-Dichloroethane-d4</i>	116		70.0-130		05/28/2023 17:26	WG2067682

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

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/28/2023 17:46	WG2067682
Ethylbenzene	<1.00		1.00	1	05/28/2023 17:46	WG2067682
Methyl tert-butyl ether	<1.00		1.00	1	05/28/2023 17:46	WG2067682
Naphthalene	<5.00		5.00	1	05/28/2023 17:46	WG2067682
Toluene	<1.00		1.00	1	05/28/2023 17:46	WG2067682
1,2,4-Trimethylbenzene	<1.00	J4	1.00	1	05/28/2023 17:46	WG2067682
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/28/2023 17:46	WG2067682
Xylenes, Total	<3.00		3.00	1	05/28/2023 17:46	WG2067682
<i>(S) Toluene-d8</i>	93.2		80.0-120		05/28/2023 17:46	WG2067682
<i>(S) 4-Bromofluorobenzene</i>	85.3		77.0-126		05/28/2023 17:46	WG2067682
<i>(S) 1,2-Dichloroethane-d4</i>	119		70.0-130		05/28/2023 17:46	WG2067682

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/28/2023 18:05	WG2067682
Ethylbenzene	<1.00		1.00	1	05/28/2023 18:05	WG2067682
Methyl tert-butyl ether	<1.00		1.00	1	05/28/2023 18:05	WG2067682
Naphthalene	<5.00		5.00	1	05/28/2023 18:05	WG2067682
Toluene	<1.00		1.00	1	05/28/2023 18:05	WG2067682
1,2,4-Trimethylbenzene	<1.00	J4	1.00	1	05/28/2023 18:05	WG2067682
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/28/2023 18:05	WG2067682
Xylenes, Total	<3.00		3.00	1	05/28/2023 18:05	WG2067682
<i>(S) Toluene-d8</i>	93.9		80.0-120		05/28/2023 18:05	WG2067682
<i>(S) 4-Bromofluorobenzene</i>	76.8	J2	77.0-126		05/28/2023 18:05	WG2067682
<i>(S) 1,2-Dichloroethane-d4</i>	114		70.0-130		05/28/2023 18:05	WG2067682

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/28/2023 18:25	WG2067682
Ethylbenzene	<1.00		1.00	1	05/28/2023 18:25	WG2067682
Methyl tert-butyl ether	<1.00		1.00	1	05/28/2023 18:25	WG2067682
Naphthalene	<5.00		5.00	1	05/28/2023 18:25	WG2067682
Toluene	<1.00		1.00	1	05/28/2023 18:25	WG2067682
1,2,4-Trimethylbenzene	<1.00	J4	1.00	1	05/28/2023 18:25	WG2067682
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/28/2023 18:25	WG2067682
Xylenes, Total	<3.00		3.00	1	05/28/2023 18:25	WG2067682
<i>(S) Toluene-d8</i>	99.4		80.0-120		05/28/2023 18:25	WG2067682
<i>(S) 4-Bromofluorobenzene</i>	78.1		77.0-126		05/28/2023 18:25	WG2067682
<i>(S) 1,2-Dichloroethane-d4</i>	116		70.0-130		05/28/2023 18:25	WG2067682

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

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	<1.00		1.00	1	05/28/2023 13:34	WG2067682
Ethylbenzene	<1.00		1.00	1	05/28/2023 13:34	WG2067682
Methyl tert-butyl ether	<1.00		1.00	1	05/28/2023 13:34	WG2067682
Naphthalene	<5.00		5.00	1	05/28/2023 13:34	WG2067682
Toluene	<1.00		1.00	1	05/28/2023 13:34	WG2067682
1,2,4-Trimethylbenzene	<1.00	J4	1.00	1	05/28/2023 13:34	WG2067682
1,3,5-Trimethylbenzene	<1.00		1.00	1	05/28/2023 13:34	WG2067682
Xylenes, Total	<3.00		3.00	1	05/28/2023 13:34	WG2067682
<i>(S) Toluene-d8</i>	93.4		80.0-120		05/28/2023 13:34	WG2067682
<i>(S) 4-Bromofluorobenzene</i>	79.8		77.0-126		05/28/2023 13:34	WG2067682
<i>(S) 1,2-Dichloroethane-d4</i>	116		70.0-130		05/28/2023 13:34	WG2067682

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

Method Blank (MB)

(MB) R3930204-3 05/27/23 10:09

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	<0.0941		0.0941	1.00
Ethylbenzene	<0.137		0.137	1.00
Methyl tert-butyl ether	<0.101		0.101	1.00
Naphthalene	<1.00		1.00	5.00
Toluene	<0.278		0.278	1.00
1,2,4-Trimethylbenzene	<0.322		0.322	1.00
1,3,5-Trimethylbenzene	<0.104		0.104	1.00
Xylenes, Total	<0.174		0.174	3.00
<i>(S) Toluene-d8</i>	118			80.0-120
<i>(S) 4-Bromofluorobenzene</i>	98.3			77.0-126
<i>(S) 1,2-Dichloroethane-d4</i>	107			70.0-130

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

(LCS) R3930204-1 05/27/23 09:12 • (LCSD) R3930204-2 05/27/23 09:31

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	4.59	4.49	91.8	89.8	70.0-123			2.20	20
Ethylbenzene	5.00	4.56	4.36	91.2	87.2	79.0-123			4.48	20
Methyl tert-butyl ether	5.00	3.80	3.85	76.0	77.0	68.0-125			1.31	20
Naphthalene	5.00	3.82	3.87	76.4	77.4	54.0-135			1.30	20
Toluene	5.00	4.75	4.59	95.0	91.8	79.0-120			3.43	20
1,2,4-Trimethylbenzene	5.00	4.18	4.08	83.6	81.6	76.0-121			2.42	20
1,3,5-Trimethylbenzene	5.00	4.30	4.07	86.0	81.4	76.0-122			5.50	20
Xylenes, Total	15.0	14.0	13.2	93.3	88.0	79.0-123			5.88	20
<i>(S) Toluene-d8</i>				113	114	80.0-120				
<i>(S) 4-Bromofluorobenzene</i>				99.9	97.2	77.0-126				
<i>(S) 1,2-Dichloroethane-d4</i>				106	110	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

Method Blank (MB)

(MB) R3930924-3 05/28/23 13:14

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	<0.0941		0.0941	1.00
Ethylbenzene	<0.137		0.137	1.00
Methyl tert-butyl ether	<0.101		0.101	1.00
Naphthalene	<1.00		1.00	5.00
Toluene	<0.278		0.278	1.00
1,2,4-Trimethylbenzene	<0.322		0.322	1.00
1,3,5-Trimethylbenzene	<0.104		0.104	1.00
Xylenes, Total	<0.174		0.174	3.00
(S) Toluene-d8	96.8			80.0-120
(S) 4-Bromofluorobenzene	79.2			77.0-126
(S) 1,2-Dichloroethane-d4	116			70.0-130

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

(LCS) R3930924-1 05/28/23 11:13 • (LCSD) R3930924-2 05/28/23 11:33

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	5.20	5.06	104	101	70.0-123			2.73	20
Ethylbenzene	5.00	5.12	5.14	102	103	79.0-123			0.390	20
Methyl tert-butyl ether	5.00	5.37	5.02	107	100	68.0-125			6.74	20
Naphthalene	5.00	4.51	5.25	90.2	105	54.0-135			15.2	20
Toluene	5.00	5.24	5.26	105	105	79.0-120			0.381	20
1,2,4-Trimethylbenzene	5.00	5.92	6.11	118	122	76.0-121		J4	3.16	20
1,3,5-Trimethylbenzene	5.00	4.97	5.63	99.4	113	76.0-122			12.5	20
Xylenes, Total	15.0	15.1	15.6	101	104	79.0-123			3.26	20
(S) Toluene-d8				93.5	96.1	80.0-120				
(S) 4-Bromofluorobenzene				87.3	88.3	77.0-126				
(S) 1,2-Dichloroethane-d4				115	110	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

INTERNAL STANDARD SUMMARY

Instrument: VOCMS32 • File ID: 0527_02

05/27/23 09:12

Sample ID	File ID	8260-FLUOROBENZENE	8260-CHLOROBENZENE-D5	8260-1,4-DICHLOROBENZENE-D4
		Response	Response	Response
Standard	0527_02	360412	152909	179906
Upper Limit		720824	305818	359812
Lower Limit		180206	76455	89953
LCS R3930204-1 WG2067657 1x	0527_02LCS	360412	152909	179906
LCSD R3930204-2 WG2067657 1x	0527_03	364816	153485	171313
BLANK R3930204-3 WG2067657 1x	0527_05	333025	135840	146134
L1618283-01 WG2067657 1x	0527_06	333023	137025	161314
L1618283-02 WG2067657 1x	0527_07	332753	136718	152726
L1618283-03 WG2067657 1x	0527_08	340736	140196	149987
L1618283-04 WG2067657 1x	0527_09	335826	138030	146182
L1618283-05 WG2067657 1x	0527_10	334707	136230	151718
L1618283-06 WG2067657 1x	0527_11	311403	127927	136918
L1618283-07 WG2067657 1x	0527_12	320928	134427	143035
L1618283-08 WG2067657 1x	0527_13	300446	120528	128519
L1618283-09 WG2067657 1x	0527_14	314503	128236	137076
L1618283-10 WG2067657 1x	0527_15	296846	118889	123521
L1618283-11 WG2067657 1x	0527_16	300268	123496	133628
L1618283-12 WG2067657 1x	0527_17	300527	125093	133129
L1618283-13 WG2067657 1x	0527_18	303871	125604	125888
L1618283-14 WG2067657 1x	0527_19	305448	129845	136386
L1618283-15 WG2067657 1x	0527_20	286969	117303	118625
L1618283-16 WG2067657 1x	0527_21	291275	117707	127145
L1618283-17 WG2067657 1x	0527_22	285422	117324	124152
L1618283-18 WG2067657 1x	0527_23	295916	123270	124081
L1618283-19 WG2067657 1x	0527_24	289307	115769	126098
L1618283-20 WG2067657 1x	0527_25	281344	115850	124335

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Is

⁸ Gl

⁹ Al

¹⁰ Sc

Instrument: VOCMS41 • File ID: 0528_28

05/28/23 11:13

Sample ID	File ID	8260-FLUOROBENZENE	8260-CHLOROBENZENE-D5	8260-1,4-DICHLOROBENZENE-D4
		Response	Response	Response
Standard	0528_28	453840.80	199122.70	100485.30
Upper Limit		907682	398245	200971
Lower Limit		226920	99561	50243
LCS R3930924-1 WG2067682 1x	0528_28LCS	453840.80	199122.70	100485.30

INTERNAL STANDARD SUMMARY

Instrument: VOCMS41 • File ID: 0528_28

05/28/23 11:13

Sample ID	File ID	8260-FLUOROBENZENE	8260-CHLOROBENZENE-D5	8260-1,4-DICHLOROBENZENE-D4
		Response	Response	Response
LCSD R3930924-2 WG2067682 1x	0528_29	455046.90	195465.90	95674.10
BLANK R3930924-3 WG2067682 1x	0528_33	402226	154960.50	54574.80
L1618283-32 WG2067682 1x	0528_34	418232.60	176519.80	75036.30
L1618283-21 WG2067682 1x	0528_39	371007.10	160588.80	68801.50
L1618283-22 WG2067682 1x	0528_40	369366.80	166492.80	76438.50
L1618283-23 WG2067682 1x	0528_41	365772.10	158219	64354.10
L1618283-24 WG2067682 1x	0528_42	362573.20	154676.60	58067.90
L1618283-25 WG2067682 1x	0528_43	346356.40	144082.50	58690.90
L1618283-26 WG2067682 1x	0528_44	360158.70	144248.20	56062.40
L1618283-27 WG2067682 1x	0528_45	360051.70	142901.40	62594.70
L1618283-28 WG2067682 1x	0528_46	347273.50	141348.40	64482.20
L1618283-29 WG2067682 1x	0528_47	351619.70	156011.30	70017
L1618283-30 WG2067682 1x	0528_48	351084.70	144587	55564.30
L1618283-31 WG2067682 1x	0528_49	351037.70	136436.50	59776.10

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

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.
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

J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J4	The associated batch QC was outside the established quality control range for accuracy.



