

2021 Groundwater Monitoring Program Report

*Superior Terminal
Superior, Wisconsin*

Prepared for
Enbridge Energy

July 2021



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**ENBRIDGE ENERGY LIMITED PARTNERSHIP
GROUNDWATER MONITORING PROGRAM - REPORT FORM
(Superior Terminal – Superior, WI)
Sample Dates: May 10 – 14, 2021**

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: Douglas 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*

Enbridge Key Number 3382; Barr Engineering Co. Key Number 32437 (MW-14 and MW-15)

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 46.69014°
W -92.06411°

MW-19B N 46.69015°
W -92.06409°

MW-20A N 46.68565°
W -92.05740°

MW-20B N 46.68564°
W -92.05738°

MW-21A N 46.68188°
W -92.06080°

MW-21B N 46.68190°
W -92.06079°

MW-22B N 46.68350°
W -92.05313°

MW-23B N 46.68658°
W -92.05070°

MW-24A N 46.69037°
W -92.05623°

MW-24B N 46.69039°
W -92.05620°

MW-25A N 46.69449°
W -92.04603°

MW-25B N 46.69450°
W -92.04604°

MW-26 N 46.69683°
W -92.05110°

Average Groundwater Depth (Shallow Wells): 6.21 feet below grade

Average Groundwater Depth (Deep Wells): 13.38 feet below grade

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

Groundwater Samples Collected? Yes No #Sampling Events: 1 (May 2021)

Analytical Laboratory Name & Location: Pace Analytical, Green Bay, WI.

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; total coliform in PW-2)*

Free Product Encountered? Yes No

Location: N/A

IV. Monitoring Well Conditions (well by well)

- MW-1R was in good condition, recovery rate was poor, purge water was clear, no evidence of contamination (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 contamination was observed. The well lock was difficult to open and had to be lubricated with powered graphite to open. Vegetation was overgrown around the monitoring well.
- MW-5 was in good condition, recovery rate was poor, purge water was clear to slightly turbid, no evidence of contamination was observed.
- MW-5B was in good condition, recovery rate was poor, purge water was clear, no evidence of contamination was observed. The well lock was difficult to open and had to be lubricated with powered graphite to open.
- MW-6 was in good condition, recovery rate was poor, purge water was clear to slightly turbid, no evidence of contamination was observed. The exterior steel protective casing paint was faded and rusty; therefore, it was re-painted with low VOC, high visibility yellow paint on May 14.
- MW-6B was in good condition, recovery rate was poor, purge water was clear to turbid, no evidence of contamination was observed. The loose concrete around the steel protective casing was removed on May 11. The exterior casing paint was faded and rusty; therefore, it was re-painted with low VOC, high visibility yellow paint on May 14.
- MW-10 was in good condition, recovery rate was poor, purge water was clear to slightly turbid, no evidence of contamination was observed.
- MW-11 was in good condition, recovery rate was poor, purge water was clear, no evidence of contamination was observed.
- MW-11B was in good condition, recovery rate was poor, purge water was clear, no evidence of contamination was observed.
- MW-12 was in good condition, recovery rate was poor, purge water was clear, no evidence of contamination was observed.
- MW-14 was in good condition, recovery rate was poor, purge water was clear to slightly turbid, no evidence of contamination was observed. Enbridge well lock had been replaced by others and when Barr cut the lock to access the well, a bailer was found hanging in the well. The bailer was removed and disposed of by Barr prior to well gauging and sampling. The well lock was replaced with a Barr lock (key #32437). The exterior casing paint was faded and rusty; therefore, it was re-painted with low VOC, high visibility yellow paint on May 14.
- MW-15 was in good condition, recovery rate was poor, purge water was clear to slightly turbid, no evidence of contamination was observed. Enbridge well lock had been replaced by others and when Barr cut the lock to access the well, a bailer was found hanging in the well. The bailer was removed and disposed of by Barr prior to well gauging and sampling. The well lock was replaced with a Barr lock (key #32437). The exterior casing paint was faded and rusty; therefore, it was re-painted with low VOC, high visibility yellow paint on May 14.
- MW-17 was in good condition, recovery rate was poor, purge water was clear, no evidence of contamination was observed. The well lock was difficult to open and had to be lubricated with powered graphite to open.
- MW-17B was in good condition, recovery rate was poor, purge water was clear, no evidence of contamination was observed. The well lock was difficult to open and had to be lubricated with powered graphite to open.
- MW-18 was in good condition, recovery rate was poor, purge water was clear, no evidence of contamination was observed.

- MW-19A was in good condition, recovery rate was poor, purge water was clear, no evidence of contamination was observed.
- MW-19B was in good condition, recovery rate was poor, purge water was clear, no evidence of contamination was observed.
- MW-20A was in good condition, recovery rate was poor, purge water was clear to slightly turbid, no evidence of contamination was observed. The exterior casing paint was faded and rusty; therefore, it was re-painted with low VOC, high visibility yellow paint on May 14.
- MW-20B was in good condition, recovery rate was poor, purge water was clear, no evidence of contamination was observed. The exterior casing paint was faded and rusty; therefore, it was re-painted with low VOC, high visibility yellow paint on May 14.
- MW-21A was in good condition, recovery rate was poor, purge water was clear, no evidence of contamination was observed.
- MW-21B was in good condition, recovery rate was poor, purge water was clear, no evidence of contamination was observed.
- MW-22B was in good condition, recovery rate was poor, purge water was clear to turbid, no evidence of contamination was observed. The well lock was difficult to open and had to be lubricated with powered graphite to open.
- MW-23B was in good condition, recovery rate was poor, purge water was clear, no evidence of contamination was observed. Frost action has loosened the concrete around the steel protective casing and it appears the concrete and steel casing have heaved slightly (<1 inch). The well lock was difficult to open and had to be lubricated with powered graphite to open.
- MW-24A was in good condition, recovery rate was poor, purge water was clear to turbid, no evidence of contamination was observed. Frost action has loosened the concrete around the steel protective casing and bollards. The monitoring well riser had heaved resulting in the pro-top cover being unable to close and lock. The top 0.18 feet of the riser was cut off to allow the pro-top cover to be closed and locked. The well lock was difficult to open and had to be lubricated with powered graphite to open.
- MW-24B was in good condition, recovery rate was poor, purge water was clear to slightly turbid, no evidence of contamination was observed. Frost action has loosened the concrete around the steel protective casing and bollards and it appears the steel casing and bollards have heaved slightly (<1 inch). The well lock was difficult to open and had to be lubricated with powered graphite to open.
- MW-25A was in good condition, recovery rate was poor, purge water was slightly turbid to very turbid, no evidence of contamination was observed. The exterior casing paint was faded and rusty; therefore, it was re-painted with low VOC, high visibility yellow paint on May 14.
- MW-25B was in good condition, recovery rate was poor, purge water was turbid to very turbid, no evidence of contamination was observed. The exterior casing paint was faded and rusty; therefore, it was re-painted with low VOC, high visibility yellow paint on May 14.
- MW-26 was in good condition, recovery rate was fair, purge water was clear, no evidence of contamination was observed. Frost action has loosened the concrete around the steel protective casing and bollards and it appears the steel casing and bollards have heaved slightly (<1 inch).

V. Conclusions

- Each monitoring well was photographed and the general condition of each well was documented. Photographs were taken of the wells after they were painted. Photographs of each monitoring well are provided in Appendix B.
- Barr measured water levels and well depths in existing wells prior to groundwater sample collection on May 10.

- Field water quality parameters were measured prior to well purging using a YSI ProDSS down-well probe. Field parameter and well purging documentation is provided in Appendix C. Field parameters included: temperature, conductivity, dissolved oxygen, pH, oxidation reduction potential and turbidity.
 - Field water quality parameters were not collected at MW-12, as the YSI down-well probe would not fit past approximately 3.1 feet from the top of the riser. The well did not appear to be bent or have any type of obstruction; however, since the down-well probe diameter is only slightly smaller than the inside diameter of the well riser, any minor or slight change in the riser angle would limit the advancement of the down-well probe.
- Groundwater samples were collected from each of the existing monitoring wells 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 2021 occurred between May 10 and 14.
- Groundwater samples collected from each monitoring well were analyzed for PVOCs and naphthalene.
- No analytes were detected in groundwater from the monitoring wells above laboratory reporting limits (Table 2).
 - No analytes were detected above laboratory reporting limits from the duplicate samples collected at MW-10, MW-18 and MW-19A.
- Groundwater contours of the shallow and deep wells are provided in Figures 3 and 4, respectively.
- The protective steel casing at the following wells were painted with low VOC, high visibility yellow paint on May 14: MW-6, MW-6B, MW-14, MW-15, MW-20A, MW-20B, MW-25A, and MW-25B.
- Well maintenance activities were completed at monitoring well MW-6B on May 11. The loose concrete around the steel protective casing was removed.
- The monitoring well riser at MW-24A had heaved resulting in the pro-top cover being unable to close and lock. The top 0.18 feet was cut off the riser to allow the pro-top cover to be closed and locked. The 0.18 feet removed from the riser was subtracted from the riser elevation listed on Table 1 and the table was updated. The new elevation should be used to calculate the groundwater elevation at this well next year.
- The locks on the following wells were difficult to open and had to be lubricated with powdered graphite to open: MW-2, MW-5B, MW-17, MW-17B, MW-22B, MW-23B, MW-24A, and MW-24B.
- The Enbridge locks at monitoring wells MW-14 and MW-15 had been replaced by others. These locks were removed and replaced with Barr Engineering Co. locks with key #32437. Dedicated bailers were found in the wells and were also removed. It was determined these wells are shared with Superior Refining Company (SRC) and future well access and sampling should be coordinated between Enbridge and SRC.
- The vegetation around MW-2 was overgrown.
- The private wells were sampled on May 13 and PW-2 was re-sampled on June 9. 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.
- Replace locks on the following wells that had to be lubricated and were difficult to open: MW-2, MW-5B, MW-17, MW-17B, MW-22B, MW-23B, MW-24A, and MW-24B.
- In coordination with SRC, replace well locks for shared wells (MW-14 and MW-15) and coordinate future well access and sampling with SRC.

- Monitor the loose concrete around wells MW-23B, MW-24A, MW-24B, and MW-26 and replace as needed.
- Vegetation has become overgrown around MW-2; trim back vegetation prior to the next year's sampling event.

Company Name: Barr Engineering Co.

Prepared By: Kaitlin Montz  7/19/2021
Printed Name Signature Date

Reviewed By: Lynette Carney  7/19/2021
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
								(ft bgs)	(ft)	(ft bgs)	(ft)	
MW-1	See Previous Reports for data prior to 2017											
	22-May-17	663.46	665.22	4.47	22.28	2.71	660.75	10	653.46	20	643.46	Yes
	2-Oct-17	663.46	665.22	5.12	22.57	3.36	660.10	10	653.46	20	643.46	Yes
	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-1R	MW-1 Abandoned on June 18, 2019											
	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	No
MW-2	See Previous Reports for data prior to 2017											
	22-May-17	657.06	659.37	3.07	27.18	0.76	656.30	14.5	642.56	24.5	632.56	Yes
	2-Oct-17	657.06	659.37	3.14	27.26	0.83	656.23	14.5	642.56	24.5	632.56	Yes
	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
MW-5	See Previous Reports for data prior to 2017											
	23-May-17	642.85	645.37	2.87	27.02	0.35	642.50	14.4	630.97	24.4	620.97	Yes
	5-Oct-17	642.85	645.37	2.80	27.06	0.28	642.57	14.4	630.97	24.4	620.97	Yes
	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
MW-5B	See Previous Reports for data prior to 2017											
	23-May-17	640.89	644.20	8.15	57.91	4.84	636.05	49	595.20	54	590.20	Yes
	5-Oct-17	640.89	644.20	7.18	57.78	3.87	637.02	49	595.20	54	590.20	Yes
	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
MW-6	See Previous Reports for data prior to 2017											
	22-May-17	645.79	648.01	7.24	26.68	5.02	640.77	14	634.01	24	624.01	Yes
	3-Oct-17	645.79	648.01	6.65	26.76	4.43	641.36	14	634.01	24	624.01	Yes
	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

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 2017												
	22-May-17	644.23	646.77	9.12	58.23	6.58	637.65	50	596.77	55	591.77	Yes	
	3-Oct-17	644.23	646.77	9.15	58.10	6.61	637.62	50	596.77	55	591.77	Yes	
	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	
MW-10	See Previous Reports for data prior to 2017												
	23-May-17	660.11	662.01	5.20	30.43	3.30	656.81	18.6	643.41	28.6	633.41	Yes	
	4-Oct-17	660.11	662.01	4.75	30.50	2.85	657.26	18.6	643.41	28.6	633.41	Yes	
	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	
MW-11	See Previous Reports for data prior to 2017												
	23-May-17	654.06	656.33	7.80	18.18	5.53	648.53	6.23	650.10	16.23	640.10	No	
	4-Oct-17	654.06	656.33	7.69	18.27	5.42	648.64	6.23	650.10	16.23	640.10	No	
	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		
MW-11B	See Previous Reports for data prior to 2017												
	23-May-17	653.86	655.91	22.94	57.50	20.89	632.97	50	605.91	55	600.91	Yes	
	4-Oct-17	653.86	655.91	26.95	57.50	24.90	628.96	50	605.91	55	600.91	Yes	
	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	
MW-12	See Previous Reports for data prior to 2017												
	23-May-17	645.36	649.46	4.75	22.47	0.65	644.71	8.4	636.96	18.4	626.96	Yes	
	4-Oct-17	645.36	649.17	4.42	22.57	0.61	644.75	8.69	636.67	18.69	626.67	Yes	
	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	

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 2017											
	22-May-17	659.27	661.15	3.40	18.35	1.52	657.75	6.6	652.65	16.6	642.65	Yes
	2-Oct-17	659.27	661.15	4.82	18.42	2.94	656.33	6.6	652.65	16.6	642.65	Yes
	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
MW-15	See Previous Reports for data prior to 2017											
	22-May-17	659.10	660.88	2.92	17.32	1.14	657.96	5.7	653.38	15.7	643.38	Yes
	2-Oct-17	659.10	660.88	2.82	17.43	1.04	658.06	5.7	653.38	15.7	643.38	Yes
	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
MW-17	See Previous Reports for data prior to 2017											
	23-May-17	640.70	643.19	4.24	17.46	1.75	638.95	5	635.70	15	625.70	Yes
	5-Oct-17	640.70	643.19	3.93	17.44	1.44	639.26	5	635.70	15	625.70	Yes
	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
MW-17B	See Previous Reports for data prior to 2017											
	23-May-17	640.95	643.27	17.78	44.88	15.46	625.49	39.5	601.45	42.5	598.45	Yes
	5-Oct-17	640.95	643.27	22.30	44.80	19.98	620.97	39.5	601.45	42.5	598.45	Yes
	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
MW-18	See Previous Reports for data prior to 2017											
	23-May-17	641.80	644.23	5.55	17.22	3.12	638.68	5	636.80	15	626.80	Yes
	5-Oct-17	641.80	644.23	5.25	17.20	2.82	638.98	5	636.80	15	626.80	Yes
	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

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 2017											
	22-May-17	656.15	658.12	3.27	24.14	1.30	654.85	12	644.15	22	634.15	Yes
	5-Oct-17	656.15	658.12	3.08	26.00	1.11	655.04	12	644.15	22	634.15	Yes
	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
MW-19B	See Previous Reports for data prior to 2017											
	22-May-17	656.19	658.22	12.88	59.93	10.85	645.34	53	603.19	58	598.19	Yes
	5-Oct-17	656.19	658.22	13.46	59.80	11.43	644.76	53	603.19	58	598.19	Yes
	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
MW-20A	See Previous Reports for data prior to 2017											
	23-May-17	648.98	651.04	4.33	24.18	2.27	646.71	12	636.98	22	626.98	Yes
	3-Oct-17	648.98	651.04	4.67	24.00	2.61	646.37	12	636.98	22	626.98	Yes
	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
MW-20B	See Previous Reports for data prior to 2017											
	22-May-17	649.36	651.34	17.72	60.16	15.74	633.62	53	596.36	58	591.36	Yes
	3-Oct-17	649.36	651.34	19.97	57.55	17.99	631.37	53	596.36	58	591.36	Yes
	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
MW-21A	See Previous Reports for data prior to 2017											
	22-May-17	646.86	648.84	3.90	24.55	1.92	644.94	12	634.86	22	624.86	Yes
	3-Oct-17	646.86	648.84	4.00	24.40	2.02	644.84	12	634.86	22	624.86	Yes
	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

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 2017											
	22-May-17	646.68	648.83	18.71	60.65	16.56	630.12	53	593.68	58	588.68	Yes
	3-Oct-17	646.68	648.83	20.03	60.70	17.88	628.80	53	593.68	58	588.68	Yes
	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
MW-22B	See Previous Reports for data prior to 2017											
	23-May-17	655.49	658.35	17.19	57.70	14.33	641.16	49	606.49	54	601.49	Yes
	4-Oct-17	655.49	658.35	17.83	57.55	14.97	640.52	49	606.49	54	601.49	Yes
	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
MW-23B	See Previous Reports for data prior to 2017											
	23-May-17	643.51	646.22	8.32	58.27	5.61	637.90	49	594.51	54	589.51	Yes
	5-Oct-17	643.51	646.22	6.36	57.11	3.65	639.86	49	594.51	54	589.51	Yes
	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
MW-24A	See Previous Reports for data prior to 2017											
	23-May-17	649.09	651.69	3.74	19.03	1.14	647.95	6	643.09	16	633.09	Yes
	3-Oct-17	649.09	651.69	3.65	18.85	1.05	648.04	6	643.09	16	633.09	Yes
	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	652.50	0.18 feet removed from top of casing								
MW-24B	See Previous Reports for data prior to 2017											
	23-May-17	648.86	651.45	14.06	49.35	11.47	637.39	41	607.86	46	602.86	Yes
	3-Oct-17	648.86	651.45	13.52	49.21	10.93	637.93	41	607.86	46	602.86	Yes
	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

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-25A	See Previous Reports for data prior to 2017											
	23-May-17	635.91	638.31	3.03	19.22	0.63	635.28	6	629.91	16	619.91	Yes
	4-Oct-17	635.91	638.31	3.05	19.00	0.65	635.26	6	629.91	16	619.91	Yes
	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
MW-25B	See Previous Reports for data prior to 2017											
	23-May-17	635.85	638.52	7.60	49.43	4.93	630.92	41	594.85	46	589.85	Yes
	4-Oct-17	635.85	638.52	8.50	49.21	5.83	630.02	41	594.85	46	589.85	Yes
	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
MW-26	See Previous Reports for data prior to 2017											
	23-May-17	643.44	646.17	7.44	18.90	4.71	638.73	6	637.44	16	627.44	Yes
	4-Oct-17	643.44	646.17	7.10	18.70	4.37	639.07	6	637.44	16	627.44	Yes
	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

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 2017								
	22-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
	2-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0	
	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	<3.0	<1.0	<1.0	<5.0	
MW-2	See Previous Reports for data prior to 2017								
	22-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
	2-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0	
	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	
MW-5	See Previous Reports for data prior to 2017								
	24-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
	5-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0	
	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		
MW-5B	See Previous Reports for data prior to 2017								
	24-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
	5-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0	
	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		
MW-6	See Previous Reports for data prior to 2017								
	23-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
	3-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0	
	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		
MW-6B	See Previous Reports for data prior to 2017								
	23-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
	3-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0	
	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		
MW-10	See Previous Reports for data prior to 2017								
	23-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	
	4-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0	
	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		

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-11	See Previous Reports for data prior to 2017							
	23-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	4-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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
MW-11B	See Previous Reports for data prior to 2017							
	23-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	4-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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
MW-12	See Previous Reports for data prior to 2017							
	24-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	4-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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
MW-14	See Previous Reports for data prior to 2017							
	22-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	2-Oct-17	<1.1	<0.57	<0.45	<0.81	<0.45	<0.60	<1.4
	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
MW-15	See Previous Reports for data prior to 2017							
	22-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	2-Oct-17	<1.1	<0.57	<0.45	<0.81	<0.45	<0.60	<1.4
	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
MW-17	See Previous Reports for data prior to 2017							
	24-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	5-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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

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-17B	See Previous Reports for data prior to 2017							
	24-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	5-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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	
MW-18	See Previous Reports for data prior to 2017							
	24-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	5-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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	
MW-19A	See Previous Reports for data prior to 2017							
	22-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	5-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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	
MW-19B	See Previous Reports for data prior to 2017							
	22-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	5-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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	
MW-20A	See Previous Reports for data prior to 2017							
	23-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	3-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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	
MW-20B	See Previous Reports for data prior to 2017							
	23-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	3-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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 2017							
	23-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	3-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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	

