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BARR

March 27, 2023

John Sager
Wisconsin Department of Natural Resources
1701 North 4th Street
Superior, WI 54880

Re: 2022 Remediation Progress Report for Murphy Oil Tank 68 Release Site
Superior Refining Company LLC Refinery, Superior, WI
WDNR BRRTS# 02-16-526812
Facility ID: 816009590

Dear John:

On behalf of Superior Refining Company LLC (SRC), Barr Engineering Co. (Barr) is submitting this remediation progress report for the Murphy Oil Tank 68 Basin release site (Tank 68) at the SRC refinery in Superior, Wisconsin. Periodic site progress reporting to the Wisconsin Department of Natural Resources (WDNR) is required pursuant to ss. NR 700.11(1) and 724.13(3), Wisconsin Administrative Code. This report summarizes monitoring activities conducted at the site in 2022.

1 Facility and Site Background Information

Figure 1 shows the location of Tank 68 within the refinery, the approximate property boundary of the refinery, and the area surrounding the refinery. Figure 2 presents the site layout of Tank 68 which is located in the SW ¼ of the SW ¼ of Section 25, Township 49 North, Range 14 West, Superior Township of Douglas County, Wisconsin.

The closest surface water to Tank 68 is Newton Creek, located approximately 2,000 feet east of the Tank 68 basin (Figure 1). The Tank 68 basin is located in the central area of the refinery which is relatively flat. The basin's ground surface is unpaved and is underlain by native clay. The average depth to groundwater in the Tank 68 monitoring wells is 3 to 4 feet below ground surface (bgs) depending on time of year. The regional groundwater flow direction below the refinery and across the Tank 68 site is toward the east (Figure 2).

As presented in the April 2014 Gannett Fleming, Inc. (GF) *Final Memorandum of Agreement, Site Investigation and Remedial Action* Plan (GF, 2014), the hydraulic conductivity of the native clay underlying the refinery is on the order of 1×10^{-7} centimeters per second (cm/sec). Assuming a horizontal hydraulic gradient of 0.003 feet per foot eastward and an effective porosity of 0.06, the estimated horizontal groundwater flow velocity at the refinery is approximately 0.01 foot per year (ft/yr) (GF, 2014).

In October 2011, Calumet Superior LLC (Calumet) acquired the refinery from Murphy Oil. In November 2017, Husky Superior Refining Holding Corp. (Husky Superior) purchased Calumet and changed its legal

name to Superior Refining Company LLC. In January 2021, Husky and Cenovus Energy Inc. (Cenovus) merged to become Cenovus; however, the legal name of the refinery will remain unchanged.

2 Tank 68 Basin Release Site Investigation and Remediation Summary

The Tank 68 release is associated with historical contamination discovered during an investigation at the adjacent Tank 65-66 basin in 2004. The Tank 68 basin monitoring network currently includes monitoring wells MW-5/T66, MW-1/T68, MW-2/T68, and MW-4/T68, MW-5/T68, and MW-6/T68 and monitoring points MP-1/T68, MW-2/T68, MP-3/T68, as shown on Figure 2. In 2001, MW-5/T66 was transferred from the Tanks 65/66 release site to the Tank 68 basin site because of the occurrence of free product in MW-5/T66. The free product in MW-5/T66 was first observed in January 2000 during a site investigation associated with the Tanks 65/66 basin east of Tank 68. This location has not been associated with any known release. In 2008, upgradient monitoring well MW-3/T68 was sealed and abandoned. During the time period 2010 to 2012, test pit sump TP-1/T68 was lost (buried or removed).

Multiple phases of investigation have been completed at the site including soil borings and test pits and the installation of monitoring wells and points. Currently, long-term groundwater monitoring is being conducted at the site as well as product gauging and passive recovery. This report presents monitoring and product gauging data for 2022.

Research conducted by the American Petroleum Institute (API) and published in a 2004 document titled, "*API Interactive LNAPL Guide, Version 2.0*", found that periodic manual removal of product is most appropriate for low permeability aquifers (hydraulic conductivity < 1×10^{-5} cm/sec). The hydraulic conductivity of the native clay underlying the refinery is on the order of 1×10^{-7} cm/sec, as described in the previous section of this letter report (GF, 2014).

Based on the recommendations included in the API Interactive LNAPL Guide document, product has been manually bailed when observed in a monitoring well. The API Interactive LNAPL Guide also states that product preferentially accumulates in wells when the potentiometric surface is low. This occurs because, as the potentiometric surface drops, product that remains above the water level will drain downward into the well. As the potentiometric surface rises, the product becomes submerged and trapped in the soil pores and subsequently will not accumulate in the well. To take advantage of this apparent pattern, the wells located in the basin were purged dry following each depth to product or groundwater measurement event to promote the accumulation of product.

Since February 2000, wells in the network have been routinely monitored for the presence of free product. Recovered product is sent through the refinery's No. 1 API oil/water separator. Separated oil is stored for use at the refinery. Separated and purged water is treated at the on-site wastewater treatment plant (WWTP).

As described in previous reports, measurable product has been encountered in the monitoring wells associated with the Tank 68 basin on multiple occasions. GF's April 2014 report includes a 15-page table summarizing the historical volume of product removed from each well (GF, 2014). Since recovery began,

approximately 102 gallons of product have been recovered from the Tank 68 basin with almost all (i.e., over 97%) from MW-2/T68, MW-5/T66, and MW-6/T68 (GF, 2019). Since 2014, product has been limited to MW-5/T-66 and MW-5/T68. In each instance where product was measured in these wells, it was recovered through bailing. Product has not been encountered in MW-5/T66 since April 2019 and in MW-5/T68 since November 2018 as seen on Table 1 in the 2021 remediation progress report submitted to the WDNR (Barr, 2022).

3 Remedial and Monitoring Activities in 2022

Since the most recent remediation progress report was submitted to the WDNR on January 6, 2022 (Barr, 2022), work at Tank 68 has included the gauging of water and product levels in associated site monitoring wells and points, and the collection of groundwater samples from select locations.

Year-round access to monitoring wells and points at the refinery is not practical because of relatively shallow groundwater, cold weather, and snow. When conditions allow access, water and product levels are monitored monthly. If product is encountered, the product is removed and sent through the refinery's No. 1 API oil/water separator. Separated oil is stored for used at the refinery and the water is treated at the on-site WWTP.

Monitoring wells and points are gauged, purged and sampled in spring and fall (typically April/May and September/October). Monitoring wells and points are routinely checked for the presence of product and, if encountered, the product is removed from the well by bailing. Monitoring well gauging activities conducted in 2022 are summarized in Table 1.

3.1 Product Recovery

During this reporting period, measurable product was not encountered in the monitoring wells or monitoring points. As established in the 2019 report (GF, 2019), if free product is not observed during the April/May gauging event, the wells and points are then checked quarterly (rather than monthly) through the October sampling event.

SRC will continue to check for free product, but for all practical purposes, free product likely has been recovered to the extent practical from the Tank 68 basin.

3.2 Groundwater Sampling and Results

Groundwater samples were collected by Barr and Insight Environmental (Insight) field staff at the site during May and October 2022. Each well was purged dry twice and allowed to recover for at least 14 days between purge events and prior to the collection of the samples. Routine sampling of monitoring wells MW-1/T68, MW-2/T68, MW-4/T68, MW-5/T66, MW-5/T68, and MW-6/T68 was conducted on May 25, 2022, and October 11, 2022. Field staff used a new one-time-use polyethylene disposable bailer with new nylon rope to collect each groundwater sample. The May 2022 and October 2022 groundwater samples were sent to Pace in Minneapolis, Minnesota (Wisconsin laboratory certification #999407970). Groundwater samples were analyzed for volatile organic compounds (VOCs) using EPA Method 8260.

Attachment A provides copies of the laboratory reports and chain of custody records for the groundwater samples collected in 2022.

Table 2 presents a summary of the groundwater analytical results that have historically exceeded NR 140 Preventative Action Limits (PAL) and / or Enforcement Standards (ES). A summary of historical analytical results for detected all compounds compared to NR 140 PAL and ES is provided in Attachment B. A discussion of the 2022 data is provided below.

- There were no compounds detected above the laboratory method detection limits (MDLs) in samples collected from upgradient well MW-1/T68 during the May 2022 event. In the October 2022 event concentrations of bromodichloromethane (1.9 ug/l) and chloroform (8.4 ug/l) were detected above NR 140 ES of 0.6 ug/l and 6 ug/l, respectively.

- Samples collected from the other five Tank 68 monitoring wells in May and October 2022 contained one or more VOC at concentrations equal to or greater than NR 140 ES. However, because of the recovery of product over the years, overall VOC concentrations in the wells have been stable or decreasing, as demonstrated by the benzene concentrations shown in Figure 3.

- Figure 3 presents trend analysis plots for benzene concentrations in groundwater samples from MW-2/T68, MW-4/T68, MW-5/T66, MW-5/T68 and MW-6/T68. If benzene was not detected in a sample collected from a well, then the reported MDL was plotted for that date. Note that, with one exception, the plotted data for each well only includes the time since measurable free product was most recently encountered during a sampling event; at MW-6/T68 "discontinuous globules" of product were observed in 2016 and data is plotted starting with October 2011. Best-fit exponential trend lines were generated using a scatter plot chart. As shown on Figure 3, dissolved-phase benzene concentrations have followed a general downward trend in MW-2/T68, MW-4/T68, MW-5/T66, and MW-6/T68. Based on the relatively low groundwater flow velocity of approximately 0.01 foot/year (GF, 2014) and decreasing benzene concentrations, results indicate the overall benzene concentration in groundwater in the referenced wells remains stable or has been decreasing for at least the last seven years.

- The VOC compound bromomethane had reported detections for the first time in the October 2022 samples: MW-2/T68 (4.5 ug/l) and MW-5/T66 (10.2 ug/l). The MW-5/T66 concentration of bromomethane exceeded the NR 140 ES of 10 ug/l; note that both MW-2/T68 and MW-5/T66 concentrations were flagged by the laboratory as an estimated quantity and may be biased high.

- The VOC compound methylene chloride has reported detection for the first time in the May 2022 samples: MW-2/T68 (3.7 ug/l), MW-5/T68 (89.7), and MW-6/T68 (95.5 ug/l). The MW-5/T68 and MW-6/T68 concentrations of methylene chloride exceeded the NR 140 ES of 5 ug/l; note that both locations were flagged by the laboratory as an estimated detected value and either certain QC criteria were not met, or the concentration is between the laboratory's detection and quantitation limits.

Attachment A provides copies of the laboratory reports and chain of custody records for the groundwater samples collected in 2022.

Historically, a groundwater contour map for the Tank 68 release site has not been prepared because groundwater levels in the wells either are influenced by local surface/melt water in the spring or typically do not have sufficient time to reach static levels after they are purged dry later in the year. Consequently, a groundwater contour map representing static conditions for the Tank 68 site has not been created. However, the regional groundwater flow direction in the vicinity of the Tank 68 site is to the east (GF, 2014) (Figure 2).