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.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc


⁷ Is

⁸ Gl

⁹ Al

¹⁰ Sc

L1618283

 chain of custody and sample log	PACE Nashville 12065 Lebanon Rd, Mt. Juliet, TN 37122 America	4-20-2023 T228869 / P994223	F075 coc/arf no.: COC-014017 distribution Original to LABORATORY Copy to Lab Services fax: (713) 386-4733 Scan Copy to: LaboratoryServices
		LABORATORY USE ONLY	
contact name: Douglas Dodds/Joseph Bauer contact no: (713) 989-8319/(713) 989-8332			

Comp Station:	Superior - Terminal
Shipping Address:	Kinzey Schneider 218.529.7141 2314 W Michigan St. Suite: 2 Duluth, MN 55806
Program Code:	OIL
Project Code:	Wisconsin
Turnaround:	5 days
Region:	Superior Area
Routing Code:	GTEHSLAB
Business Unit:	10076-Texas Eastern Transmission, LP
Department:	LP US

Work Order	
Method of Shipment (to Field):	Ground (3-5 days)
Method of Shipment (from Field):	FedEx (Priority overnight)
Freight Bill #:	
Cooler Temp (Celsius):	
Condition of Contents:	
Sampler Print:	
Sampler Signature:	
Lab Acceptance Signature:	Date/Time:

Relinquished By: Kinzey Schneider	Date/Time: 05/18/2023 15:15pm	Recd. By:	Date/Time:
Relinquished By:	Date/Time:	Recd. By: FL PAS	Date/Time: 5/19/23 9:05

Comments or Lab Remarks:	6337 2244 4220
---------------------------------	----------------

Date Bottleware Required: May-08-2023	Type of Data Package: Type II Std.
Expected Sample Date: May-09-2023	e-mail: abigail.bossbaly@enbridge.com
Prelim Data: No	

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Sample ID	Sample Point	Sample Name	Collection Date	Collection Time	Matrix	COMP/GRAB	MAG	Bottle Preserve	ICE	Use Except Qty.	Use Except Pkg.	QC Req	Hold Test
COC-014017-01	SR-MW-1R	SR-mw-1R	5/16/2023	14:02	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False -61
COC-014017-02	SR-MW-2	SR-mw-2	5/16/2023	13:15	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False -02
COC-014017-03	SR-MW-5	SR-mw-5	5/16/2023	10:04	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False -03
COC-014017-04	SR-MW-5B	SR-mw-5B	5/16/2023	10:47	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False -04
COC-014017-05	SR-MW-6	SR-mw-6	5/17/2023	13:10	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False -05
COC-014017-06	SR-MW-6B	SR-mw-6B	5/17/2023	13:00	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False -06
COC-014017-07	SR-MW-10	SR-mw-10	5/16/2023	16:16	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False -07
COC-014017-08	SR-MW-11	SR-mw-11	5/17/2023	14:42	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False -08
COC-014017-09	SR-MW-11B	SR-mw-11B	5/17/2023	15:04	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False -09
COC-014017-10	SR-MW-12	SR-mw-12	05/18/2023	9:20	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False -10
COC-014017-14	SR-MW-14	SR-mw-14	05/18/2023	10:55	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False -11

14

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11	14														
COC-014017-12	SR-MW-15	SR-mw-15	5/18/2023	11:27	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False			False	-12
COC-014017-13	SR-MW-17	SR-mw-17	5/16/2023	11:15	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False			False	-13
COC-014017-14	SR-MW-17B	SR-mw-17B	5/16/2023	11:40	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False			False	-14
COC-014017-15	SR-MW-18	SR-mw-18	5/16/2023	12:10	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False			False	-15
COC-014017-16	SR-MW-19A	SR-mw-19A	5/16/2023	15:32	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False			False	-16
COC-014017-17	SR-MW-19B	SR-mw-19B	5/16/2023	15:10	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False			False	-17
COC-014017-18	SR-MW-20A	SR-mw-20A	5/17/2023	15:42	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False			False	-18
COC-014017-19	SR-MW-20B	SR-mw-20B	5/17/2023	15:57	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False			False	-19
COC-014017-20	SR-MW-21A	SR-mw-21A	5/17/2023	13:54	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False			False	-20
COC-014017-21	SR-MW-21B	SR-mw-21B	5/17/2023	14:00	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False			False	-21
COC-014017-22	SR-MW-22B	SR-mw-22B	5/16/2023	17:02	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False			False	-22
COC-014017-23	SR-MW-23B	SR-mw-23B	5/16/2023	9:15	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False			False	-23

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COC-014017-24	SR-MW-24A	SR-mw-24A	5/17/2023	16:45	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False	False	-24	
COC-014017-25	SR-MW-24B	SR-mw-24B	5/17/2023	17:05	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False	False	-25	
COC-014017-26	SR-MW-25A	SR-mw-25A	5/18/2023	8:47	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False	False	-26	
COC-014017-27	SR-MW-25B	SR-mw-25B	5/18/2023	8:30	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False	False	-27	
COC-014017-28	SR-MW-26	SR-mw-26	5/18/2023	7:40	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False	False	-28	
COC-014017-29	MISC	DUP-1	05/16/2023	—	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False	Field Duplicate	False	-29
COC-014017-30	MISC	DUP-2	05/16/2023	—	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False	Field Duplicate	False	-30
COC-014017-31	MISC	DUP-3	05/16/2023	—	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False	Field Duplicate	False	-31
COC-014017-32	MISC	Trip Blank 1	05/16/2023	—	Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False	Trip Blank	False	-32
COC-014017-33	MISC	Trip Blank 2			Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False	Trip Blank	False	
COC-014017-34	MISC	Trip Blank 3			Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False	Trip Blank	False	
COC-014017-35	MISC	Extra 1			Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False	
COC-014017-	MISC	Extra 2			Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False	

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COC-014017-37	MISC	Extra 3			Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False
COC-014017-38	MISC	Extra 4			Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False
COC-014017-39	MISC	Extra 5			Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False

Sample Receipt Checklist

COC Seal Present/Intact: Y N If Applicable
 DOC Signed/Accurate: Y N VOA Zero Headspace: Y N
 Bottles arrive intact: Y N Pres. Correct/Check: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 RAD Screen <0.5 mR/hr: Y N



chain of custody and sample log

contact name: Douglas Dodds/Joseph Bauer

contact no: (713) 989-8319/(713) 989-8332

PACE Nashville
12065 Lebanon Rd, Mt. Juliet, TN 37122
America

LABORATORY USE ONLY

coc/arf no.: COC-014017
distribution
Original to LABORATORY
Copy to Lab Services
fax: (713) 386-4733
Scan Copy to: LaboratoryServices

Comp Station:	Superior - Terminal
Shipping Address:	Kinzey Schneider 218.529.7141 2314 W Michigan St. Suite: 2 Duluth, MN 55806
Program Code:	OIL
Project Code:	Wisconsin
Turnaround:	5 days
Region:	Superior Area
Routing Code:	GTEHSLAB
Business Unit:	EELP-Enbridge Energy, Limited Partnership
Department:	LP US

Work Order	
Method of Shipment (to Field):	Ground (3-5 days)
Method of Shipment (from Field):	
Freight Bill #:	
Cooler Temp (Celsius):	
Condition of Contents:	
Sampler Print:	
Sampler Signature:	
Lab Acceptance Signature:	Date/Time:

Relinquished By:	Date/Time:	Recd. By:	Date/Time:
Relinquished By:	Date/Time:	Recd. By:	Date/Time:

Comments or Lab Remarks:

Date Bottleware Required: May-08-2023	Type of Data Package: Type II Std.
Expected Sample Date: May-09-2023	e-mail: abigail.bossbaly@enbridge.com
Prelim Data: No	

Sample ID	Sample Point	Sample Name	Collection Date	Collection Time	Matrix	COMP/GRAB	MAG	Bottle Preserve	ICE	Use Except Qty.	Use Except Pkg.	QC Req	Hold Test
COC-014017-01	SR-MW-1R				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False
COC-014017-02	SR-MW-2				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False
COC-014017-03	SR-MW-5				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False
COC-014017-04	SR-MW-5B				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False
COC-014017-05	SR-MW-6				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False
COC-014017-06	SR-MW-6B				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False
COC-014017-07	SR-MW-10				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False
COC-014017-08	SR-MW-11				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False
COC-014017-09	SR-MW-11B				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False
COC-014017-10	SR-MW-12				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False
COC-014017-	SR-MW-				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False

11	14												
COC-014017-12	SR-MW-15				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False
COC-014017-13	SR-MW-17				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False
COC-014017-14	SR-MW-17B				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False
COC-014017-15	SR-MW-18				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False
COC-014017-16	SR-MW-19A				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False
COC-014017-17	SR-MW-19B				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False
COC-014017-18	SR-MW-20A				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False
COC-014017-19	SR-MW-20B				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False
COC-014017-20	SR-MW-21A				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False
COC-014017-21	SR-MW-21B				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False
COC-014017-22	SR-MW-22B				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False
COC-014017-23	SR-MW-23B				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCl	Yes	False	False		False

COC-014017-24	SR-MW-24A				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False
COC-014017-25	SR-MW-24B				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False
COC-014017-26	SR-MW-25A				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False
COC-014017-27	SR-MW-25B				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False
COC-014017-28	SR-MW-26				Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False		False
COC-014017-29	MISC	DUP-1			Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False	Field Duplicate	False
COC-014017-30	MISC	DUP-2			Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False	Field Duplicate	False
COC-014017-31	MISC	DUP-3			Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False	Field Duplicate	False
COC-014017-32	MISC	Trip Blank 1			Aqueous (Water)	Grab	BTEX_TMB_NAP_MTBE_A	HCI	Yes	False	False	Trip Blank	False

Appendix B

Well Photos

Superior Terminal Well Photos Spring - 2023

MW-1R



MW-2



MW-5 & MW-5B



Superior Terminal Well Photos Spring - 2023

MW-6 & MW-6B



MW-10



MW-11 & MW-11B



Superior Terminal Well Photos Spring - 2023

MW-12



MW-14



MW-15



Superior Terminal Well Photos Spring - 2023

MW-17& MW-17B



MW-18



MW-19A & MW-19B



Superior Terminal Well Photos Spring - 2023

MW-20A & MW-20B



MW-21A & MW-21B



MW-22B



Superior Terminal Well Photos Spring - 2023

MW-23B



MW-24A & MW-24B



MW-25A & 25B



Superior Terminal Well Photos Spring - 2023

MW-26



Appendix C

Field Notes



Barr Engineering Company Field Log Data Sheet

Client: Enbridge		Monitoring Point: <i>mw-1R</i>							
Location: Superior Terminal, Superior, WI		Date: <i>5/16/2023</i>							
Project #: 49161528.02		Sample Time: <i>14:02</i>							
GENERAL DATA		STABILIZATION TEST							
Barr lock:	<i>Enbridge Lock</i>	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance	
Casing diameter:	<i>2"</i>								
Total well depth:*	<i>17.54 ft</i>								
Static water level:*	<i>5.76 ft</i>								
Water depth:*	<i>1.92 gal</i>								
Well volume: (gal)	<i>11.76</i>								
Purge method:	<i>bailer</i>								
Sample method:	<i>bailer</i>								
Start time:	<i>1350</i>	Odor: <i>none detected</i>							
Stop time:	<i>1359</i>	Purge Appearance: <i>clear + colorless</i>							
Duration: (minutes)	<i>9 minutes</i>	Sample Appearance: <i>light brown + clear</i>							
Rate, gpm:	<i>0.89 gal</i>	Comments: <i>WL on 5/15/2023</i>							
Volume, purged:	<i>8 gal</i>								
Duplicate collected?	<i>no</i>								
Sample collection by:	<i>KLSS</i>	CO2-	Mn2-	Fe(T)-	Fe2-				
Others present:	<i>none</i>	Well Condition: <i>good</i>							
MW: <u>groundwater monitoring well</u>	WS: water supply well	SW: surface water	SE: sediment	other:					
<i>+naphthalene</i> VOC- <i>3</i> semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-				
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-				
Others: <i>r</i>									

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: <i>mw-2</i>				
Location: Superior Terminal, Superior, WI				Date: <i>5/16/2023</i>				
Project #: 49161528.02				Sample Time: <i>13:15</i>				
GENERAL DATA		STABILIZATION TEST						
Barr lock:	<i>Enbridge lock</i>							
Casing diameter:	<i>2 in</i>	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Total well depth:*	<i>27.42 ft</i>							
Static water level:*	<i>3.16 ft</i>							
Water depth:*	<i>24.26</i>							
Well volume: (gal)	<i>3.96 gal</i>							
Purge method:	<i>bauler</i>							
Sample method:	<i>bauler</i>							
Start time:	<i>12:40</i>	Odor: <i>none detected</i>						
Stop time:	<i>13:10</i>	Purge Appearance: <i>clear & colorless</i>						
Duration: (minutes)	<i>22</i>	Sample Appearance: <i>clear + light brown</i>						
Rate, gpm:	<i>0.54</i>	Comments: <i>WL on 5/15/2023</i>						
Volume, purged:	<i>12 gallons</i>							
Duplicate collected?	<i>yes - Dup-2</i>							
Sample collection by:	<i>KLS3</i>	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present: <i>none</i>		Well Condition: <i>good</i>						
<input checked="" type="checkbox"/> MW: groundwater monitoring well		<input type="checkbox"/> WS: water supply well		<input type="checkbox"/> SW: surface water		<input type="checkbox"/> SE: sediment		other:
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others: <i>PVOC + naphthalene - 36</i>								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge		Monitoring Point: mw-5						
Location: Superior Terminal, Superior, WI		Date: 5/14/2023						
Project #: 49161528.02		Sample Time: 10:04						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Enbridge lock	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	2"							
Total well depth:*	27.0 ft							
Static water level:*	3.15 ft							
Water depth:*	23.85 ft							
Well volume: (gal)	3.89							
Purge method:	bauler							
Sample method:	bauler							
Start time:	9:36	Odor: none detected						
Stop time:	10:00	Purge Appearance: clear + colorless						
Duration: (minutes)	24 minutes	Sample Appearance: light brown / clear						
Rate, gpm:	0.56 gpm	Comments: WL on 5/15/2023						
Volume, purged:	13.5 gall							
Duplicate collected?	No							
Sample collection by:	KLS3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present: none		Well Condition: good						
<input checked="" type="checkbox"/> MW: groundwater monitoring well <input type="checkbox"/> WS: water supply well <input type="checkbox"/> SW: surface water <input type="checkbox"/> SE: sediment <input type="checkbox"/> other:								
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others: PVOc + naphthalene -3								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: mw-58					
Location: Superior Terminal, Superior, WI				Date: 5/16/2023					
Project #: 49161528.02				Sample Time: 10:47					
GENERAL DATA			STABILIZATION TEST						
Barr lock:	Enbridge lock		Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	2"								
Total well depth:*	58.02 ft								
Static water level:*	7.40 ft								
Water depth:*	50.62								
Well volume: (gal)	8.26								
Purge method:	bailer								
Sample method:	bailer								
Start time:	10:12		Odor: none detected						
Stop time:	10:45		Purge Appearance: clear + colorless						
Duration: (minutes)	33		Sample Appearance: clear + colorless						
Rate, gpm:	0.36		Comments: WL on 5/15/2023						
Volume, purged:	12 gallons								
Duplicate collected?	no								
Sample collection by:	KLS3		CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	none		Well Condition: good. Lock was a little tricky / stroke easily						
<input checked="" type="checkbox"/> MW: groundwater monitoring well <input type="checkbox"/> WS: water supply well <input type="checkbox"/> SW: surface water <input type="checkbox"/> SE: sediment other:									
<input type="checkbox"/> VOC- <input type="checkbox"/> semi-volatile- <input type="checkbox"/> general- <input type="checkbox"/> nutrient- <input type="checkbox"/> cyanide- <input type="checkbox"/> DRO- <input type="checkbox"/> Sulfide-									
<input type="checkbox"/> oil,grease- <input type="checkbox"/> bacteria- <input type="checkbox"/> total metal- <input type="checkbox"/> filtered metal- <input type="checkbox"/> methane- <input type="checkbox"/> filter-									
Others: pVOC + naphthalene -3									