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-21B	See Previous Reports for data prior to 2017							
	23-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	3-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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 2017							
	24-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	4-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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 2017							
	24-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	5-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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 2017							
	24-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	3-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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-24B	See Previous Reports for data prior to 2017							
	24-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	3-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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 2017							
	24-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	4-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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 2017							
	24-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	4-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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	

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-26	See Previous Reports for data prior to 2017							
	24-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	4-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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 2017							
	24-May-17	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0
	5-Oct-17	<1.0	<1.0	<1.0	<3.0	<4.0	<1.0	<10.0
	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	

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)

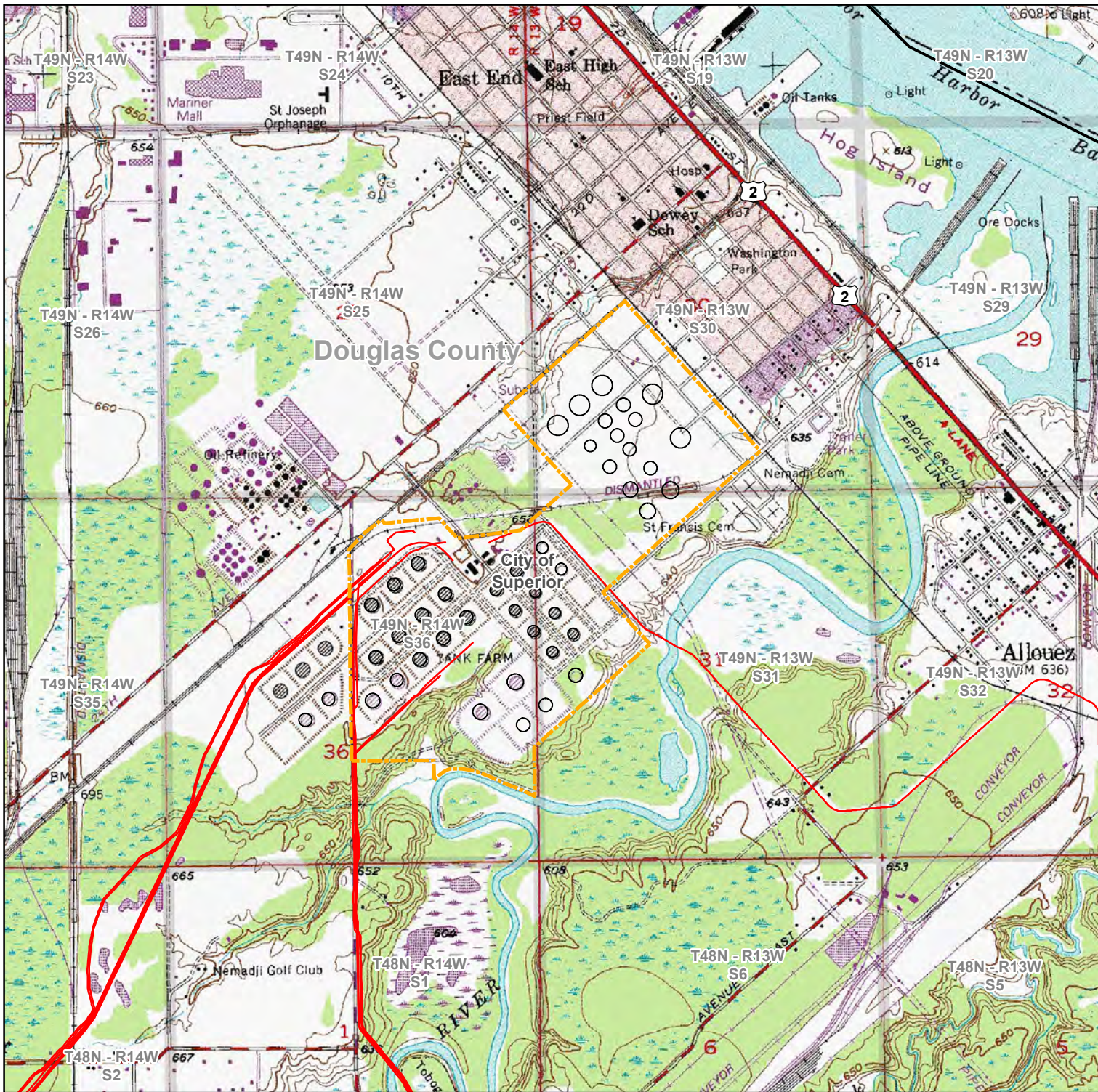
NA = Not analyzed for this parameter

NS = Not sampled for this parameter

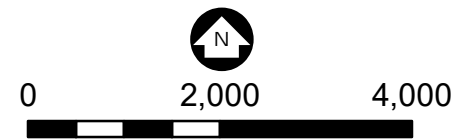
<1.0 = not detected above the laboratory practical quantitation limit or reporting limit

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

Figures

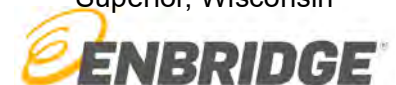


- ★ Site Location
- Enbridge Pipelines
- Terminal Property Boundary



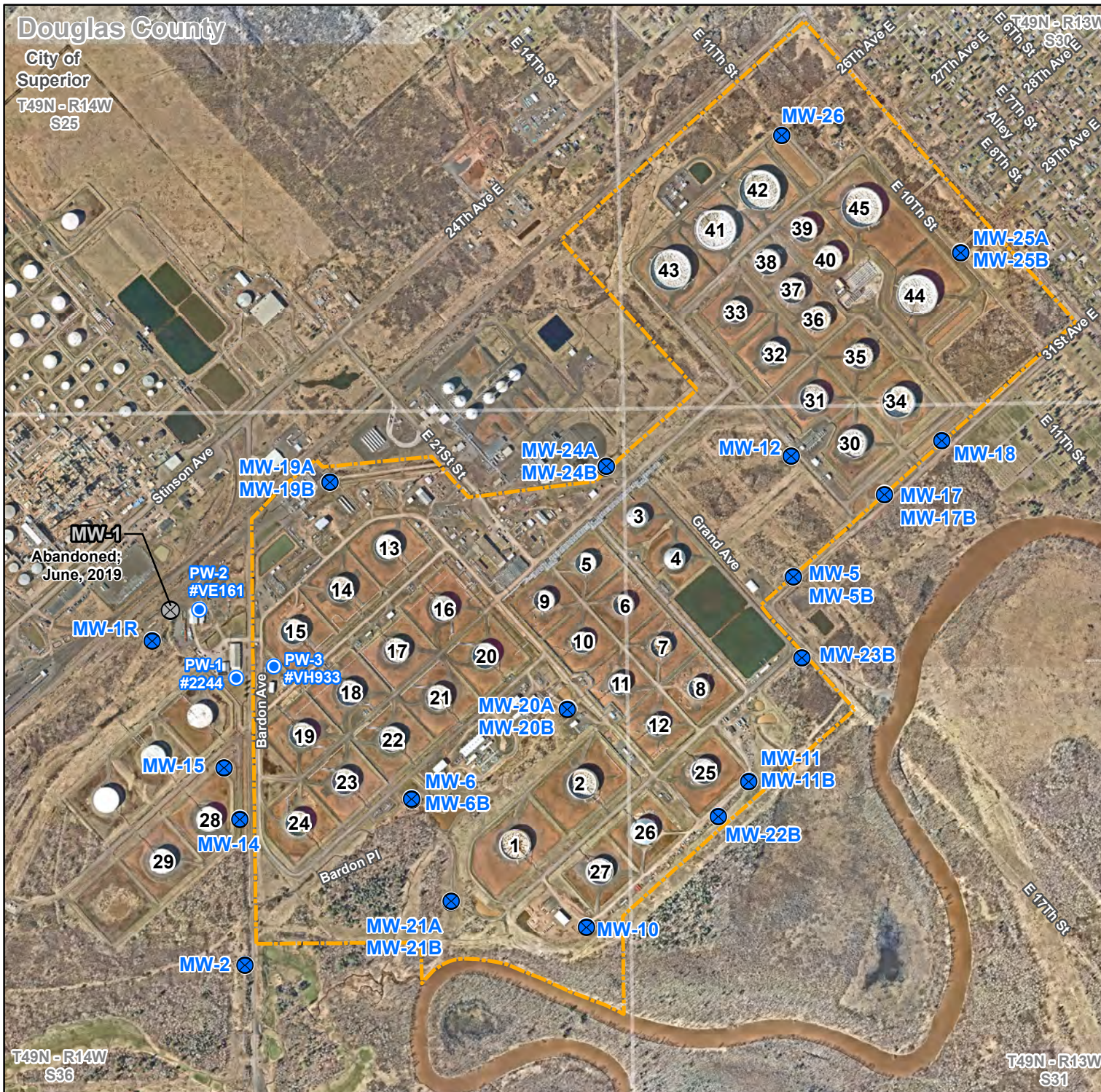
Feet
 1 Inch = 2,000 Feet
 Figure 1

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



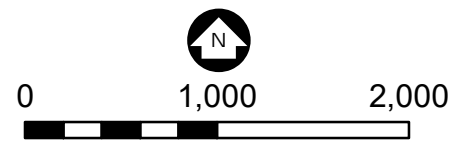
Douglas County

City of Superior
T49N - R14W
S25



- Monitoring Well Location
- Private Well Location
- Abandoned Monitoring Well
- Terminal Property Boundary

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



Feet
1 Inch = 1,000 Feet
Figure 2

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

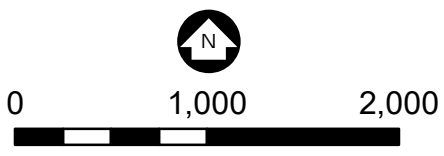




- ★ Site Location
- ⊗ Monitoring Wells
Groundwater Elevation (ft NAVD)
- Groundwater Elevation (ft)
- Contour Interval = 2-Foot
(Dashed Where Inferred)
- ➔ Groundwater Flow Direction
- 5-Foot Topographic Contours
- Terminal Property Boundary

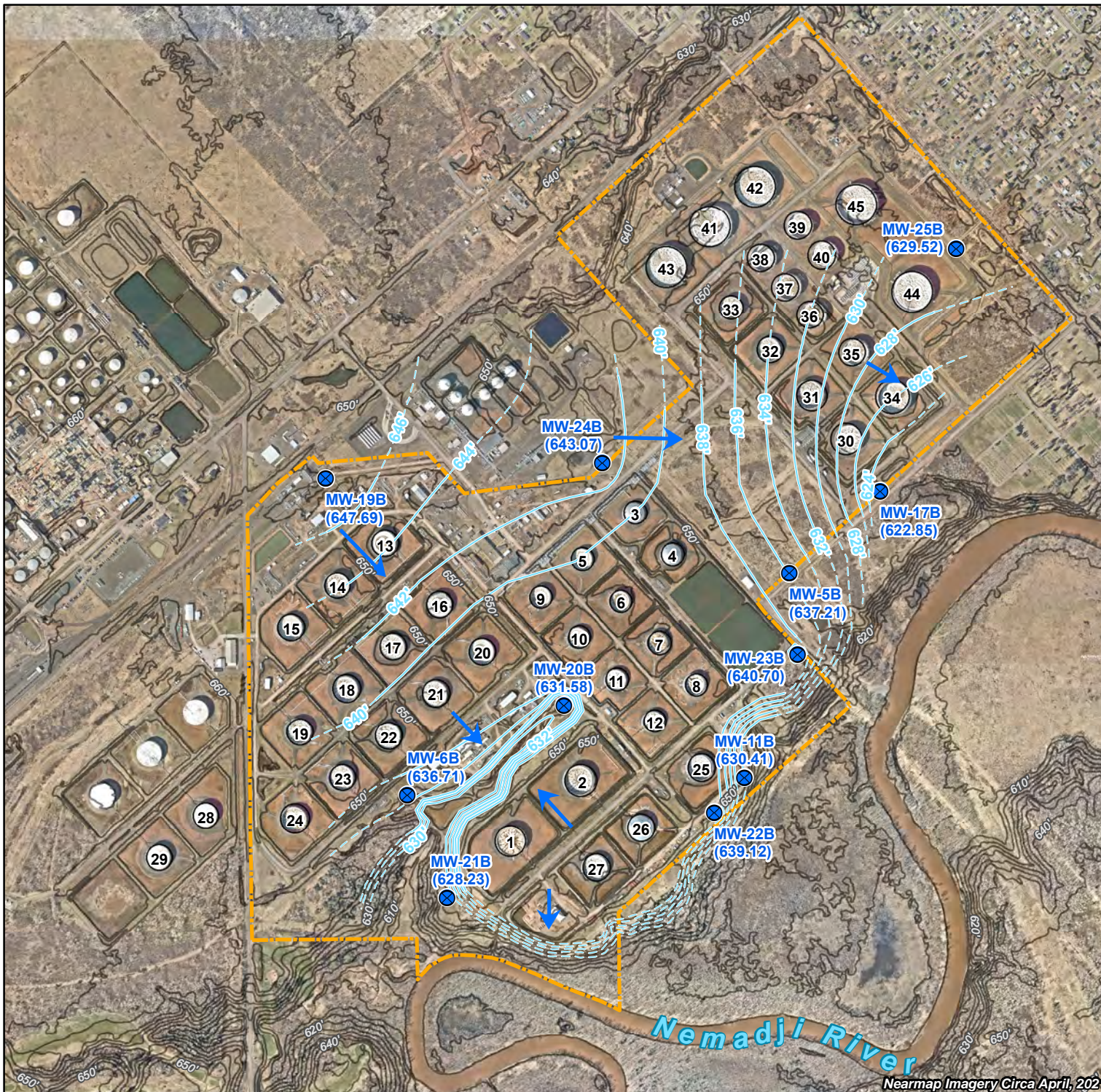
MW-24A well riser had heaved and elevation data may be biased.

Groundwater elevations measured on 5/10/21.



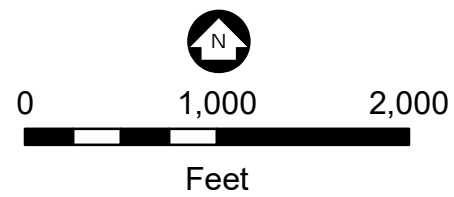
Feet
1 Inch = 1,000 Feet
Figure 3
SPRING 2021
SHALLOW GROUNDWATER
ELEVATION CONTOURS
Superior Terminal
Enbridge Energy, L.P.
Superior, Wisconsin





- ★ 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

Groundwater elevations measured on 5/10/21.



Feet
1 Inch = 1,000 Feet
Figure 4
**SPRING 2021
DEEP GROUNDWATER
ELEVATION CONTOURS**
Superior Terminal
Enbridge Energy, L.P.
Superior, Wisconsin



Appendix A

Laboratory Analytical Reports

May 27, 2021

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

RE: Project: 49161528.00 200 205 2021 GMP
Pace Project No.: 10560268

Dear Jim Taraldsen:

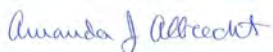
Enclosed are the analytical results for sample(s) received by the laboratory on May 13, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Green Bay

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

Sincerely,



Amanda Albrecht
amanda.albrecht@pacelabs.com
(612)607-6382
Project Manager

Enclosures

cc: BarrDM@barr.com, Barr Engineering
Data Management, Barr Engineering
Accounts Payable, Barr Engineering



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10560268001	MW-20A	Water	05/11/21 11:00	05/13/21 13:40
10560268002	MW-20B	Water	05/11/21 11:30	05/13/21 13:40
10560268003	MW-6	Water	05/11/21 12:40	05/13/21 13:40
10560268004	MW-6B	Water	05/11/21 12:50	05/13/21 13:40
10560268005	MW-2	Water	05/11/21 14:03	05/13/21 13:40
10560268006	MW-19B	Water	05/11/21 15:20	05/13/21 13:40
10560268007	MW-19A	Water	05/11/21 15:25	05/13/21 13:40
10560268008	MW-24A	Water	05/11/21 16:30	05/13/21 13:40
10560268009	MW-24B	Water	05/11/21 16:52	05/13/21 13:40
10560268010	MW-12	Water	05/12/21 08:30	05/13/21 13:40
10560268011	MW-25A	Water	05/12/21 09:10	05/13/21 13:40
10560268012	MW-25B	Water	05/12/21 09:40	05/13/21 13:40
10560268013	MW-26	Water	05/12/21 10:18	05/13/21 13:40
10560268014	MW-21A	Water	05/12/21 11:10	05/13/21 13:40
10560268015	MW-21B	Water	05/12/21 11:45	05/13/21 13:40
10560268016	MW-10	Water	05/12/21 12:35	05/13/21 13:40
10560268017	MW-22B	Water	05/12/21 13:50	05/13/21 13:40
10560268018	MW-11	Water	05/12/21 14:27	05/13/21 13:40
10560268019	MW-11B	Water	05/12/21 15:00	05/13/21 13:40
10560268020	MW-1R	Water	05/12/21 15:55	05/13/21 13:40
10560268021	MW-15	Water	05/12/21 16:30	05/13/21 13:40
10560268022	MW-14	Water	05/12/21 17:00	05/13/21 13:40
10560268023	MW-18	Water	05/13/21 07:25	05/13/21 13:40
10560268024	MW-17	Water	05/13/21 08:02	05/13/21 13:40
10560268025	MW-17B	Water	05/13/21 08:20	05/13/21 13:40
10560268026	MW-5	Water	05/13/21 09:10	05/13/21 13:40
10560268027	MW-5B	Water	05/13/21 09:45	05/13/21 13:40
10560268028	Dup-1	Water	05/11/21 00:00	05/13/21 13:40
10560268029	Dup-2	Water	05/12/21 00:00	05/13/21 13:40
10560268030	Dup-3	Water	05/13/21 00:00	05/13/21 13:40
10560268031	Trip Blank - 1	Water	05/11/21 00:00	05/13/21 13:40

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10560268001	MW-20A	EPA 8260	MDS	11	PASI-G
10560268002	MW-20B	EPA 8260	MDS	11	PASI-G
10560268003	MW-6	EPA 8260	MDS	11	PASI-G
10560268004	MW-6B	EPA 8260	MDS	11	PASI-G
10560268005	MW-2	EPA 8260	MDS	11	PASI-G
10560268006	MW-19B	EPA 8260	MDS	11	PASI-G
10560268007	MW-19A	EPA 8260	MDS	11	PASI-G
10560268008	MW-24A	EPA 8260	MDS	11	PASI-G
10560268009	MW-24B	EPA 8260	MDS	11	PASI-G
10560268010	MW-12	EPA 8260	MDS	11	PASI-G
10560268011	MW-25A	EPA 8260	MDS	11	PASI-G
10560268012	MW-25B	EPA 8260	MDS	11	PASI-G
10560268013	MW-26	EPA 8260	MDS	11	PASI-G
10560268014	MW-21A	EPA 8260	MDS	11	PASI-G
10560268015	MW-21B	EPA 8260	MDS	11	PASI-G
10560268016	MW-10	EPA 8260	MDS	11	PASI-G
10560268017	MW-22B	EPA 8260	MDS	11	PASI-G
10560268018	MW-11	EPA 8260	MDS	11	PASI-G
10560268019	MW-11B	EPA 8260	MDS	11	PASI-G
10560268020	MW-1R	EPA 8260	MDS	11	PASI-G
10560268021	MW-15	EPA 8260	MDS	11	PASI-G
10560268022	MW-14	EPA 8260	MDS	11	PASI-G
10560268023	MW-18	EPA 8260	MDS	11	PASI-G
10560268024	MW-17	EPA 8260	MDS	11	PASI-G
10560268025	MW-17B	EPA 8260	MDS	11	PASI-G
10560268026	MW-5	EPA 8260	MDS	11	PASI-G
10560268027	MW-5B	EPA 8260	MDS	11	PASI-G
10560268028	Dup-1	EPA 8260	MDS	11	PASI-G
10560268029	Dup-2	EPA 8260	MDS	11	PASI-G
10560268030	Dup-3	EPA 8260	MDS	11	PASI-G
10560268031	Trip Blank - 1	EPA 8260	MDS	11	PASI-G