3.3 Monitoring Well Maintenance Activities

On September 1, 2022, the well cap at monitoring well MW-5/T66 was replaced and on September 20, 2022, the well cap at monitoring point MW-2/T68 was replaced.

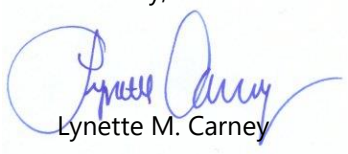
4 Future Work

SRC's work plan for 2023 is as follows:

- Continue to check for, and if present, manually bail product, monthly (as conditions allow) from monitoring wells MW-5/T66 and MW-5/T68. If, however, product is not observed during the spring gauging event as was the case in 2019 through 2022, these wells will only be checked quarterly. Any purged product/water will continue to be separated and stored or sent through the refinery's No. 1 API oil/water separator and on-site WWTP.
- If product is observed at the remaining four monitoring wells and three monitoring points during the spring gauging event, monthly product checks will resume.
- Collect biannual (spring and fall) groundwater samples from monitoring wells without product and have the samples analyzed for VOCs by a Wisconsin-certified laboratory using EPA Method 8260. Each monitoring well will be purged dry twice and allowed to recover for approximately 2 weeks prior to the collection of samples.

If you have any questions or need additional information, please reach out to Joseph Pearson at SRC (joseph.pearson@cenovus.com) or me (lcarney@barr.com).

Sincerely,



Lynette M. Carney
Project Manager

cc: Joseph Pearson (SRC)

Tables

Figures

Attachments

References

Barr Engineering Co., 2022. 2021 Remediation Progress Report for Murphy Oil Tank 68 Release Site, Superior Refining Company LLC Refinery, Superior, WI, WDNR BRRTS# 02-16-526812, Facility ID: 816009590. February 26, 2021.

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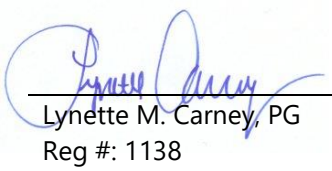
GF, 2019. 2019 Remediation Progress Report for Tank 68 Release Site, Superior Refining Company LLC Refinery, Superior, WI, WDNR BRRTS# 02-16-526812 and Facility ID: 816009590. December 4, 2019.

Wisconsin Department of Natural Resources (WDNR), 2020. Reminder to Include Evaluation of Emerging Contaminants in Site Investigation, Murphy Oil – Tank Basin #68, 2407 Stinson Avenue, BRRTS# 02-16-526812. Letter to Husky Energy dated August 17, 2020.

WDNR, 2021. Activity Details summary table page for Activity Number 02-16-526812 Murphy Oil – Tank Basin #68. Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web. https://dnr.wisconsin.gov/topic/Brownfields/botw.html. Accessed January 2021.

CERTIFICATION

I, Lynette M. Carney, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03(1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code; and that, to the best of my knowledge, all of the information contained in this document is correct, and the document was prepared in compliance with all applicable requirements in Chapters NR 700 to 726, Wis. Adm. Code.



Lynette M. Carney, PG
Reg #: 1138

March 27, 2023
Date

Tables

Table 1
2022 Fluid Level Monitoring Data
Tank 68 Release Site
Superior Refining Company LLC
Superior, Wisconsin

Date	MP-1/T68		MP-2/T68		MP-3/T68		MW-1/T68		MW-2/T68		MW-4/T68		MW-5/T66		MW-5/T68		MW-6/T68		Comments/ Footnotes
	DTP	DTW	DTP	DTW	DTP	DTW	DTP	DTW	DTP	DTW	DTP	DTW	DTP	DTW	DTP	DTW	DTP	DTW	
		Depth to Fluid from Top of Casing (feet)																	
04/27/22	--(4)	--(4)	--(4)	--(4)	--(4)	--(4)	--	4.39	--	6.45	--	3.98	--	3.35	--	5.83	--	6.01	(2)
05/11/22	--	5.30	--	5.91	--	4.95	--	4.48	--	4.49	--	3.99	--	3.45	--	7.55	--	5.58	(2)
05/25/22	--	5.37	--	5.88	--	5.05	--	4.51	--	4.42	--	3.96	--	3.30	--	8.45	--	4.48	(3)
07/22/22	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	--	4.40	--	4.60	nm	nm	Checked for FP
09/14/22	--	5.73	--	6.45	--	6.36	--	5.53	--	5.12	--	5.60	--	4.21	--	6.72	--	3.91	(2)
09/28/22	--	5.33	--	5.98	--	5.34	--	4.70	--	4.23	--	4.20	--	3.57	--	9.58	--	7.78	(2)
10/11/22	--	5.37	--	6.01	--	5.85	--	5.00	--	4.72	--	4.73	--	4.14	--	10.9	--	9.57	(3)

NOTES:
DTP = Depth to product.
DTW = Depth to water.
nm = Not measured.
-- = Not applicable/no free product (FP).

FOOTNOTES:
(2) Bailed the MWs dry in preparation for sampling.
(3) Sampled the MWs (see Table 2 for summary of analytical results).
(4) Water was frozen in well.

Table 2
Historical Groundwater Analytical Results for Detected Compounds above NR140 PAL and/or ES
Tank 68 Release Site (1)
Superior Refining Company LLC
Superior, Wisconsin

Well ID	Substance Concentration (µg/l) and Results Qualifiers (if any)															
Date	Benzene	Ethylbenzene	Toluene	Xylenes	TMBs	1,2-Dichloroethane	Bromodichloromethane	Bromomethane	Chloroform	Chloromethane	Methylene chloride	Methyl isobutyl ketone (MIBK)	Naphthalene	Styrene	Tetrachloroethene	Dissolved Lead
NR 140 PAL	*0.5*	*140*	*160*	*400*	*96*	*0.5*	*0.06*	*1*	*0.6*	*3*	*0.5*	*50*	*10*	*10*	*0.5*	*1.5*
NR 140 ES	**5**	**700**	**800**	**2,000**	**480**	**5**	**0.6**	**10**	**6**	30	**5**	500	**100**	100	5	15
MW-1/T68																
3/6/2002	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
5/17/2002	< 0.43	5.3	7.1	< 1.45	13.8	< 0.54	(2)	(2)	(2)	< 0.69	(2)	(2)	< 1.4	(2)	< 1	na
9/12/2002	< 0.45	< 0.82	< 0.68	< 2.47	< 1.86	na	(2)	(2)	(2)	na	(2)	(2)	< 0.89	(2)	na	na
3/12/2003	< 0.45	< 0.82	< 0.68	< 2.47	< 1.86	na	(2)	(2)	(2)	na	(2)	(2)	< 0.89	(2)	na	na
9/30/2004	< 0.14	< 0.40	< 0.36	< 1.10	< 0.79	na	(2)	(2)	(2)	na	(2)	(2)	< 0.47	(2)	na	na
5/26/2005	< 0.31	< 0.5	< 0.3	< 0.92	< 0.71	< 0.4	(2)	(2)	(2)	< 0.29	(2)	(2)	< 0.8	(2)	< 0.3	na
11/9/2005	< 0.31	< 0.5	< 0.3	< 0.92	< 0.71	< 0.4	(2)	(2)	(2)	< 0.29	(2)	(2)	< 0.8	(2)	< 0.3	na
5/10/2006	< 0.31	< 0.50	< 0.30	< 0.92	< 0.71	< 0.40	(2)	(2)	(2)	< 0.29	(2)	(2)	< 0.80	(2)	< 0.3	na
11/16/2006	< 0.15	< 0.10	< 0.40	< 0.50	< 0.30	< 0.10	(2)	(2)	(2)	< 0.20	(2)	(2)	< 1.00	(2)	< 0.3	na
5/23/2007	< 0.20	< 0.10	< 0.40	< 0.60	< 0.40	< 0.20	(2)	(2)	(2)	< 0.30	(2)	(2)	< 1.00	(2)	< 0.3	na
11/15/2007	< 0.20	< 0.10	< 0.40	< 0.60	< 0.40	< 0.20	(2)	(2)	(2)	< 0.30	(2)	(2)	< 1.00	(2)	< 0.3	na
5/27/2008	< 0.20	< 0.10	< 0.40	< 0.60	< 0.40	< 0.20	(2)	(2)	(2)	< 0.30	(2)	(2)	< 1.00	(2)	< 0.3	na
11/24/2008	0.42 J	1.55	3.23	10.16	6.97	< 0.30	(2)	(2)	(2)	< 0.40	(2)	(2)	< 1.00	(2)	< 0.3	na
5/27/2009	< 0.20	< 0.20	< 0.40	< 0.60	< 0.40	< 0.30	(2)	(2)	(2)	< 0.40	(2)	(2)	< 1.00	(2)	< 0.3	na
11/23/2009	< 2.00	78.0	9.88 J	*514*	90	< 3.00	(2)	(2)	(2)	< 4.00	(2)	(2)	< 10.0	(2)	< 0.3	na
5/19/2010	< 0.20	< 0.20	< 0.40	< 0.60	< 0.40	< 0.30	(2)	(2)	(2)	< 0.40	(2)	(2)	< 1.00	(2)	< 0.3	na
10/21/2010	< 0.20	< 0.20	< 0.40	< 0.60	< 0.40	< 0.30	(2)	(2)	(2)	< 0.40	(2)	(2)	< 1.00	(2)	*0.90* J	na
6/16/2011	< 0.20	< 0.20	< 0.40	< 0.60	< 0.40	< 0.30	(2)	(2)	(2)	< 0.40	(2)	(2)	< 1.00	(2)	< 0.30	na
10/25/2011	< 0.20	< 0.20	< 0.40	< 0.60	< 0.70	< 0.30	(2)	(2)	(2)	< 0.40	(2)	(2)	< 1.00	(2)	< 0.30	na
5/16/2012	< 0.41	< 0.54	< 0.67	< 2.63	< 1.80	< 0.36	(2)	(2)	(2)	< 0.24	(2)	(2)	< 0.89	(2)	< 0.45	na
8/21/2013	< 0.50	< 0.50	< 0.44	< 1.32	< 3.07	< 0.48	(2)	(2)	(2)	< 0.39	(2)	(2)	< 2.5	(2)	< 0.47	na
6/24/2014	< 0.50	< 0.50	< 0.50	< 1.50	< 1.00	< 0.17	(2)	(2)	(2)	< 0.50	(2)	(2)	< 2.5	(2)	< 0.50	na
10/21/2014	< 0.50	< 0.50	< 0.50	< 1.50	< 1.00	< 0.17	(2)	(2)	(2)	< 0.50	(2)	(2)	< 2.5	(2)	< 0.50	na
6/23/2015	< 0.50	0.57 J	2.3	2.92 J	< 1.36 J	< 0.17	(2)	(2)	(2)	< 0.50	(2)	(2)	< 2.5	(2)	< 0.50	na
10/6/2015	< 0.50	< 0.50	< 0.50	< 1.50	< 1.00	< 0.17	(2)	(2)	(2)	< 0.50	(2)	(2)	< 2.5	(2)	< 0.50	na
5/24/2016	< 0.50	< 0.50	< 0.50	< 1.50	< 1.00	< 0.17	(2)	(2)	(2)	< 0.50	(2)	(2)	< 2.5	(2)	< 0.50	na
10/5/2016	< 0.50	< 0.50	< 0.50	< 1.50	< 1.00	< 0.17	(2)	(2)	(2)	< 0.50	(2)	(2)	< 2.5	(2)	< 0.50	na
5/16/2017	< 0.50	< 0.50	< 0.50	< 1.50	< 1.00	< 0.17	(2)	(2)	(2)	< 0.50	(2)	(2)	< 2.5	(2)	< 0.50	na
10/25/2017	< 0.50	< 0.50	2.3	2.38 J	< 1.08 J	< 0.17	(2)	(2)	(2)	< 0.50	(2)	(2)	< 2.5	(2)	< 0.50	na
6/12/2018	< 0.50	< 0.50	< 0.50	< 1.50	< 1.00	< 0.17	(2)	(2)	(2)	< 0.50	(2)	na	< 2.5	< 0.50	< 0.50	na
10/9/2018	< 0.25	< 0.22	0.22 J	< 0.90 J	< 2.37 J	< 0.28	(2)	(2)	(2)	< 2.2	(2)	na	< 1.2	< 0.47	< 0.33	na
5/21/2019	< 0.25	< 0.22	< 0.17	< 0.73	< 1.71	< 0.28	(2)	(2)	(2)	< 2.2	(2)	na	< 1.2	< 0.47	< 0.33	na
10/9/2019	< 0.25	0.38 J	0.37 J	4.9	8.9 J	< 0.28	(2)	(2)	(2)	< 2.2	(2)	na	1.9 J	< 0.47	< 0.33	na
5/27/2020	< 0.25	< 0.32	< 0.27	< 0.73	< 1.71	< 0.28	< 0.36	< 0.97	< 1.3	< 2.2	< 0.58	na	< 1.2	< 3.0	< 0.33	na
10/6/2020	< 0.12	< 0.075	< 0.12	< 0.29	< 0.29	< 0.25	< 0.11	< 0.63	< 0.48	< 0.42	< 1.1	< 0.54	< 0.68	< 0.11	< 0.17	na
5/24/2021	< 0.30	< 0.33	< 0.29	< 1.05	< 0.81	< 0.29	< 0.42	< 1.2	< 1.2	< 1.6	< 0.32	na	< 1.1	< 0.36	< 0.41	na
10/4/2021	< 0.12	< 0.069	< 0.11	< 0.30	< 0.22	< 0.14	< 0.21	< 1.9	< 0.14	< 0.22	< 0.83	na	< 0.20	< 0.13	< 0.10	na
5/25/2022	< 0.10	< 0.11	< 0.10	< 0.20	< 0.24	< 0.17	< 0.12	< 0.38	< 0.23	< 0.17	< 0.33	< 0.80	< 0.18	< 0.097	< 0.10	na
10/11/2022	< 0.10	< 0.11	< 0.10	< 0.38	< 0.24	< 0.17	***1.9***	< 0.38	***8.4***	< 0.17	< 0.33	na	< 0.18	< 0.097	< 0.10	na