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: mw-6				
Location: Superior Terminal, Superior, WI				Date: 5/17/2023				
Project #: 49161528.02				Sample Time: 13:10				
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Enbridge Lock							
Casing diameter:	2 in	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Total well depth:*	26.66 ft							
Static water level:*	7.66 ft							
Water depth:*	19 ft							
Well volume: (gal)	3.10							
Purge method:	boiler							
Sample method:	boiler							
Start time:	12:30	Odor: none detected						
Stop time:	13:08	Purge Appearance: clear + colorless						
Duration: (minutes)	38	Sample Appearance: clear + colorless						
Rate, gpm:	0.24	Comments: WL on 5/15/2023						
Volume, purged:	9 gal							
Duplicate collected?	no							
Sample collection by:	CWK	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	K53	Well Condition: none						
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:								
VOC- semi-volatile- general- nutrient- cyanide- DRO- Sulfide-								
oil,grease- bacteria- total metal- filtered metal- methane- filter-								
Others: PVOc+naphthalene-3								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: MW-6B				
Location: Superior Terminal, Superior, WI				Date: 5/17/2023				
Project #: 49161528.02				Sample Time: 13:00				
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Enbridge Lock	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	2 in							
Total well depth:*	58.15 ft							
Static water level:*	9.69 ft							
Water depth:*	48.46 ft							
Well volume: (gal)	7.91 gal							
Purge method:	bailer							
Sample method:	bailer							
Start time:	12:23	Odor: none detected						
Stop time:	12:56	Purge Appearance: clear + colorless						
Duration: (minutes)	33	Sample Appearance: clear + light brown						
Rate, gpm:	0.30	Comments: WL on 5/15/2023 -Dry						
Volume, purged:	10 gal							
Duplicate collected?	no							
Sample collection by:	KLS3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present: CWK		Well Condition: good						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others: Pvoc + naphthalene ⁻³								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: <i>mw-10</i>				
Location: Superior Terminal, Superior, WI				Date: <i>5/16/2023</i>				
Project #: 49161528.02				Sample Time: <i>16:16</i>				
GENERAL DATA		STABILIZATION TEST						
Barr lock:	<i>Enbridge lock</i>	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	<i>2"</i>							
Total well depth:*	<i>30.42 ft</i>							
Static water level:*	<i>4.68 ft</i>							
Water depth:*	<i>25.74</i>							
Well volume: (gal)	<i>4.20 gal</i>							
Purge method:	<i>Bailer</i>							
Sample method:	<i>Bailer</i>							
Start time:	<i>15:55</i>	Odor: <i>none detected</i>						
Stop time:	<i>16:14</i>	Purge Appearance: <i>clear + colorless</i>						
Duration: (minutes)	<i>19</i>	Sample Appearance: <i>clear + colorless</i>						
Rate, gpm:	<i>0.58</i>	Comments: <i>WL on 5/15/2023</i> <i>dry</i>						
Volume, purged:	<i>11 gal</i>							
Duplicate collected?	<i>no</i>							
Sample collection by:	<i>KLS 3</i>	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present: <i>None</i>		Well Condition: <i>good</i>						
<input checked="" type="checkbox"/> MW:	groundwater monitoring well	<input type="checkbox"/> WS:	water supply well	<input type="checkbox"/> SW:	surface water	<input type="checkbox"/> SE:	sediment	other:
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others: <i>PVOC + naphthalene - 3</i>								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: <i>mw-11</i>				
Location: Superior Terminal, Superior, WI				Date: <i>5/17/2023</i>				
Project #: 49161528.02				Sample Time: <i>14:42</i>				
GENERAL DATA		STABILIZATION TEST						
Barr lock:	<i>Enbridge lock</i>	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	<i>2"</i>							
Total well depth:*	<i>18.18 ft</i>							
Static water level:*	<i>8.56 ft</i>							
Water depth:*	<i>9.62 ft</i>							
Well volume: (gal)	<i>1.57 gal</i>							
Purge method:	<i>bailer</i>							
Sample method:	<i>bailer</i>							
Start time:	<i>14:30</i>	Odor: <i>none detected!</i>						
Stop time:	<i>14:39</i>	Purge Appearance: <i>clear + colorless</i>						
Duration: (minutes)	<i>9 min</i>	Sample Appearance: <i>clear + colorless</i>						
Rate, gpm:	<i>0.5</i>	Comments: <i>WL on 5/15/2023</i> <i>-dry</i>						
Volume, purged:	<i>4.5 gal</i>							
Duplicate collected?	<i>no</i>							
Sample collection by:	<i>KISS</i>							
Others present: <i>CWK</i>		Well Condition: <i>good</i>						
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:								
VOC- semi-volatile- general- nutrient- cyanide- DRO- Sulfide-								
oil, grease- bacteria- total metal- filtered metal- methane- filter-								
Others: <i>PVOC + naphthalene -3</i>								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: mw-11B					
Location: Superior Terminal, Superior, WI				Date: 5/17/2023					
Project #: 49161528.02				Sample Time: 19:04					
GENERAL DATA			STABILIZATION TEST						
Barr lock:	Enbridge Lock		Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	2"								
Total well depth:*	57.52 ft								
Static water level:*	19.20 ft								
Water depth:*	38.32 ft								
Well volume: (gal)	3.12 gal								
Purge method:	bailer								
Sample method:	bailer								
Start time:	14:31		Odor: none detected						
Stop time:	15:03		Purge Appearance: clear + colorless						
Duration: (minutes)	32		Sample Appearance: clear + ^{light brown} colorless KLS3						
Rate, gpm:	0.29		Comments: WL on 5/15/2023 Dry						
Volume, purged:	KLS3 Ao 9 gal								
Duplicate collected?	no								
Sample collection by:	CWK								
Others present: KLS3			CO2- Mn2- Fe(T)- Fe2-						
Well Condition: good									
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:									
VOC- semi-volatile- general- nutrient- cyanide- DRO- Sulfide-									
oil,grease- bacteria- total metal- filtered metal- methane- filter-									
Others: PVOc + naphthalene - 3									

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: MW-12				
Location: Superior Terminal, Superior, WI				Date: 5/19/2023				
Project #: 49161528.02				Sample Time: 9:20				
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Enbridge Lock	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	2"							
Total well depth:*	21.05 ft							
Static water level:*	3.47 ft							
Water depth:*	17.58 ft							
Well volume: (gal)	2.87							
Purge method:	bailer							
Sample method:	bailer							
Start time:	9:10	Odor: none detected.						
Stop time:	9:16	Purge Appearance: clear + colorless						
Duration: (minutes)	6 min	Sample Appearance: clear + colorless						
Rate, gpm:	0.75	Comments: WL on 5/15/2023 Dry						
Volume, purged:	4.5 gallons							
Duplicate collected?	Yes Dup-3							
Sample collection by:	KLS3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	Well Condition: good							
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:								
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others: pVOC + naphthalene-1,2,3								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-14						
Location: Superior Terminal, Superior, WI		Date: 5/18/2023						
Project #: 49161528.02		Sample Time: 10:55						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Enbridge Lock	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter (in.):	2"							
Total well depth (ft.):*	18.31 ft							
Static water level (ft.):*	4.40 ft							
Water depth (ft.):*	13.91 ft							
Well volume (gal.):	2.27							
Purge method:	bailer							
Sample method:	bailer							
Start time (hh:mm:ss):	10:41	Odor: none detected						
Stop time (hh:mm:ss):	10:51	Purge Appearance: clear + colorless, plant material						
Duration (hh:mm:ss):	10 minutes	Sample Appearance: light brown / clear						
Rate, gpm:	0.65	Comments: NL on 5/15/2023 - Well went dry - organic matter encountered in well						
Volume, purged: (note units)	6.5 gal.							
Duplicate collected?	No							
Sample collection by:	KLS3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	none	Well Condition: good						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others: pVOC + naphthalene - 3								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: <i>Enbridge</i>		Monitoring Point: <i>mw-15</i>						
Location: <i>Superior Terminal, Superior, WI</i>		Date: <i>5/18/2023</i>						
Project #: <i>49161528.02</i>		Sample Time: <i>11:27</i>						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	<i>Enbridge Lock</i>	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter (in.):	<i>2"</i>							
Total well depth (ft.):*	<i>17.31 ft</i>							
Static water level (ft.):*	<i>3.02 ft</i>							
Water depth (ft.):*	<i>14.29 ft</i>							
Well volume (gal.):	<i>2.33 gal</i>							
Purge method:	<i>bailer</i>							
Sample method:	<i>bailer</i>							
Start time (hh:mm:ss):	<i>11:15</i>	Odor: <i>none detected</i>						
Stop time (hh:mm:ss):	<i>11:23</i>	Purge Appearance: <i>clear + colorless</i>						
Duration (hh:mm:ss):	<i>8 minutes</i>	Sample Appearance: <i>Clear + colorless</i>						
Rate, gpm:	<i>0.88</i>	Comments: <i>WL on 5/15/2023</i> <i>-Dry</i>						
Volume, purged: (note units)	<i>7 gallons</i>							
Duplicate collected?	<i>No</i>							
Sample collection by:	<i>KLSB</i>	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	<i>none</i>	Well Condition: <i>good</i>						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others: <i>pVOC + Napthalene -3</i>								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: mw-17					
Location: Superior Terminal, Superior, WI				Date: 5/16/2023					
Project #: 49161528.02				Sample Time: 11:15					
GENERAL DATA			STABILIZATION TEST						
Barr lock:	Enbridge Lock		Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	2" ^{il}								
Total well depth:*	17.45 ft								
Static water level:*	4.03 ft								
Water depth:*	13.4								
Well volume: (gal)	2.19 gal								
Purge method:	Bailer								
Sample method:	Bailer								
Start time:	11:05		Odor: none detected.						
Stop time:	11:13		Purge Appearance: clear + colorless						
Duration: (minutes)	8 min		Sample Appearance: clear + colorless						
Rate, gpm:	0.75		Comments: WL on 5/15/2023						
Volume, purged:	KLS3 8.6 gal								
Duplicate collected?	no								
Sample collection by:	KLS3								
	CO2-	Mn2-	Fe(T)-	Fe2-					
Others present:	none		Well Condition: good						
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:									
VOC- semi-volatile- general- nutrient- cyanide- DRO- Sulfide-									
oil,grease- bacteria- total metal- filtered metal- methane- filter-									
Others: P/OC+Naphthalene-3									

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge		Monitoring Point: mw-17B						
Location: Superior Terminal, Superior, WI		Date: 5/16/2023						
Project #: 49161528.02		Sample Time: 11:40						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Enbridge Lock							
Casing diameter:	2 inches	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Total well depth:*	45.93 ft							
Static water level:*	15.37 ft							
Water depth:*	30.56							
Well volume: (gal)	4.99							
Purge method:	bailer							
Sample method:	bailer							
Start time:	11:23	Odor: none detected						
Stop time:	11:37	Purge Appearance: clear + colorless						
Duration: (minutes)	14	Sample Appearance: clear + colorless						
Rate, gpm:	0.46	Comments: WL on 5/15/2023 -went dry						
Volume, purged:	6.5 gal							
Duplicate collected?	no							
Sample collection by:	KLSJ	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	none	Well Condition: good						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-		filter-		
Others:		pVOC + Napthalene						