PASI-G = Pace Analytical Services - Green Bay

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-20A **Lab ID: 10560268001** Collected: 05/11/21 11:00 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 14:09	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 14:09	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 14:09	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 14:09	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 14:09	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 14:09	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 14:09	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 14:09	1330-20-7	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		05/19/21 14:09	2037-26-5	
4-Bromofluorobenzene (S)	112	%	70-130		1		05/19/21 14:09	460-00-4	
1,2-Dichlorobenzene-d4 (S)	104	%	70-130		1		05/19/21 14:09	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-20B **Lab ID: 10560268002** Collected: 05/11/21 11:30 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 14:29	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 14:29	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 14:29	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 14:29	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 14:29	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 14:29	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 14:29	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 14:29	1330-20-7	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		05/19/21 14:29	2037-26-5	
4-Bromofluorobenzene (S)	110	%	70-130		1		05/19/21 14:29	460-00-4	
1,2-Dichlorobenzene-d4 (S)	105	%	70-130		1		05/19/21 14:29	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-6 **Lab ID: 10560268003** Collected: 05/11/21 12:40 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<1.5	ug/L	5.0	1.5	5		05/19/21 14:49	71-43-2	
Ethylbenzene	<1.6	ug/L	5.0	1.6	5		05/19/21 14:49	100-41-4	
Methyl-tert-butyl ether	<5.6	ug/L	25.0	5.6	5		05/19/21 14:49	1634-04-4	
Naphthalene	<5.6	ug/L	25.0	5.6	5		05/19/21 14:49	91-20-3	
Toluene	<1.4	ug/L	5.0	1.4	5		05/19/21 14:49	108-88-3	
1,2,4-Trimethylbenzene	<2.2	ug/L	5.0	2.2	5		05/19/21 14:49	95-63-6	
1,3,5-Trimethylbenzene	<1.8	ug/L	5.0	1.8	5		05/19/21 14:49	108-67-8	
Xylene (Total)	<5.2	ug/L	15.0	5.2	5		05/19/21 14:49	1330-20-7	
Surrogates									
Toluene-d8 (S)	100	%	70-130		5		05/19/21 14:49	2037-26-5	
4-Bromofluorobenzene (S)	109	%	70-130		5		05/19/21 14:49	460-00-4	
1,2-Dichlorobenzene-d4 (S)	104	%	70-130		5		05/19/21 14:49	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-6B **Lab ID: 10560268004** Collected: 05/11/21 12:50 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 15:09	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 15:09	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 15:09	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 15:09	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 15:09	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 15:09	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 15:09	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 15:09	1330-20-7	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		05/19/21 15:09	2037-26-5	
4-Bromofluorobenzene (S)	110	%	70-130		1		05/19/21 15:09	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	70-130		1		05/19/21 15:09	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-2 **Lab ID: 10560268005** Collected: 05/11/21 14:03 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 15:49	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 15:49	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 15:49	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 15:49	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 15:49	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 15:49	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 15:49	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 15:49	1330-20-7	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		05/19/21 15:49	2037-26-5	
4-Bromofluorobenzene (S)	111	%	70-130		1		05/19/21 15:49	460-00-4	
1,2-Dichlorobenzene-d4 (S)	104	%	70-130		1		05/19/21 15:49	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-19B **Lab ID: 10560268006** Collected: 05/11/21 15:20 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 17:22	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 17:22	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 17:22	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 17:22	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 17:22	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 17:22	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 17:22	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 17:22	1330-20-7	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		05/19/21 17:22	2037-26-5	
4-Bromofluorobenzene (S)	109	%	70-130		1		05/19/21 17:22	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	70-130		1		05/19/21 17:22	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-19A **Lab ID: 10560268007** Collected: 05/11/21 15:25 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 17:41	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 17:41	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 17:41	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 17:41	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 17:41	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 17:41	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 17:41	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 17:41	1330-20-7	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		05/19/21 17:41	2037-26-5	
4-Bromofluorobenzene (S)	109	%	70-130		1		05/19/21 17:41	460-00-4	
1,2-Dichlorobenzene-d4 (S)	105	%	70-130		1		05/19/21 17:41	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-24A **Lab ID: 10560268008** Collected: 05/11/21 16:30 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 18:01	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 18:01	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 18:01	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 18:01	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 18:01	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 18:01	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 18:01	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 18:01	1330-20-7	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		05/19/21 18:01	2037-26-5	
4-Bromofluorobenzene (S)	110	%	70-130		1		05/19/21 18:01	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	70-130		1		05/19/21 18:01	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-24B **Lab ID: 10560268009** Collected: 05/11/21 16:52 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 18:21	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 18:21	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 18:21	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 18:21	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 18:21	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 18:21	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 18:21	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 18:21	1330-20-7	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		05/19/21 18:21	2037-26-5	
4-Bromofluorobenzene (S)	110	%	70-130		1		05/19/21 18:21	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	70-130		1		05/19/21 18:21	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-12 **Lab ID: 10560268010** Collected: 05/12/21 08:30 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 19:01	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 19:01	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 19:01	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 19:01	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 19:01	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 19:01	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 19:01	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 19:01	1330-20-7	
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		05/19/21 19:01	2037-26-5	
4-Bromofluorobenzene (S)	112	%	70-130		1		05/19/21 19:01	460-00-4	
1,2-Dichlorobenzene-d4 (S)	106	%	70-130		1		05/19/21 19:01	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-25A **Lab ID: 10560268011** Collected: 05/12/21 09:10 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 19:21	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 19:21	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 19:21	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 19:21	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 19:21	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 19:21	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 19:21	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 19:21	1330-20-7	
Surrogates									
Toluene-d8 (S)	100	%	70-130		1		05/19/21 19:21	2037-26-5	
4-Bromofluorobenzene (S)	110	%	70-130		1		05/19/21 19:21	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	70-130		1		05/19/21 19:21	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-25B **Lab ID: 10560268012** Collected: 05/12/21 09:40 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 19:41	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 19:41	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 19:41	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 19:41	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 19:41	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 19:41	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 19:41	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 19:41	1330-20-7	
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		05/19/21 19:41	2037-26-5	
4-Bromofluorobenzene (S)	110	%	70-130		1		05/19/21 19:41	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	70-130		1		05/19/21 19:41	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-26 **Lab ID: 10560268013** Collected: 05/12/21 10:18 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 20:01	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 20:01	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 20:01	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 20:01	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 20:01	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 20:01	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 20:01	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 20:01	1330-20-7	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		05/19/21 20:01	2037-26-5	
4-Bromofluorobenzene (S)	111	%	70-130		1		05/19/21 20:01	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	70-130		1		05/19/21 20:01	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-21A **Lab ID: 10560268014** Collected: 05/12/21 11:10 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 20:20	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 20:20	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 20:20	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 20:20	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 20:20	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 20:20	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 20:20	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 20:20	1330-20-7	
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		05/19/21 20:20	2037-26-5	
4-Bromofluorobenzene (S)	110	%	70-130		1		05/19/21 20:20	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	70-130		1		05/19/21 20:20	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-21B **Lab ID: 10560268015** Collected: 05/12/21 11:45 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 23:19	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 23:19	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 23:19	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 23:19	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 23:19	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 23:19	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 23:19	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 23:19	1330-20-7	
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		05/19/21 23:19	2037-26-5	
4-Bromofluorobenzene (S)	108	%	70-130		1		05/19/21 23:19	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	70-130		1		05/19/21 23:19	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-10 **Lab ID: 10560268016** Collected: 05/12/21 12:35 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 23:39	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 23:39	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 23:39	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 23:39	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 23:39	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 23:39	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 23:39	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 23:39	1330-20-7	
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		05/19/21 23:39	2037-26-5	
4-Bromofluorobenzene (S)	110	%	70-130		1		05/19/21 23:39	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	70-130		1		05/19/21 23:39	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-22B **Lab ID: 10560268017** Collected: 05/12/21 13:50 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 23:58	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 23:58	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 23:58	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 23:58	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 23:58	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 23:58	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 23:58	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 23:58	1330-20-7	
Surrogates									
Toluene-d8 (S)	103	%	70-130		1		05/19/21 23:58	2037-26-5	
4-Bromofluorobenzene (S)	109	%	70-130		1		05/19/21 23:58	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	70-130		1		05/19/21 23:58	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-11 **Lab ID: 10560268018** Collected: 05/12/21 14:27 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/20/21 00:18	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/20/21 00:18	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/20/21 00:18	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/20/21 00:18	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/20/21 00:18	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/20/21 00:18	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/20/21 00:18	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/20/21 00:18	1330-20-7	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		05/20/21 00:18	2037-26-5	
4-Bromofluorobenzene (S)	108	%	70-130		1		05/20/21 00:18	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	70-130		1		05/20/21 00:18	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-11B **Lab ID: 10560268019** Collected: 05/12/21 15:00 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/20/21 00:38	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/20/21 00:38	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/20/21 00:38	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/20/21 00:38	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/20/21 00:38	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/20/21 00:38	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/20/21 00:38	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/20/21 00:38	1330-20-7	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		05/20/21 00:38	2037-26-5	
4-Bromofluorobenzene (S)	110	%	70-130		1		05/20/21 00:38	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	70-130		1		05/20/21 00:38	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-1R **Lab ID: 10560268020** Collected: 05/12/21 15:55 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/20/21 00:58	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/20/21 00:58	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/20/21 00:58	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/20/21 00:58	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/20/21 00:58	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/20/21 00:58	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/20/21 00:58	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/20/21 00:58	1330-20-7	
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		05/20/21 00:58	2037-26-5	
4-Bromofluorobenzene (S)	112	%	70-130		1		05/20/21 00:58	460-00-4	
1,2-Dichlorobenzene-d4 (S)	104	%	70-130		1		05/20/21 00:58	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-15 **Lab ID: 10560268021** Collected: 05/12/21 16:30 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/20/21 01:17	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/20/21 01:17	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/20/21 01:17	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/20/21 01:17	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/20/21 01:17	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/20/21 01:17	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/20/21 01:17	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/20/21 01:17	1330-20-7	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		05/20/21 01:17	2037-26-5	
4-Bromofluorobenzene (S)	111	%	70-130		1		05/20/21 01:17	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		1		05/20/21 01:17	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-14 **Lab ID: 10560268022** Collected: 05/12/21 17:00 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/20/21 01:37	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/20/21 01:37	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/20/21 01:37	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/20/21 01:37	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/20/21 01:37	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/20/21 01:37	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/20/21 01:37	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/20/21 01:37	1330-20-7	
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		05/20/21 01:37	2037-26-5	
4-Bromofluorobenzene (S)	112	%	70-130		1		05/20/21 01:37	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		1		05/20/21 01:37	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-18 **Lab ID: 10560268023** Collected: 05/13/21 07:25 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/20/21 02:17	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/20/21 02:17	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/20/21 02:17	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/20/21 02:17	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/20/21 02:17	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/20/21 02:17	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/20/21 02:17	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/20/21 02:17	1330-20-7	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		05/20/21 02:17	2037-26-5	
4-Bromofluorobenzene (S)	108	%	70-130		1		05/20/21 02:17	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	70-130		1		05/20/21 02:17	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-17 **Lab ID: 10560268024** Collected: 05/13/21 08:02 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/20/21 02:36	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/20/21 02:36	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/20/21 02:36	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/20/21 02:36	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/20/21 02:36	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/20/21 02:36	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/20/21 02:36	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/20/21 02:36	1330-20-7	
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		05/20/21 02:36	2037-26-5	
4-Bromofluorobenzene (S)	114	%	70-130		1		05/20/21 02:36	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	70-130		1		05/20/21 02:36	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-17B **Lab ID: 10560268025** Collected: 05/13/21 08:20 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/20/21 02:56	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/20/21 02:56	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/20/21 02:56	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/20/21 02:56	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/20/21 02:56	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/20/21 02:56	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/20/21 02:56	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/20/21 02:56	1330-20-7	
Surrogates									
Toluene-d8 (S)	103	%	70-130		1		05/20/21 02:56	2037-26-5	
4-Bromofluorobenzene (S)	111	%	70-130		1		05/20/21 02:56	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	70-130		1		05/20/21 02:56	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-5 **Lab ID: 10560268026** Collected: 05/13/21 09:10 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/20/21 09:51	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/20/21 09:51	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/20/21 09:51	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/20/21 09:51	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/20/21 09:51	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/20/21 09:51	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/20/21 09:51	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/20/21 09:51	1330-20-7	
Surrogates									
Toluene-d8 (S)	99	%	70-130		1		05/20/21 09:51	2037-26-5	
4-Bromofluorobenzene (S)	112	%	70-130		1		05/20/21 09:51	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	70-130		1		05/20/21 09:51	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: MW-5B **Lab ID: 10560268027** Collected: 05/13/21 09:45 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/20/21 10:11	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/20/21 10:11	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/20/21 10:11	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/20/21 10:11	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/20/21 10:11	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/20/21 10:11	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/20/21 10:11	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/20/21 10:11	1330-20-7	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		05/20/21 10:11	2037-26-5	
4-Bromofluorobenzene (S)	110	%	70-130		1		05/20/21 10:11	460-00-4	
1,2-Dichlorobenzene-d4 (S)	104	%	70-130		1		05/20/21 10:11	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: Dup-1 **Lab ID: 10560268028** Collected: 05/11/21 00:00 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 13:49	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 13:49	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 13:49	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 13:49	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 13:49	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 13:49	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 13:49	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 13:49	1330-20-7	
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		05/19/21 13:49	2037-26-5	
4-Bromofluorobenzene (S)	111	%	70-130		1		05/19/21 13:49	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	70-130		1		05/19/21 13:49	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: Dup-2 **Lab ID: 10560268029** Collected: 05/12/21 00:00 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 18:41	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 18:41	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 18:41	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 18:41	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 18:41	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 18:41	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 18:41	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 18:41	1330-20-7	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		05/19/21 18:41	2037-26-5	
4-Bromofluorobenzene (S)	111	%	70-130		1		05/19/21 18:41	460-00-4	
1,2-Dichlorobenzene-d4 (S)	104	%	70-130		1		05/19/21 18:41	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: Dup-3 **Lab ID: 10560268030** Collected: 05/13/21 00:00 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/20/21 01:57	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/20/21 01:57	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/20/21 01:57	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/20/21 01:57	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/20/21 01:57	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/20/21 01:57	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/20/21 01:57	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/20/21 01:57	1330-20-7	
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		05/20/21 01:57	2037-26-5	
4-Bromofluorobenzene (S)	108	%	70-130		1		05/20/21 01:57	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	70-130		1		05/20/21 01:57	2199-69-1	

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Sample: Trip Blank - 1 **Lab ID: 10560268031** Collected: 05/11/21 00:00 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/19/21 13:29	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/19/21 13:29	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/19/21 13:29	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/19/21 13:29	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/19/21 13:29	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/19/21 13:29	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/19/21 13:29	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/19/21 13:29	1330-20-7	
Surrogates									
Toluene-d8 (S)	103	%	70-130		1		05/19/21 13:29	2037-26-5	
4-Bromofluorobenzene (S)	110	%	70-130		1		05/19/21 13:29	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	70-130		1		05/19/21 13:29	2199-69-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

QC Batch:	385546	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 10560268001, 10560268002, 10560268003, 10560268004, 10560268005, 10560268006, 10560268007, 10560268008, 10560268009, 10560268010, 10560268011, 10560268012, 10560268013, 10560268014, 10560268028, 10560268029, 10560268031

METHOD BLANK: 2224927 Matrix: Water
Associated Lab Samples: 10560268001, 10560268002, 10560268003, 10560268004, 10560268005, 10560268006, 10560268007, 10560268008, 10560268009, 10560268010, 10560268011, 10560268012, 10560268013, 10560268014, 10560268028, 10560268029, 10560268031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.45	1.0	05/19/21 09:02	
1,3,5-Trimethylbenzene	ug/L	<0.36	1.0	05/19/21 09:02	
Benzene	ug/L	<0.30	1.0	05/19/21 09:02	
Ethylbenzene	ug/L	<0.33	1.0	05/19/21 09:02	
Methyl-tert-butyl ether	ug/L	<1.1	5.0	05/19/21 09:02	
Naphthalene	ug/L	<1.1	5.0	05/19/21 09:02	
Toluene	ug/L	<0.29	1.0	05/19/21 09:02	
Xylene (Total)	ug/L	<1.0	3.0	05/19/21 09:02	
1,2-Dichlorobenzene-d4 (S)	%	101	70-130	05/19/21 09:02	
4-Bromofluorobenzene (S)	%	111	70-130	05/19/21 09:02	
Toluene-d8 (S)	%	100	70-130	05/19/21 09:02	

LABORATORY CONTROL SAMPLE: 2224928

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	49.3	99	70-132	
Ethylbenzene	ug/L	50	51.6	103	80-123	
Methyl-tert-butyl ether	ug/L	50	47.3	95	66-130	
Toluene	ug/L	50	50.0	100	80-121	
Xylene (Total)	ug/L	150	151	101	70-130	
1,2-Dichlorobenzene-d4 (S)	%			103	70-130	
4-Bromofluorobenzene (S)	%			113	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2224929 2224930

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40227030050 Result	Conc.	Spike Conc.	Spike Conc.								
Benzene	ug/L	<1.0	50	50	50	43.2	50.5	86	101	70-132	16	20	
Ethylbenzene	ug/L	<1.0	50	50	50	46.2	51.3	92	103	80-123	11	20	
Methyl-tert-butyl ether	ug/L	<5.0	50	50	50	41.1	49.8	82	100	66-130	19	20	
Toluene	ug/L	<1.0	50	50	50	45.0	49.8	90	100	80-121	10	20	
Xylene (Total)	ug/L	<3.0	150	150	150	137	152	91	102	70-130	11	20	
1,2-Dichlorobenzene-d4 (S)	%							105	100	70-130			

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QUALITY CONTROL DATA

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2224929												2224930	
Parameter	Units	40227030050 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
4-Bromofluorobenzene (S)	%						119	110	70-130				
Toluene-d8 (S)	%						105	101	70-130				

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QUALITY CONTROL DATA

Project: 49161528.00 200 205 2021 GMP
Pace Project No.: 10560268

QC Batch:	385756	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 10560268015, 10560268016, 10560268017, 10560268018, 10560268019, 10560268020, 10560268021, 10560268022, 10560268023, 10560268024, 10560268025, 10560268026, 10560268027, 10560268030

METHOD BLANK: 2225818 Matrix: Water
Associated Lab Samples: 10560268015, 10560268016, 10560268017, 10560268018, 10560268019, 10560268020, 10560268021, 10560268022, 10560268023, 10560268024, 10560268025, 10560268026, 10560268027, 10560268030

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.45	1.0	05/19/21 17:02	
1,3,5-Trimethylbenzene	ug/L	<0.36	1.0	05/19/21 17:02	
Benzene	ug/L	<0.30	1.0	05/19/21 17:02	
Ethylbenzene	ug/L	<0.33	1.0	05/19/21 17:02	
Methyl-tert-butyl ether	ug/L	<1.1	5.0	05/19/21 17:02	
Naphthalene	ug/L	<1.1	5.0	05/19/21 17:02	
Toluene	ug/L	<0.29	1.0	05/19/21 17:02	
Xylene (Total)	ug/L	<1.0	3.0	05/19/21 17:02	
1,2-Dichlorobenzene-d4 (S)	%	101	70-130	05/19/21 17:02	
4-Bromofluorobenzene (S)	%	109	70-130	05/19/21 17:02	
Toluene-d8 (S)	%	104	70-130	05/19/21 17:02	

LABORATORY CONTROL SAMPLE: 2225819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	51.6	103	70-132	
Ethylbenzene	ug/L	50	52.5	105	80-123	
Methyl-tert-butyl ether	ug/L	50	50.3	101	66-130	
Toluene	ug/L	50	50.9	102	80-121	
Xylene (Total)	ug/L	150	155	104	70-130	
1,2-Dichlorobenzene-d4 (S)	%			103	70-130	
4-Bromofluorobenzene (S)	%			112	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2226003 2226004

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10560268019 Result	Spike Conc.	Spike Conc.	MS Result								
Benzene	ug/L	<0.30	50	50	49.2	51.2	98	102	70-132	4	20		
Ethylbenzene	ug/L	<0.33	50	50	50.5	52.0	101	104	80-123	3	20		
Methyl-tert-butyl ether	ug/L	<1.1	50	50	48.9	51.1	98	102	66-130	4	20		
Toluene	ug/L	<0.29	50	50	48.9	50.5	98	101	80-121	3	20		
Xylene (Total)	ug/L	<1.0	150	150	146	155	97	103	70-130	6	20		
1,2-Dichlorobenzene-d4 (S)	%						104	103	70-130				
4-Bromofluorobenzene (S)	%						114	115	70-130				
Toluene-d8 (S)	%						98	100	70-130				

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QUALIFIERS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

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.