Table 2
Historical Groundwater Analytical Results for Detected Compounds above NR140 PAL and/or ES
Tank 68 Release Site (1)
Superior Refining Company LLC
Superior, Wisconsin

Well ID	Substance Concentration (µg/l) and Results Qualifiers (if any)															
Date	Benzene	Ethylbenzene	Toluene	Xylenes	TMBs	1,2-Dichloroethane	Bromodichloromethane	Bromomethane	Chloroform	Chloromethane	Methylene chloride	Methyl isobutyl ketone (MIBK)	Naphthalene	Styrene	Tetrachloroethene	Dissolved Lead
NR 140 PAL	*0.5*	*140*	*160*	*400*	*96*	*0.5*	*0.06*	*1*	*0.6*	*3*	*0.5*	*50*	*10*	*10*	*0.5*	*1.5*
NR 140 ES	**5**	**700**	**800**	**2,000**	**480**	**5**	**0.6**	**10**	**6**	30	**5**	500	**100**	100	5	15
MW-2/T68																
5/17/2002	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
9/12/2002	***32000***	***3000***	***38000***	***17400***	***3170***	***2800***	(2)	(2)	(2)	< 54	(2)	(2)	***280*** J	(2)	< 300	na
3/12/2003	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	(2)	FP	FP
9/30/2004	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	(2)	FP	FP
5/26/2005	***25200***	***1810***	***29300***	***20850***	***5570***	< 600	(2)	(2)	(2)	< 290	(2)	(2)	***1810***	(2)	< 300	na
11/9/2005	***25800***	***1530***	***27000***	***15700***	***2476***	***2520***	(2)	(2)	(2)	< 290	(2)	(2)	< 800	(2)	< 300	na
5/10/2006	***29700***	***1300***	***25600***	***14830***	***3529***	***2680***	(2)	(2)	(2)	< 145	(2)	(2)	< 400	(2)	< 300	na
11/16/2006	***29100***	***1570***	***26300***	***16440***	***3212***	***2370***	(2)	(2)	(2)	< 200	(2)	(2)	< 1,000	(2)	< 300	na
5/23/2007	***30000***	***2440***	***34700***	***18820***	***5500***	< 200	(2)	(2)	(2)	< 300	(2)	(2)	< 1,000	(2)	< 300	na
11/15/2007	***22500***	***2090***	***24800***	***19190***	***5040***	***2020***	(2)	(2)	(2)	< 300	(2)	(2)	***6390***	(2)	< 300	na
5/27/2008	***24900***	***1880***	***29000***	***17380***	***4150***	***1710***	(2)	(2)	(2)	< 400	(2)	(2)	< 1,000	(2)	< 300	na
11/24/2008	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	(2)	FP	FP
5/27/2009	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	(2)	FP	FP
11/23/2009	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	(2)	FP	FP
5/19/2010	***39800***	***2790***	***44100***	***18080***	***4660***	< 300	(2)	(2)	(2)	< 400	(2)	(2)	< 1,000	(2)	< 300	na
10/21/2010	***32300***	***4380***	***41200***	***37800***	***12330***	***1510***	(2)	(2)	(2)	< 400	(2)	(2)	***1180*** J	(2)	< 300	na
6/16/2011	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	(2)	FP	FP
10/25/2011	***29600***	***2760***	***34800***	***18150***	***3670***	< 60.0	(2)	(2)	(2)	< 80.0	(2)	(2)	***451*** J	(2)	< 60.0	na
5/16/2012	***24600***	***1950***	***29200***	***16780***	***2906***	***1700***	(2)	(2)	(2)	< 30.0	(2)	(2)	***324*** J	(2)	< 56.2	na
8/21/2013	***23800***	***2290***	***28300***	***20740***	***5310***	***930***	(2)	(2)	(2)	< 77.5	(2)	(2)	***604*** J	(2)	< 88.6	na
6/24/2014	***23700***	***892***	***21300***	***16270***	***2757***	***1220***	(2)	(2)	(2)	< 125	(2)	(2)	< 625	(2)	< 125	na
10/21/2014	***25400***	***975***	***24700***	***15820***	***2149***	***1180***	(2)	(2)	(2)	< 100	(2)	(2)	< 500	(2)	< 100	na
6/23/2015	***10100***	*203*	***11500***	***17270***	***3140***	***355***	(2)	(2)	(2)	< 100	(2)	(2)	< 500	(2)	< 100	na
10/6/2015	***18300***	***995***	***18500***	***15000***	***2627***	***894***	(2)	(2)	(2)	< 100	(2)	(2)	< 500	(2)	< 100	na
5/24/2016	***21400***	***1370***	***22200***	***16160***	***2663***	***1260***	(2)	(2)	(2)	< 100	(2)	(2)	< 500	(2)	< 100	na
10/5/2016	***20900***	***1350***	***20300***	***15370***	***2673***	***1150***	(2)	(2)	(2)	< 100	(2)	(2)	< 500	(2)	< 100	na
5/16/2017	***22100***	***933***	***19200***	***15400***	***3192***	***1420***	(2)	(2)	(2)	< 100	(2)	(2)	< 500	(2)	< 100	na
10/25/2017	***30600***	***1170***	***24500***	***19550***	***3122***	***1610***	(2)	(2)	(2)	< 125	(2)	(2)	< 625	(2)	< 125	na
6/12/2018	***24200***	***1550***	***25500***	***19050***	***2703***	***1240***	(2)	(2)	(2)	< 100	(2)	na	< 500	< 100	< 100	na
10/9/2018	***18600***	***1120***	***16100***	***15370***	***3389***	***1520***	(2)	(2)	(2)	< 438	(2)	na	***292*** J	< 93.1	< 65.3	na
5/21/2019	***106***	3.6	105	*999*	*434*	***8.0***	(2)	(2)	(2)	< 2.2	(2)	na	*23.8*	< 0.47	< 0.33	na
10/9/2019	***2240***	17.8 J	***1330***	***5060***	***1601***	***287***	(2)	(2)	(2)	< 87.6	(2)	na	*98.3* J	< 18.6	< 13.1	na
5/27/2020	***9570***	*525*	***7520***	***8520***	***2226***	***941***	< 18.2	< 48.6	< 63.7	< 109	< 29.0	na	***173*** J	< 150	< 16.3	na
10/6/2020	***18600***	***1250***	***15000***	***16300***	***3525***	***1070***	< 5.7	< 31.7	< 24.2	< 21.2	< 55.0	*76.2* J	***333***	< 5.5	< 8.7	na
5/24/2021	***2200***	99.2	***1670***	***2445***	***759***	< 2.9	< 4.2	< 11.9	< 11.8	< 16.4	< 3.2	na	*54.0*	< 3.6	< 4.1	na
10/4/2021	***4820***	*233*	***3520***	***5620***	***1462***	***364***	< 0.96 H	< 3.2 H	< 1.6 H	< 1.8 H	< 4.7 H	na	***150*** H	< 0.88 H	< 2.5 H	na
5/25/2022	***16600*** H	***1650***	***13200*** H	***14000***	***2870***	< 4.2	< 2.9	< 9.6	< 5.8	< 4.2	< 8.2	35.3 J	***315***	< 2.4	< 2.6	na
10/11/2022	***724***	2.0 J	*251*	***2055***	***783***	***94.7***	< 1.2	*4.5* J+	< 2.3	< 1.7	*3.7* J	na	*31.4*	< 0.97	< 1.0	na
MW-3/T68																
3/12/2003	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
9/30/2004	< 0.41	< 0.54	< 0.67	< 2.63	< 1.8	< 0.36	(2)	(2)	(2)	< 0.24	(2)	(2)	< 0.74	(2)	< 0.45	na
5/26/2005	***15.6***	0.636 J	0.44 J	1.25 J	4.78 J	< 0.4	(2)	(2)	(2)	< 0.29	(2)	(2)	1.38 J	(2)	< 0.45	na
11/9/2005	< 0.31	< 0.5	< 0.3	< 0.92	< 0.71	< 0.4	(2)	(2)	(2)	< 1.00	(2)	(2)	< 0.8	(2)	< 0.45	na
5/10/2006	***9.77***	< 0.50	< 0.30	1.93 J	3.09 J	< 0.40	(2)	(2)	(2)	< 0.29	(2)	(2)	< 0.80	(2)	< 0.71	na
11/16/2006	< 0.15	< 0.10	< 0.40	< 0.50	< 0.30	< 0.10	(2)	(2)	(2)	< 0.20	(2)	(2)	< 1.00	(2)	< 0.10	na
5/23/2007	< 0.20	0.10 J	< 0.40	< 0.60	< 0.40	< 0.20	(2)	(2)	(2)	< 0.30	(2)	(2)	< 1.00	(2)	< 0.30	na
11/15/2007	< 0.20	< 0.10	< 0.40	< 0.60	< 0.40	< 0.20	(2)	(2)	(2)	< 0.30	(2)	(2)	< 1.00	(2)	< 0.30	na
5/27/2008	< 0.20	< 0.10	< 0.40	< 0.60	< 0.40	< 0.20	(2)	(2)	(2)	< 0.30	(2)	(2)	< 1.00	(2)	< 0.30	na
11/24/2008																