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: mw-18					
Location: Superior Terminal, Superior, WI				Date: 5/16/2023					
Project #: 49161528.02				Sample Time: 12:10					
GENERAL DATA			STABILIZATION TEST						
Barr lock:	Enbridge lock		Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	2 inches								
Total well depth:*	17.23 ft								
Static water level:*	5.68 ft								
Water depth:*	11.55 ft								
Well volume: (gal)	1.88								
Purge method:	bailer								
Sample method:	bailer								
Start time:	12:00		Odor: none detected						
Stop time:	12:08		Purge Appearance: clear + colorless						
Duration: (minutes)	8 min		Sample Appearance: very light brown + clear						
Rate, gpm:	0.625		Comments: WL on 5/15/2023 - started going dry						
Volume, purged:	5 gal								
Duplicate collected?	no								
Sample collection by:	KLS3		CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	none		Well Condition: good						
MW:	groundwater monitoring well	WS:	water supply well	SW:	surface water	SE:	sediment	other:	
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-			
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-				
Others:	P VOC + Naphthalene - 3								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: MW19A				
Location: Superior Terminal, Superior, WI				Date: 5/16/2023				
Project #: 49161528.02				Sample Time: 15:32				
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Enbridge Lock	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	2"							
Total well depth:*	24.20 ft							
Static water level:*	3.32 ft							
Water depth:*	20.88 ft							
Well volume: (gal)	3.41 gal							
Purge method:	Bailer							
Sample method:	Bailer							
Start time:	15:17	Odor: clear none detected						
Stop time:	15:29	Purge Appearance: clear + colorless						
Duration: (minutes)	12	Sample Appearance: clear + colorless						
Rate, gpm:	0.07	Comments: WL on 5/15/2023 dry						
Volume, purged:	8 gal							
Duplicate collected?	no							
Sample collection by:	KLS3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present: none		Well Condition: good						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others: PVOc + naphthalene-3								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge		Monitoring Point: MW-198						
Location: Superior Terminal, Superior, WI		Date: 5/16/2023						
Project #: 49161528.02		Sample Time: 15:10						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Enbridge Lock	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	2"							
Total well depth:*	60.35 ft							
Static water level:*	9.25 ft							
Water depth:*	51.1 ft							
Well volume: (gal)	8.34 gal							
Purge method:	Bailer							
Sample method:	Bailer							
Start time:	14:33	Odor: none detected						
Stop time:	15:07	Purge Appearance: clear + colorless						
Duration: (minutes)	34	Sample Appearance:						
Rate, gpm:	0.35	Comments: WL on 5/15/2023						
Volume, purged:	12 gal - dry							
Duplicate collected?	no							
Sample collection by:	KL53	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present: none		Well Condition: good						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	filtered metal-	methane-		filter-		
Others:		PvOC + naphthalene - 3						

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge		Monitoring Point: MW-20A						
Location: Superior Terminal, Superior, WI		Date: 5/17/2023						
Project #: 49161528.02		Sample Time: 15:42						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Enbridge lock							
Casing diameter:	2"	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Total well depth:*	24.44 ft							
Static water level:*	4.40 ft							
Water depth:*	20.04							
Well volume: (gal)	3.27 gal							
Purge method:	bailer							
Sample method:	bailer							
Start time:	15:22	Odor: none detected						
Stop time:	15:39	Purge Appearance: clear + colorless						
Duration: (minutes)	17	Sample Appearance: clear + light brown						
Rate, gpm:	0.53	Comments: WL on 5/15/2023 dry						
Volume, purged:	9 gal							
Duplicate collected?	no							
Sample collection by:	KLS3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	CWK	Well Condition: good						
<input checked="" type="checkbox"/> MW: groundwater monitoring well		<input type="checkbox"/> WS: water supply well		<input type="checkbox"/> SW: surface water		<input type="checkbox"/> SE: sediment		<input type="checkbox"/> other:
<input type="checkbox"/> VOC-		<input type="checkbox"/> semi-volatile-		<input type="checkbox"/> general-		<input type="checkbox"/> nutrient-		<input type="checkbox"/> cyanide-
<input type="checkbox"/> DRO-		<input type="checkbox"/> Sulfide-		<input type="checkbox"/> oil,grease-		<input type="checkbox"/> bacteria-		<input type="checkbox"/> total metal-
<input type="checkbox"/> filtered metal-		<input type="checkbox"/> methane-		<input type="checkbox"/> filter-		<input type="checkbox"/> Others: POC + Naphthalene-3		

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge		Monitoring Point: ^{KLS3} MW-20B MW-20B						
Location: Superior Terminal, Superior, WI		Date: 05/17/2023						
Project #: 49161528.02		Sample Time: 15:57						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Enbridge Lock							
Casing diameter:	2"	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Total well depth:*	61.41 ft							
Static water level:*	17.09 ft							
Water depth:*	44.32							
Well volume: (gal)	7.23 gal							
Purge method:	bailer							
Sample method:	bailer							
Start time:	15:24	Odor: none detected						
Stop time:	15:54	Purge Appearance: clear + colorless						
Duration: (minutes)	30	Sample Appearance: clear + colorless						
Rate, gpm:	0.3	Comments: WL on 5/15/2023 Dry						
Volume, purged:	9 gal							
Duplicate collected?	none							
Sample collection by:	CWK	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	KLS3	Well Condition: Good						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others:		PvOC+Naphthalene						

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: <i>mw-21A</i>				
Location: Superior Terminal, Superior, WI				Date: <i>5/17/2023</i>				
Project #: 49161528.02				Sample Time: <i>13:54</i>				
GENERAL DATA		STABILIZATION TEST						
Barr lock:	<i>Enbridge Lock</i>	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	<i>2"</i>							
Total well depth:*	<i>24.52 ft</i>							
Static water level:*	<i>4.01 ft</i>							
Water depth:*	<i>20.51 ft</i>							
Well volume: (gal)	<i>3.35 gal</i>							
Purge method:	<i>bailer</i>							
Sample method:	<i>bailer</i>							
Start time:	<i>13:28</i>	Odor: <i>none detected</i>						
Stop time:	<i>13:52</i>	Purge Appearance: <i>clear + colorless</i>						
Duration: (minutes)	<i>24</i>	Sample Appearance: <i>clear + colorless</i>						
Rate, gpm:	<i>0.38</i>	Comments: <i>WL on 5/15/2023</i>						
Volume, purged:	<i>9 gal-dry</i>							
Duplicate collected?	<i>No</i>							
Sample collection by:	<i>CWK</i>	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	<i>KLS3</i>	Well Condition: <i>good</i>						
<input checked="" type="checkbox"/> MW:	groundwater monitoring well	WS:	water supply well	SW:	surface water	SE:	sediment	other:
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others: <i>PVOC + Napthalene-3</i>								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: <i>mw-218</i>				
Location: Superior Terminal, Superior, WI				Date: <i>5/17/2023</i>				
Project #: 49161528.02				Sample Time: <i>14:00</i>				
GENERAL DATA		STABILIZATION TEST						
Barr lock:	<i>Enbridge lock</i>							
Casing diameter:	<i>2"</i>	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Total well depth:*	<i>62.25 ft</i>							
Static water level:*	<i>17.63 ft</i>							
Water depth:*	<i>44.62 ft</i>							
Well volume: (gal)	<i>7.29 gal</i>							
Purge method:	<i>bailer</i>							
Sample method:	<i>bailer</i>							
Start time:	<i>13:28</i>	Odor: <i>none detected</i>						
Stop time:	<i>13:58</i>	Purge Appearance: <i>clear + colorless</i>						
Duration: (minutes)	<i>30 min</i>	Sample Appearance: <i>clear + colorless</i>						
Rate, gpm:	<i>0.3</i>	Comments: <i>WL on 5/15/2023</i> <i>Dry</i>						
Volume, purged:	<i>9 gal</i>							
Duplicate collected?	<i>no</i>							
Sample collection by:	<i>KLS</i>	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	<i>CWK</i>	Well Condition: <i>good</i>						
<input checked="" type="checkbox"/> MW: groundwater monitoring well <input type="checkbox"/> WS: water supply well <input type="checkbox"/> SW: surface water <input type="checkbox"/> SE: sediment other:								
VOC- semi-volatile- general- nutrient- cyanide- DRO- Sulfide-								
oil,grease- bacteria- total metal- filtered metal- methane- filter-								
Others: <i>PVOC + Napthalene -3</i>								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: MW-22B						
Location: Superior Terminal, Superior, WI				Date: 5/16/2023						
Project #: 49161528.02				Sample Time: 17:02						
GENERAL DATA			STABILIZATION TEST							
Barr lock:	Enbridge lock		Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance	
Casing diameter:	2 inches									
Total well depth:*	58.14 ft									
Static water level:*	19.40 ft									
Water depth:*	38.74									
Well volume: (gal)	6.32									
Purge method:	Bailer									
Sample method:	Bailer									
Start time:	16:36		Odor: none detected							
Stop time:	17:00		Purge Appearance: clear + colorless							
Duration: (minutes)	24		Sample Appearance: light brown + clear							
Rate, gpm:	0.3125		Comments: WL on 5/15/2023 Dry							
Volume, purged:	7.5 gal									
Duplicate collected?	no									
Sample collection by:	RUS3		CO2-	Mn2-	Fe(T)-	Fe2-				
Others present: none			Well Condition: good							
MW: groundwater monitoring well			WS: water supply well		SW: surface water		SE: sediment		other:	
VOC-	semi-volatile-		general-		nutrient-		cyanide-		DRO-	Sulfide-
oil,grease-	bacteria-		total metal-		filtered metal-		methane-		filter-	
Others: PPOC + Napthalene -3										

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: mw-238				
Location: Superior Terminal, Superior, WI				Date: 5/16/2023				
Project #: 49161528.02				Sample Time: 9:15 AM				
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Enbridge lock							
Casing diameter:	2"	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Total well depth:*	58.20 ft							
Static water level:*	8.63 ft							
Water depth:*	49.57 ft							
Well volume: (gal)	8.09 gal							
Purge method:	boiler							
Sample method:	boiler							
Start time:	8:28	Odor: none detected						
Stop time:	9:12	Purge Appearance: clear + colorless						
Duration: (minutes)	44 minutes	Sample Appearance: clear + colorless						
Rate, gpm:	0.27	Comments: WL on 5/15/2023						
Volume, purged:	12 - dry							
Duplicate collected?	Yes							
Sample collection by:	KLS3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present: none		Well Condition: good						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others: Asx + pVOC + Napthalene - 60								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: MW-24A					
Location: Superior Terminal, Superior, WI				Date: 5/17/2023					
Project #: 49161528.02				Sample Time: 16:45					
GENERAL DATA			STABILIZATION TEST						
Barr lock:	Enbridge lock		Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	2 in								
Total well depth:*	18.82 ft								
Static water level:*	4.20 ft								
Water depth:*	14.62 ft								
Well volume: (gal)	2.39 gal								
Purge method:	bailey								
Sample method:	bailey								
Start time:	16:29		Odor: none detected						
Stop time:	16:40		Purge Appearance: clear + colorless to slight orange tint						
Duration: (minutes)	11		Sample Appearance: slight orange tint to clear						
Rate, gpm:	0.55		Comments: Cleaned up concrete around the well WL on 5/15/2023 - Rst on wells?						
Volume, purged:	6 gal								
Duplicate collected?	no								
Sample collection by:	KLS3		CO2-	Mn2-	Fe(T)-	Dry	Fe2-		
Others present:	CWF		Well Condition: good						
MW: groundwater monitoring well			WS: water supply well		SW: surface water		SE: sediment		other:
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-			
oil, grease-	bacteria-	total metal-	filtered metal-	methane-	filter-				
Others: PVOc + Naphthalene -3									

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: MW-24B				
Location: Superior Terminal, Superior, WI				Date: 5/17/2023				
Project #: 49161528.02				Sample Time: 17:05				
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Enbridge Lock	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	2"							
Total well depth:*	49.93 ft							
Static water level:*	6.71 ft							
Water depth:*	43.22							
Well volume: (gal)	7.05 gal							
Purge method:	bauler							
Sample method:	bauler							
Start time:	16:38	Odor: none detected						
Stop time:	17:07	Purge Appearance: slight orange tint + clear						
Duration: (minutes)	29	Sample Appearance: slight orange tint + clear						
Rate, gpm:	0.36	Comments: Cleaned up concrete around the well. -Discoloration at top. → line tinted stronger orange color at top + middle prevalent. orange as well WL on 5/15/2023 Dry CO2- Mn2- Fe(T)- Fe2-						
Volume, purged:	10.5 gal - dry							
Duplicate collected?	no							
Sample collection by:	CWK							
Others present:	KLS3	Well Condition: good						
MW groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:								
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others: PVOC + Napthalene								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: MW-25A				
Location: Superior Terminal, Superior, WI				Date: 5/18/2023				
Project #: 49161528.02				Sample Time: 8:47				
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Enbridge Lock							
Casing diameter:	2"	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Total well depth:*	19.50 ft							
Static water level:*	3.66 ft							
Water depth:*	15.84 ft							
Well volume: (gal)	2.58 gal							
Purge method:	bailer							
Sample method:	bailer							
Start time:	8:38	Odor: none detected						
Stop time:	8:45	Purge Appearance: light brown + cloudy / top clear + colorless						
Duration: (minutes)	7	Sample Appearance: light brown + cloudy						
Rate, gpm:	0.57	Comments: WL on 5/15/2023 Dry						
Volume, purged:	4 gal							
Duplicate collected?	no							
Sample collection by:	KLS3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	none	Well Condition: good						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-		filter-		
Others: PVOG + Napthalene - 3								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge		Monitoring Point: MW-25B						
Location: Superior Terminal, Superior, WI		Date: 5/18/2023						
Project #: 49161528.02		Sample Time: 9:30						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Enbridge Lock	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	2"							
Total well depth:*	50.25 ft							
Static water level:*	9.33 ft							
Water depth:*	40.92 ft							
Well volume: (gal)	6.68 gal							
Purge method:	bailer							
Sample method:	bailer							
Start time:	8:07	Odor: none detected						
Stop time:	8:26	Purge Appearance: clear + colorless - light brown at end						
Duration: (minutes)	19	Sample Appearance: light brown + clear / slightly cloudy						
Rate, gpm:	0.42	Comments: WL on 5/15/2023 Dry						
Volume, purged:	8 gal							
Duplicate collected?	no							
Sample collection by:	KSB	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present: none		Well Condition: good						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others: PVOc + Naphthalene -3								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: Enbridge				Monitoring Point: MW-26			
Location: Superior Terminal, Superior, WI				Date: 5/18/2023			
Project #: 49161528.02				Sample Time: 7:40			
GENERAL DATA		STABILIZATION TEST					
Barr lock:	Enbridge Lock						
Casing diameter:	2"	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.
Total well depth:*	18.87 ft						Turbidity Appearance
Static water level:*	6.03 ft						
Water depth:*	12.84 ft						
Well volume: (gal)	2.10 gal						
Purge method:	bailey						
Sample method:	bailey						
Start time:	7:28	Odor: none detected					
Stop time:	7:38	Purge Appearance: clear + colorless					
Duration: (minutes)	10 minutes	Sample Appearance: clear + light brown					
Rate, gpm:	0.60	Comments: WL on 5/15/2023 Dry					
Volume, purged:	6 gal						
Duplicate collected?	No						
Sample collection by:	KUS3	CO2-	Mn2-	Fe(T)-	Fe2-		
Others present:	none	Well Condition: good					
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:							
VOC- semi-volatile- general- nutrient- cyanide- DRO- Sulfide-							
oil,grease- bacteria- total metal- filtered metal- methane- filter-							
Others: PVOc+Naphthalene - 3							