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560268

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10560268001	MW-20A	EPA 8260	385546		
10560268002	MW-20B	EPA 8260	385546		
10560268003	MW-6	EPA 8260	385546		
10560268004	MW-6B	EPA 8260	385546		
10560268005	MW-2	EPA 8260	385546		
10560268006	MW-19B	EPA 8260	385546		
10560268007	MW-19A	EPA 8260	385546		
10560268008	MW-24A	EPA 8260	385546		
10560268009	MW-24B	EPA 8260	385546		
10560268010	MW-12	EPA 8260	385546		
10560268011	MW-25A	EPA 8260	385546		
10560268012	MW-25B	EPA 8260	385546		
10560268013	MW-26	EPA 8260	385546		
10560268014	MW-21A	EPA 8260	385546		
10560268015	MW-21B	EPA 8260	385756		
10560268016	MW-10	EPA 8260	385756		
10560268017	MW-22B	EPA 8260	385756		
10560268018	MW-11	EPA 8260	385756		
10560268019	MW-11B	EPA 8260	385756		
10560268020	MW-1R	EPA 8260	385756		
10560268021	MW-15	EPA 8260	385756		
10560268022	MW-14	EPA 8260	385756		
10560268023	MW-18	EPA 8260	385756		
10560268024	MW-17	EPA 8260	385756		
10560268025	MW-17B	EPA 8260	385756		
10560268026	MW-5	EPA 8260	385756		
10560268027	MW-5B	EPA 8260	385756		
10560268028	Dup-1	EPA 8260	385546		
10560268029	Dup-2	EPA 8260	385546		
10560268030	Dup-3	EPA 8260	385756		
10560268031	Trip Blank - 1	EPA 8260	385546		

REPORT OF LABORATORY ANALYSIS

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Barr Engineering Co. Chain of Custody

Sample Origination State

CO MI MN MO ND TX UT WI Other: _____

REPORT TO	INVOICE TO
Company: <u>Barr Engineering Co.</u>	Company: <u>Barr</u>
Address: <u>325 S. Lake Ave</u>	Address: <u>↓</u>
Address: <u>Duluth, MN 55802</u>	Address: <u>↓</u>
Name: <u>Lynette Carney</u>	Name: <u>↓</u>
email: <u>lcarney@barr.com</u>	email: <u>↓</u>
Copy to: <u>BarrDM@barr.com</u>	P.O. <u>—</u>
Project Name: <u>2021 GMP SPT</u>	Barr Project No: <u>49161528.00 200 205</u>

Perform MS/MSD Y / N	Analysis Requested		Total Number of Containers	% Solids
	Water	Soil		
N			2	
			2	

COC Number: **№ 588138**

COC 2 of 4

Matrix Code:
 GW = Groundwater
 SW = Surface Water
 WW = Waste Water
 DW = Drinking Water
 S = Soil/Solid
 SD = Sediment
 O = Other

Preservative Code:
 A = None
 B = HCl
 C = HNO₃
 D = H₂SO₄
 E = NaOH
 F = MeOH
 G = NaHSO₄
 H = Na₂S₂O₃
 I = Ascorbic Acid
 J = Zn Acetate
 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	Preservative Code
	Start	Stop	Unit (m./ft. or in.)							
1. MW-25A	—	—		05/12/2021	0910	GW	N	3		011
2. MW-25B	—	—			0940		N	3		012
3. MW-26	—	—			1018		N	3		013
4. MW-21A	—	—			1110		N	3		014
5. MW-21B	—	—			1145		N	3		015
6. MW-10	—	—			1235		N	3		016
7. MW-22B	—	—			1350		N	3		017
8. MW-11	—	—			1427		N	3		018
9. MW-11B	—	—			1500		N	3		019
10. MW-12	—	—			1555		N	3		020

BARR USE ONLY		Relinquished by: <u>Wendy Mart</u>	On Ice? <input checked="" type="checkbox"/> N	Date: <u>5/13/21</u>	Time: <u>1340</u>	Received by: <u>John Pelt / PRCE</u>	Date: <u>5/13/21</u>	Time: <u>13:40</u>
Sampled by: <u>KMJS</u>	Relinquished by: <u>[Signature]</u>	On Ice? <input checked="" type="checkbox"/> N	Date: <u>5/14/21</u>	Time: <u>1400</u>	Received by:	Date:	Time:	
Barr Proj. Manager: <u>LML</u>	Samples Shipped VIA: <input type="checkbox"/> Ground Courier <input type="checkbox"/> Air Carrier	Air Bill Number:		Requested Due Date:				
Barr DQ Manager: <u>JET</u>	<input type="checkbox"/> Sampler <input type="checkbox"/> Other: _____	Temperature on Receipt (°C): <u>1.2</u>		Custody Seal Intact? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> None		<input checked="" type="checkbox"/> Standard Turn Around Time		
Lab Name: <u>Pace</u>	Lab WO:	Rush <input type="checkbox"/> (mm/dd/yyyy)		Page 42 of 4				
Lab Location: <u>Green Bay, WI</u>								

Distribution - White-Original: Accompanies Shipment to Laboratory; Yellow Copy: Include in Field Documents; Scan and email: a copy to BarrDM@barr.com for tracking and filing procedures

Relinquished by: Fedex 5/15/21 1120 Received by: Anthony Wundel 5/15/21 1120

HRLGSTDFORMS Chain of Custody Form 2015 RLG Rev. 01/30/2020



Barr Engineering Co. Chain of Custody

Sample Origination State

CO MI MN MO ND TX UT WI Other: _____

REPORT TO	INVOICE TO
Company: <u>Barr Engineering</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. <u>-</u>
Project Name: <u>2021 Gmp SPT</u>	Barr Project No: <u>49161528.00 200 205</u>

Perform MS/MSD Y / N	Total Number of Containers	Analysis Requested		% Solids
		Water	Soil	
	<u>2</u>			
	<u>2</u>			
	<u>2</u>			

COC Number: **№ 589463**
 COC 4 of 4

Matrix Code:	Preservative Code:
GW = Groundwater	A = None
SW = Surface Water	B = HCl
WW = Waste Water	C = HNO ₃
DW = Drinking Water	D = H ₂ SO ₄
S = Soil/Solid	E = NaOH
SD = Sediment	F = MeOH
O = Other	G = NaHSO ₄
	H = Na ₂ S ₂ O ₃
	I = Ascorbic Acid
	J = Zn Acetate
	K = Other

Location	Sample Depth			Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix Code	Preservative Code	Field Filtered Y/N
	Start	Stop	Unit (m./ft. or in.)					
1. <u>Trip Blank - 1</u>	—	—	—	—	—	—	<u>031</u>	
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								

BARR USE ONLY		Relinquished by: <u>Marta M...</u>	On Ice? <input checked="" type="checkbox"/> N	Date: <u>5/13/21</u>	Time: <u>1340</u>	Received by: <u>AP Pace</u>	Date: <u>5/13/21</u>	Time: <u>13:40</u>
Sampled by: <u>KMS</u>		Relinquished by: <u>[Signature]</u>	On Ice? <input checked="" type="checkbox"/> N	Date: <u>5/14/21</u>	Time: <u>1400</u>	Received by: _____	Date: _____	Time: _____
Barr Proj. Manager: <u>LMC</u>		Samples Shipped VIA: <input type="checkbox"/> Ground Courier <input type="checkbox"/> Air Carrier		Air Bill Number: _____		Requested Due Date: <input checked="" type="checkbox"/> Standard Turn Around Time		
Barr DQ Manager: <u>JET</u>		<input type="checkbox"/> Sampler <input type="checkbox"/> Other: _____		Custody Seal Intact? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> None		<input type="checkbox"/> Rush _____ (mm/dd/yyyy) Page 44 of 4		
Lab Name: <u>Pace</u>		Lab WO: _____		Temperature on Receipt (°C): <u>1.2</u>				
Lab Location: <u>Green Bay, WI</u>								

Distribution - White-Original: Accompanies Shipment to Laboratory; Yellow Copy: Include in Field Documents; Scan and email: a copy to BarrDM@barr.com for tracking and filing procedures

Relinquished by: Fedex 5/15/21 1120 Received by: Anthony Wundel 5/15/21 1120

H:\RLG\STDFORMS\Chain of Custody Form 2015 RLG Rev. 01/30/2020

Sample Preservation Receipt Form

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Client Name: Barr Engineering

Project # _____

All containers needing preservation have been checked and noted below: Yes No N/A

Initial when completed:

Date/Time:


Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Pace Lab #	Glass							Plastic					Vials					Jars				General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)				
	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC								GN			
001																																			2.5 / 5 / 10
002																																			2.5 / 5 / 10
003																																			2.5 / 5 / 10
004																																			2.5 / 5 / 10
005																																			2.5 / 5 / 10
006																																			2.5 / 5 / 10
007																																			2.5 / 5 / 10
008																																			2.5 / 5 / 10
009																																			2.5 / 5 / 10
010																																			2.5 / 5 / 10
011																																			2.5 / 5 / 10
012																																			2.5 / 5 / 10
013																																			2.5 / 5 / 10
014																																			2.5 / 5 / 10
015																																			2.5 / 5 / 10
016																																			2.5 / 5 / 10
017																																			2.5 / 5 / 10
018																																			2.5 / 5 / 10
019																																			2.5 / 5 / 10
020																																			2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____ Headspace in VOA Vials (>6mm) : Yes No N/A *If yes look in headspace column

AG1U 1 liter amber glass	BP1U 1 liter plastic unpres	VG9A 40 mL clear ascorbic	JGFU 4 oz amber jar unpres
BG1U 1 liter clear glass	BP3U 250 mL plastic unpres	DG9T 40 mL amber Na Thio	JG9U 9 oz amber jar unpres
AG1H 1 liter amber glass HCL	BP3B 250 mL plastic NaOH	VG9U 40 mL clear vial unpres	WGFU 4 oz clear jar unpres
AG4S 125 mL amber glass H2SO4	BP3N 250 mL plastic HNO3	VG9H 40 mL clear vial HCL	WPFU 4 oz plastic jar unpres
AG4U 120 mL amber glass unpres	BP3S 250 mL plastic H2SO4	VG9M 40 mL clear vial MeOH	SP5T 120 mL plastic Na Thiosulfate
AG5U 100 mL amber glass unpres		VG9D 40 mL clear vial DI	ZPLC ziploc bag
AG2S 500 mL amber glass H2SO4			GN
BG3U 250 mL clear glass unpres			

 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 26Mar2020
	Document No.: ENV-FRM-GBAY-0014-Rev.00	Author: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Client Name: Barr Engineering

Project #: _____

Courier: CS Logistics Fed Ex Speedee UPS Walto
 Client Pace Other: _____

WO# : 40227076

Tracking #: 677A 880A 3734



Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No
 Custody Seal on Samples Present: Yes No Seals intact: Yes No
 Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used SR-107 Type of Ice: Wet Blue Dry None
 Cooler Temperature Uncorr: 3.5 / Corr: 3.5

Samples on ice, cooling process has begun
 Person examining contents:
 Date: 5/15/12 / Initials: AW
 Labeled By Initials: SKW

Temp Blank Present: Yes No Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C.
 Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>032221-3CYR</u>		

Client Notification/ Resolution: _____ If checked, see attached form for additional comments
 Person Contacted: _____ Date/Time: _____
 Comments/ Resolution: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir

May 28, 2021

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

RE: Project: 49161528.00 200 205 2021 GMP
Pace Project No.: 10560497

Dear Jim Taraldsen:

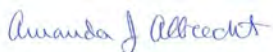
Enclosed are the analytical results for sample(s) received by the laboratory on May 14, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Green Bay

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

Sincerely,



Amanda Albrecht
amanda.albrecht@pacelabs.com
(612)607-6382
Project Manager

Enclosures

cc: BarrDM@barr.com, Barr Engineering
Data Management, Barr Engineering
Accounts Payable, Barr Engineering



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560497

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560497

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10560497001	MW-23B	Water	05/14/21 08:05	05/14/21 08:35
10560497002	Trip Blank - 2	Water	05/14/21 00:00	05/14/21 08:35

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560497

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10560497001	MW-23B	EPA 8260	SMT	11	PASI-G
10560497002	Trip Blank - 2	EPA 8260	SMT	11	PASI-G

PASI-G = Pace Analytical Services - Green Bay

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560497

Sample: MW-23B **Lab ID: 10560497001** Collected: 05/14/21 08:05 Received: 05/14/21 08:35 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/20/21 00:57	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/20/21 00:57	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/20/21 00:57	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/20/21 00:57	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/20/21 00:57	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/20/21 00:57	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/20/21 00:57	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/20/21 00:57	1330-20-7	
Surrogates									
Toluene-d8 (S)	92	%	70-130		1		05/20/21 00:57	2037-26-5	
4-Bromofluorobenzene (S)	112	%	70-130		1		05/20/21 00:57	460-00-4	
1,2-Dichlorobenzene-d4 (S)	98	%	70-130		1		05/20/21 00:57	2199-69-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560497

Sample: Trip Blank - 2 **Lab ID: 10560497002** Collected: 05/14/21 00:00 Received: 05/14/21 08:35 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		05/20/21 00:39	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/20/21 00:39	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/20/21 00:39	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		05/20/21 00:39	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		05/20/21 00:39	108-88-3	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/20/21 00:39	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/20/21 00:39	108-67-8	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/20/21 00:39	1330-20-7	
Surrogates									
Toluene-d8 (S)	94	%	70-130		1		05/20/21 00:39	2037-26-5	
4-Bromofluorobenzene (S)	99	%	70-130		1		05/20/21 00:39	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	70-130		1		05/20/21 00:39	2199-69-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560497

QC Batch: 385762

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 10560497001, 10560497002

METHOD BLANK: 2225833

Matrix: Water

Associated Lab Samples: 10560497001, 10560497002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<4.5	10.0	05/19/21 16:51	
1,3,5-Trimethylbenzene	ug/L	<3.6	10.0	05/19/21 16:51	
Benzene	ug/L	<3.0	10.0	05/19/21 16:51	
Ethylbenzene	ug/L	<3.3	10.0	05/19/21 16:51	
Methyl-tert-butyl ether	ug/L	<11.3	50.0	05/19/21 16:51	
Naphthalene	ug/L	<11.3	50.0	05/19/21 16:51	
Toluene	ug/L	<2.9	10.0	05/19/21 16:51	
Xylene (Total)	ug/L	<10.5	30.0	05/19/21 16:51	
1,2-Dichlorobenzene-d4 (S)	%	105	70-130	05/19/21 16:51	
4-Bromofluorobenzene (S)	%	100	70-130	05/19/21 16:51	
Toluene-d8 (S)	%	94	70-130	05/19/21 16:51	

LABORATORY CONTROL SAMPLE: 2225834

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	54.2	108	70-132	
Ethylbenzene	ug/L	50	52.2	104	80-123	
Methyl-tert-butyl ether	ug/L	50	55.6	111	66-130	
Toluene	ug/L	50	51.3	103	80-121	
Xylene (Total)	ug/L	150	159	106	70-130	
1,2-Dichlorobenzene-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2226042 2226043

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40227004001 Result	Spike Conc.	Spike Conc.	MS Conc.								
Benzene	ug/L	482	50	500	758	7060	554	1310	70-132	161	20	E,M1, R1	
Ethylbenzene	ug/L	129	50	500	188	1760	117	327	80-123	161	20	M1,R1	
Methyl-tert-butyl ether	ug/L	<1.1	50	500	56.0	540	112	108	66-130	162	20	R1	
Toluene	ug/L	1450	50	500	2160	19800	1440	3660	80-121	161	20	E,M1, R1	
Xylene (Total)	ug/L	584	150	1500	910	8760	218	545	70-130	162	20	ES, MS,RS	
1,2-Dichlorobenzene-d4 (S)	%						101	102	70-130				
4-Bromofluorobenzene (S)	%						97	99	70-130				

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560497

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2226042												2226043	
Parameter	Units	40227004001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
Toluene-d8 (S)	%						100	99	70-130				

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.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560497

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.

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.

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

ES The reported result is estimated because one or more of the constituent results are qualified as such.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

MS Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.

R1 RPD value was outside control limits.

RS The RPD value in one of the constituent analytes was outside the control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161528.00 200 205 2021 GMP
Pace Project No.: 10560497

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10560497001	MW-23B	EPA 8260	385762		
10560497002	Trip Blank - 2	EPA 8260	385762		

REPORT OF LABORATORY ANALYSIS

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 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 26Mar2020
	Document No.: ENV-FRM-GBAY-0014-Rev.00	Author: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO#: 40227075

Client Name: Barr Engineering

Courier: CS Logistics Fed Ex Speedee UPS Waitco
 Client Pace Other: _____



Tracking #: 677A 880A 3734

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Custody Seal on Samples Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used SR-107 Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 3.5 /Corr: 3.5

Temp Blank Present: yes no

Biological Tissue is Frozen: yes no

Person examining contents:	
Date: <u>5/15/11</u>	Initials: <u>AW</u>
Labeled By Initials: <u>SCW</u>	

Temp should be above freezing to 6°C.
 Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
- Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
- Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
- Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>03221-3CYR</u>		

Client Notification/ Resolution:

If checked, see attached form for additional comments

Person Contacted: _____ Date/Time: _____
 Comments/ Resolution: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir

Appendix B

Well Photos

Superior Terminal Well Photos Spring - 2021

MW-1R



MW-2



MW-5 & MW-5B



Superior Terminal Well Photos Spring - 2021

MW-6 & MW-6B



MW-10



MW-11 & MW-11B



Superior Terminal Well Photos Spring - 2021

MW-12



MW-14



MW-15



Superior Terminal Well Photos Spring - 2021

MW-17 & MW-17B



MW-18



MW-19A & MW-19B



Superior Terminal Well Photos Spring - 2021

MW-20A & MW-20B



MW-21A & MW-21B



MW-22B



Superior Terminal Well Photos Spring - 2021

MW-23B



MW-24A & MW-24B



MW-25A & 25B



Superior Terminal Well Photos Spring - 2021

MW-26



Appendix C

Field Notes



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-12						
Location: Superior Terminal, Superior, WI		Date: 5/12/2011						
Project #: 49161528.00		Sample Time: 1555						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	Yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	17.55	1537	5.4	0.697	7.10	83.7	1.97	11.70
Static water level (ft.):*	5.75							
Water depth (ft.):*	11.80							
Well volume (gal):	1.92							
Purge method:	ball							
Sample method:	ball							
Start time (hh:mm:ss):	1544	Odor: none						
Stop time (hh:mm:ss):	1553	Purge Appearance: clear, colorless						
Duration (hh:mm:ss):	9 min	Sample Appearance: LI						
Rate, gpm:	0.67	Comments: Water level measured on 5/12.						
Volume, purged: (note units)	6 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3							
Others present: ^{none} none		CO2-	Mn2-	Fe(T)-	Fe2-	Well Condition: good		
MW: groundwater monitoring well		WS: water supply well	SW: surface water	SE: sediment	other:			
PVOC+ naphthalene- 3		semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-	
oil, grease-		bacteria-	total metal-	filtered metal-	methane-	filter-		
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-2						
Location: Superior Terminal, Superior, WI		Date: 5/11/2021						
Project #: 49161528.00		Sample Time: 14:03						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	Yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FAU
Casing diameter (in.):	2"							
Total well depth (ft.):*	28.20	13:39	7.2	1.051	7.37	68.7	2.21	19.40
Static water level (ft.):*	4.11							
Water depth (ft.):*	24.09							
Well volume (gal):	3.9							
Purge method:	bail-dry							
Sample method:	bail							
Start time (hh:mm:ss):	1:41	Odor: none						
Stop time (hh:mm:ss):	2:00	Purge Appearance: Clear to slightly turbid, light brown/pink						
Duration (hh:mm:ss):	19 minutes	Sample Appearance: light brown/pink						
Rate, gpm:	0.63	Comments: water level measured on 5/10.						
Volume, purged: (note units)	12							
Duplicate collected?	No							
Sample collection by:	KMJ3 / KLS3							
Others present: none		CO2-	Mn2-	Fe(T)-	Fe2-	Well Condition: good, rusty lock - replace		
MW: groundwater monitoring well		WS: water supply well	SW: surface water	SE: sediment	other:			
PVOC+ naphthalene-3		semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-	
oil, grease-		bacteria-	total metal-	filtered metal-	methane-	filter-		
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge			Monitoring Point: MW-5					
Location: Superior Terminal, Superior, WI			Date: 5/13/21					
Project #: 49161528.00			Sample Time: 0910					
GENERAL DATA			STABILIZATION TEST					
Enbridge lock:	yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	27.03	0839	7.0	0.774	7.33	75.2	2.24	8.67
Static water level (ft.):*	3.41							
Water depth (ft.):*	23.62							
Well volume (gal.):	3.85							
Purge method:	bail - DM							
Sample method:	bail							
Start time (hh:mm:ss):	0849	Odor: none						
Stop time (hh:mm:ss):	0908	Purge Appearance: clear to light brown/pink						
Duration (hh:mm:ss):	19min	Sample Appearance: light brown/pink						
Rate, gpm:	0.6	Comments: water level measured on 5/10.						
Volume, purged: (note units)	11 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3							
		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:			
PVOC+ naphthalene- 3		semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-	
oil,grease-		bacteria-	total metal-	filtered metal-	methane-	filter-		
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-5B						
Location: Superior Terminal, Superior, WI		Date: 5/13/21						
Project #: 49161528.00		Sample Time: 0945						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	YES	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	57.91	0844	6.8	0.417	7.59	79.8	3.73	4.73
Static water level (ft.):*	7.10							
Water depth (ft.):*	50.81							
Well volume (gal):	8.28							
Purge method:	bail ^{2.5} / ₃							
Sample method:	bail							
Start time (hh:mm:ss):	0913	Odor: none						
Stop time (hh:mm:ss):	0941	Purge Appearance: clear, colorless						
Duration (hh:mm:ss):	28 min	Sample Appearance: ✓						
Rate, gpm:	0.5	Comments: water level measured on 5/10.						
Volume, purged: (note units)	13 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	none	Well Condition: good - lock on bit rusty						
MW: groundwater monitoring well		WS: water supply well	SW: surface water	SE: sediment	other:			
PVOC+ naphthalene- 3		semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-	
oil,grease-		bacteria-	total metal-	filtered metal-	methane-	filter-		
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-6						
Location: Superior Terminal, Superior, WI		Date: 5/14/2021						
Project #: 49161528.00		Sample Time: 1240						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	425	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	26.70	1211	8.5	1.059	7.24	125.2	5.82	114.66
Static water level (ft.):*	9.82							
Water depth (ft.):*	16.88							
Well volume (gal):	2.8							
Purge method:	bail							
Sample method:	bail							
Start time (hh:mm:ss):	1219	Odor: none						
Stop time (hh:mm:ss):	1238	Purge Appearance: ^{clear to} slightly turbid, brown/pink						
Duration (hh:mm:ss):	19 min	Sample Appearance: brown/pink						
Rate, gpm:	0.53	Comments: water level measured on 5/10. w/TS concrete well purged on 5/14/21						
Volume, purged: (note units)	10 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3 KLS3							
Others present: none		CO2-	Mn2-	Fe(T)-	Fe2-	Well Condition: good		
MW: groundwater monitoring well		WS: water supply well	SW: surface water	SE: sediment	other:			
PVOC+ naphthalene- 3		semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-	
oil, grease-		bacteria-	total metal-	filtered metal-	methane-	filter-		
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: mw-6B						
Location: Superior Terminal, Superior, WI		Date: 5/11/2021						
Project #: 49161528.00		Sample Time: 1250						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	58.28	12:00	8.3	0.516	7.45	84.1	3.73	87.44
Static water level (ft.):*	10.06							
Water depth (ft.):*	48.22							
Well volume (gal.):	7.9							
Purge method:	ball - dry							
Sample method:	ball							
Start time (hh:mm:ss):	12:04	Odor: none						
Stop time (hh:mm:ss):	1245	Purge Appearance: ^{clear to} turbid, brown/pink						
Duration (hh:mm:ss):	41 min	Sample Appearance: turbid, brown/pink						
Rate, gpm:	0.26	Comments: water level measured on 5/10. concrete collar around well removed on 5/11. well purged on 5/14/21.						
Volume, purged: (note units)	10.5 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3 / KLS3							
Others present: none		CO2-	Mn2-	Fe(T)-	Fe2-	Well Condition: good		
MW: <u>groundwater</u> monitoring well		WS: water supply well	SW: surface water	SE: sediment	other:			
PVOC+ naphthalene- 3		semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-	
oil, grease-		bacteria-	total metal-	filtered metal-	methane-	filter-		
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-10						
Location: Superior Terminal, Superior, WI		Date: 05/12/2011						
Project #: 49161528.00		Sample Time: 1235						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	Yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	36.45	1205	7.9	1.411	6.65	-42.5	0.51	12.75
Static water level (ft.):*	6.34							
Water depth (ft.):*	24.11							
Well volume (gal.):	3.9							
Purge method:	bail							
Sample method:	bail							
Start time (hh:mm:ss):	1212	Odor: none						
Stop time (hh:mm:ss):	1231	Purge Appearance: clear to light orange/brown						
Duration (hh:mm:ss):	19 min	Sample Appearance: light brown						
Rate, gpm:	0.71	Comments: Water level measured on 5/10-						
Volume, purged: (note units)	13.5							
Duplicate collected?	Yes-Dup-2							
Sample collection by:	KMJ3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	None	Well Condition: good						
<u>MW</u> - groundwater monitoring well	WS: water supply well	SW: surface water	SE: sediment	other:				
PVOC+ naphthalene- 6	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge			Monitoring Point: MW-11					
Location: Superior Terminal, Superior, WI			Date: 5/12/21					
Project #: 49161528.00			Sample Time: 1427					
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	18.19	1407	6.7	1,273	6.37	-89.9	0.81	13.20
Static water level (ft.):*	8.56							
Water depth (ft.):*	9.63							
Well volume (gal):	1.57							
Purge method:	bail - dry							
Sample method:	bail							
Start time (hh:mm:ss):	1418	Odor: none						
Stop time (hh:mm:ss):	1425	Purge Appearance: clear, colorless						
Duration (hh:mm:ss):	7 min	Sample Appearance: ✓						
Rate, gpm:	0.57	Comments: water level measured on 5/12.						
Volume, purged: (note units)	4 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3							
Others present: none		CO2-	Mn2-	Fe(T)-	Fe2-	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	other:				
<input type="checkbox"/> PVOC+ naphthalene- 3	<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:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-11B						
Location: Superior Terminal, Superior, WI		Date: 5/12/21						
Project #: 49161528.00		Sample Time: 1500						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	YLS	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	57.52	1412	7.4	0.727	7.65	-47.4	2.44	40.21
Static water level (ft.):*	23.56							
Water depth (ft.):*	33.96							
Well volume (gal.):	5.5							
Purge method:	bail - dry							
Sample method:	bail							
Start time (hh:mm:ss):	1431	Odor: none						
Stop time (hh:mm:ss):	1457	Purge Appearance: clear, colorless						
Duration (hh:mm:ss):	26 min	Sample Appearance: LI						
Rate, gpm:	0.31	Comments: Water level measured on 5/10.						
Volume, purged: (note units)	8 gal							
Duplicate collected?	no							
Sample collection by:	KM13							
Others present: none		CO2-	Mn2-	Fe(T)-	Fe2-	Well Condition: good		
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
PVOC+ naphthalene- 3		semi-volatile-		general-		nutrient-		cyanide- DRO- Sulfide-
oil,grease-		bacteria-		total metal-		filtered metal-		methane- filter-
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-12						
Location: Superior Terminal, Superior, WI		Date: 5/12/2021						
Project #: 49161528.00		Sample Time: 0830						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	Yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter (in.):	2"							
Total well depth (ft.):*	21.05	NOT MEASURED →						
Static water level (ft.):*	4.52							
Water depth (ft.):*	16.53							
Well volume (gal.):	2.7							
Purge method:	ball - dry							
Sample method:	ball							
Start time (hh:mm:ss):	0821	Odor: none						
Stop time (hh:mm:ss):	0828	Purge Appearance: clear, colorless						
Duration (hh:mm:ss):	7	Sample Appearance: clear, colorless						
Rate, gpm:	0.64	Comments: water level measured on 5/10. Could not get 451 probe down well near - slight bend in riser possibly at 3.1 feet.						
Volume, purged: (note units)	4.5 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3	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		other:
<input checked="" type="checkbox"/> PVOC+ naphthalene-3		<input type="checkbox"/> semi-volatile-		<input type="checkbox"/> general-		<input type="checkbox"/> nutrient-		<input type="checkbox"/> cyanide-
<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:								

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

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Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: mw-14						
Location: Superior Terminal, Superior, WI		Date: 5/12/21						
Project #: 49161528.00		Sample Time: 1700						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	no - ^{unknown lock} Barr lock pad ←	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	18.35	1643	6.1	0.673	7.28	126.5	7.27	7.23
Static water level (ft.):*	5.06							
Water depth (ft.):*	13.29							
Well volume (gal):	2.17							
Purge method:	bail - dry							
Sample method:	bail							
Start time (hh:mm:ss):	1648	Odor: none						
Stop time (hh:mm:ss):	1657	Purge Appearance: clear to slightly turbid						
Duration (hh:mm:ss):	9 min	Sample Appearance: light brown / pink						
Rate, gpm:	0.78	Comments: water level measured on 5/10. unknown lock on well, cut lock, bailer in well, removed. Placed Barr lock on well. Well painted on 5/14/21.						
Volume, purged: (note units)	7 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3							
		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:
PVOC+ naphthalene- 3		semi-volatile-		general-		nutrient-		cyanide- DRO- Sulfide-
oil, grease-		bacteria-		total metal-		filtered metal-		methane- filter-
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-15						
Location: Superior Terminal, Superior, WI		Date: 5/12/21						
Project #: 49161528.00		Sample Time: 1630						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	no - unknown lock put on Buvvala	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	17.31	1614	6-1	6.618	7.33	-32.8	6.12	0.20
Static water level (ft.):*	3.98							
Water depth (ft.):*	13.33							
Well volume (gal):	2.17							
Purge method:	bail - dry							
Sample method:	bail							
Start time (hh:mm:ss):	1618	Odor: none						
Stop time (hh:mm:ss):	1627	Purge Appearance: clear, no color to slightly turbid						
Duration (hh:mm:ss):	9 min	Sample Appearance: light brown						
Rate, gpm:	.67	Comments: water level measured on 5/10. unknown lock on well, cut lock, bailer in well - removed. placed Buvvala lock on well. well painted on 5/14/21.						
Volume, purged: (note units)	6 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3							
		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:
PVOC+ naphthalene- 3		semi-volatile-		general-		nutrient-		cyanide- DRO- Sulfide-
oil, grease-		bacteria-		total metal-		filtered metal-		methane- filter-
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: ^{KMJ3} MW-17						
Location: Superior Terminal, Superior, WI		Date: 5/13/21						
Project #: 49161528.00		Sample Time: 0802						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	YLV	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	17.48	0739	5.8	0.825	7.59	72.9	5.77	10.01
Static water level (ft.):*	4.81							
Water depth (ft.):*	12.67							
Well volume (gal):	2,07							
Purge method:	ball-dry							
Sample method:	ball							
Start time (hh:mm:ss):	0750	Odor: none						
Stop time (hh:mm:ss):	0759	Purge Appearance: clear, colorless						
Duration (hh:mm:ss):	9 min	Sample Appearance: LL						
Rate, gpm:	0.5	Comments: Water level measured on 5/10.						
Volume, purged: (note units)	4.5 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	none	Well Condition: good, hole getting dirty						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
PVOC+ naphthalene- 3		semi-volatile-		general-		nutrient-		cyanide- DRO- Sulfide-
oil, grease-		bacteria-		total metal-		filtered metal-		methane- filter-
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: Mw-17B						
Location: Superior Terminal, Superior, WI		Date: 5/13/21						
Project #: 49161528.00		Sample Time: 0820						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	44.95	2.44	7.3	6.355	7.59	85.4	3.69	10.21
Static water level (ft.):*	18.42							
Water depth (ft.):*	26.53							
Well volume (gal):	4.32							
Purge method:	bail-dry							
Sample method:	bail							
Start time (hh:mm:ss):	0806	Odor: none						
Stop time (hh:mm:ss):	0818	Purge Appearance: good clear colorless						
Duration (hh:mm:ss):	12 min	Sample Appearance: good 11						
Rate, gpm:	0.42	Comments: water level measured on 5/10						
Volume, purged: (note units)	5 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present: none		Well Condition: good, looks getting murky						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
PVOC+ naphthalene- 3		semi-volatile		general-		nutrient-		cyanide-
oil,grease-		bacteria-		total metal-		filtered metal-		methane-
filter-								
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-18						
Location: Superior Terminal, Superior, WI		Date: 5/13/21						
Project #: 49161528.00		Sample Time: 0725						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	17.25	0712	6.4	0.752	7.48	-39.1	6.58	34.48
Static water level (ft.):*	6.12							
Water depth (ft.):*	11.13							
Well volume (gal):	1.8							
Purge method:	ball-dry							
Sample method:	ball							
Start time (hh:mm:ss):	0715	Odor: none						
Stop time (hh:mm:ss):	0725	Purge Appearance: clear, colorless						
Duration (hh:mm:ss):	8 min	Sample Appearance: LL						
Rate, gpm:	0.56	Comments: water level measured on 5/10.						
Volume, purged: (note units)	4.5 gal							
Duplicate collected?	Yes-Dup-3							
Sample collection by:	KMJ3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present: none	Well Condition: good, lock is starting to get rusty -							
<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: <i>don't need to replace yet</i>								
<input type="checkbox"/> PVOC+ naphthalene-6 <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:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-19A						
Location: Superior Terminal, Superior, WI		Date: 5/11/2021						
Project #: 49161528.00		Sample Time: 1525						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	425	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	24.17	1448	7.8	0.522	7.52	126.4	0.42	29.7
Static water level (ft.):*	3.26							
Water depth (ft.):*	20.91							
Well volume (gal):	3.4							
Purge method:	bail - dry							
Sample method:	bail							
Start time (hh:mm:ss):	1500	Odor: none						
Stop time (hh:mm:ss):	1520	Purge Appearance: Clear, colorless						
Duration (hh:mm:ss):	20 min	Sample Appearance: "						
Rate, gpm:	0.45	Comments: water level measured on 5/10/21.						
Volume, purged: (note units)	9 gal							
Duplicate collected?	YES - Dup-1							
Sample collection by:	KMJ3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	K2S3	Well Condition: good						
(MW) groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
PVOC+ naphthalene- 6		semi-volatile-		general-		nutrient-		cyanide- DRO- Sulfide-
oil, grease-		bacteria-		total metal-		filtered metal-		methane- filter-
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-19B						
Location: Superior Terminal, Superior, WI		Date: 5/11/2021						
Project #: 49161528.00		Sample Time: 1520						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	Y65	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FTU
Casing diameter (in.):	2"							
Total well depth (ft.):*	59.95	1440	7.4	0.176	7.52	106.4	2.00	4.17
Static water level (ft.):*	4.50							
Water depth (ft.):*	51.45							
Well volume (gal.):	8,38							
Purge method:	bail - dry							
Sample method:	bail							
Start time (hh:mm:ss):	1444	Odor: none						
Stop time (hh:mm:ss):	1516	Purge Appearance: Clear, colorless						
Duration (hh:mm:ss):	32 min	Sample Appearance: "						
Rate, gpm:	0.41	Comments: water level measured on 5/10.						
Volume, purged: (note units)	13 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3							
		CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	KL53	Well Condition: good						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
PVOC: naphthalene-3		semi-volatile-		general-		nutrient-		cyanide- DRO- Sulfide-
oil,grease-		bacteria-		total metal-		filtered metal-		methane- filter-
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

MW

Client: Enbridge			Monitoring Point: MW-60A						
Location: Superior Terminal, Superior, WI			Date: 5/11/2021						
Project #: 49161528.00			Sample Time: 11:00						
GENERAL DATA			STABILIZATION TEST						
Enbridge lock:	yes		Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"								
Total well depth (ft.):*	24.20		1017	7.1	0.997	7.22	205.6	2.61	47.36
Static water level (ft.):*	4.88								
Water depth (ft.):*	21.60 19.32								
Well volume (gal.):	3.15								
Purge method:	bail/dry								
Sample method:	bail								
Start time (hh:mm:ss):	1030		Odor: none						
Stop time (hh:mm:ss):	1057		Purge Appearance: slightly turbid light brown/pink						
Duration (hh:mm:ss):	27 min		Sample Appearance: light brown/pink						
Rate, gpm:	0.37		Comments: water level measured on 5/10. well purged on 5/14/21.						
Volume, purged: (note units)	10 gal								
Duplicate collected?	no								
Sample collection by:	KMJ3 / 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:
PVOC+ naphthalene-8			semi-volatile-		general-		nutrient-		cyanide-
oil, grease-			bacteria-		total metal-		filtered metal-		methane-
filter-									
Others:									

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: mw-208						
Location: Superior Terminal, Superior, WI		Date: 5/11/2021						
Project #: 49161528.00		Sample Time: 11:30						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FWU
Casing diameter (in.):	2"							
Total well depth (ft.):*	60.19	10:24	7.1	0.322	7.51	176.0	2.41	13.08
Static water level (ft.):*	17.86							
Water depth (ft.):*	42.33							
Well volume (gal):	6.9							
Purge method:	bail-dry							
Sample method:	bail							
Start time (hh:mm:ss):	10:17	Odor: none						
Stop time (hh:mm:ss):	11:28	Purge Appearance: clear, colorless						
Duration (hh:mm:ss):	41 min	Sample Appearance: clear, colorless						
Rate, gpm:	0.24	Comments: water level measured on 5/10; well purged on 5/11/21						
Volume, purged: (note units)	10 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3	KL53	CO2-	Mn2-	Fe(T)-	Fe2-		
Others present:	Well Condition: good							
MW: groundwater monitoring well		WS: water supply well	SW: surface water	SE: sediment	other:			
PVOC+ naphthalene- 3		semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-	
oil, grease-		bacteria-	total metal-	filtered metal-	methane-	filter-		
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-21A							
Location: Superior Terminal, Superior, WI		Date: 5/12/2021							
Project #: 49161528.00		Sample Time: 1110							
GENERAL DATA		STABILIZATION TEST							
Enbridge lock:	405	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FMH	
Casing diameter (in.):	2"								
Total well depth (ft.):*	24.55	1042	7.1	1,034	7.26	79.0	5.84	4.30	
Static water level (ft.):*	4.31								
Water depth (ft.):*	20.24								
Well volume (gal.):	3.3								
Purge method:	bail - dry								
Sample method:	bail								
Start time (hh:mm:ss):	1055	Odor: none							
Stop time (hh:mm:ss):	1108	Purge Appearance: clear, colorless							
Duration (hh:mm:ss):	13 min	Sample Appearance: clear, colorless							
Rate, gpm:	0.65	Comments: water level measured on 5/10.							
Volume, purged: (note units)	8.5 gal								
Duplicate collected?	no								
Sample collection by:	KMJ3	CO2-	Mn2-	Fe(T)-	Fe2-				
Others present:	none	Well Condition: good							
<u>MW</u> : groundwater monitoring well	WS: water supply well	SW: surface water	SE: sediment	other:					
PVOC+ naphthalene- 3	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-			
oil, grease-	bacteria-	total metal-	filtered metal-	methane-	filter-				
Others:									