Table 2
Historical Groundwater Analytical Results for Detected Compounds above NR140 PAL and/or ES
Tank 68 Release Site (1)
Superior Refining Company LLC
Superior, Wisconsin

Well ID	Substance Concentration (µg/l) and Results Qualifiers (if any)															
Date	Benzene	Ethylbenzene	Toluene	Xylenes	TMBs	1,2-Dichloroethane	Bromodichloromethane	Bromomethane	Chloroform	Chloromethane	Methylene chloride	Methyl isobutyl ketone (MIBK)	Naphthalene	Styrene	Tetrachloroethene	Dissolved Lead
NR 140 PAL	*0.5*	*140*	*160*	*400*	*96*	*0.5*	*0.06*	*1*	*0.6*	*3*	*0.5*	*50*	*10*	*10*	*0.5*	*1.5*
NR 140 ES	**5**	**700**	**800**	**2,000**	**480**	**5**	**0.6**	**10**	**6**	30	**5**	500	**100**	100	5	15
MW-4/T68																
3/12/2003	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
9/30/2004	***650***	*260*	49	*1090*	***560***	< 1.8	(2)	(2)	(2)	< 1.2	(2)	(2)	*38*	(2)	< 30.0	na
5/26/2005	***2560***	*402*	44.3	***2857***	***1522***	< 40.0	(2)	(2)	(2)	< 29.0	(2)	(2)	***132***	(2)	< 30.0	na
11/9/2005	***2730***	*650*	59.9	***3555***	***1439***	< 20.0	(2)	(2)	(2)	< 14.5	(2)	(2)	***114***	(2)	< 30.0	na
5/10/2006	***5350***	*462*	125	***4280***	***1622***	< 40.0	(2)	(2)	(2)	< 29.0	(2)	(2)	***154*** J	(2)	< 30.0	na
11/16/2006	***2630***	*567*	74.9	***4360***	***2580***	< 5.00	(2)	(2)	(2)	*13.6* J	(2)	(2)	***212***	(2)	< 30.0	na
5/23/2007	***2810***	*247*	52.8	***2314***	***625.5***	***56.2***	(2)	(2)	(2)	< 15.0	(2)	(2)	***118*** J	(2)	< 30.0	na
11/15/2007	***2160***	*241*	< 40.0	***2410***	***1760***	< 20.0	(2)	(2)	(2)	< 30.0	(2)	(2)	***164*** J	(2)	< 30.0	na
5/27/2008	***5270***	*554* J	< 400	***3156***	***1071***	< 300	(2)	(2)	(2)	< 400	(2)	(2)	< 1,000	(2)	< 300	na
11/24/2008	***2540***	*399*	43.7 J	***2153***	***1425***	***62.8*** J	(2)	(2)	(2)	< 40.0	(2)	(2)	***157*** J	(2)	< 30.0	na
5/27/2009	***4150***	*335*	52.8 J	***2153***	***1023***	***115***	(2)	(2)	(2)	< 40.0	(2)	(2)	***104*** J	(2)	< 30.0	na
11/23/2009	***3180***	*236*	136	***2090***	***784***	***84.3*** J	(2)	(2)	(2)	< 40.0	(2)	(2)	***404***	(2)	< 30.0	na
5/19/2010	***4990***	*243*	< 40.0	*1669*	***839***	***118***	(2)	(2)	(2)	< 40.0	(2)	(2)	< 100	(2)	< 30.0	na
10/21/2010	***2590***	*368*	< 40.0	***2045***	***1790***	***57.6*** J	(2)	(2)	(2)	< 40.0	(2)	(2)	***153*** J	(2)	< 30.0	na
6/16/2011	***2390***	*172*	< 40.0	*1096.4* J	***535***	< 30.0	(2)	(2)	(2)	< 40.0	(2)	(2)	< 100	(2)	< 30.0	na
10/25/2011	***2180***	*247*	45.2 J	*1234.3* J	***857***	***51.3***	(2)	(2)	(2)	< 40.0	(2)	(2)	< 100	(2)	< 30.0	na
5/16/2012	***2150***	*297*	13.0	*1054.5*	***793***	< 3.6	(2)	(2)	(2)	< 2.4	(2)	(2)	*72.4*	(2)	< 4.5	na
8/21/2013	***2690***	*548*	11.4 J	*1157.6* J	***799.6*** J	< 9.5	(2)	(2)	(2)	< 7.8	(2)	(2)	*94.1* J	(2)	< 9.4	na
6/24/2014	< 0.50	< 0.50	< 0.50	< 1.50	< 1.0	< 0.17	(2)	(2)	(2)	< 0.50	(2)	(2)	< 2.5	(2)	< 0.50	na
10/21/2014	***73.8***	19.8	< 0.50	111.97 J	85.4	< 0.17	(2)	(2)	(2)	< 0.50	(2)	(2)	3.3 J	(2)	< 0.50	na
6/23/2015	***982***	*178*	15.8	*450.6* J	*475.5*	< 1.7	(2)	(2)	(2)	< 5.0	(2)	(2)	< 25.0	(2)	< 5.0	na
10/6/2015	***10.1***	1.5	< 0.50	2.7	2.6	< 0.17	(2)	(2)	(2)	< 0.50	(2)	(2)	< 2.5	(2)	< 0.50	na
5/24/2016	***282***	30.6	2.2 J	88.0 J	*148.6*	< 0.42	(2)	(2)	(2)	< 1.2	(2)	(2)	< 6.2	(2)	< 1.2	na
10/5/2016	*3.3*	0.83 J	0.99 J	4.1	3.2	< 0.17	(2)	(2)	(2)	< 0.50	(2)	(2)	< 2.5	(2)	< 0.50	na
5/16/2017	***3930***	*602*	< 20.0	*1600*	***674.5***	< 6.7	(2)	(2)	(2)	< 20.0	(2)	(2)	< 100	(2)	< 30.0	na
10/25/2017	***79.6***	9.7	3.6	30.6	40.6	< 0.42	(2)	(2)	(2)	< 1.2	(2)	(2)	< 6.2	(2)	< 1.2	na
6/12/2018	***3770***	*531*	< 25.0	< 1305 BQX	***597.7*** J	< 8.4	(2)	(2)	(2)	< 25.0	(2)	na	< 125	< 25.0	< 25.0	na
10/9/2018	< 0.25	< 0.22	< 0.17	< 0.73	< 1.71	< 0.28	(2)	(2)	(2)	< 2.2	(2)	na	< 1.2	< 0.47	< 0.33	na
5/21/2019	***1790***	*278*	4.9 J	< 552.6 BQX	*376.0* J	< 2.8	(2)	(2)	(2)	< 21.9	(2)	na	*13.1* J	< 4.7	< 3.3	na
10/9/2019	***2640***	*420*	4.8 J	< 441.6 BQX	***661.1***	***64.6***	(2)	(2)	(2)	< 21.9	(2)	na	< 11.8	< 4.7	< 3.3	na
5/27/2020	***790***	133	2.8 J	192.3	*229* a	< 1.4	< 1.8	< 4.9	< 6.4	< 10.9	< 2.9	na	6 J	< 15.0	< 1.6	na
10/6/2020	***2950***	*499*	5.0	*636*	***1027***	*0.96*	< 0.11	< 0.63	< 0.48	< 0.42	< 1.1	< 0.54	8.9	< 0.11	< 0.17	na
5/24/2021	***1850***	*279*	5.4 J	397	*411*	< 2.9	< 4.2	< 11.9	< 11.8	< 16.4	< 3.2	na	< 11.3	< 3.6	< 4.1	na
10/4/2021	***17.4*** H	2.6 H	< 0.14 H	10.7	13.2	< 0.16 H	< 0.096 H	< 0.32 H	< 0.16 H	< 0.18 H	< 0.47 H	na	0.47 H	< 0.088 H	< 0.25 H	na
5/25/2022	***1500***	*357*	4.3	383	***692***	< 0.17	< 0.12	< 0.38	< 0.23	< 0.17	< 0.33	< 0.80	2.1	< 0.097	< 0.10	na
10/11/2022	0.19 J	*< 0.11*	< 0.10	0.40 a	0.80 a	< 0.17	< 0.12	< 0.54 J+UB	< 0.23	< 0.17	< 0.33	na	0.30 J	< 0.097	< 0.10	na

Table 2
Historical Groundwater Analytical Results for Detected Compounds above NR140 PAL and/or ES
Tank 68 Release Site (1)
Superior Refining Company LLC
Superior, Wisconsin