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

Appendix D

Private Well Memo

August 10, 2023

Sent via email

Mr. Nick Larabel
Senior Environmental Advisor
Enbridge Energy
455 Leggitt Road
Marshall, MI 49068

**Re: Potable Well Sampling Results – Superior Terminal,
2023 Groundwater Monitoring Program**

Dear Mr. Larabel:

On May 17, 2023, Barr Engineering Co (Barr) collected water quality samples from the three private water supply wells located at the Enbridge Superior Terminal. Water samples from private wells PW-1 and PW-2 were collected from indoor spigots closest to, but prior to, each pressure tank. The water sample from private well PW-3 was collected from an outside spigot. Figure 1 depicts the locations of the potable wells at the terminal. Prior to sample collection, stagnant water was purged from each well by allowing the spigot to run for approximately 20 minutes. This allowed the well pump to cycle on and helped ensure the sample was representative of the aquifer. Water samples from each well were collected into laboratory-supplied containers and submitted to Pace Analytical Laboratory of Duluth, Minnesota and Ormond Beach, Florida for chemical analyses of benzene, toluene, ethylbenzene, total xylenes (BTEX), iron, chloride, pH, nitrate, and total and fecal coliform (as E. coli). The results are summarized on Table 1 and copy of the analytical laboratory report is provided in Attachment A.

No BTEX compounds were detected in these wells and, although the iron and pH detections are above established criteria, these detections, along with the chloride and nitrate, appear to represent natural groundwater conditions. These results are similar to what has previously been detected in these wells since monitoring began in 2017.

The wells were inspected and were found in good condition, with the exception of PW-2 which was found to have a gap between the well casing and the well cover (Photo 1), as similarly observed in 2022 (Photo 2). Photo documentation of this is provided in Attachment B.

If you have any questions or require additional information, please contact me at (218) 529-7131 or Lynette Carney at (218) 529-7141.

Sincerely,

A handwritten signature in black ink that reads "Kaitlin Montz".

Kaitlin Montz
Geologist
Barr Engineering Co.

Enclosure:

Table 1	Private Well Groundwater Quality Data
Figure 1	Private Well Locations
Attachment A	Pace Analytical Laboratory Report
Attachment B	Private Well PW-2 Photos

Table 1: Private Well Groundwater Quality Data
Enbridge Energy Limited Partnership - Superior, WI Terminal

	Sampling Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (m,o,p) (µg/L)	Chloride (mg/L)	Iron (mg/L)	Nitrate as N (mg/L)	Total Coliform (P/A)	Fecal Coliform as E. Coli (P/A)	Total Coliform (MPN/100/ml)	Fecal Coliform as E. Coli (MPN/100/ml)	pH
PW-1	29-May-18	<1.0	<1.0	<1.0	<3.0	72.7	0.442	<0.020	Absent	Absent	NA	NA	8.8
	21-May-19	<1.0	<5.0	<1.0	<3.0	73.9	1.950	0.068J	NA	NA	<1.0	<1.0	8.6
	21-May-20	<0.12	<0.078	<0.11	<0.30	73.3	0.2	<0.0090	Absent	Absent	<1.0	<1.0	8.3
	13-May-21	<0.40	<0.28	<0.23	<0.11	72.3	1.7	<0.0027	Absent	Absent	<1.0	<1.0	8.6
	12-May-22	<0.50	<0.50	<0.50	<1.0	74.7	0.4	<0.0038	NA	NA	<1.0	<1.0	8.8
	17-May-23	<0.40	<0.28	<0.23	<0.11	75.1	0.077	<0.032	Absent	Absent	<1.0	<1.0	6.9
PW-2	29-May-18	<1.0	<1.0	<1.0	<3.0	108	0.153	<0.020	Absent	Absent	NA	NA	9.0
	21-May-19	<0.34	<0.28	<0.46	<1.0	109	0.099	<0.020	NA	NA	<1.0	<1.0	8.8
	21-May-20	<0.12	<0.078	<0.11	<0.30	107	0.1	<0.0090	Absent	Absent	<1.0	<1.0	9.0
	13-May-21	<0.40	<0.28	<0.23	<0.11	104	0.1	<0.0027	NA	NA	1.0	<1.0	9.0
	9-Jun-21	NS	NS	NS	NS	NS	NS	NS	Absent	Absent	3.0	<1.0	NS
	12-May-22	<0.50	<0.50	<0.50	<1.0	107	1.5	<0.0038	NA	NA	<1.0	<1.0	9.1
17-May-23	<0.40	<0.28	<0.23	<0.11	108	0.41	0.071J	Absent	Absent	<1.0	<1.0	8.8	
PW-3	29-May-18	<1.0	<1.0	<1.0	<3.0	59.5	1.200	<0.020	Absent	Absent	NA	NA	9.1
	21-May-19	<1.0	<5.0	<1.0	<3.0	60.4	1.290	<0.020	NA	NA	<1.0	<1.0	8.9
	21-May-20	<0.12	<0.078	<0.11	<0.30	60.8	1.9	<0.0090	Absent	Absent	<1.0	<1.0	8.2
	13-May-21	<0.40	<0.28	<0.23	<0.11	57.6	0.4	<0.0027	Absent	Absent	<1.0	<1.0	8.7
	12-May-22	<0.50	<0.50	<0.50	<1.0	59.5	0.96	<0.0038	NA	NA	<1.0	<1.0	8.9
	17-May-23	<0.40	<0.28	<0.23	<0.11	58.8	1.2	<0.032	Absent	Absent	<1.0	<1.0	8.7
WAC NR 140 ES Criteria	--	5	800	700	2,000	250	0.3	10	--	--	--	--	--
WAC NR 140 PAL Criteria	--	0.5	160	140	400	125	0.15	2	--	--	--	--	--
EPA Primary DW Criteria	--	5	1,000	700	10,000	--	--	10	Pos/Neg	Pos/Neg	0	0	--
EPA Secondary DW Criteria	--	--	--	--	--	250	0.3	--	--	--	--	--	6.5 - 8.5

Notes:

µg/L = micrograms per liter (parts per billion)

mg/L = milligrams per liter

NA = Not analyzed for this parameter

NS = Not sampled for this parameter

J = Estimated concentration at or above the LOD and below the LOQ

<1.0 = not detected above the laboratory practical quantitation limit or reporting limit

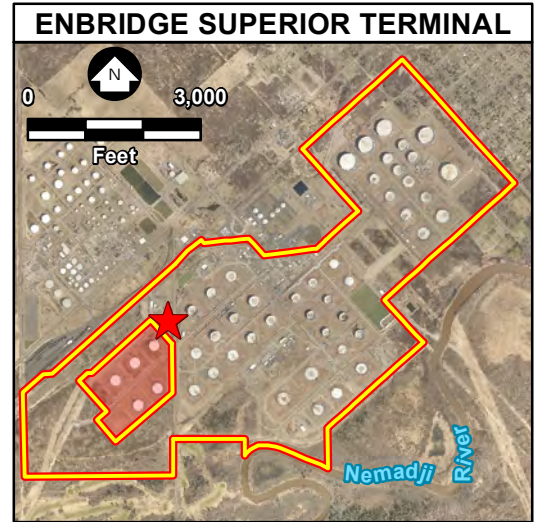
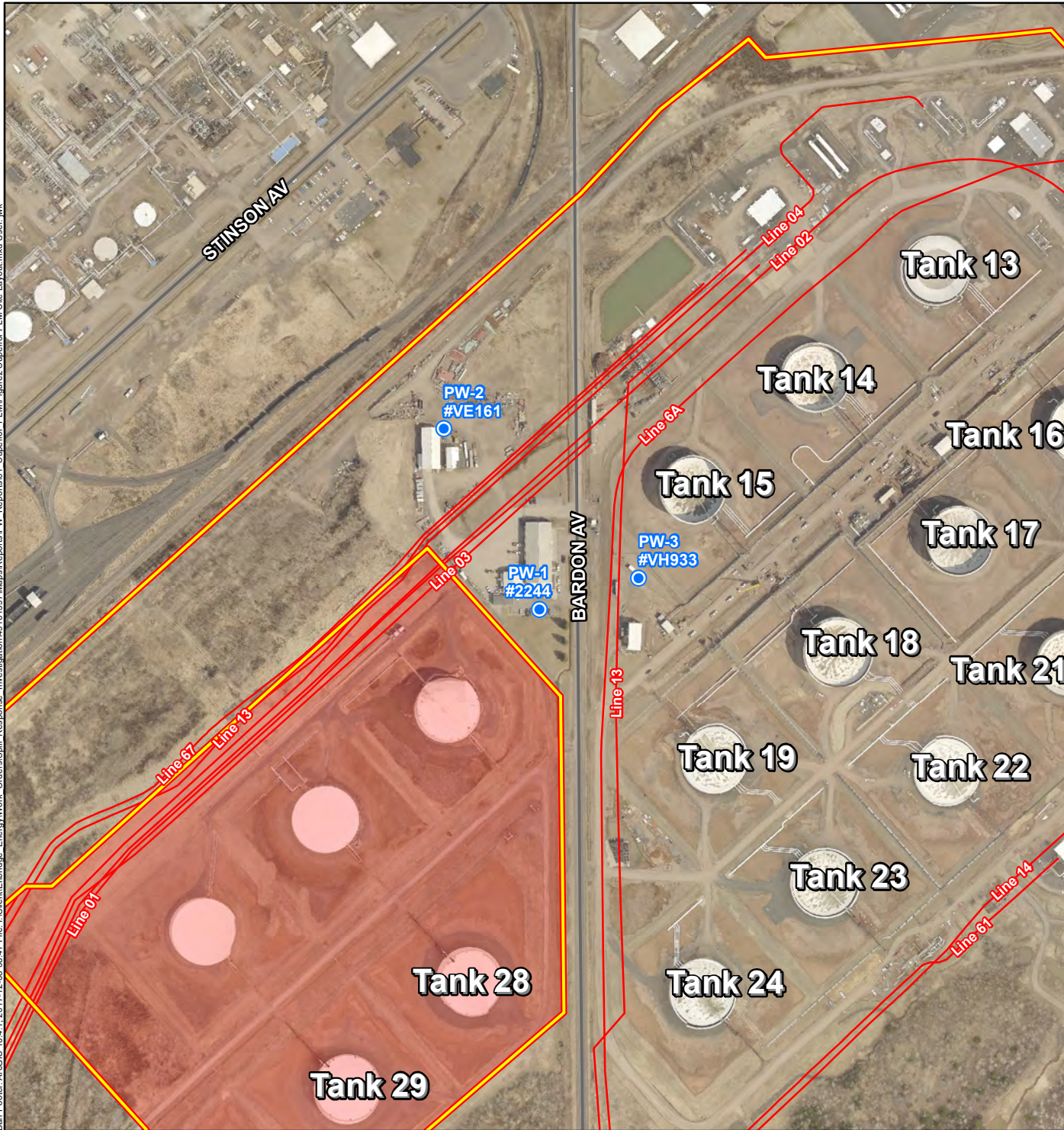
-- = No standard established

Bold results exceeded established criteria

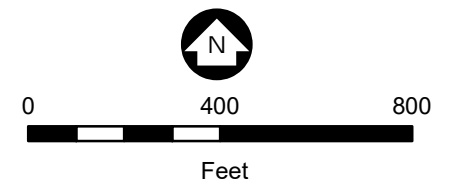
WAC NR 140 ES Criteria = Wisconsin Administrative Code NR 140, Enforcement Standard, revised December 2010.

WAC NR 140 PAL Criteria = Wisconsin Administrative Code NR 140, Preventive Action Limit, revised December 2010.

Barr Footer: ArcGIS 10.4.1, 2017-12-08 08:47 File: h:\Client\Enbridge_Energy\Work_Orders\Spill_Response_Investigation\4616397\Maps\Reports\pw_Reports\01_Superior_PLM\Figure2_Superior_PLM_Site_Layout.mxd User: mk



- ★ Site Location
- Pipeline Infrastructure
- Enbridge Ownership Boundary
- Non-Enbridge Owned Property
- Private Well



1 Inch = 400 Feet
 Douglas County Imagery Circa May, 2016

Figure 1

PRIVATE WELL LOCATIONS

Superior Terminal
 Enbridge Energy, L.P.