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-21B						
Location: Superior Terminal, Superior, WI		Date: 5/12/2024						
Project #: 49161528.00		Sample Time: 1145						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	Yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FWU
Casing diameter (in.):	2"							
Total well depth (ft.):*	60.63	1048	6.9	0.424	7.49	74.3	2.26	50.30
Static water level (ft.):*	18.57							
Water depth (ft.):*	42.11							
Well volume (gal.):	6.9							
Purge method:	bail - dry							
Sample method:	bail							
Start time (hh:mm:ss):	1120	Odor: none						
Stop time (hh:mm:ss):	1142	Purge Appearance: clear, colorless						
Duration (hh:mm:ss):	22 min	Sample Appearance: LL						
Rate, gpm:	0.34	Comments: water level measured on 5/10.						
Volume, purged: (note units)	7.5 gal							
Duplicate collected?	NO							
Sample collection by:	KMJ3							
Others present: none		CO2-	Mn2-	Fe(T)-	Fe2-	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"/> PVOC+ naphthalene-3 <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:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-22B						
Location: Superior Terminal, Superior, WI		Date: 5/12/2021						
Project #: 49161528.00		Sample Time: 1350						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	425	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	57.75	1254	7.5	0.575	7.35	-87.8	0.20	10.20
Static water level (ft.):*	19.36							
Water depth (ft.):*	38.39							
Well volume (gal.):	6.26							
Purge method:	ball							
Sample method:	ball							
Start time (hh:mm:ss):	1323	Odor: none						
Stop time (hh:mm:ss):	1347	Purge Appearance: clear to turbid, red/brown						
Duration (hh:mm:ss):	24 min	Sample Appearance: red, brown						
Rate, gpm:	0.4	Comments: water level measured on 5/10. Close to contractor trailer & spill containment & several 5 gallon cans.						
Volume, purged: (note units)	9.5 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	none	Well Condition: good - murky look.						
<input checked="" type="checkbox"/> MW:	groundwater monitoring well	WS:	water supply well	SW:	surface water	SE:	sediment	other:
	PVOC+ naphthalene- 3	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-	
	oil, grease-	bacteria-	total metal-	filtered metal-	methane-	filter-		
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-23B						
Location: Superior Terminal, Superior, WI		Date: 5/14/21						
Project #: 49161528.00		Sample Time: 0805						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	YK	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	57.30	0733	7.1	0.533	7.62	45.9	2.30	8.70
Static water level (ft.):*	5.62							
Water depth (ft.):*	51.68							
Well volume (gal.):	8.42							
Purge method:	bail - dry							
Sample method:	bail							
Start time (hh:mm:ss):	0738	Odor: none						
Stop time (hh:mm:ss):	0802	Purge Appearance: clear, colorless						
Duration (hh:mm:ss):	24 min	Sample Appearance: 61						
Rate, gpm:	0.52	Comments: water level measured on 5/10.						
Volume, purged: (note units)	12.5 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	none	Well Condition: good - riser lock had to be replaced						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
PVOC+ naphthalene- 3		semi-volatile-		general-		nutrient-		cyanide-
oil, grease-		bacteria-		total metal-		filtered metal-		methane-
								filter-
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-24A						
Location: Superior Terminal, Superior, WI		Date: 5/11/21						
Project #: 49161528.00		Sample Time: 1630						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	Yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	19.03	1609	6.2	0.589	7.0	114.9	2.20	18.81
Static water level (ft.):*	4.72							
Water depth (ft.):*	14.31							
Well volume (gal):	2.3							
Purge method:	bail-dry							
Sample method:	bail							
Start time (hh:mm:ss):	1615	Odor: none						
Stop time (hh:mm:ss):	1626	Purge Appearance: clear to turbid						
Duration (hh:mm:ss):	11 min	Sample Appearance: light brown / pink						
Rate, gpm:	0.55	Comments: well water level measured on 5/11/21. Well inser heaved, making it impossible to close well pm - top cover with J-peg on. Cut 0.18' off riser on 5/11/21 - able to close cover now.						
Volume, purged: (note units)	6 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	none	Well Condition: good, replace lock - rusty						
MW: groundwater monitoring well		WS: water supply well	SW: surface water	SE: sediment	other:			
PVOC+ naphthalene-3		semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-	
oil, grease-		bacteria-	total metal-	filtered metal-	methane-	filter-		
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-24B						
Location: Superior Terminal, Superior, WI		Date: 5/10/2021						
Project #: 49161528.00		Sample Time: 1652						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	Yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	49.38	1559	7.6	0.509	7.32	55.0	2.51	51.92
Static water level (ft.):*	8.84							
Water depth (ft.):*	40.54							
Well volume (gal.):	6.6							
Purge method:	bail - dry							
Sample method:	bail							
Start time (hh:mm:ss):	1633	Odor: none						
Stop time (hh:mm:ss):	1649	Purge Appearance: clear to slightly turbid						
Duration (hh:mm:ss):	16 min	Sample Appearance: light brown						
Rate, gpm:	0.5	Comments: Water level measured on 5/10.						
Volume, purged: (note units)	8 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	none	Well Condition: good, rusty rock - replace						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
PVOC+ naphthalene- 3		semi-volatile-		general-		nutrient-		cyanide-
oil, grease-		bacteria-		total metal-		filtered metal-		methane-
								filter-
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-25A						
Location: Superior Terminal, Superior, WI		Date: 5/12/2021						
Project #: 49161528.00		Sample Time: 0910						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	Yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FAU
Casing diameter (in.):	2"							
Total well depth (ft.):*	19.26	0849	6.6	0.613	7.19	83.1	0.33	7.42
Static water level (ft.):*	3.98							
Water depth (ft.):*	15.28							
Well volume (gal):	2.5-							
Purge method:	bail-dry							
Sample method:	bail							
Start time (hh:mm:ss):	0900	Odor: none						
Stop time (hh:mm:ss):	0908	Purge Appearance: slightly turbid to very turbid, brown/red						
Duration (hh:mm:ss):	8 min	Sample Appearance: red/brown						
Rate, gpm:	0.5	Comments: Water level measured on 5/10. Well painted on 5/11/21.						
Volume, purged: (note units)	4 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	none	Well Condition: good						
<u>MW</u> : groundwater monitoring well	WS: water supply well	SW: surface water	SE: sediment	other:				
PVOC+ naphthalene- 3	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-25B						
Location: Superior Terminal, Superior, WI		Date: 5/12/2021						
Project #: 49161528.00		Sample Time: 0940						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	Yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FNU
Casing diameter (in.):	2"							
Total well depth (ft.):*	50.45	0859	7.1	0.252	7.75	22.1	1.03	27.66
Static water level (ft.):*	9.29							
Water depth (ft.):*	41.16							
Well volume (gal.):	6.7							
Purge method:	bail - dry							
Sample method:	bail							
Start time (hh:mm:ss):	0915	Odor: None						
Stop time (hh:mm:ss):	0935	Purge Appearance: brown/pink turbid & very turbid						
Duration (hh:mm:ss):	20 min	Sample Appearance: brown/pink						
Rate, gpm:	0.43	Comments: Water level measured on 5/10. Well purged on 5/14/21.						
Volume, purged: (note units)	8.5 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3	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:
PVOC+ naphthalene- 3		semi-volatile-		general-		nutrient-		cyanide- DRO- Sulfide-
oil,grease-		bacteria-		total metal-		filtered metal-		methane- filter-
Others:								

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



Barr Engineering Company Well Sampling/Stabilization Data Sheet

Client: Enbridge		Monitoring Point: MW-26						
Location: Superior Terminal, Superior, WI		Date: 5/12/2021						
Project #: 49161528.00		Sample Time: 10:18						
GENERAL DATA		STABILIZATION TEST						
Enbridge lock:	Yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance FWU
Casing diameter (in.):	2"							
Total well depth (ft.):*	18.92	0958	6.7	0.649	7.10	61.2	4.03	25.01
Static water level (ft.):*	8.78							
Water depth (ft.):*	8.78 ^{KMJ3} 10.14							
Well volume (gal.):	1.7							
Purge method:	bail - dry							
Sample method:	bail							
Start time (hh:mm:ss):	1007	Odor: none						
Stop time (hh:mm:ss):	1014	Purge Appearance: clear, colorless						
Duration (hh:mm:ss):	10 min	Sample Appearance: "						
Rate, gpm:	0.55	Comments: water level measured on 5/10.						
Volume, purged: (note units)	5.5 gal							
Duplicate collected?	no							
Sample collection by:	KMJ3	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:								
<input type="checkbox"/> PVOC+ naphthalene-3 <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:								

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

Appendix D

Private Well Memo

July 19, 2021

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

Sent Via Email

**Re: Potable Well Sampling Results – Superior Terminal
2021 Groundwater Monitoring Program**

Dear Mr. Larabel:

On May 13, 2021, Barr Engineering Co (Barr) collected water quality samples from the three private wells located at the Enbridge Superior Terminal. Water samples from private wells PW-1 and PW-2 were collected from spigots closest 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 Minneapolis, Minnesota 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 in Attachment A.

Private well PW-2 had a detection of total coliform equal to the reporting limit of 1.0 mpn/100/ml from the May 13 sampling event. The well was resampled by Barr for total and fecal coliform (as E. coli) on June 9, 2021. Prior to sample collection the well was purged for approximately 20 minutes and the sample was collected from the spigot closest to the pressure tank (same location as the previous sample). Analytical results from the June 9 sampling event confirmed the total coliform detection with a result of 3.0 mpn/100/ml. The resample results are summarized on Table 1 and copy of the analytical laboratory report is included in Attachment A. The well was also inspected and a gap between the well casing and well cover was identified. Photo documentation of this is in Attachment B.

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. With the exception of the total coliform detection, these results are similar to what has been previously been detected in these wells since monitoring began in 2017.

If you have any questions or require additional information, please contact me at (218) 529-7133 or Lynette Carney at (218) 529-7141.

Sincerely,
Barr Engineering Co.



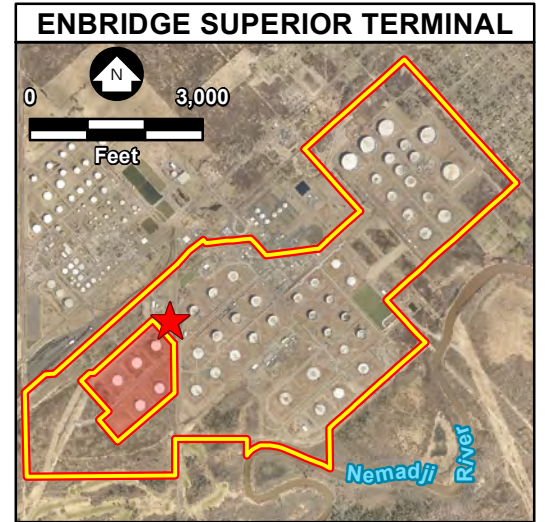
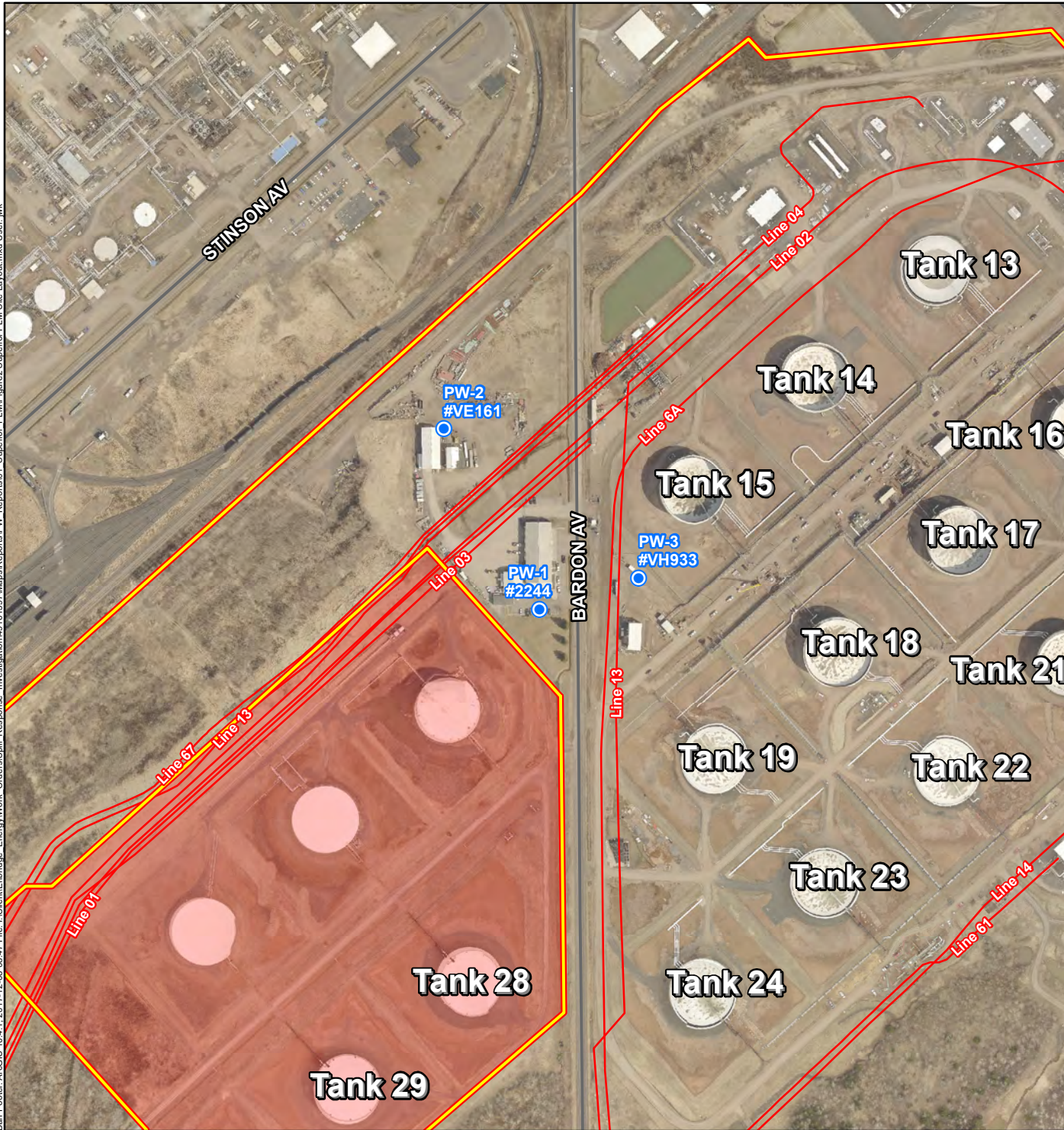
Kaitlin Montz
Geologist

Enclosure:

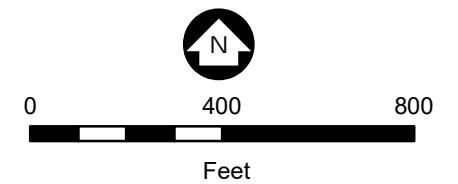
Figure 1	Private Well Locations
Table 1	Private Well Groundwater Quality Data
Attachment A	Pace Analytical Laboratory Reports
Attachment B	Private Well PW-2 Photos

cc: Karl Beaster, Enbridge Energy

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.



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	2-Oct-17	<1.0	<4.0	<1.0	<3.0	NS	NS	NS	NS	NS	NS	NS	NS
	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
PW-2	2-Oct-17	<1.0	<4.0	<1.0	<3.0	NS	NS	NS	NS	NS	NS	NS	NS
	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
PW-3	3-Oct-17	<1.0	<4.0	<1.0	<3.0	NS	NS	NS	NS	NS	NS	NS	NS
	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
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

<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.

Attachment A

Pace Analytical Laboratory Reports

June 01, 2021

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

RE: Project: 49161528.00 200 205 2021 GMP
Pace Project No.: 10560019

Dear Jim Taraldsen:

Enclosed are the analytical results for sample(s) received by the laboratory on May 13, 2021. 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.

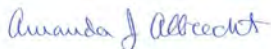
Some analyses were subcontracted outside of the Pace Network. The test report from the external subcontractor is attached to this report in its entirety.

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,



Amanda Albrecht
amanda.albrecht@pacelabs.com
(612)607-6382
Project Manager

Enclosures

cc: BarrDM@barr.com, Barr Engineering
Data Management, 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: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560019

Pace Analytical Services Ormond Beach

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

Arizona Certification# AZ0819

Colorado Certification: FL NELAC Reciprocity

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

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

Maryland Certification: #346

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: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560019

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10560019001	PW-1	Water	05/13/21 10:45	05/13/21 13:40
10560019002	PW-2	Water	05/13/21 11:20	05/13/21 13:40
10560019003	PW-3	Water	05/13/21 12:20	05/13/21 13:40
10560019004	Trip Blank - 1	Water	05/13/21 00:00	05/13/21 13:40

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560019

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10560019001	PW-1	SM 9223B (Colilert-18 QT) 2004	AA2	2	PASI-DU
		EPA 353.2	AP2	2	PASI-DU
		EPA 353.2	AP2	1	PASI-DU
		EPA 524.2	JLR	7	PASI-O
		SM 4500-H+B	SWB	1	PASI-O
		EPA 300.0	EDC	1	PASI-O
10560019002	PW-2	SM 9223B (Colilert-18 QT) 2004	AA2	2	PASI-DU
		EPA 353.2	AP2	2	PASI-DU
		EPA 353.2	AP2	1	PASI-DU
		EPA 524.2	JLR	7	PASI-O
		SM 4500-H+B	SWB	1	PASI-O
		EPA 300.0	EDC	1	PASI-O
10560019003	PW-3	SM 9223B (Colilert-18 QT) 2004	AA2	2	PASI-DU
		EPA 353.2	AP2	2	PASI-DU
		EPA 353.2	AP2	1	PASI-DU
		EPA 524.2	JLR	7	PASI-O
		SM 4500-H+B	SWB	1	PASI-O
		EPA 300.0	EDC	1	PASI-O
10560019004	Trip Blank - 1	EPA 524.2	JLR	7	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: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560019

Sample: PW-1 **Lab ID: 10560019001** Collected: 05/13/21 10:45 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
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	05/13/21 17:45	05/14/21 14:04		
Total Coliform Bacteria	<1.0	MPN/100/mL	1.0	1.0	1	05/13/21 17:45	05/14/21 14:04		
353.2 Nitrogen N+N pres DU									
Analytical Method: EPA 353.2									
Pace Analytical Services - Duluth, MN									
Nitrate as N	<0.0027	mg/L	0.0091	0.0027	1		05/14/21 15:23	14797-55-8	
Nitrogen, NO2 plus NO3	<0.0089	mg/L	0.030	0.0089	1		05/14/21 15:23		
353.2 Nitrogen, NO2 unpres DU									
Analytical Method: EPA 353.2									
Pace Analytical Services - Duluth, MN									
Nitrite as N	<0.0062	mg/L	0.021	0.0062	1		05/14/21 14:52	14797-65-0	
524.2 MSV									
Analytical Method: EPA 524.2									
Pace Analytical Services - Ormond Beach									
Benzene	<0.40	ug/L	0.50	0.40	1		05/25/21 08:06	71-43-2	
Ethylbenzene	<0.23	ug/L	0.50	0.23	1		05/25/21 08:06	100-41-4	
Toluene	<0.28	ug/L	0.50	0.28	1		05/25/21 08:06	108-88-3	
Xylene (Total)	<0.11	ug/L	1.0	0.11	1		05/25/21 08:06	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		05/25/21 08:06	460-00-4	
Toluene-d8 (S)	99	%	70-130		1		05/25/21 08:06	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	109	%	70-130		1		05/25/21 08:06	2199-69-1	
4500H+ pH, Electrometric									
Analytical Method: SM 4500-H+B									
Pace Analytical Services - Ormond Beach									
pH at 25 Degrees C	8.6	Std. Units	0.10	0.10	1		05/19/21 17:11		H6
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	72300	ug/L	5000	2500	1		05/27/21 14:23	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560019

Sample: PW-2 **Lab ID: 10560019002** Collected: 05/13/21 11:20 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
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	05/13/21 17:45	05/14/21 14:04		
Total Coliform Bacteria	1.0	MPN/100/mL	1.0	1.0	1	05/13/21 17:45	05/14/21 14:04		
353.2 Nitrogen N+N pres DU									
Analytical Method: EPA 353.2									
Pace Analytical Services - Duluth, MN									
Nitrate as N	<0.0027	mg/L	0.0091	0.0027	1		05/14/21 15:27	14797-55-8	
Nitrogen, NO2 plus NO3	<0.0089	mg/L	0.030	0.0089	1		05/14/21 15:27		
353.2 Nitrogen, NO2 unpres DU									
Analytical Method: EPA 353.2									
Pace Analytical Services - Duluth, MN									
Nitrite as N	<0.0062	mg/L	0.021	0.0062	1		05/14/21 14:57	14797-65-0	
524.2 MSV									
Analytical Method: EPA 524.2									
Pace Analytical Services - Ormond Beach									
Benzene	<0.40	ug/L	0.50	0.40	1		05/19/21 20:55	71-43-2	
Ethylbenzene	<0.23	ug/L	0.50	0.23	1		05/19/21 20:55	100-41-4	
Toluene	<0.28	ug/L	0.50	0.28	1		05/19/21 20:55	108-88-3	
Xylene (Total)	<0.11	ug/L	1.0	0.11	1		05/19/21 20:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	90	%	70-130		1		05/19/21 20:55	460-00-4	
Toluene-d8 (S)	106	%	70-130		1		05/19/21 20:55	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	113	%	70-130		1		05/19/21 20:55	2199-69-1	
4500H+ pH, Electrometric									
Analytical Method: SM 4500-H+B									
Pace Analytical Services - Ormond Beach									
pH at 25 Degrees C	9.0	Std. Units	0.10	0.10	1		05/19/21 17:12		H6
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	104000	ug/L	10000	5000	2		05/28/21 10:46	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560019