Well ID	Substance Concentration (µg/l) and Results Qualifiers (if any)																
Date	Benzene	Ethylbenzene	Toluene	Xylenes	TMBs	1,2-Dichloroethane	Bromodichloromethane	Bromomethane	Chloroform	Chloromethane	Methylene chloride	Methyl isobutyl ketone (MIBK)	Naphthalene	Styrene	Tetrachloroethene	Dissolved Lead
NR 140 PAL	*0.5*	*140*	*160*	*400*	*96*	*0.5*	*0.06*	*1*	*0.6*	*3*	*0.5*	*50*	*10*	*10*	*0.5*	*1.5*
NR 140 ES	**5**	**700**	**800**	**2,000**	**480**	**5**	**0.6**	**10**	**6**	30	**5**	500	**100**	100	5	15
MW-5/T66																
11/25/1998	< 0.30	1.9	6.7	32	10.4	< 0.20	NI	NI	(2)	< 0.90	(2)	(2)	< 1.1	(2)	< 0.60	na
12/17/1998	na	na	na	na	na	na	(2)	(2)	(2)	na	(2)	(2)	na	(2)	na	< 1
4/6/1999	***44***	8.06	33.1	195	*109*	na	(2)	(2)	(2)	na	(2)	(2)	na	(2)	na	*2.41*
6/1/1999	***55.4***	65.7	*170*	*909*	***554***	na	(2)	(2)	(2)	na	(2)	(2)	na	(2)	na	*2.75*
9/9/1999	***1920***	***1970***	***5190***	***9590***	***2554***	na	(2)	(2)	(2)	na	(2)	(2)	na	(2)	na	*4.23*
12/10/1999	***7480***	***3070***	***19800***	***15270***	***2786***	na	(2)	(2)	(2)	na	(2)	(2)	na	(2)	na	*3.38*
3/6/2002	***3300***	***3100***	***13000***	***18000***	***4800***	na	(2)	(2)	(2)	na	(2)	(2)	***820***	(2)	na	na
7/11/2002	***2100***	***1700***	***8700***	***13400***	***2900***	na	(2)	(2)	(2)	na	(2)	(2)	na	(2)	na	na
9/12/2002	***2200***	***2800***	***10000***	***14500***	***2960***	na	(2)	(2)	(2)	na	(2)	(2)	***310***	(2)	na	na
3/12/2003	***3400***	***3100***	***9900***	***15600***	***3220***	na	(2)	(2)	(2)	na	(2)	(2)	***340***	(2)	na	na
9/30/2004	***13000***	***3600***	***23000***	***17200***	***3350***	na	(2)	(2)	(2)	na	(2)	(2)	***520***	(2)	na	na
5/26/2005	***20700***	***1250***	***23400***	***9990***	***1974***	< 400	(2)	(2)	(2)	< 290	(2)	(2)	< 800	(2)	< 300	na
11/9/2005	***8980***	***2580***	***19700***	***17840***	***2731***	< 80.0	(2)	(2)	(2)	< 58.0	(2)	(2)	***270***	(2)	< 300	na
5/10/2006	***8620***	***3660***	***19400***	***18340***	***4340***	< 200	(2)	(2)	(2)	< 145	(2)	(2)	***667*** J	(2)	< 300	na
11/16/2006	***672***	*425*	***1740***	***4040***	***1852***	***15.4*** J	(2)	(2)	(2)	< 10.0	(2)	(2)	*89.6* J	(2)	< 30.0	na
5/23/2007	***2620***	***1160***	***5200***	***6840*** J	***2360***	***52.0***	(2)	(2)	(2)	*19.7* J	(2)	(2)	***174***	(2)	< 30.0	na
11/15/2007	***2440***	***1270***	***4790***	***8180***	***2540***	< 20.0	(2)	(2)	(2)	< 30.0	(2)	(2)	***221*** J	(2)	< 30.0	na
5/27/2008	***4210***	***2180***	***8750***	***12350***	***2360***	< 300	(2)	(2)	(2)	< 400	(2)	(2)	< 1,000	(2)	< 300	na
11/24/2008	***2010***	***1270***	***4340***	***8540***	***1841***	< 30.0	(2)	(2)	(2)	< 40.0	(2)	(2)	***223*** J	(2)	< 30.0	na
5/29/2009	***2710***	***1570***	***3590***	***10550***	***3160***	< 300	(2)	(2)	(2)	< 400	(2)	(2)	< 1,000	(2)	< 300	na
11/23/2009	***1870***	***926***	***1050***	***6910***	***2760***	***43.6*** J	(2)	(2)	(2)	< 40.0	(2)	(2)	***391***	(2)	< 300	na
5/19/2010	***2980***	***1480***	***4190***	***9050***	***3000***	< 300	(2)	(2)	(2)	< 400	(2)	(2)	< 1,000	(2)	< 300	na
10/21/2010	***1630***	***913***	***2090***	***6670***	***1431***	***34.9*** J	(2)	(2)	(2)	< 40.0	(2)	(2)	***211*** J	(2)	< 30.0	na
6/16/2011	***2940***	***1520***	***2470***	***9480***	***2161*** J	< 150	(2)	(2)	(2)	< 200	(2)	(2)	< 500	(2)	< 150	na
10/25/2011	***3020***	***820***	***1110***	***7280***	***1745*** J	< 150	(2)	(2)	(2)	< 200	(2)	(2)	< 500	(2)	< 150	na
5/16/2012	***3220***	***2550***	***2690***	***13910***	***2828***	< 9.0	(2)	(2)	(2)	< 6.0	(2)	(2)	***317***	(2)	< 11.2	na
8/21/2013	***3860***	***2540***	***1760***	***15230***	***3450***	< 19.1	(2)	(2)	(2)	< 15.5	(2)	(2)	***404***	(2)	< 18.9	na
6/24/2014	***6.0***	0.80 J	2.5	64.5	19.4	< 0.16	(2)	(2)	(2)	< 0.50	(2)	(2)	< 2.5	(2)	< 0.50	na
10/21/2014	***2050***	***1230***	*423*	***9030***	***1486***	< 3.4	(2)	(2)	(2)	< 10.0	(2)	(2)	***172***	(2)	< 10.0	na
6/23/2015	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	(2)	FP	FP
10/6/2015	***11800***	***2080***	***20900***	***16670***	***4585***	< 33.6	(2)	(2)	(2)	< 100	(2)	(2)	***510*** J	(2)	< 100	na
5/24/2016	***10600***	***3330***	***17000***	***19360***	***4719***	< 33.6	(2)	(2)	(2)	< 100	(2)	(2)	< 500	(2)	< 100	na
10/5/2016	***9090***	***2700***	***15900***	***16800***	***3241***	< 33.6	(2)	(2)	(2)	< 100	(2)	(2)	< 500	(2)	< 100	na
5/16/2017	***10600***	***2950***	***16300***	***18730***	***2902***	< 33.6	(2)	(2)	(2)	< 100	(2)	(2)	< 500	(2)	< 100	na
10/25/2017	***8790***	***2300***	***15400***	***17250***	***2364***	< 21.0	(2)	(2)	(2)	< 62.5	(2)	(2)	< 312	(2)	< 62.5	na
6/12/2018	***5630***	***2240***	***8760***	***16810***	***3243***	< 8.4	(2)	(2)	(2)	< 25.0	(2)	na	***276***	< 25.0	< 25.0	na
10/9/2018	***4180***	***2030***	***10800***	***17330***	***4662***	< 14.0	(2)	(2)	(2)	< 109	(2)	na	***549***	< 23.3	< 16.3	na
5/21/2019	***2810***	***1410***	***7130***	***13160***	***3625***	< 14.0	(2)	(2)	(2)	< 109	(2)	na	***382***	< 23.3	< 16.3	na
10/9/2019	***4260***	***1680***	***9810***	***14770***	***3279***	***112***	(2)	(2)	(2)	< 109	(2)	na	***358***	< 23.3	< 16.3	na
5/27/2020	***4760***	***2010***	***6000***	***13740***	***2914***	< 28.0	< 36.4	< 97.1	< 127	< 219	< 58.1	na	***326*** J	< 301	< 32.6	na
10/6/2020	***7150***	***9730***	***14900***	***43900***	***27960***	< 25.4	< 11.4	< 63.4	< 48.4	< 42.4	< 110	< 54.5	***2660***	< 11.0	< 17.4	na
5/24/2021	***339***	*467*	***901***	***13190***	***3045***	< 7.3	< 10.4	< 29.8	< 29.6	< 40.9	< 8.0	na	***355***	< 8.9	< 10.2	na
10/4/2021	***1760***	*538*	***2470***	***9780***	***2597***	< 1.6 H	< 0.96 H	< 3.2 H	< 1.6 H	< 1.8 H	< 4.7 H	na	***302*** H	< 0.88 H	< 2.5 H	na
5/25/2022	***5340***	***2540***	***1730***	***14800***	***3064***	< 1.7	< 1.2	< 3.8	< 2.3	< 1.7	< 3.3	15.5 J	***402***	< 0.97	< 1.0	na
10/11/2022	***1340***	*467*	***2050***	***12110***	***3434***	< 3.4	< 2.3	***10.2*** J+	< 4.6	< 3.4	< 6.6	na	***312***	< 1.9	< 2.1	na

Table 2
Historical Groundwater Analytical Results for Detected Compounds above NR140 PAL and/or ES
Tank 68 Release Site (1)
Superior Refining Company LLC
Superior, Wisconsin

Well ID	Substance Concentration (µg/l) and Results Qualifiers (if any)															
Date	Benzene	Ethylbenzene	Toluene	Xylenes	TMBs	1,2-Dichloroethane	Bromodichloromethane	Bromomethane	Chloroform	Chloromethane	Methylene chloride	Methyl isobutyl ketone (MIBK)	Naphthalene	Styrene	Tetrachloroethene	Dissolved Lead
NR 140 PAL	*0.5*	*140*	*160*	*400*	*96*	*0.5*	*0.06*	*1*	*0.6*	*3*	*0.5*	*50*	*10*	*10*	*0.5*	*1.5*
NR 140 ES	**5**	**700**	**800**	**2,000**	**480**	**5**	**0.6**	**10**	**6**	30	**5**	500	**100**	100	5	15
MW-5/T68																
3/12/2003	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
9/30/2004	***14000***	*460*	***15000***	***9100***	***1810***	< 36	(2)	(2)	(2)	< 24	(2)	(2)	***330***	na	< 300	na
5/26/2005	***10500***	***2240***	***17000***	***17060***	***4084***	< 300	(2)	(2)	(2)	< 145	(2)	(2)	***431***	na	< 300	na
11/9/2005	***9710***	*450*	***10100***	***9990***	***1682***	< 200	(2)	(2)	(2)	< 145	(2)	(2)	< 400	na	< 300	na
5/10/2006	***13300***	*422*	***12300***	***9700***	***1881***	< 80.0	(2)	(2)	(2)	< 58.0	(2)	(2)	***241*** J	na	< 300	na
11/16/2006	***5410***	***922***	***6820***	***10380***	***3260***	***109***	(2)	(2)	(2)	< 20.0	(2)	(2)	***265*** J	na	< 300	na
5/23/2007	***21200***	***2730***	***33800***	***16520***	***4590***	< 200	(2)	(2)	(2)	< 300	(2)	(2)	< 1,000	na	< 300	na
11/15/2007	***7580***	***1240***	***13500***	***7180***	***2007***	< 200	(2)	(2)	(2)	< 300	(2)	(2)	< 1,000	na	< 300	na
5/27/2008	***22600***	***3310***	***45700***	***20390***	***3327***	< 300	(2)	(2)	(2)	< 400	(2)	(2)	< 1,000	na	< 300	na
11/24/2008	***6950***	***1590***	***14200***	***7780***	***1377***	< 300	(2)	(2)	(2)	< 400	(2)	(2)	< 1,000	na	< 300	na
5/27/2009	***19000***	***4030***	***45700***	***21860***	***6040***	***585*** J	(2)	(2)	(2)	< 400	(2)	(2)	< 1,000	na	< 300	na
11/23/2009	***13200***	***3630***	***30600***	***20610***	***6280***	***315***	(2)	(2)	(2)	< 40.0	(2)	(2)	***783***	na	< 300	na
5/19/2010	***18400***	***3640***	***42200***	***21540***	***6560***	< 300	(2)	(2)	(2)	< 400	(2)	(2)	< 1,000	na	< 300	na
10/21/2010	***14900***	***3730***	***36800***	***24540***	***6240***	***339*** J	(2)	(2)	(2)	< 400	(2)	(2)	***1070*** J	na	< 300	na
6/16/2011	***12200***	***2760***	***33100***	***16950***	***3324*** J	< 300	(2)	(2)	(2)	< 400	(2)	(2)	< 1,000	na	< 300	na
10/25/2011	***12600***	***2250***	***27800***	***18100***	***4288*** J	***322*** J	(2)	(2)	(2)	< 400	(2)	(2)	< 1,000	na	< 300	na
5/16/2012	***12700***	***2610***	***28200***	***17680***	***3480***	< 45.0	(2)	(2)	(2)	< 30.0	(2)	(2)	***476*** J	na	< 56.2	na
8/21/2013	***16000***	***2390***	***27800***	***16160***	***4261***	< 95.3	(2)	(2)	(2)	< 77.5	(2)	(2)	***584*** J	na	< 94.4	na
6/24/2014	***14600***	***2700***	***26900***	***17940***	***1208***	< 41.9	(2)	(2)	(2)	< 125	(2)	(2)	< 625	na	< 125	na
10/21/2014	***23300***	***4140***	***48700***	***33400***	***5250***	< 33.5	(2)	(2)	(2)	< 100	(2)	(2)	***617*** J	na	< 100	na
6/23/2015	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
10/6/2015	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
5/24/2016	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
10/5/2016	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
5/16/2017	***25600***	***3200***	***42700***	***23200***	***3821***	< 105	(2)	(2)	(2)	< 312	(2)	(2)	< 1560	na	< 312	na
10/25/2017	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
6/12/2018	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	na	FP	< 25.0	FP	FP
10/9/2018	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	na	FP	FP	FP	FP
5/21/2019	***27400***	***2730***	***41600***	***24450***	***3480***	< 70.0	(2)	(2)	(2)	< 547	(2)	na	***432*** J	< 116	< 81.6	na
10/9/2019	***25400***	***2480***	***39500***	***21620***	***4555***	***697***	(2)	(2)	(2)	< 547	(2)	na	***717*** J	< 116	< 81.6	na
5/27/2020	***21100***	***2060***	***33700***	***21630***	***3891***	< 70.0	< 90.9	< 243	< 318	< 547	< 145	na	***494*** J	< 752	< 81.6	na
10/6/2020	***24300***	***8670***	***33700***	***162000***	***65080***	***88.7***	< 11.4	< 63.4	< 48.4	< 42.4	< 110	*250*	***5690***	*34.4* J	< 17.4	na
5/24/2021	***17100***	***1740***	***27900***	***17430***	***3454***	***78.0*** J	< 51.9	< 149	< 148	< 204	< 39.9	na	***455*** J	< 44.5	< 51.1	na
10/4/2021	***18500***	***2920***	***38000***	***33100***	***10480***	***56.1***	< 20.7	< 188	***18.4*** J	< 22.4	< 82.9	na	***1500***	< 12.6	< 10.1	na
5/25/2022	***18600***	***1820***	***31500***	***21900***	***3359***	< 4.2	< 2.9	< 9.6	< 5.8	< 4.2	< 8.2	*91.0* J	***535***	< 2.4	< 2.6	na
10/11/2022	***17200***	***2350***	***28200***	***22000***	***5870***	< 33.8	< 23.4	< 77.0	< 46.0	< 34.0	***89.7*** J	na	***1040***	< 19.3	< 21.0	na