Attachment A

Pace Analytical Laboratory Report

June 01, 2023

Jim Taraldsen
Barr Engineering Company
325 S Lake Ave
Duluth, MN 55802

RE: Project: 49161528.01 200 205 2022 GMP S
Pace Project No.: 10653525

Dear Jim Taraldsen:

Enclosed are the analytical results for sample(s) received by the laboratory on May 17, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses were subcontracted outside of the Pace Network. The test report from the external subcontractor is attached to this report in its entirety.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Duluth, MN
- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Martha Hansen
martha.hansen@pacelabs.com
(612)607-6451
Project Manager

Enclosures

cc: Barr DM, Barr Engineering
Accounts Payable, Barr Engineering



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: 49161528.01 200 205 2022 GMP S

Pace Project No.: 10653525

Pace Analytical Services Ormond Beach

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

Colorado Certification: FL NELAC Reciprocity

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

DoD-ANAB #: ADE-3199

Florida Certification #: E83079

Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity

Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maine Certification #: FL01264

Maryland Certification: #346

Massachusetts Certification #: M-FL1264

Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236

Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14

New Hampshire Certification #: 2958

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710

North Dakota Certification #: R-216

Ohio DEP 87780

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

Pace Analytical Services, LLC - Duluth MN

4730 Oneota Street, Duluth, MN 55807

Minnesota Certification #: 027-137-152

Minnesota Dept of Ag Approval: via Minnesota 027-137-152

Minnesota Petrofund Registration #: 1240

Montana Certification #: CERT0102

Nevada Certification #: MN00037

North Dakota Certification #: R-105

Wisconsin Certification #: 999446800

Wisconsin Dept of Ag Certification: 480341

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 49161528.01 200 205 2022 GMP S

Pace Project No.: 10653525

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10653525001	PW-3	Water	05/17/23 08:50	05/17/23 11:18
10653525002	PW-1	Water	05/17/23 09:40	05/17/23 11:18
10653525003	PW-2	Water	05/17/23 10:27	05/17/23 11:18
10653525004	Trip Blank	Water	05/17/23 08:42	05/17/23 11:18

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 49161528.01 200 205 2022 GMP S

Pace Project No.: 10653525

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10653525001	PW-3	Colilert-18 (Fecal Coliforms)	DW3	1	PASI-DU
		SM 9223B (Colilert-18 QT) 2004	DW3	2	PASI-DU
		SM 9223 B (Colilert-18)	DW3	2	PASI-DU
		EPA 300.0	RL1	2	PASI-DU
		EPA 524.2	CLT	9	PASI-O
		SM 4500-H+B	SWB	1	PASI-O
10653525002	PW-1	Colilert-18 (Fecal Coliforms)	DW3	1	PASI-DU
		SM 9223B (Colilert-18 QT) 2004	DW3	2	PASI-DU
		SM 9223 B (Colilert-18)	DW3	2	PASI-DU
		EPA 300.0	RL1	2	PASI-DU
		EPA 524.2	CLT	9	PASI-O
		SM 4500-H+B	SWB	1	PASI-O
10653525003	PW-2	Colilert-18 (Fecal Coliforms)	DW3	1	PASI-DU
		SM 9223B (Colilert-18 QT) 2004	DW3	2	PASI-DU
		SM 9223 B (Colilert-18)	DW3	2	PASI-DU
		EPA 300.0	RL1	2	PASI-DU
		EPA 524.2	CLT	9	PASI-O
		SM 4500-H+B	SWB	1	PASI-O
10653525004	Trip Blank	EPA 524.2	CLT	9	PASI-O

PASI-DU = Pace Analytical Services - Duluth, MN

PASI-O = Pace Analytical Services - Ormond Beach

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161528.01 200 205 2022 GMP S

Pace Project No.: 10653525

Sample: PW-3 **Lab ID: 10653525001** Collected: 05/17/23 08:50 Received: 05/17/23 11:18 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
9223B QT Fecal Coliform DU									
Analytical Method: Colilert-18 (Fecal Coliforms) Preparation Method: Colilert-18 (Fecal Coliforms) Pace Analytical Services - Duluth, MN									
Fecal Coliform Bacteria	<1.0	MPN/100/mL	1.0	1.0	1	05/17/23 15:24	05/18/23 10:23		
9223B QT Total Coli Ecoli DU									
Analytical Method: SM 9223B (Colilert-18 QT) 2004 Preparation Method: SM 9223B (Colilert-18 QT) 2004 Pace Analytical Services - Duluth, MN									
E.coli	<1.0	MPN/100/mL	1.0	1.0	1	05/17/23 15:34	05/18/23 10:15		
Total Coliform Bacteria	<1.0	MPN/100/mL	1.0	1.0	1	05/17/23 15:34	05/18/23 10:15		
Coliform Colilert18 P/A DW DU									
Analytical Method: SM 9223 B (Colilert-18) Preparation Method: SM 9223 B (Colilert-18) Pace Analytical Services - Duluth, MN									
Total Coliforms	Absent		1.0	1.0	1	05/17/23 15:08	05/18/23 10:12		
E.coli	Absent		1.0	1.0	1	05/17/23 15:08	05/18/23 10:12		
300.0 IC Anions WW 48 Hrs DU									
Analytical Method: EPA 300.0 Pace Analytical Services - Duluth, MN									
Chloride	58.8	mg/L	1.0	0.24	1		05/19/23 06:01	16887-00-6	
Nitrate as N	<0.032	mg/L	0.10	0.032	1		05/19/23 06:01	14797-55-8	
524.2 MSV									
Analytical Method: EPA 524.2 Pace Analytical Services - Ormond Beach									
Benzene	<0.40	ug/L	0.50	0.40	1		05/23/23 20:27	71-43-2	
Ethylbenzene	<0.23	ug/L	0.50	0.23	1		05/23/23 20:27	100-41-4	
Toluene	<0.28	ug/L	0.50	0.28	1		05/23/23 20:27	108-88-3	
Xylene (Total)	<0.11	ug/L	1.0	0.11	1		05/23/23 20:27	1330-20-7	
m&p-Xylene	<0.39	ug/L	1.0	0.39	1		05/23/23 20:27	179601-23-1	
o-Xylene	<0.19	ug/L	0.50	0.19	1		05/23/23 20:27	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		05/23/23 20:27	460-00-4	p2
Toluene-d8 (S)	97	%	70-130		1		05/23/23 20:27	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	70-130		1		05/23/23 20:27	2199-69-1	
4500H+ pH, Electrometric									
Analytical Method: SM 4500-H+B Pace Analytical Services - Ormond Beach									
pH at 25 Degrees C	8.7	Std. Units	0.10	0.10	1		05/23/23 12:45		H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161528.01 200 205 2022 GMP S

Pace Project No.: 10653525

Sample: PW-1 **Lab ID: 10653525002** Collected: 05/17/23 09:40 Received: 05/17/23 11:18 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
9223B QT Fecal Coliform DU									
Analytical Method: Colilert-18 (Fecal Coliforms) Preparation Method: Colilert-18 (Fecal Coliforms) Pace Analytical Services - Duluth, MN									
Fecal Coliform Bacteria	<1.0	MPN/100/mL	1.0	1.0	1	05/17/23 15:24	05/18/23 10:23		
9223B QT Total Coli Ecoli DU									
Analytical Method: SM 9223B (Colilert-18 QT) 2004 Preparation Method: SM 9223B (Colilert-18 QT) 2004 Pace Analytical Services - Duluth, MN									
E.coli	<1.0	MPN/100/mL	1.0	1.0	1	05/17/23 15:34	05/18/23 10:15		
Total Coliform Bacteria	<1.0	MPN/100/mL	1.0	1.0	1	05/17/23 15:34	05/18/23 10:15		
Coliform Colilert18 P/A DW DU									
Analytical Method: SM 9223 B (Colilert-18) Preparation Method: SM 9223 B (Colilert-18) Pace Analytical Services - Duluth, MN									
Total Coliforms	Absent		1.0	1.0	1	05/17/23 15:08	05/18/23 10:12		
E.coli	Absent		1.0	1.0	1	05/17/23 15:08	05/18/23 10:12		
300.0 IC Anions WW 48 Hrs DU									
Analytical Method: EPA 300.0 Pace Analytical Services - Duluth, MN									
Chloride	75.1	mg/L	1.0	0.24	1		05/19/23 09:05	16887-00-6	
Nitrate as N	<0.032	mg/L	0.10	0.032	1		05/19/23 09:05	14797-55-8	
524.2 MSV									
Analytical Method: EPA 524.2 Pace Analytical Services - Ormond Beach									
Benzene	<0.40	ug/L	0.50	0.40	1		05/23/23 20:51	71-43-2	
Ethylbenzene	<0.23	ug/L	0.50	0.23	1		05/23/23 20:51	100-41-4	
Toluene	<0.28	ug/L	0.50	0.28	1		05/23/23 20:51	108-88-3	
Xylene (Total)	<0.11	ug/L	1.0	0.11	1		05/23/23 20:51	1330-20-7	
m&p-Xylene	<0.39	ug/L	1.0	0.39	1		05/23/23 20:51	179601-23-1	
o-Xylene	<0.19	ug/L	0.50	0.19	1		05/23/23 20:51	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		1		05/23/23 20:51	460-00-4	p2
Toluene-d8 (S)	99	%	70-130		1		05/23/23 20:51	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	70-130		1		05/23/23 20:51	2199-69-1	
4500H+ pH, Electrometric									
Analytical Method: SM 4500-H+B Pace Analytical Services - Ormond Beach									
pH at 25 Degrees C	6.9	Std. Units	0.10	0.10	1		05/25/23 13:45		H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161528.01 200 205 2022 GMP S

Pace Project No.: 10653525

Sample: PW-2 **Lab ID: 10653525003** Collected: 05/17/23 10:27 Received: 05/17/23 11:18 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
9223B QT Fecal Coliform DU									
Analytical Method: Colilert-18 (Fecal Coliforms) Preparation Method: Colilert-18 (Fecal Coliforms) Pace Analytical Services - Duluth, MN									
Fecal Coliform Bacteria	<1.0	MPN/100/mL	1.0	1.0	1	05/17/23 15:24	05/18/23 10:23		
9223B QT Total Coli Ecoli DU									
Analytical Method: SM 9223B (Colilert-18 QT) 2004 Preparation Method: SM 9223B (Colilert-18 QT) 2004 Pace Analytical Services - Duluth, MN									
E.coli	<1.0	MPN/100/mL	1.0	1.0	1	05/17/23 15:34	05/18/23 10:15		
Total Coliform Bacteria	<1.0	MPN/100/mL	1.0	1.0	1	05/17/23 15:34	05/18/23 10:15		
Coliform Colilert18 P/A DW DU									
Analytical Method: SM 9223 B (Colilert-18) Preparation Method: SM 9223 B (Colilert-18) Pace Analytical Services - Duluth, MN									
Total Coliforms	Absent		1.0	1.0	1	05/17/23 15:08	05/18/23 10:12		
E.coli	Absent		1.0	1.0	1	05/17/23 15:08	05/18/23 10:12		
300.0 IC Anions WW 48 Hrs DU									
Analytical Method: EPA 300.0 Pace Analytical Services - Duluth, MN									
Chloride	108	mg/L	1.0	0.24	1		05/19/23 09:28	16887-00-6	
Nitrate as N	0.071J	mg/L	0.10	0.032	1		05/19/23 09:28	14797-55-8	
524.2 MSV									
Analytical Method: EPA 524.2 Pace Analytical Services - Ormond Beach									
Benzene	<0.40	ug/L	0.50	0.40	1		05/23/23 21:16	71-43-2	
Ethylbenzene	<0.23	ug/L	0.50	0.23	1		05/23/23 21:16	100-41-4	
Toluene	<0.28	ug/L	0.50	0.28	1		05/23/23 21:16	108-88-3	
Xylene (Total)	<0.11	ug/L	1.0	0.11	1		05/23/23 21:16	1330-20-7	
m&p-Xylene	<0.39	ug/L	1.0	0.39	1		05/23/23 21:16	179601-23-1	
o-Xylene	<0.19	ug/L	0.50	0.19	1		05/23/23 21:16	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		05/23/23 21:16	460-00-4	p2
Toluene-d8 (S)	100	%	70-130		1		05/23/23 21:16	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	70-130		1		05/23/23 21:16	2199-69-1	
4500H+ pH, Electrometric									
Analytical Method: SM 4500-H+B Pace Analytical Services - Ormond Beach									
pH at 25 Degrees C	8.8	Std. Units	0.10	0.10	1		05/25/23 13:52		H6

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ANALYTICAL RESULTS

Project: 49161528.01 200 205 2022 GMP S

Pace Project No.: 10653525

Sample: Trip Blank **Lab ID: 10653525004** Collected: 05/17/23 08:42 Received: 05/17/23 11:18 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV									
Analytical Method: EPA 524.2									
Pace Analytical Services - Ormond Beach									
Benzene	<0.40	ug/L	0.50	0.40	1		05/23/23 21:40	71-43-2	
Ethylbenzene	<0.23	ug/L	0.50	0.23	1		05/23/23 21:40	100-41-4	
Toluene	<0.28	ug/L	0.50	0.28	1		05/23/23 21:40	108-88-3	
Xylene (Total)	<0.11	ug/L	1.0	0.11	1		05/23/23 21:40	1330-20-7	
m&p-Xylene	<0.39	ug/L	1.0	0.39	1		05/23/23 21:40	179601-23-1	
o-Xylene	<0.19	ug/L	0.50	0.19	1		05/23/23 21:40	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		1		05/23/23 21:40	460-00-4	
Toluene-d8 (S)	99	%	70-130		1		05/23/23 21:40	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	70-130		1		05/23/23 21:40	2199-69-1	

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QUALITY CONTROL DATA

Project: 49161528.01 200 205 2022 GMP S

Pace Project No.: 10653525

QC Batch:	881877	Analysis Method:	Colilert-18 (Fecal Coliforms)
QC Batch Method:	Colilert-18 (Fecal Coliforms)	Analysis Description:	9223B QT Fecal Coliform DU
		Laboratory:	Pace Analytical Services - Duluth, MN