Sample: PW-3 **Lab ID: 10560019003** Collected: 05/13/21 12:20 Received: 05/13/21 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
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	05/13/21 17:45	05/14/21 14:04		
Total Coliform Bacteria	<1.0	MPN/100/mL	1.0	1.0	1	05/13/21 17:45	05/14/21 14:04		
353.2 Nitrogen N+N pres DU									
Analytical Method: EPA 353.2									
Pace Analytical Services - Duluth, MN									
Nitrate as N	<0.0027	mg/L	0.0091	0.0027	1		05/14/21 15:28	14797-55-8	
Nitrogen, NO2 plus NO3	<0.0089	mg/L	0.030	0.0089	1		05/14/21 15:28		
353.2 Nitrogen, NO2 unpres DU									
Analytical Method: EPA 353.2									
Pace Analytical Services - Duluth, MN									
Nitrite as N	<0.0062	mg/L	0.021	0.0062	1		05/14/21 14:58	14797-65-0	
524.2 MSV									
Analytical Method: EPA 524.2									
Pace Analytical Services - Ormond Beach									
Benzene	<0.40	ug/L	0.50	0.40	1		05/25/21 18:30	71-43-2	
Ethylbenzene	<0.23	ug/L	0.50	0.23	1		05/25/21 18:30	100-41-4	
Toluene	<0.28	ug/L	0.50	0.28	1		05/25/21 18:30	108-88-3	
Xylene (Total)	<0.11	ug/L	1.0	0.11	1		05/25/21 18:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	90	%	70-130		1		05/25/21 18:30	460-00-4	
Toluene-d8 (S)	106	%	70-130		1		05/25/21 18:30	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	112	%	70-130		1		05/25/21 18:30	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		05/19/21 17:13		H6
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	57600	ug/L	5000	2500	1		05/27/21 15:50	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560019

Sample: Trip Blank - 1 **Lab ID: 10560019004** Collected: 05/13/21 00:00 Received: 05/13/21 13:40 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		05/25/21 18:04	71-43-2	
Ethylbenzene	<0.23	ug/L	0.50	0.23	1		05/25/21 18:04	100-41-4	
Toluene	<0.28	ug/L	0.50	0.28	1		05/25/21 18:04	108-88-3	
Xylene (Total)	<0.11	ug/L	1.0	0.11	1		05/25/21 18:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	88	%	70-130		1		05/25/21 18:04	460-00-4	
Toluene-d8 (S)	102	%	70-130		1		05/25/21 18:04	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	111	%	70-130		1		05/25/21 18:04	2199-69-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560019

QC Batch:	741997	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: 10560019001, 10560019002, 10560019003

METHOD BLANK: 3956848 Matrix: Water

Associated Lab Samples: 10560019001, 10560019002, 10560019003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
E.coli	MPN/100/mL	<1.0	1.0	05/14/21 14:04	
Total Coliform Bacteria	MPN/100/mL	<1.0	1.0	05/14/21 14:04	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560019

QC Batch: 742194 Analysis Method: EPA 353.2
 QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved DU
 Laboratory: Pace Analytical Services - Duluth, MN
 Associated Lab Samples: 10560019001, 10560019002, 10560019003

METHOD BLANK: 3958003 Matrix: Water
 Associated Lab Samples: 10560019001, 10560019002, 10560019003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.0089	0.030	05/14/21 15:21	

LABORATORY CONTROL SAMPLE: 3958004

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.5	0.51	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3958005 3958006

Parameter	Units	10560019001		3958006		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
Nitrogen, NO2 plus NO3	mg/L	<0.0089	0.5	0.5	0.52	0.52	104	103	90-110	0	10		

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QUALITY CONTROL DATA

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560019

QC Batch: 742190

Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2

Analysis Description: 353.2 Nitrite DU

Laboratory: Pace Analytical Services - Duluth, MN

Associated Lab Samples: 10560019001, 10560019002, 10560019003

METHOD BLANK: 3957993

Matrix: Water

Associated Lab Samples: 10560019001, 10560019002, 10560019003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrite as N	mg/L	<0.0062	0.021	05/14/21 14:49	

LABORATORY CONTROL SAMPLE: 3957994

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	0.5	0.52	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3957995 3957996

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		10560019001	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Nitrite as N	mg/L	<0.0062	0.5	0.5	0.52	0.52	104	104	90-110	0	10		

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QUALITY CONTROL DATA

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560019

QC Batch: 730722

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: 10560019002

METHOD BLANK: 3984140

Matrix: Water

Associated Lab Samples: 10560019002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	<0.40	0.50	05/19/21 14:34	
Ethylbenzene	ug/L	<0.23	0.50	05/19/21 14:34	
Toluene	ug/L	<0.28	0.50	05/19/21 14:34	
Xylene (Total)	ug/L	<0.11	1.0	05/19/21 14:34	
1,2-Dichlorobenzene-d4 (S)	%	114	70-130	05/19/21 14:34	
4-Bromofluorobenzene (S)	%	88	70-130	05/19/21 14:34	
Toluene-d8 (S)	%	102	70-130	05/19/21 14:34	

LABORATORY CONTROL SAMPLE & LCSD: 3984141

3984142

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	ug/L	40	43.7	42.8	109	107	70-130	2	20	
Ethylbenzene	ug/L	40	43.8	42.6	110	106	70-130	3	20	
Toluene	ug/L	40	40.7	39.7	102	99	70-130	2	20	
Xylene (Total)	ug/L	120	120	117	100	98	70-130	2	20	
1,2-Dichlorobenzene-d4 (S)	%				99	98	70-130			
4-Bromofluorobenzene (S)	%				102	104	70-130			
Toluene-d8 (S)	%				99	101	70-130			

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QUALITY CONTROL DATA

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560019

QC Batch: 732178	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: 10560019001

METHOD BLANK: 3992105 Matrix: Water

Associated Lab Samples: 10560019001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	<0.40	0.50	05/25/21 04:17	
Ethylbenzene	ug/L	<0.23	0.50	05/25/21 04:17	
Toluene	ug/L	<0.28	0.50	05/25/21 04:17	
Xylene (Total)	ug/L	<0.11	1.0	05/25/21 04:17	
1,2-Dichlorobenzene-d4 (S)	%	108	70-130	05/25/21 04:17	
4-Bromofluorobenzene (S)	%	93	70-130	05/25/21 04:17	
Toluene-d8 (S)	%	97	70-130	05/25/21 04:17	

LABORATORY CONTROL SAMPLE & LCSD: 3992106 3992107

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	ug/L	10	10.4	10.3	104	103	70-130	0	20	
Ethylbenzene	ug/L	10	10.3	10.2	103	102	70-130	2	20	
Toluene	ug/L	10	9.8	9.7	98	97	70-130	1	20	
Xylene (Total)	ug/L	30	30.8	29.6	103	99	70-130	4	20	
1,2-Dichlorobenzene-d4 (S)	%				97	93	70-130			
4-Bromofluorobenzene (S)	%				97	98	70-130			
Toluene-d8 (S)	%				102	103	70-130			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560019

QC Batch: 732542

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: 10560019003, 10560019004

METHOD BLANK: 3995282

Matrix: Water

Associated Lab Samples: 10560019003, 10560019004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	<0.40	0.50	05/25/21 16:24	
Ethylbenzene	ug/L	<0.23	0.50	05/25/21 16:24	
Toluene	ug/L	<0.28	0.50	05/25/21 16:24	
Xylene (Total)	ug/L	<0.11	1.0	05/25/21 16:24	
1,2-Dichlorobenzene-d4 (S)	%	109	70-130	05/25/21 16:24	
4-Bromofluorobenzene (S)	%	93	70-130	05/25/21 16:24	
Toluene-d8 (S)	%	110	70-130	05/25/21 16:24	

LABORATORY CONTROL SAMPLE & LCSD: 3995283

3995284

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	ug/L	10	9.1	8.1	91	81	70-130	11	20	
Ethylbenzene	ug/L	10	8.7	8.8	87	88	70-130	2	20	
Toluene	ug/L	10	8.3	8.5	83	85	70-130	2	20	
Xylene (Total)	ug/L	30	24.5	25.9	82	86	70-130	5	20	
1,2-Dichlorobenzene-d4 (S)	%				97	98	70-130			
4-Bromofluorobenzene (S)	%				91	97	70-130			
Toluene-d8 (S)	%				100	101	70-130			

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QUALITY CONTROL DATA

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560019

QC Batch: 733269	Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0	Analysis Description: 300.0 IC Anions
	Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 10560019001, 10560019002, 10560019003

METHOD BLANK: 3999198 Matrix: Water
Associated Lab Samples: 10560019001, 10560019002, 10560019003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	ug/L	<2500	5000	05/27/21 13:17	

LABORATORY CONTROL SAMPLE: 3999199

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	ug/L	50000	48400	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3999200 3999201

Parameter	Units	10560019001		3999201		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	ug/L	72300	50000	120000	126000	96	107	90-110	4	20	E

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3999202 3999203

Parameter	Units	35632809001		3999203		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	ug/L	4.7J mg/L	50000	52100	52000	95	95	90-110	0	20	

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QUALIFIERS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560019

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.

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.

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10560019

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10560019001	PW-1	SM 9223B (Colilert-18 QT) 2004	741997	SM 9223B (Colilert-18 QT) 2004	742007
10560019002	PW-2	SM 9223B (Colilert-18 QT) 2004	741997	SM 9223B (Colilert-18 QT) 2004	742007
10560019003	PW-3	SM 9223B (Colilert-18 QT) 2004	741997	SM 9223B (Colilert-18 QT) 2004	742007
10560019001	PW-1	EPA 353.2	742194		
10560019002	PW-2	EPA 353.2	742194		
10560019003	PW-3	EPA 353.2	742194		
10560019001	PW-1	EPA 353.2	742190		
10560019002	PW-2	EPA 353.2	742190		
10560019003	PW-3	EPA 353.2	742190		
10560019001	PW-1	EPA 524.2	732178		
10560019002	PW-2	EPA 524.2	730722		
10560019003	PW-3	EPA 524.2	732542		
10560019004	Trip Blank - 1	EPA 524.2	732542		
10560019001	PW-1	SM 4500-H+B	730708		
10560019002	PW-2	SM 4500-H+B	730708		
10560019003	PW-3	SM 4500-H+B	730708		
10560019001	PW-1	EPA 300.0	733269		
10560019002	PW-2	EPA 300.0	733269		
10560019003	PW-3	EPA 300.0	733269		

REPORT OF LABORATORY ANALYSIS

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Barr Engineering Co. Chain of Custody

Sample Origination State

CO MI MN MO ND TX UT WI Other: _____

REPORT TO	INVOICE TO
Company: <i>Barr Engineering</i>	Company: <i>Barr</i>
Address: <i>325 S. Lake Ave</i>	Address:
Address: <i>Duluth, MN 55802</i>	Address:
Name: <i>Lynette Carney</i>	Name:
email: <i>lcarney@barr.com</i>	email:
Copy to: <i>BarrDM@barr.com</i>	P.O.:
Project Name: <i>2021 Gmp SPT PW</i>	Barr Project No: <i>49161528.00 200 205</i>

Perform MS/MSD Y / N	Total Number of Containers	Analysis Requested										% Solids		
		Water					Soil							
		BTEX (524.2)	Chloride (300.0)	pH (sm4500 H+)	Iron (200.7)	Total Coliform + E. Coli by 9223B Coli/rt	Nitrate (353.2)							
		N	N	N	N	N	N							

COC Number: **No 588140**

COC 1 of 1

WO#: 10560019

PM: AA1

Due Date: 05/27/21

CLIENT: BARR

O = Other

G = NaHSO₄

H = Na₂S₂O₃

I = Ascorbic Acid

J = Zn Acetate

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	Analysis Requested										% Solids					
	Start	Stop	Unit (m./ft. or in.)						B	A	A	C	H	D										
1. <i>PW-1</i>				<i>05/13/2021</i>	<i>1045</i>	<i>DW</i>	<i>N</i>	<i>8</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>										
2. <i>PW-2</i>					<i>1120</i>	<i>DW</i>	<i>N</i>	<i>11</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>										<i>PW-2 has 3 vial vial with HCl + 3 vial vial without HCl. Air Bubbles in samples - KMJ3</i>
3. <i>PW-3</i>					<i>1220</i>	<i>DW</i>	<i>N</i>	<i>8</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>										
4. <i>Trip Blank -1</i>							<i>N</i>	<i>2</i>	<i>X</i>															
5.																								
6.																								
7.																								
8.																								
9.																								
10.																								

BARR USE ONLY		Relinquished by: <i>Vaithi Manj</i>	On Ice? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Date: <i>5/13/21</i>	Time: <i>1340</i>	Received by: <i>John Gott</i>	PEACE	Date: <i>5/13/21</i>	Time: <i>13:40</i>
Sampled by: <i>KMJ3</i>		Relinquished by:	On Ice? <input type="checkbox"/> Y <input type="checkbox"/> N	Date:	Time:	Received by:		Date:	Time:
Barr Proj. Manager: <i>LMC</i>	Samples Shipped VIA: <input type="checkbox"/> Ground Courier <input type="checkbox"/> Air Carrier		Air Bill Number:		Requested Due Date:		<input checked="" type="checkbox"/> Standard Turn Around Time		
Barr DQ Manager: <i>JET</i>	<input type="checkbox"/> Sampler <input type="checkbox"/> Other: _____		Temperature on Receipt (°C): <i>23</i>		Custody Seal Intact? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> None		<input type="checkbox"/> Rush _____ Page 18 of 31 (mm/dd/yyyy)		
Lab Name: <i>Pace</i>	Lab WO:								
Lab Location:									

Distribution - White-Original: Accompanies Shipment to Laboratory; Yellow Copy: Include in Field Documents; Scan and email: a copy to BarrDM@barr.com for tracking and filing procedures

Sample Condition Upon Receipt **Client Name:** BARR ENGINEERING **Project #:** **WO# : 10560019**

Courier: Fed Ex UPS USPS Client
 SpeedDee Pace Other: _____

Tracking Number: _____ **PM: AA1** **Due Date: 05/27/21**
CLIENT: BARR

Custody Seal on Cooler/Box Present? Yes No **Seals Intact?** Yes No


Packing Material: Bubble Wrap Bubble Bags None Other: _____

Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Is there evidence of ice formation in samples? Yes No **Biological Tissue Frozen?** Yes No NA

Temp Blank? Yes No **Thermometer Used:** 01339252/1710 122639816 **Correction Factor °C:** -0.3

Temp should be above freezing to 6 °C **Cooler Temp Read °C:** 2.6 **Cooler Temp Corrected °C:** 2.3

Date and Initials of Person Examining Contents: 05/13/2021 

Chain of Custody Present?	Chain of Custody Filled Out?	Chain of Custody Relinquished?	Sampler Name and Signature on COC?	Samples Arrived within Hold Time?	Short Hold Time Analysis (<72 hr)?	Rush Turn Around Time Requested?	Sufficient Volume?	Correct Containers Used?	-Pace Containers Used?	Containers Intact?	Filtered Volume Received for Dissolved Tests?	Sample Labels Match COC?	-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>	All containers needing acid/base preservation properly preserved?	Headspace in Methyl Mercury Container	Headspace in VOA Vials (>6mm)?	Trip Blank Present?	Trip Blank Custody Seals Present?	Pace Trip Blank Lot # (if purchased):	Comments:	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		1.
																				2.	
																				3.	
																				4.	
																				5. If Fecal: <input type="checkbox"/> <8 hours <input type="checkbox"/> >8, <24 hours <input type="checkbox"/> >24 hours	
																				6. <u>E-COLI, NO2, NO3</u>	
																				7.	
																				8.	
																				9.	
																				10.	
																				11. Note if sediment is visible in the dissolved containers:	
																				12.	
																				13. Note samples needing adjustment:	
																				14.	
																				15.	
																				16.	

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

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

FECAL WAIVER ON FILE: Y N TEMPERATURE WAIVER ON FILE: Y N **Date:** 5/13/21

Project Manager Review: _____

WO#: 35633914



35633914

Custody

✓ Samples Pre-Logged into eCOC.

State Of Origin: WI

Cert. Needed: Yes No

Owner Received Date: 5/13/2021 Results Requested By: 5/27/2021



Workorder: 10560019 Workorder Name: 49161528.00 200 205 2021 GMP

Report To		Subcontract To		Requested Analysis																																											
Amanda Albrecht Pace Analytical Minnesota 1700 Elm Street Minneapolis, MN 55414 Phone (612)607-6382		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						300.0 Chloride (Pace-Ormond Beach)	524.2 BTEX (Pace-Ormond Beach)	SM4500 H+ pH (Pace-Ormond Beach)	LAB USE ONLY																																
						VO9H HCL	BP3U Unpreserved	VC9U Unpreserved																																							
1	PW-1	PS	5/13/2021 10:45	10560019001	Drinking Water	3	1					X	X	X																																	
2	PW-2	PS	5/13/2021 11:20	10560019002	Drinking Water	3	1	3				X	X	X																																	
3	PW-3	PS	5/13/2021 12:20	10560019003	Drinking Water	3	1					X	X	X																																	
4	Trip Blank - 1	PS	5/13/2021 00:00	10560019004	Drinking Water	2							X																																		
5																																															

Transfers						Comments														
Released By	Date/Time	Received By	Date/Time													LAB USE ONLY				
<i>[Signature]</i>	5/14/21 14:00	<i>[Signature]</i>	5/15/21 11:00	3 VOA Vials with HCL and 3 VOA vials without HCL due to bubble formation - watch holding time																
				Drinking Water Certification																
Cooler Temperature on Receipt 5.0°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.



Document Name:
Sample Condition Upon Receipt Form
Document No.:
F-FL-C-007 rev. 13

Document Revised:
May 30, 2018
Issuing Authority:
Pace Florida Quality Office

WO#: 35633914

CUR)

Project #
Project Manager:
Client:

PM: CLG **Due Date: 05/27/21**
CLIENT: PACMIN

Date and Initials of person:
Examining contents: _____
Label: _____
Deliver: Hand
pH: _____

Thermometer Used: T-353 Date: 5.15.21 Time: 11:10 Initials: KAT

State of Origin: _____ For WV projects, all containers verified to $\leq 6^\circ\text{C}$

Cooler #1 Temp. °C <u>4.9</u> (Visual) <u>+0.1</u> (Correction Factor) <u>5.0</u> (Actual)	<input type="checkbox"/> Samples on ice, cooling process has begun
Cooler #2 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice, cooling process has begun
Cooler #3 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice, cooling process has begun
Cooler #4 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice, cooling process has begun
Cooler #5 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice, cooling process has begun
Cooler #6 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice, cooling process has begun

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

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

Billing: Recipient Sender Third Party Credit Card Unknown

Tracking # 6779 88993756

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No Ice: Wet Blue Dry None

Packing Material: Bubble Wrap Bubble Bags None Other _____

Samples shorted to lab (If Yes, complete) Shorted Date: _____ Shorted Time: _____ Qty: _____

Comments:

Chain of Custody Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Filled Out	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Relinquished Signature & Sampler Name COC	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples Arrived within Hold Time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Rush TAT requested on COC	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient Volume	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct Containers Used	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sample Labels match COC (sample IDs & date/time of collection)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing acid/base preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Preservation Information: Preservative: _____ Lot #/Trace #: _____ Date: _____ Time: _____ Initials: _____
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA Vials? (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>2-8 524</u>

Client Notification/ Resolution:
Person Contacted: _____ Date/Time: 4/17 5/17

Comments/ Resolution (use back for additional comments): _____

Project Manager Review: _____ Date: _____

LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

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STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Missouri	880
Alaska	IN00035	Montana	CERT0026
Arizona	AZ0432	Nebraska	NE-OS-05-04
Arkansas	IN00035	Nevada	IN00035
California	2920	New Hampshire*	2124
Colorado	IN00035	New Jersey*	IN598
Colorado Radiochemistry	IN00035	New Mexico	IN00035
Connecticut	PH-0132	New York*	11398
Delaware	IN035	North Carolina	18700
Florida(Primary AB)*	E87775	North Dakota	R-035
Georgia	929	Ohio	87775
Hawaii	IN035	Oklahoma	D9508
Idaho	IN00035	Oregon*	4156
Illinois*	200001	Pennsylvania*	68-00466
Illinois Microbiology	17767	Puerto Rico	IN00035
Illinois Radiochemistry	IN00035	Rhode Island	LAO00343
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA014	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	460275
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
EPA	IN00035		

*NELAP/TNI Recognized Accreditation Bodies

110 South Hill Street
 South Bend, IN 46617
 Tel: (574) 233-4777
 Fax: (574) 233-8207
 1 800 332 4345

Laboratory Report

Client: Pace Analytical
 Attn: Amanda Albrecht
 1700 Elm Street SE
 Suite 200
 Minneapolis, MN 55414

Report: 518266
 Priority: Rush Written
 Status: Final
 PWS ID: Not Supplied

Sample Information					
EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
4903818	10560019001/PW-1	200.7	05/13/21 10:45	Client	05/17/21 08:15
4903819	10560019002/PW-2	200.7	05/13/21 11:20	Client	05/17/21 08:15
4903820	10560019003/PW-3	200.7	05/13/21 12:20	Client	05/17/21 08:15

Report Summary

Note: Sample containers were provided by the client.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Jessie Brasch at (574) 233-4777.