Table 2
Historical Groundwater Analytical Results for Detected Compounds above NR140 PAL and/or ES
Tank 68 Release Site (1)
Superior Refining Company LLC
Superior, Wisconsin

Well ID	Substance Concentration (µg/l) and Results Qualifiers (if any)															
Date	Benzene	Ethylbenzene	Toluene	Xylenes	TMBs	1,2-Dichloroethane	Bromodichloromethane	Bromomethane	Chloroform	Chloromethane	Methylene chloride	Methyl isobutyl ketone (MIBK)	Naphthalene	Styrene	Tetrachloroethene	Dissolved Lead
NR 140 PAL	*0.5*	*140*	*160*	*400*	*96*	*0.5*	*0.06*	*1*	*0.6*	*3*	*0.5*	*50*	*10*	*10*	*0.5*	*1.5*
NR 140 ES	**5**	**700**	**800**	**2,000**	**480**	**5**	**0.6**	**10**	**6**	30	**5**	500	**100**	100	5	15
MW-6/T68																
3/12/2003	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
9/30/2004	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
thru	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
11/9/2005	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
11/19/2006	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
5/23/2007	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
11/15/2007	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
5/27/2008	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
11/24/2008	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
5/27/2009	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
11/23/2009	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
5/19/2010	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
10/21/2010	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
6/16/2011	FP	FP	FP	FP	FP	FP	(2)	(2)	(2)	FP	(2)	(2)	FP	na	FP	FP
10/25/2011	***24000***	***2160***	***25200***	***16320***	***3830***	< 60.0	(2)	(2)	(2)	< 80.0	(2)	(2)	***243*** J	na	< 60.0	na
5/16/2012	***27900***	***2270***	***31200***	***19370***	***3059***	***293***	(2)	(2)	(2)	< 48.0	(2)	(2)	***436*** J	na	< 90.0	na
8/21/2013	***26100***	***3940***	***32700***	***33400***	***11180***	< 95.3	(2)	(2)	(2)	< 77.5	(2)	(2)	***852*** J	na	< 94.4	na
6/24/2014	***26000***	***1780***	***25700***	***19390***	***3017***	***336***	(2)	(2)	(2)	< 125	(2)	(2)	< 625	na	< 125	na
10/21/2014	***47200***	***2160***	***47700***	***43200***	***6080***	< 33.5	(2)	(2)	(2)	< 100	(2)	(2)	***543*** J	na	< 100	na
6/23/2015	***5710***	26.3 J	***3900***	***20110***	***4263***	< 8.4	(2)	(2)	(2)	< 25.0	(2)	(2)	***383***	na	< 25.0	na
10/6/2015	***6000***	43.0 J	***3010***	***18150***	***4307***	***43.5*** J	(2)	(2)	(2)	< 25.0	(2)	(2)	***342***	na	< 25.0	na
5/24/2016	DP	DP	DP	DP	DP	DP	(2)	(2)	(2)	DP	(2)	(2)	DP	na	DP	DP
10/5/2016	***5070***	45.5 J	***1560***	***14320***	***4065***	***37.5*** J	(2)	(2)	(2)	< 25.0	(2)	(2)	***334***	na	< 25.0	na
5/16/2017	***21000***	***1170***	***19600***	***20980***	***3928***	***240***	(2)	(2)	(2)	< 50.0	(2)	(2)	***273*** J	na	< 50.0	na
10/25/2017	***17500***	*576*	***12500***	***16570***	***3569***	***225***	(2)	(2)	(2)	< 62.5	(2)	(2)	< 312	na	< 62.5	na
6/12/2018	***23300***	***2100***	***25200***	***22650***	***3555***	***209***	(2)	(2)	(2)	< 25.0	(2)	na	***290***	< 25.0	< 25.0	na
10/9/2018	***20600***	***1700***	***19300***	***19490***	***3735***	< 70.0	(2)	(2)	(2)	< 547	(2)	na	***421*** J	< 116	< 81.6	na
5/21/2019	***22600***	***1550***	***20400***	***20360***	***3487***	***236*** J	(2)	(2)	(2)	< 547	(2)	na	***297*** J	< 116	< 81.6	na
10/9/2019	***20300***	***1300***	***17700***	***17400***	***3428***	***743***	(2)	(2)	(2)	< 547	(2)	na	***391*** J	< 116	< 81.6	na
5/27/2020	***18300***	***1410***	***16000***	***15710***	***3205***	< 56.0	< 72.7	< 194	< 255	< 438	< 116	na	***344*** J	<602	< 65.3	na
10/6/2020	***21100***	***1800***	***19000***	***20000***	***3611***	***200***	< 5.7	< 31.7	< 24.2	< 21.2	< 55.0	*69.0* J	***407***	< 5.5	< 8.7	na
5/24/2021	***14600***	***1190***	***12500***	***14340***	***2661***	< 36.4	< 51.9	< 149	< 148	< 204	< 39.9	na	***212*** J	< 44.5	< 51.1	na
10/4/2021	***18400***	***1630***	***16400***	***19040***	***3476***	***192***	< 20.7	< 188	***21.2*** J	< 22.4	< 82.9	na	***477***	< 12.6	< 10.1	na
5/25/2022	***17400***	***1540***	***18000***	***21000***	***3994***	< 1.7	< 1.2	< 3.8	< 2.3	< 1.7	< 3.3	41.9 J	***434***	< 0.97	< 1.0	na
10/11/2022	***17900***	***1800***	***15500***	***17500***	***3345***	< 33.8	< 23.4	< 77.0	< 46.0	< 34.0	***95.5*** J	na	***470***	< 19.3	< 21.0	na

Table 2
Historical Groundwater Analytical Results for Detected Compounds above NR140 PAL and/or ES
Tank 68 Release Site (1)
Superior Refining Company LLC
Superior, Wisconsin

Well ID / Date	Substance Concentration (µg/ℓ) and Results Qualifiers (if any)															
	Benzene	Ethylbenzene	Toluene	Xylenes	TMBs	1,2-Dichloroethane	Bromodichloromethane	Bromomethane	Chloroform	Chloromethane	Methylene chloride	Methyl isobutyl ketone (MIBK)	Naphthalene	Styrene	Tetrachloroethene	Dissolved Lead
NR 140 PAL	*0.5*	*140*	*160*	*400*	*96*	*0.5*	*0.06*	*1*	*0.6*	*3*	*0.5*	*50*	*10*	*10*	*0.5*	*1.5*
NR 140 ES	**5**	**700**	**800**	**2,000**	**480**	**5**	**0.6**	**10**	**6**	30	**5**	500	**100**	100	5	15

NOTES:
Detected concentrations at or above an applicable NR 140 PAL are in **bold** font; those at or above an NR 140 ES are in *italicized* font. Data shown for parameters with NR 140 PAL and NR 140 ES exceedances only.
a = Estimated value, calculated using some or all values that are estimates.
BQX = Value exceeds PAL despite being classified as not detected. It is possible one or more of the compounds added together to derived this value were detected in the original sample.
DP = Discontinuous product globules, well not sampled.
FP = Free product, well not sampled.
H = Recommended sample preservation, extraction or analysis holding time was exceeded.
J (Pre 2020) = Estimated concentration below laboratory quantitation level.
J (Post 2020) = Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quanitation limits.
J+ = The result is an estimated quantity and may be biased high.
na = Not analyzed.
NI = Not installed.
NR 140 ES = Wisconsin Administrative Code NR 140 Enforcement Standard; 7/1/2015.
NR 140 PAL = Wisconsin Administrative Code NR 140 Preventive Action Limit; 7/1/2015.
TMBs = Sum of 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.
UB = The analyte was detected in one of the associated laboratory, equipment, field or trip blank samples and is considered non-detect at the concentration reported by the laboratory.
(1) = In addition, 244 µg/ℓ of 1,3-dichloropropane was detected in the sample collected from MW-5/T66 on 10/25/17. However, 1,3-dichloropropane has no NR 140 PAL or NR 140 ES. Consequently, Table 2 was not revised to include all 1,3-dichloropropane data.
(2) = No data available.