Associated Lab Samples: 10653525001, 10653525002, 10653525003

METHOD BLANK: 4647097 Matrix: Water

Associated Lab Samples: 10653525001, 10653525002, 10653525003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fecal Coliform Bacteria	MPN/100/mL	<1.0	1.0	05/18/23 10:23	

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QUALITY CONTROL DATA

Project: 49161528.01 200 205 2022 GMP S

Pace Project No.: 10653525

QC Batch:	881890	Analysis Method:	SM 9223B (Colilert-18 QT) 2004
QC Batch Method:	SM 9223B (Colilert-18 QT) 2004	Analysis Description:	9223B QT Total Coli Ecoli DU
		Laboratory:	Pace Analytical Services - Duluth, MN

Associated Lab Samples: 10653525001, 10653525002, 10653525003

METHOD BLANK: 4647124 Matrix: Water

Associated Lab Samples: 10653525001, 10653525002, 10653525003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
E.coli	MPN/100/mL	<1.0	1.0	05/18/23 10:15	
Total Coliform Bacteria	MPN/100/mL	<1.0	1.0	05/18/23 10:15	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: 49161528.01 200 205 2022 GMP S

Pace Project No.: 10653525

QC Batch: 881880

Analysis Method: SM 9223 B (Colilert-18)

QC Batch Method: SM 9223 B (Colilert-18)

Analysis Description: TotColDW DBIO Total Coliform DU

Laboratory: Pace Analytical Services - Duluth, MN

Associated Lab Samples: 10653525001, 10653525002, 10653525003

METHOD BLANK: 4647102

Matrix: Drinking Water

Associated Lab Samples: 10653525001, 10653525002, 10653525003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
E.coli		Absent	1.0	05/18/23 10:12	
Total Coliforms		Absent	1.0	05/18/23 10:12	

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QUALITY CONTROL DATA

Project: 49161528.01 200 205 2022 GMP S

Pace Project No.: 10653525

QC Batch:	882218	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions WW 48 Hrs DU
		Laboratory:	Pace Analytical Services - Duluth, MN

Associated Lab Samples: 10653525001, 10653525002, 10653525003

METHOD BLANK: 4648511 Matrix: Water

Associated Lab Samples: 10653525001, 10653525002, 10653525003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.24	1.0	05/19/23 05:15	
Nitrate as N	mg/L	<0.032	0.10	05/19/23 05:15	

LABORATORY CONTROL SAMPLE: 4648512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	100	101	101	90-110	
Nitrate as N	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4648513 4648514

Parameter	Units	10653525001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	58.8	100	100	156	162	97	104	90-110	4	20	
Nitrate as N	mg/L	<0.032	5	5	4.8	5.2	96	104	90-110	7	20	

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QUALITY CONTROL DATA

Project: 49161528.01 200 205 2022 GMP S

Pace Project No.: 10653525

QC Batch:	920170	Analysis Method:	EPA 524.2
QC Batch Method:	EPA 524.2	Analysis Description:	524.2 MSV
		Laboratory:	Pace Analytical Services - Ormond Beach

Associated Lab Samples: 10653525001, 10653525002, 10653525003, 10653525004

METHOD BLANK: 5059682 Matrix: Water

Associated Lab Samples: 10653525001, 10653525002, 10653525003, 10653525004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	<0.40	0.50	05/23/23 14:44	
Ethylbenzene	ug/L	<0.23	0.50	05/23/23 14:44	
m&p-Xylene	ug/L	<0.39	1.0	05/23/23 14:44	
o-Xylene	ug/L	<0.19	0.50	05/23/23 14:44	
Toluene	ug/L	<0.28	0.50	05/23/23 14:44	
Xylene (Total)	ug/L	<0.11	1.0	05/23/23 14:44	
1,2-Dichlorobenzene-d4 (S)	%	99	70-130	05/23/23 14:44	
4-Bromofluorobenzene (S)	%	104	70-130	05/23/23 14:44	
Toluene-d8 (S)	%	99	70-130	05/23/23 14:44	

LABORATORY CONTROL SAMPLE & LCSD: 5059683 5059684

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	ug/L	40	38.1	37.5	95	94	70-130	2	20	
Ethylbenzene	ug/L	40	38.1	37.9	95	95	70-130	0	20	
m&p-Xylene	ug/L	80	73.3	72.7	92	91	70-130	1	20	
o-Xylene	ug/L	40	38.1	37.7	95	94	70-130	1	20	
Toluene	ug/L	40	36.8	36.1	92	90	70-130	2	20	
Xylene (Total)	ug/L	120	111	110	93	92	70-130	1	20	
1,2-Dichlorobenzene-d4 (S)	%				101	100	70-130			
4-Bromofluorobenzene (S)	%				104	103	70-130			
Toluene-d8 (S)	%				99	100	70-130			

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 49161528.01 200 205 2022 GMP S

Pace Project No.: 10653525

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

DL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

WORKORDER QUALIFIERS

WO: 10653525

[1] Samples were received outside of the recommended temperature range of 0-6 degrees Celsius. The samples were received from the field on ice.

ANALYTE QUALIFIERS

H6 Analysis initiated outside of the 15 minute EPA required holding time.

p2 Post-analysis pH measurement indicates pH > 2.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161528.01 200 205 2022 GMP S

Pace Project No.: 10653525

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10653525001	PW-3	Colilert-18 (Fecal Coliforms)	881877	Colilert-18 (Fecal Coliforms)	881916
10653525002	PW-1	Colilert-18 (Fecal Coliforms)	881877	Colilert-18 (Fecal Coliforms)	881916
10653525003	PW-2	Colilert-18 (Fecal Coliforms)	881877	Colilert-18 (Fecal Coliforms)	881916
10653525001	PW-3	SM 9223B (Colilert-18 QT) 2004	881890	SM 9223B (Colilert-18 QT) 2004	881917
10653525002	PW-1	SM 9223B (Colilert-18 QT) 2004	881890	SM 9223B (Colilert-18 QT) 2004	881917
10653525003	PW-2	SM 9223B (Colilert-18 QT) 2004	881890	SM 9223B (Colilert-18 QT) 2004	881917
10653525001	PW-3	SM 9223 B (Colilert-18)	881880	SM 9223 B (Colilert-18)	881915
10653525002	PW-1	SM 9223 B (Colilert-18)	881880	SM 9223 B (Colilert-18)	881915
10653525003	PW-2	SM 9223 B (Colilert-18)	881880	SM 9223 B (Colilert-18)	881915
10653525001	PW-3	EPA 300.0	882218		
10653525002	PW-1	EPA 300.0	882218		
10653525003	PW-2	EPA 300.0	882218		
10653525001	PW-3	EPA 524.2	920170		
10653525002	PW-1	EPA 524.2	920170		
10653525003	PW-2	EPA 524.2	920170		
10653525004	Trip Blank	EPA 524.2	920170		
10653525001	PW-3	SM 4500-H+B	919998		
10653525002	PW-1	SM 4500-H+B	920804		
10653525003	PW-2	SM 4500-H+B	920804		

REPORT OF LABORATORY ANALYSIS

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Barr Engineering Co. Chain of Custody

Sample Origination State

CO MI MN MO ND NV TX UT WI WY Other: _____

REPORT TO	INVOICE TO
Company: <u>Barr Engineering Co.</u>	Company: <u>Barr</u>
Address: <u>325 S. Lake Ave.</u>	Address: _____
Address: <u>Duluth, MN 55802</u>	Address: _____
Name: <u>Lynette Carney</u>	Name: _____
email: <u>lcarney@barr.com</u>	email: _____
Copy to: <u>BarrDM@barr.com</u>	P.O. _____
Project Name: <u>2022 GMP SPT PW</u>	Barr Project No: <u>4916/528.01 200 205</u>

Perform MS/MSD Y / N	Analysis Requested	
	Water	Soil
	<u>BTEX (524.2)</u>	
	<u>Chloride (300.0)</u>	
	<u>PH (SM 4500 H+)</u>	
	<u>Iron (900.7)</u>	
	<u>Nitrate (300.0)</u>	
	<u>Coli. E. Coli - See Site Comments</u>	
	<u>Coli. Coli - See Site Comments</u>	

COC Number: **No 591703**
 COC 1 of 1

WO#: 10653525

PM: MKH Due Date: 06/01/23
 CLIENT: BARR

W = Unspecified G = NaHSO₄
 S = Soil/Solid H = Na₂S₂O₃
 SD = Sediment I = Ascorbic Acid
 SQ = MeOH blank J = Zn Acetate
 OTH = Other (Oil, etc.) K = Other

Location	Sample Depth			Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix Code	Perform MS/MSD Y / N	Total Number Of Containers	% Solids
	Start	Stop	Unit (m./ft. or in.)						
1. <u>PW-3</u>	---	---	---	<u>05/17/2023</u>	<u>8:50</u>	<u>DW</u>	<u>N</u>	<u>9</u>	
2. <u>PW-1</u>	---	---	---	<u>05/17/2023</u>	<u>9:40</u>	<u>DW</u>	<u>N</u>	<u>9</u>	
3. <u>PW-2</u>	---	---	---	<u>05/17/2023</u>	<u>10:27</u>	<u>DW</u>	<u>N</u>	<u>4</u>	
4. <u>Top Blank</u>	---	---	---	<u>05/17/2023</u>	<u>8:42</u>	<u>NB</u>	<u>N</u>	<u>2</u>	
5.									
6.									
7.									
8.									
9.									
10.									

Preservative Code
 Field Filtered Y/N

PW-2 has 3 VOA vials w/ preservative and 3 VOA vials without preservative. Air bubbles in samples - KLS3

Additional info for Analysis requested:

(1) Total and fecal coliform as method coliert w/ E coli by method SM 9223B (coliert-18 QF) 2004

AND
(2) Total and fecal coliform as method coliert w/ E coli by method SM 9223B (coliert-18) - P/A

BARR USE ONLY

Sampled by: KLS3/CWK
 Barr Proj. Manager: LMC
 Barr DQ Manager: JET
 Lab Name: Aze
 Lab Location: _____

Relinquished by: Katey Schruder

On Ice? Y N
 Date: 05/17/2023 Time: 11:18

Received by: Muelly Gaton

Date: 5/17/23 Time: 11:18

Relinquished by: _____

On Ice? Y N
 Date: _____ Time: _____

Received by: _____

Date: _____ Time: _____

Samples Shipped VIA: Ground Courier Air Carrier
 Sampler Other: _____

Air Bill Number: _____

Lab WO: _____ Temperature on Receipt (°C): 9.2 Custody Seal Intact? Y N None

Requested Due Date:
 Standard Turn Around Time
 Rush _____ (mm/dd/yyyy)

Effective Date:

Sample Condition Upon Receipt **Client Name:** Barr Engineering **Project #:** **WO#: 10653525**

Courier: FedEx UPS USPS Client
 Pace SpeedDee Commercial

Tracking Number: _____ See Exceptions ENV-FRM-MIN4-0142

Barcode: **10653525**

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No Biological Tissue Frozen? Yes No N/A

Packing Material: Bubble Wrap Bubble Bags None Other Temp Blank? Yes No

Thermometer: T1 (0461) T2 (1336) T3 (0459) T4 (0254) T5 (0178) Type of Ice: Wet Blue Dry None
 T6 (0235) T7 (0042) T8 (0775) 01339252/1710 Melted

Did Samples Originate in West Virginia? Yes No Were All Container Temps Taken? Yes No N/A

Temp should be above freezing to 6 °C Cooler temp Read w/Temp Blank: 9.0 °C Average Corrected Temp (no temp blank only): _____ °C

Correction Factor: +0.2 Cooler Temp Corrected w/temp blank: 9.2 °C See Exceptions ENV-FRM-MIN4-0142 1 Container

USDA Regulated Soil: (N/A, water sample/other: _____) Date/Initials of Person Examining Contents: 5/17/23 SV

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): <input checked="" type="checkbox"/> Duluth <input type="checkbox"/> Minneapolis <input type="checkbox"/> Virginia	COMMENTS
Chain of Custody Present and Filled Out? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Relinquished? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Sampler Name and/or Signature on COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	4. If fecal: <input type="checkbox"/> <8 hrs <input type="checkbox"/> >8 hr, <24 <input type="checkbox"/> No
Short Hold Time Analysis (<72 hr)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. <input checked="" type="checkbox"/> Fecal Coliform <input type="checkbox"/> HPC <input checked="" type="checkbox"/> Total Coliform/E.coli <input type="checkbox"/> BOD/cBOD <input type="checkbox"/> Hex Chrom <input type="checkbox"/> Turbidity <input checked="" type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Orthophos <input type="checkbox"/> Other MKH 5/17/23
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Sufficient Sample Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Field Filtered Volume Received for Dissolved Tests? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10. Is sediment visible in the dissolved container? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is sufficient information available to reconcile the samples to the COC? Matrix: <input checked="" type="checkbox"/> Water <input type="checkbox"/> Soil <input type="checkbox"/> Oil <input type="checkbox"/> Other	11. If no, write ID/Date/Time of container below: <input type="checkbox"/> See Exceptions ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12. Sample # <input type="checkbox"/> NaOH <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> Zinc Acetate
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH >10 Cyanide)	
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	Positive for Residual Chlorine? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> See Exceptions ENV-FRM-MIN4-0142 pH Paper Lot # Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in Methyl Mercury Container? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Extra labels present on soil VOA or WIDRO containers? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14. <input type="checkbox"/> See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
3 Trip Blanks Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ Date: 5/17/23

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Internal Transfer Chain of Custody



Samples Pre-Logged into eCOC.