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Analytical Services Manager

Authorized Signature

Title

05/21/2021

Date

Client Name: Pace Analytical
 Report #: 518266

Sampling Point: 10560019001/PW-1

PWS ID: Not Supplied

Metals									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
7439-89-6	Iron	200.7	0.3 ^	0.0	1.7	mg/L	05/18/21 15:00	05/19/21 15:50	4903818

Sampling Point: 10560019002/PW-2

PWS ID: Not Supplied

Metals									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
7439-89-6	Iron	200.7	0.3 ^	0.0	0.1	mg/L	05/18/21 15:00	05/19/21 16:03	4903819

Sampling Point: 10560019003/PW-3

PWS ID: Not Supplied

Metals									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
7439-89-6	Iron	200.7	0.3 ^	0.0	0.4	mg/L	---	05/19/21 14:45	4903820

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis. CCL, CCM, and CCH are the CCC standards at low, mid, and high concentration levels, respectively.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control. FBL, FBM, and FBH are the LFB samples at low, mid, and high concentration levels, respectively.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

If applicable, the calculation of the matrix spike (MS) or matrix spike duplicate (MSD) percent recovery is as follows: $(MS \text{ or } MSD \text{ value} - \text{Sample value}) * 100 / \text{spike target} / \text{dilution factor} = \text{Recovery } \%$

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix. SDL, SDM, and SDH / LFSMDL, LFSMDM, and LFSMDH are the MSD or LFSMD at low, mid, and high concentration levels, respectively.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results. MSL, MSM, and MSH / LFSML, LFSMM, and LFSMH are the MS or LFSM at low, mid, and high concentration levels, respectively.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

Eurofins Eaton Analytical Run Log

Run ID: **289151** Method: **200.7**

<u>Type</u>	<u>Sample Id</u>	<u>Sample Site</u>	<u>Matrix</u>	<u>Instrument ID</u>	<u>Analysis Date</u>	<u>Calibration File</u>
ICB	4900878		RW	FC	05/19/2021 14:07	
UQCSM	4900885		RW	FC	05/19/2021 14:22	
CCB	4900887		RW	FC	05/19/2021 14:26	
LRB	4900889		RW	FC	05/19/2021 14:30	
LFB	4900891		RW	FC	05/19/2021 14:37	
FS	4903820	10560019003/PW-3	DW	FC	05/19/2021 14:45	
CCC	4900903		RW	FC	05/19/2021 15:05	
CCB	4900904		RW	FC	05/19/2021 15:07	
CCC	4900894		RW	FC	05/19/2021 15:37	
CCB	4900895		RW	FC	05/19/2021 15:39	
LDB	4905347		RW	FC	05/19/2021 15:41	
DFB	4905350		RW	FC	05/19/2021 15:48	
FS	4903818	10560019001/PW-1	DW	FC	05/19/2021 15:50	
MS	4906851	10560019001/PW-1	DW	FC	05/19/2021 15:52	
MSD	4906852	10560019001/PW-1	DW	FC	05/19/2021 15:54	
FS	4903819	10560019002/PW-2	DW	FC	05/19/2021 16:03	
CCC	4900907		RW	FC	05/19/2021 16:05	
CCB	4900908		RW	FC	05/19/2021 16:07	
CCB	4904495		RW	FC	05/19/2021 16:20	

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
ICB	Iron	200.7	0.0	---	<	0.0		mg/L	---	---	---	---	1.0	---	05/19/2021 14:07	4900878
ICB	IS-Yttrium	200.7	N/A	---		1.0000	1.0	N/A	100	75 - 125	---	---	1.0	---	05/19/2021 14:07	4900878
UQCSCM	Iron	200.7	0.0	---		5.1500	5.0	mg/L	103	95 - 105	---	---	1.0	---	05/19/2021 14:22	4900885
UQCSCM	IS-Yttrium	200.7	N/A	---		1.0000	1.0	N/A	100	75 - 125	---	---	1.0	---	05/19/2021 14:22	4900885
CCB	Iron	200.7	0.0	---	<	0.0		mg/L	---	---	---	---	1.0	---	05/19/2021 14:26	4900887
CCB	IS-Yttrium	200.7	N/A	---		1.0100	1.0	N/A	101	75 - 125	---	---	1.0	---	05/19/2021 14:26	4900887
LRB	Iron	200.7	0.0	---	<	0.0		mg/L	---	---	---	---	1.0	---	05/19/2021 14:30	4900889
LRB	IS-Yttrium	200.7	N/A	---		1.0100	1.0	N/A	101	75 - 125	---	---	1.0	---	05/19/2021 14:30	4900889
LFB	Iron	200.7	0.0	---		5.0481	5.0	mg/L	101	85 - 115	---	---	1.0	---	05/19/2021 14:37	4900891
LFB	IS-Yttrium	200.7	N/A	---		1.0100	1.0	N/A	101	75 - 125	---	---	1.0	---	05/19/2021 14:37	4900891
FS	Iron	200.7	0.0	10560019003/PW-3		0.4		mg/L	---	---	---	---	1.0	---	05/19/2021 14:45	4903820
FS	IS-Yttrium	200.7	N/A	10560019003/PW-3		1.0100	1.0	N/A	101	75 - 125	---	---	1.0	---	05/19/2021 14:45	4903820
CCC	Iron	200.7	0.0	---		4.9310	5.0	mg/L	99	90 - 110	---	---	1.0	---	05/19/2021 15:05	4900903
CCC	IS-Yttrium	200.7	N/A	---		1.0100	1.0	N/A	101	75 - 125	---	---	1.0	---	05/19/2021 15:05	4900903
CCB	Iron	200.7	0.0	---	<	0.0		mg/L	---	---	---	---	1.0	---	05/19/2021 15:07	4900904
CCB	IS-Yttrium	200.7	N/A	---		1.0200	1.0	N/A	102	75 - 125	---	---	1.0	---	05/19/2021 15:07	4900904
CCC	Iron	200.7	0.0	---		4.9787	5.0	mg/L	100	90 - 110	---	---	1.0	---	05/19/2021 15:37	4900894
CCC	IS-Yttrium	200.7	N/A	---		1.0300	1.0	N/A	103	75 - 125	---	---	1.0	---	05/19/2021 15:37	4900894
CCB	Iron	200.7	0.0	---	<	0.0		mg/L	---	---	---	---	1.0	---	05/19/2021 15:39	4900895
CCB	IS-Yttrium	200.7	N/A	---		1.0300	1.0	N/A	103	75 - 125	---	---	1.0	---	05/19/2021 15:39	4900895
LDB	Iron	200.7	0.0	---	<	0.0		mg/L	---	---	---	---	1.0	05/18/2021 15:00	05/19/2021 15:41	4905347
LDB	IS-Yttrium	200.7	N/A	---		1.0300	1.0	N/A	103	75 - 125	---	---	1.0	05/18/2021 15:00	05/19/2021 15:41	4905347
DFB	Iron	200.7	0.0	---		4.9850	5.0	mg/L	100	85 - 115	---	---	1.0	05/18/2021 15:00	05/19/2021 15:48	4905350
DFB	IS-Yttrium	200.7	N/A	---		1.0300	1.0	N/A	103	75 - 125	---	---	1.0	05/18/2021 15:00	05/19/2021 15:48	4905350
FS	Iron	200.7	0.0	10560019001/PW-1		1.7		mg/L	---	---	---	---	1.0	05/18/2021 15:00	05/19/2021 15:50	4903818
FS	IS-Yttrium	200.7	N/A	10560019001/PW-1		1.0200	1.0	N/A	102	75 - 125	---	---	1.0	05/18/2021 15:00	05/19/2021 15:50	4903818
MS	Iron	200.7	0.0	10560019001/PW-1		6.6496	6.748799	mg/L	98	70 - 130	---	---	1.0	---	05/19/2021 15:52	4906851
MS	IS-Yttrium	200.7	N/A	10560019001/PW-1		1.0000	1.0	N/A	100	75 - 125	---	---	1.0	---	05/19/2021 15:52	4906851
MSD	Iron	200.7	0.0	10560019001/PW-1		6.4321	6.748799	mg/L	94	70 - 130	3.3	20	1.0	---	05/19/2021 15:54	4906852
MSD	IS-Yttrium	200.7	N/A	10560019001/PW-1		1.0100	1.0	N/A	101	75 - 125	---	---	1.0	---	05/19/2021 15:54	4906852
FS	Iron	200.7	0.0	10560019002/PW-2		0.1		mg/L	---	---	---	---	1.0	05/18/2021 15:00	05/19/2021 16:03	4903819
FS	IS-Yttrium	200.7	N/A	10560019002/PW-2		1.0200	1.0	N/A	102	75 - 125	---	---	1.0	05/18/2021 15:00	05/19/2021 16:03	4903819
CCC	Iron	200.7	0.0	---		4.9251	5.0	mg/L	99	90 - 110	---	---	1.0	---	05/19/2021 16:05	4900907
CCC	IS-Yttrium	200.7	N/A	---		1.0200	1.0	N/A	102	75 - 125	---	---	1.0	---	05/19/2021 16:05	4900907
CCB	Iron	200.7	0.0	---	<	0.0		mg/L	---	---	---	---	1.0	---	05/19/2021 16:07	4900908
CCB	IS-Yttrium	200.7	N/A	---		1.0200	1.0	N/A	102	75 - 125	---	---	1.0	---	05/19/2021 16:07	4900908
CCB	Iron	200.7	0.0	---	<	0.0		mg/L	---	---	---	---	1.0	05/19/2021 13:30	05/19/2021 16:20	4904495
CCB	IS-Yttrium	200.7	N/A	---		1.0300	1.0	N/A	103	75 - 125	---	---	1.0	05/19/2021 13:30	05/19/2021 16:20	4904495

Sample Type Key

<u>Type (Abbr.)</u>	<u>Sample Type</u>	<u>Type (Abbr.)</u>	<u>Sample Type</u>
CCB	Continuing Calibration Blank		
CCC	Continuing Calibration Check		
DFB	Digested Fortified Blank		
FS	Field Sample		
ICB	Initial Calibration Blank		
LDB	Laboratory Digestion Blank		
LFB	Laboratory Fortified Blank		
LRB	Laboratory Reagent Blank		
MS	Matrix Spike		
MSD	Matrix Spike Duplicate		
UQCSM	Unextracted QCS Mid		

END OF REPORT

June 10, 2021

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

RE: Project: 49161528.00 200 205 2021 GMP
Pace Project No.: 10564297

Dear Jim Taraldsen:

Enclosed are the analytical results for sample(s) received by the laboratory on June 09, 2021. 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.

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

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

Sincerely,



Amanda Albrecht
amanda.albrecht@pacelabs.com
(612)607-6382
Project Manager

Enclosures

cc: BarrDM@barr.com, Barr Engineering
Data Management, Barr Engineering
Accounts Payable, Barr Engineering



REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10564297

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: 49161528.00 200 205 2021 GMP

Pace Project No.: 10564297

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10564297001	PW-2	Water	06/09/21 09:08	06/09/21 09:46

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10564297

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10564297001	PW-2	SM 9223B (Colilert-18 QT) 2004	DW3	2	PASI-DU
		SM 9223 B (Colilert-18)	AP2	2	PASI-DU

PASI-DU = Pace Analytical Services - Duluth, MN

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10564297

Sample: PW-2 **Lab ID: 10564297001** Collected: 06/09/21 09:08 Received: 06/09/21 09:46 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
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	06/09/21 15:40	06/10/21 10:00		
Total Coliform Bacteria	3.0	MPN/100/mL	1.0	1.0	1	06/09/21 15:40	06/10/21 10:00		
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	06/09/21 14:15	06/10/21 08:34		
E.coli	Absent		1.0	1.0	1	06/09/21 14:15	06/10/21 08:34		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10564297

QC Batch: 747926

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: 10564297001

METHOD BLANK: 3989417

Matrix: Water

Associated Lab Samples: 10564297001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
E.coli	MPN/100/mL	<1.0	1.0	06/10/21 10:00	
Total Coliform Bacteria	MPN/100/mL	<1.0	1.0	06/10/21 10:00	

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10564297

QC Batch: 747897

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: 10564297001

METHOD BLANK: 3989033

Matrix: Drinking Water

Associated Lab Samples: 10564297001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
E.coli		Absent	1.0	06/10/21 08:34	
Total Coliforms		Absent	1.0	06/10/21 08:34	

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.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10564297

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.

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161528.00 200 205 2021 GMP

Pace Project No.: 10564297

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10564297001	PW-2	SM 9223B (Colilert-18 QT) 2004	747926	SM 9223B (Colilert-18 QT) 2004	748149
10564297001	PW-2	SM 9223 B (Colilert-18)	747897	SM 9223 B (Colilert-18)	748194

REPORT OF LABORATORY ANALYSIS

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Barr Engineering Co. Chain of Custody

Sample Origination State

CO MI MN MO ND TX UT WI Other: _____

REPORT TO	INVOICE TO
Company: <i>Barr Engineering Co.</i>	Company: <i>Barr</i>
Address: <i>325 S. Lake Ave.</i>	Address:
Address: <i>Duluth, MN 55802</i>	Address:
Name: <i>Lynette Carney</i>	Name:
email: <i>lcarney@barr.com</i>	email:
Copy to: <i>BarrDM@barr.com</i>	P.O. <i>-</i>
Project Name: <i>W21 GMP SPT PW</i>	Barr Project No: <i>49161528.00 200 205</i>

Analysis Requested		COC Number: No 589419
Water	Soil	COC <u>1</u> of <u>1</u>

WO#: 10564297

PM: AA1 Due Date: 06/23/21
CLIENT: BARR

O = Other
G = NaHSO₄
H = Na₂S₂O₃
I = Ascorbic Acid
J = Zn Acetate
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	Preservative Code	Field Filtered Y/N
	Start	Stop	Unit (m./ft. or in.)										
1. <i>PW-2</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>06/09/2021</i>	<i>0908</i>	<i>DW</i>	<i>N</i>	<i>2</i>	<i>X</i>	<i>X</i>			
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

Total Number Of Containers
2 H
2 H
See side comment
See side comment

Analysis Requested:
Total Coliform and E. Coli
by SM 9223B (Coli-18 QT) -
2004
and
total Coliform and E. Coli by
SM 9223 B (Coli-18) - P/A

BARR USE ONLY		Relinquished by: <i>Kurt Metz</i>	On Ice? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Date: <i>6/9/21</i>	Time: <i>0946</i>	Received by: <i>John Gott</i>	Date: <i>6/9/21</i>	Time: <i>09:46</i>
Sampled by: <i>KMS3</i>	Barr Proj. Manager: <i>LML</i>	Relinquished by:	On Ice? <input type="checkbox"/> Y <input type="checkbox"/> N	Date:	Time:	Received by:	Date:	Time:
Barr DQ Manager: <i>JET</i>	Lab Name: <i>Pace</i>	Samples Shipped VIA: <input type="checkbox"/> Ground Courier <input type="checkbox"/> Air Carrier	Air Bill Number:		Requested Due Date: <input checked="" type="checkbox"/> Standard Turn Around Time <input type="checkbox"/> Rush _____ Page 10 of 12 (mm/dd/yyyy)			
Lab Location: <i>Duluth, MN</i>	Lab WO:	Temperature on Receipt (°C): <i>2.6</i>		Custody Seal Intact? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> None				

H:\R\G\STD\FORMS\Chain of Custody Form 2015 RLG Rev. 01/30/2020

Sample Condition Upon Receipt **Client Name:** BARR ENGINEERING CO. **Project #:** **WO# : 10564297**

Courier: Fed Ex UPS USPS Client **PM: AA1** **Due Date: 06/23/21**
 SpeedDee Pace Other: _____ **CLIENT: BARR**

Tracking Number: _____

Custody Seal on Cooler/Box Present? Yes No **Seals Intact?** Yes No


Packing Material: Bubble Wrap Bubble Bags None Other: _____

Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Is there evidence of ice formation in samples? Yes No **Biological Tissue Frozen?** Yes No NA

Temp Blank? Yes No **Thermometer Used:** 01339252/1710 122639816 **Correction Factor °C:** -0.3

Temp should be above freezing to 6 °C **Cooler Temp Read °C:** 2.9 **Cooler Temp Corrected °C:** 2.6

Date and Initials of Person Examining Contents: 06/09/2021 

			Comments:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and Signature on COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	5. If Fecal: <input type="checkbox"/> <8 hours <input type="checkbox"/> >8, <24 hours <input type="checkbox"/> >24 hours
Short Hold Time Analysis (<72 hr)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>T-COLI, E-COLI</u>
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved containers:
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes Date/Time/ID/Analysis Matrix: <u>DW</u>			
All containers needing acid/base preservation properly preserved?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
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: _____

FECAL WAIVER ON FILE: Y N TEMPERATURE WAIVER ON FILE: Y N **Date:** 6/9/21

Project Manager Review: _____

Pace Container Order #824651

Addresses		
Order By :	Ship To :	Return To:
Company <u>Barr Engineering</u>	Company <u>HOLD FOR CLIENT</u>	Company <u>Pace Analytical Minnesota</u>
Contact <u>Taraldsen, Jim</u>	Contact <u>Taraldsen, James</u>	Contact <u>Albrecht, Amanda</u>
Email <u>mtreanor@barr.com</u>	Email <u>jtardaldsen@barr.com</u>	Email <u>amanda.albrecht@pacelabs.com</u>
Address <u>325 S Lake Ave</u>	Address <u>4730 Oneota Street</u>	Address <u>1700 Elm Street</u>
Address 2 _____	Address 2 _____	Address 2 <u>Suite 200</u>
City <u>Duluth</u>	City <u>Duluth</u>	City <u>Minneapolis</u>
State <u>MN</u> Zip <u>55802</u>	State <u>MN</u> Zip <u>55807</u>	State <u>MN</u> Zip <u>55414</u>
Phone <u>NONE</u>	Phone <u>(218) 529-7138</u>	Phone <u>(612)607-6382</u>

Info			
Project Name <u>49161528.00 200 205 Superior Terminal GMP</u>	Due Date <u>06/04/2021</u>	Profile <u>38604, line 6</u>	Quote <u>00086549, 00086506</u>
Project Manager <u>Albrecht, Amanda</u>	Return Date _____	Carrier <u>Pace Courier</u>	Location <u>MN</u>

Trip Blanks

Include Trip Blanks

Bottle Labels

Blank

Pre-Printed No Sample IDs

Pre-Printed With Sample IDs

Bottles

Boxed Cases

Individually Wrapped

Grouped By Sample ID/Matrix

Return Shipping Labels

No Shipper

With Shipper

Misc

Sampling Instructions

Custody Seal

Temp. Blanks

Coolers _____

Syringes _____

Extra Bubble Wrap

Short Hold/Rush Stickers

DI Water

USDA Regulated Soils

COC Options

Number of Blanks

Pre-Printed

# of Samples	Matrix	Test	Container	Total	# of	Lot #	Notes
1	WT	9223B ColiIert (Presence/Absence)	120mL Sterile Coliform Sodium Thiosulfate	1	0	1-036-003	Short Hold - Pace Duluth
1	WT	9223B QT (MPN Total Coliform & E. coli)	120mL Sterile Coliform Sodium Thiosulfate	1	0	1-036-003	Short Hold - Pace Duluth

WO# : 10564297

PM: AA1 Due Date: 06/23/21
CLIENT: BARR

Hazard Shipping Placard In Place : YES

- *Sample receiving hours are Mon-Fri 7:30am-7:00pm and Sat 9:00am-1:00pm unless special arrangements are made with your project manager.
- *Pace Analytical reserves the right to return hazardous, toxic, or radioactive samples to you.
- *Pace Analytical reserves the right to charge for unused bottles, as well as cost associated with sample storage/disposal.
- *Payment term are net 30 days.
- *Please include the proposal number on the chain of custody to insure proper billing.

LAB USE:

Ship Date :	<u>06/04/2021</u>
Prepared By:	<u>SV</u>
Verified By:	<u>SV</u>

Sample

CLIENT USE (Optional):

Date Rec'd:	<input type="text"/>
Received By:	<input type="text"/>
Verified By:	<input type="text"/>

Attachment B

Private Well PW-2 Photos

Private Well PW-2 photos taken on June 9, 2021
Enbridge Superior Terminal, Superior, WI



Photo 1: Private Well PW-2, photo facing west.



Photo 2: Gap between PW-2 well casing and cover.