Figures

Tank 68

Newton Creek

Nemadji River

Douglas County

Site Location

Approximate SRC Property Boundaries for Contiguous Operations

Approximate Fenceline Boundaries for Refining-Related Activities

0 750 1,500

Feet

SITE LOCATION
Superior Refining Company LLC (SRC)
Superior, WI

FIGURE 1

Copyright © 2013 National Geographic Society, i-cubed

Barr Footer: ArcGIS 10.7.1, 2020-09-30 09:25 File: I:\Client\Husky_Energy\Superior_Refinery\Maps\Groundwater_Monitoring\Tank 68\Figure 1 Site Location.mxd User: EMA

Geoprobe (GP)/ Hand Auger (HA) Boring Locations (April/May 2002)

Monitoring Point (July 2001)

Test Pit

Monitoring Well

General Direction of Groundwater Flow

Contaminant Berm

Wet Area

Notes:
1. Gray shaded well, test pit, and geoprobe and hand auger boring locations have been abandoned.
2. Each monitoring point (MP) is 7 feet deep and consists of 4" diameter PVC with 3 feet of slotted PVC screen.

Source: Gannett Fleming. Sample locations are based on field measurements made by Gannett Fleming and are approximate. Locations were not surveyed.

0 15 30
Feet

1 inch = 30 feet

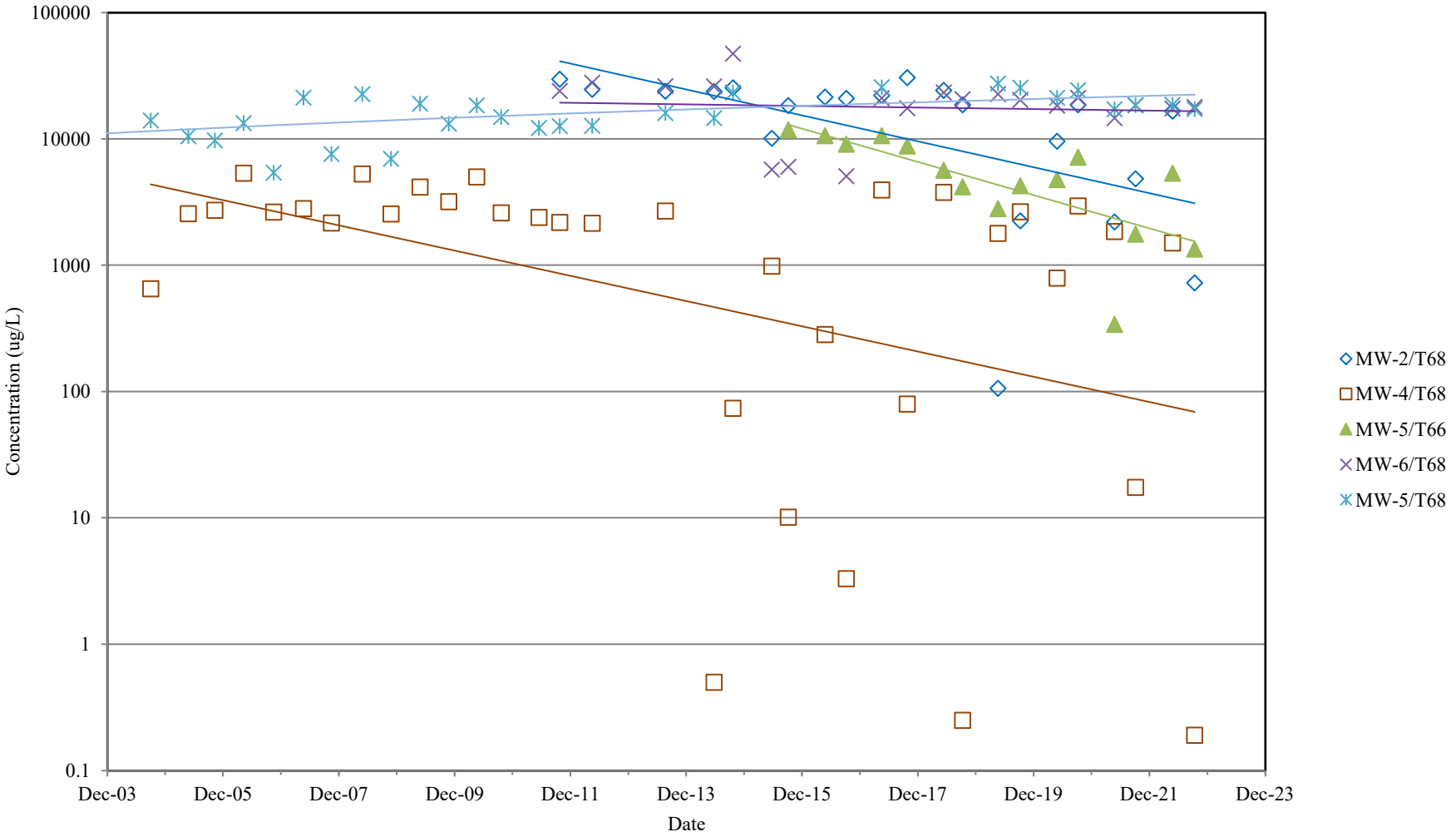
TANK 68 SITE LAYOUT & MONITORING LOCATIONS
Superior Refining Company LLC (SRC)
Superior, WI

FIGURE 2

Barr Footer: ArcGIS 10.7.1, 2020-10-27 13:12 File: I:\Client\Husky_Energy\Superior_Refinery\Maps\Groundwater_Monitoring\Tank 68\Figure 2 Site Layout and Monitoring Locations-Tank 68.mxd User: EMA

BARR

FIGURE 3



Note: Best-fit exponential trend lines generated using Excel and non-detect concentrations (if any) plotted at detection limit.

BENZENE GROUNDWATER CONCENTRATIONS vs. TIME - TANK 68 BASIN

SUPERIOR REFINING COMPANY LLC
SUPERIOR, WISCONSIN

*Discontinuous product globules observed at MW-6/T68 on May 24, 2016.

Attachments

Attachment A

Pace Analytical Laboratory Reports

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

June 16, 2022

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

RE: Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Dear Jim Taraldsen:

Enclosed are the analytical results for sample(s) received by the laboratory on May 26, 2022. 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 - Minneapolis

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

Sincerely,

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

Enclosures

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

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
A2LA Certification #: 2926.01*
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification (A2LA) #: R-036
North Dakota Certification (MN) #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
*Please Note: Applicable air certifications are denoted with an asterisk (*).

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10610203001	**MW-1 / T68**	Water	05/25/22 12:45	05/26/22 15:00
10610203002	**MW-2 / T68**	Water	05/25/22 12:58	05/26/22 15:00
10610203003	**MW-4 / T68**	Water	05/25/22 13:07	05/26/22 15:00
10610203004	**MW-5 / T68**	Water	05/25/22 13:15	05/26/22 15:00
10610203005	**MW-5 / T66**	Water	05/25/22 13:34	05/26/22 15:00
10610203006	**MW-6 / T68**	Water	05/25/22 13:24	05/26/22 15:00
10610203007	**Trip Blank**	Water	05/25/22 00:00	05/26/22 15:00

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10610203001	**MW-1 / T68**	EPA 8260D	TKL	72	PASI-M
10610203002	**MW-2 / T68**	EPA 8260D	TKL, ZB	72	PASI-M
10610203003	**MW-4 / T68**	EPA 8260D	NMB, TKL, ZB	72	PASI-M
10610203004	**MW-5 / T68**	EPA 8260D	TKL, ZB	72	PASI-M
10610203005	**MW-5 / T66**	EPA 8260D	TKL, ZB	72	PASI-M
10610203006	**MW-6 / T68**	EPA 8260D	NMB, TKL, ZB	72	PASI-M
10610203007	**Trip Blank**	EPA 8260D	TKL	72	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Date: June 16, 2022

Case Narrative

Volatile Organics Analysis

8260D VOA

Batch 819128

Recovery for bromomethane in the continuing calibration verification was outside of laboratory control limits at 69% recovery (limits 80-120%). The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard . Reported values may be biased low.

Recovery for dichlorodifluoromethane in the continuing calibration verification was outside of laboratory control limits at 120.7% recovery (limits 80-120%). Reported values may be biased high.

Batch 820062

Recovery for bromomethane in the continuing calibration verification was outside of laboratory control limits at 71% recovery (limits 80-120%). The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard . Reported values may be biased low.

Recovery for allyl chloride in the continuing calibration verification was outside of laboratory control limits at 73% recovery (limits 80-120%). The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard . Reported values may be biased low.

Recovery for 2-butanone (MEK) in the continuing calibration verification was outside of laboratory control limits at 75% recovery (limits 80-120%). The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard . Reported values may be biased low.

Recovery for bromoform in the continuing calibration verification was outside of laboratory control limits at 123% recovery (limits 80-120%). Reported values may be biased high.