State Of Origin: WI

Cert. Needed:
Owner Received:



WO#: 35801151

1/2023

Workorder: 10653525 Workorder Name: 49161528.01 200 205 2022 GMP S



Report To						Subcontract To																
Martha Hansen Pace Analytical Minnesota 1700 Elm Street Minneapolis, MN 55414 Phone (612)607-6451						Pace Analytical Ormond Beach 8 East Tower Circle Ormond Beach, FL 32174 Phone (386)672-5668																
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers					524.2 BTEX (Pace OB)	524.2 BTEX - TB (Pace OB)	SM4500 H+B pH (Pace OB)	LAB USE ONLY								
						VG9H	BP3U	DG9T	DG9U													
1	PW-3	PS	5/17/2023 08:50	10653525001	Drinking		1	3				X	X									
2	PW-1	PS	5/17/2023 09:40	10653525002	Drinking		1	3				X	X									
3	PW-2	PS	5/17/2023 10:27	10653525003	Drinking		1	3	3			X	X									
4	Trip Blank	PS	5/17/2023 08:42	10653525004	Drinking	2						X										
5																						

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	<i>Ernest Higgins</i>	5/18 13:00	<i>[Signature]</i>	5/18/23 10:30	
2					
3					

Cooler Temperature on Receipt 14 °C Custody Seal Y or N Received on Ice Y or N Samples Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

WO#: 35801151

(UR)



Project #
Project Manager:
Client:

PM: SS1 Due Date: 05/31/23
CLIENT: PACMIN

Date and Initials of person:

Examining contents: EH
Label: EH
Deliver: EH
pH:
Initials: CEJ

Thermometer Used: I-409 Date: 5-19-23 Time: 10:50

State of Origin: _____ For WV projects, all containers verified to $\pm 0.6^\circ\text{C}$

Cooler #1 Temp. $^\circ\text{C}$ 1.6 (Visual) -0.2 (Correction Factor) 1.4 (Actual)

Cooler #2 Temp. $^\circ\text{C}$ _____ (Visual) _____ (Correction Factor) _____ (Actual)

Cooler #3 Temp. $^\circ\text{C}$ _____ (Visual) _____ (Correction Factor) _____ (Actual)

Cooler #4 Temp. $^\circ\text{C}$ _____ (Visual) _____ (Correction Factor) _____ (Actual)

Cooler #5 Temp. $^\circ\text{C}$ _____ (Visual) _____ (Correction Factor) _____ (Actual)

Cooler #6 Temp. $^\circ\text{C}$ _____ (Visual) _____ (Correction Factor) _____ (Actual)

Recheck for OOT $^\circ\text{C}$ _____ (Visual) _____ (Correction Factor) _____ (Actual)

Courier: Fed Ex UPS USPS Client Commercial Pace Other:

Shipping Method: Standard Overnight First Overnight Priority Overnight Ground International Priority Other:

Billing: Recipient Sender Third Party Credit Card Unknown Other:

Tracking # 6289 8668 2922

Custody Seal Present: Yes No Seal properly placed and intact: Yes No

Packing Material: Bubble Wrap Bubble Bags None Other: _____ Ice: Wet Blue Dry None Melted

Samples shorted to lab: Yes No (if yes, complete the following)

Shorted Date: _____
Bottle Quantity / Type: _____ Shorted Time: _____

Chain of Custody:	Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Relinquished From Pace: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Sampler Name: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Samples Arrived within Hold Time	Relinquished To Pace: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Sampling Date(s): <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Sampling Time(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Rush Turnaround Requested on COC	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Comments:
Sufficient Volume	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Comments:
Correct Containers Used	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Comments:
Containers Intact	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Comments:
Sample Labels Match COC (Sample ID, Date/Time of Collection)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Comments:
All containers needing acid / base preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Comments:
All containers needing preservation are found to be in compliance with EPA recommendation:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Headspace in Volatile Vials? (>6mm):	Exceptions: Vials, Microbiology, O&G, PFAS
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Comments / Resolutions (use back for additional comments):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

Preservation Information

Preservative: _____ Date: _____

Lot / Trace: _____ Time: _____

Amount added (mL): _____ Initials: _____



ANALYTICAL REPORT

PREPARED FOR

Attn: Martha Hansen
Pace Analytical Services LLC
2665 Long Lake Road
Bldg. C, STE 300
Roseville, Minnesota 55113

Generated 6/1/2023 2:39:06 PM

JOB DESCRIPTION

10653525

JOB NUMBER

810-63746-1

Eurofins Eaton Analytical South Bend

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization



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6/1/2023 2:39:06 PM

Authorized for release by
Nathan Trowbridge, Manager of Project Management
Nathan.Trowbridge@et.eurofinsus.com
(574)233-4777



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Definitions/Glossary

Client: Pace Analytical Services LLC
Project/Site: 10653525

Job ID: 810-63746-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Pace Analytical Services LLC
Project/Site: 10653525

Job ID: 810-63746-1

Job ID: 810-63746-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-63746-1

Receipt

The samples were received on 5/19/2023 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

- 1
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Detection Summary

Client: Pace Analytical Services LLC
Project/Site: 10653525

Job ID: 810-63746-1

Client Sample ID: PW-3_10653525001

Lab Sample ID: 810-63746-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Iron	1.2		0.010	mg/L	1		200.7 Rev 4.4	Total/NA

Client Sample ID: PW-1_10653525002

Lab Sample ID: 810-63746-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Iron	0.077		0.010	mg/L	1		200.7 Rev 4.4	Total/NA

Client Sample ID: PW-2_10653525003

Lab Sample ID: 810-63746-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Iron	0.41		0.010	mg/L	1		200.7 Rev 4.4	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: Pace Analytical Services LLC
Project/Site: 10653525

Job ID: 810-63746-1

Client Sample ID: PW-3_10653525001

Lab Sample ID: 810-63746-1

Date Collected: 05/17/23 08:50

Matrix: Water

Date Received: 05/19/23 09:30

Method: EPA 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	1.2		0.010	mg/L			05/31/23 14:28	1

Client Sample ID: PW-1_10653525002

Lab Sample ID: 810-63746-2

Date Collected: 05/17/23 09:40

Matrix: Water

Date Received: 05/19/23 09:30

Method: EPA 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.077		0.010	mg/L			05/31/23 14:30	1

Client Sample ID: PW-2_10653525003

Lab Sample ID: 810-63746-3

Date Collected: 05/17/23 10:27

Matrix: Water

Date Received: 05/19/23 09:30

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.41		0.010	mg/L		05/24/23 12:25	05/25/23 18:59	1

QC Sample Results

Client: Pace Analytical Services LLC
Project/Site: 10653525

Job ID: 810-63746-1

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 810-60892/105
Matrix: Water
Analysis Batch: 60892

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<0.010		0.010	mg/L			05/31/23 16:11	1

Lab Sample ID: MB 810-60892/12
Matrix: Water
Analysis Batch: 60892

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<0.010		0.010	mg/L			05/31/23 12:51	1

Lab Sample ID: MB 810-60892/45
Matrix: Water
Analysis Batch: 60892

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<0.010		0.010	mg/L			05/31/23 14:02	1

Lab Sample ID: MB 810-60892/75
Matrix: Water
Analysis Batch: 60892

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<0.010		0.010	mg/L			05/31/23 15:06	1

Lab Sample ID: LCS 810-60892/46
Matrix: Water
Analysis Batch: 60892

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5.00	5.06		mg/L		101	85 - 115

Lab Sample ID: LLCS 810-60892/11
Matrix: Water
Analysis Batch: 60892

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	0.0100	0.0102		mg/L		102	50 - 150

Lab Sample ID: MB 810-60168/1-A
Matrix: Water
Analysis Batch: 60396

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 60168

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<0.010		0.010	mg/L		05/24/23 12:25	05/25/23 18:40	1

Lab Sample ID: LCS 810-60168/4-A
Matrix: Water
Analysis Batch: 60396

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 60168

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5.00	5.02		mg/L		100	85 - 115

QC Sample Results

Client: Pace Analytical Services LLC
Project/Site: 10653525

Job ID: 810-63746-1

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: LLCS 810-60168/2-A
Matrix: Water
Analysis Batch: 60396

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 60168

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	0.0100	0.0107		mg/L		107	50 - 150

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QC Association Summary

Client: Pace Analytical Services LLC
Project/Site: 10653525

Job ID: 810-63746-1

Metals

Prep Batch: 60168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-63746-3	PW-2_10653525003	Total Recoverable	Water	200.7	
MB 810-60168/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 810-60168/4-A	Lab Control Sample	Total Recoverable	Water	200.7	
LLCS 810-60168/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Analysis Batch: 60396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-63746-3	PW-2_10653525003	Total Recoverable	Water	200.7 Rev 4.4	60168
MB 810-60168/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	60168
LCS 810-60168/4-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	60168
LLCS 810-60168/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	60168

Analysis Batch: 60892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-63746-1	PW-3_10653525001	Total/NA	Water	200.7 Rev 4.4	
810-63746-2	PW-1_10653525002	Total/NA	Water	200.7 Rev 4.4	
MB 810-60892/105	Method Blank	Total/NA	Water	200.7 Rev 4.4	
MB 810-60892/12	Method Blank	Total/NA	Water	200.7 Rev 4.4	
MB 810-60892/45	Method Blank	Total/NA	Water	200.7 Rev 4.4	
MB 810-60892/75	Method Blank	Total/NA	Water	200.7 Rev 4.4	
LCS 810-60892/46	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
LLCS 810-60892/11	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	

Lab Chronicle

Client: Pace Analytical Services LLC
 Project/Site: 10653525

Job ID: 810-63746-1

Client Sample ID: PW-3_10653525001

Lab Sample ID: 810-63746-1

Date Collected: 05/17/23 08:50

Matrix: Water

Date Received: 05/19/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	200.7 Rev 4.4		1	60892	AC	EA SB	05/31/23 14:28

Client Sample ID: PW-1_10653525002

Lab Sample ID: 810-63746-2

Date Collected: 05/17/23 09:40

Matrix: Water

Date Received: 05/19/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	200.7 Rev 4.4		1	60892	AC	EA SB	05/31/23 14:30

Client Sample ID: PW-2_10653525003

Lab Sample ID: 810-63746-3

Date Collected: 05/17/23 10:27

Matrix: Water

Date Received: 05/19/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			60168	NB	EA SB	05/24/23 12:25
Total Recoverable	Analysis	200.7 Rev 4.4		1	60396	AC	EA SB	05/25/23 18:59

Laboratory References:

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Accreditation/Certification Summary

Client: Pace Analytical Services LLC
Project/Site: 10653525

Job ID: 810-63746-1

Laboratory: Eurofins Eaton Analytical South Bend

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Minnesota	NELAP	1989807	12-31-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
200.7 Rev 4.4		Water	Iron
200.7 Rev 4.4	200.7	Water	Iron



Method Summary

Client: Pace Analytical Services LLC
Project/Site: 10653525

Job ID: 810-63746-1

Method	Method Description	Protocol	Laboratory
200.7 Rev 4.4	Metals (ICP)	EPA	EA SB
200.7	Preparation, Total Recoverable Metals	EPA	EA SB

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777



Sample Summary

Client: Pace Analytical Services LLC
Project/Site: 10653525

Job ID: 810-63746-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-63746-1	PW-3_10653525001	Water	05/17/23 08:50	05/19/23 09:30
810-63746-2	PW-1_10653525002	Water	05/17/23 09:40	05/19/23 09:30
810-63746-3	PW-2_10653525003	Water	05/17/23 10:27	05/19/23 09:30

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Chain of Custody

PASI Minnesota Laboratory



810-63746 Chain of Custody



Workorder: 10653525

Workorder Name: 49161528.01 200 205 2022 GMP S

Results Requested By: 6/1/2023

Report / Invoice To Martha Hansen Pace Analytical Minnesota 1700 Elm Street Minneapolis, MN 55414 Phone (612)607-6451 Email: martha.hansen@pacelabs.com	Subcontract To Eurofins 110 South Hill St South Bend, IN 46617	P.O. 10653525	Requested Analysis										
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Phone (612)607-6451
Email: martha.hansen@pacelabs.com

State of Sample Origin: WI LOD/LOQ

Preserved Containers

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	BP3N	200.7 Fe (Eurofins)											LAB USE ONLY			
1	PW-3	5/17/2023 08:50	10653525001	Water	1	X														
2	PW-1	5/17/2023 09:40	10653525002	Water	1	X														
3	PW-2	5/17/2023 10:27	10653525003	Water	1	X														
4																				
5																				

Transfers						Comments
Released By	Date/Time	Received By	Date/Time			
Megan [Signature]	5/18/23 12:40	Kameron Williams	5/18/23 09:30			Drinking water certification in WI required Include Barr Equis EDD

Cooler Temperature on Receipt	°C	Custody Seal Y or N	Received on Ice Y or N	Samples Intact Y or N
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Client Provided Sample Container

pH Acceptable



Login Sample Receipt Checklist

Client: Pace Analytical Services LLC

Job Number: 810-63746-1

Login Number: 63746

List Source: Eurofins Eaton Analytical South Bend

List Number: 1

Creator: Williams, Kameron

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	False	Thermal preservation not required.
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	False	Client provided containers

Attachment B

Private Well PW-2 Photos

**Private Well PW-2 photos
Enbridge Superior Terminal, Superior, WI**



Photo 1: Private Well PW-2, photo facing northwest. (May 17, 2023)



Photo 2: Gap between PW-2 well casing and cover. (May 12, 2022)