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Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Sample: MW-1 / T68 **Lab ID: 10610203001** Collected: 05/25/22 12:45 Received: 05/26/22 15:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Acetone	**<1.9**	ug/L	10.0	1.9	1		06/03/22 17:04	67-64-1	
Allyl chloride	**<0.15**	ug/L	2.5	0.15	1		06/03/22 17:04	107-05-1	
Benzene	**<0.10**	ug/L	1.0	0.10	1		06/03/22 17:04	71-43-2	
Bromobenzene	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:04	108-86-1	
Bromochloromethane	**<0.15**	ug/L	1.0	0.15	1		06/03/22 17:04	74-97-5	
Bromodichloromethane	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:04	75-27-4	
Bromoform	**<0.22**	ug/L	1.0	0.22	1		06/03/22 17:04	75-25-2	
Bromomethane	**<0.38**	ug/L	2.5	0.38	1		06/03/22 17:04	74-83-9	
2-Butanone (MEK)	**<0.93**	ug/L	10.0	0.93	1		06/03/22 17:04	78-93-3	
n-Butylbenzene	**<0.096**	ug/L	1.0	0.096	1		06/03/22 17:04	104-51-8	
sec-Butylbenzene	**<0.097**	ug/L	1.0	0.097	1		06/03/22 17:04	135-98-8	
tert-Butylbenzene	**<0.091**	ug/L	1.0	0.091	1		06/03/22 17:04	98-06-6	
Carbon tetrachloride	**<0.13**	ug/L	1.0	0.13	1		06/03/22 17:04	56-23-5	
Chlorobenzene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 17:04	108-90-7	
Chloroethane	**<0.21**	ug/L	1.0	0.21	1		06/03/22 17:04	75-00-3	
Chloroform	**<0.23**	ug/L	1.0	0.23	1		06/03/22 17:04	67-66-3	
Chloromethane	**<0.17**	ug/L	1.0	0.17	1		06/03/22 17:04	74-87-3	
2-Chlorotoluene	**<0.098**	ug/L	1.0	0.098	1		06/03/22 17:04	95-49-8	
4-Chlorotoluene	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:04	106-43-4	
1,2-Dibromo-3-chloropropane	**<0.36**	ug/L	2.5	0.36	1		06/03/22 17:04	96-12-8	
Dibromochloromethane	**<0.20**	ug/L	1.0	0.20	1		06/03/22 17:04	124-48-1	
1,2-Dibromoethane (EDB)	**<0.20**	ug/L	1.0	0.20	1		06/03/22 17:04	106-93-4	
Dibromomethane	**<0.17**	ug/L	1.0	0.17	1		06/03/22 17:04	74-95-3	
1,2-Dichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 17:04	95-50-1	
1,3-Dichlorobenzene	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:04	541-73-1	
1,4-Dichlorobenzene	**<0.15**	ug/L	1.0	0.15	1		06/03/22 17:04	106-46-7	
Dichlorodifluoromethane	**<0.079**	ug/L	1.0	0.079	1		06/03/22 17:04	75-71-8	
1,1-Dichloroethane	**<0.11**	ug/L	1.0	0.11	1		06/03/22 17:04	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		06/03/22 17:04	107-06-2	
1,1-Dichloroethene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 17:04	75-35-4	
cis-1,2-Dichloroethene	**<0.15**	ug/L	1.0	0.15	1		06/03/22 17:04	156-59-2	
trans-1,2-Dichloroethene	**<0.14**	ug/L	1.0	0.14	1		06/03/22 17:04	156-60-5	
Dichlorofluoromethane	**<0.15**	ug/L	1.0	0.15	1		06/03/22 17:04	75-43-4	
1,2-Dichloropropane	**<0.15**	ug/L	1.0	0.15	1		06/03/22 17:04	78-87-5	
1,3-Dichloropropane	**<0.16**	ug/L	1.0	0.16	1		06/03/22 17:04	142-28-9	
2,2-Dichloropropane	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:04	594-20-7	
1,1-Dichloropropene	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:04	563-58-6	
cis-1,3-Dichloropropene	**<0.057**	ug/L	1.0	0.057	1		06/03/22 17:04	10061-01-5	
trans-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 17:04	10061-02-6	
Diethyl ether (Ethyl ether)	**<0.19**	ug/L	2.5	0.19	1		06/03/22 17:04	60-29-7	
Ethylbenzene	**<0.11**	ug/L	1.0	0.11	1		06/03/22 17:04	100-41-4	
Hexachloro-1,3-butadiene	**<0.24**	ug/L	1.0	0.24	1		06/03/22 17:04	87-68-3	
Isopropylbenzene (Cumene)	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:04	98-82-8	
p-Isopropyltoluene	**<0.11**	ug/L	1.0	0.11	1		06/03/22 17:04	99-87-6	
Methylene Chloride	**<0.33**	ug/L	1.0	0.33	1		06/03/22 17:04	75-09-2	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Sample: MW-1 / T68 **Lab ID: 10610203001** Collected: 05/25/22 12:45 Received: 05/26/22 15:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
4-Methyl-2-pentanone (MIBK)	**<0.80**	ug/L	10.0	0.80	1		06/03/22 17:04	108-10-1	
Methyl-tert-butyl ether	**<0.13**	ug/L	1.0	0.13	1		06/03/22 17:04	1634-04-4	
Naphthalene	**<0.18**	ug/L	1.0	0.18	1		06/03/22 17:04	91-20-3	
n-Propylbenzene	**<0.11**	ug/L	1.0	0.11	1		06/03/22 17:04	103-65-1	
Styrene	**<0.097**	ug/L	1.0	0.097	1		06/03/22 17:04	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.19**	ug/L	1.0	0.19	1		06/03/22 17:04	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.15**	ug/L	1.0	0.15	1		06/03/22 17:04	79-34-5	
Tetrachloroethene	**<0.10**	ug/L	1.0	0.10	1		06/03/22 17:04	127-18-4	
Tetrahydrofuran	**<1.4**	ug/L	10.0	1.4	1		06/03/22 17:04	109-99-9	
Toluene	**<0.10**	ug/L	1.0	0.10	1		06/03/22 17:04	108-88-3	
1,2,3-Trichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 17:04	87-61-6	
1,2,4-Trichlorobenzene	**<0.14**	ug/L	1.0	0.14	1		06/03/22 17:04	120-82-1	
1,1,1-Trichloroethane	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:04	71-55-6	
1,1,2-Trichloroethane	**<0.22**	ug/L	1.0	0.22	1		06/03/22 17:04	79-00-5	
Trichloroethene	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:04	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:04	75-69-4	
1,2,3-Trichloropropane	**<0.38**	ug/L	2.5	0.38	1		06/03/22 17:04	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<0.15**	ug/L	1.0	0.15	1		06/03/22 17:04	76-13-1	
1,2,4-Trimethylbenzene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 17:04	95-63-6	
1,3,5-Trimethylbenzene	**<0.11**	ug/L	1.0	0.11	1		06/03/22 17:04	108-67-8	
Vinyl chloride	**<0.046**	ug/L	1.0	0.046	1		06/03/22 17:04	75-01-4	
Xylene (Total)	**<0.20**	ug/L	3.0	0.20	1		06/03/22 17:04	1330-20-7	
m&p-Xylene	**<0.20**	ug/L	2.0	0.20	1		06/03/22 17:04	179601-23-1	
o-Xylene	**<0.18**	ug/L	1.0	0.18	1		06/03/22 17:04	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	99	%.	75-125		1		06/03/22 17:04	2199-69-1	
4-Bromofluorobenzene (S)	99	%.	75-125		1		06/03/22 17:04	460-00-4	
Toluene-d8 (S)	100	%.	75-125		1		06/03/22 17:04	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Sample: MW-2 / T68 **Lab ID: 10610203002** Collected: 05/25/22 12:58 Received: 05/26/22 15:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Acetone	**188J**	ug/L	250	47.5	25		06/03/22 18:06	67-64-1	
Allyl chloride	**<3.6**	ug/L	62.5	3.6	25		06/03/22 18:06	107-05-1	
Benzene	**16600**	ug/L	200	20.6	200		06/09/22 15:01	71-43-2	H5
Bromobenzene	**<3.0**	ug/L	25.0	3.0	25		06/03/22 18:06	108-86-1	
Bromochloromethane	**<3.8**	ug/L	25.0	3.8	25		06/03/22 18:06	74-97-5	
Bromodichloromethane	**<2.9**	ug/L	25.0	2.9	25		06/03/22 18:06	75-27-4	
Bromoform	**<5.6**	ug/L	25.0	5.6	25		06/03/22 18:06	75-25-2	
Bromomethane	**<9.6**	ug/L	62.5	9.6	25		06/03/22 18:06	74-83-9	
2-Butanone (MEK)	**193J**	ug/L	250	23.4	25		06/03/22 18:06	78-93-3	
n-Butylbenzene	**<2.4**	ug/L	25.0	2.4	25		06/03/22 18:06	104-51-8	
sec-Butylbenzene	**8.3J**	ug/L	25.0	2.4	25		06/03/22 18:06	135-98-8	
tert-Butylbenzene	**<2.3**	ug/L	25.0	2.3	25		06/03/22 18:06	98-06-6	
Carbon tetrachloride	**<3.4**	ug/L	25.0	3.4	25		06/03/22 18:06	56-23-5	
Chlorobenzene	**<3.3**	ug/L	25.0	3.3	25		06/03/22 18:06	108-90-7	
Chloroethane	**<5.2**	ug/L	25.0	5.2	25		06/03/22 18:06	75-00-3	
Chloroform	**<5.8**	ug/L	25.0	5.8	25		06/03/22 18:06	67-66-3	
Chloromethane	**<4.2**	ug/L	25.0	4.2	25		06/03/22 18:06	74-87-3	
2-Chlorotoluene	**<2.4**	ug/L	25.0	2.4	25		06/03/22 18:06	95-49-8	
4-Chlorotoluene	**<3.1**	ug/L	25.0	3.1	25		06/03/22 18:06	106-43-4	
1,2-Dibromo-3-chloropropane	**<8.9**	ug/L	62.5	8.9	25		06/03/22 18:06	96-12-8	
Dibromochloromethane	**<5.1**	ug/L	25.0	5.1	25		06/03/22 18:06	124-48-1	
1,2-Dibromoethane (EDB)	**<5.0**	ug/L	25.0	5.0	25		06/03/22 18:06	106-93-4	
Dibromomethane	**<4.3**	ug/L	25.0	4.3	25		06/03/22 18:06	74-95-3	
1,2-Dichlorobenzene	**<3.3**	ug/L	25.0	3.3	25		06/03/22 18:06	95-50-1	
1,3-Dichlorobenzene	**<3.1**	ug/L	25.0	3.1	25		06/03/22 18:06	541-73-1	
1,4-Dichlorobenzene	**<3.7**	ug/L	25.0	3.7	25		06/03/22 18:06	106-46-7	
Dichlorodifluoromethane	**<2.0**	ug/L	25.0	2.0	25		06/03/22 18:06	75-71-8	
1,1-Dichloroethane	**<2.7**	ug/L	25.0	2.7	25		06/03/22 18:06	75-34-3	
1,2-Dichloroethane	**<4.2**	ug/L	25.0	4.2	25		06/03/22 18:06	107-06-2	
1,1-Dichloroethene	**<3.3**	ug/L	25.0	3.3	25		06/03/22 18:06	75-35-4	
cis-1,2-Dichloroethene	**<3.8**	ug/L	25.0	3.8	25		06/03/22 18:06	156-59-2	
trans-1,2-Dichloroethene	**<3.4**	ug/L	25.0	3.4	25		06/03/22 18:06	156-60-5	
Dichlorofluoromethane	**<3.8**	ug/L	25.0	3.8	25		06/03/22 18:06	75-43-4	
1,2-Dichloropropane	**<3.7**	ug/L	25.0	3.7	25		06/03/22 18:06	78-87-5	
1,3-Dichloropropane	**<4.0**	ug/L	25.0	4.0	25		06/03/22 18:06	142-28-9	
2,2-Dichloropropane	**<2.9**	ug/L	25.0	2.9	25		06/03/22 18:06	594-20-7	
1,1-Dichloropropene	**<3.1**	ug/L	25.0	3.1	25		06/03/22 18:06	563-58-6	
cis-1,3-Dichloropropene	**<1.4**	ug/L	25.0	1.4	25		06/03/22 18:06	10061-01-5	
trans-1,3-Dichloropropene	**<3.2**	ug/L	25.0	3.2	25		06/03/22 18:06	10061-02-6	
Diethyl ether (Ethyl ether)	**<4.8**	ug/L	62.5	4.8	25		06/03/22 18:06	60-29-7	
Ethylbenzene	**1650**	ug/L	25.0	2.7	25		06/03/22 18:06	100-41-4	
Hexachloro-1,3-butadiene	**<5.9**	ug/L	25.0	5.9	25		06/03/22 18:06	87-68-3	
Isopropylbenzene (Cumene)	**52.5**	ug/L	25.0	2.9	25		06/03/22 18:06	98-82-8	
p-Isopropyltoluene	**7.3J**	ug/L	25.0	2.6	25		06/03/22 18:06	99-87-6	
Methylene Chloride	**<8.2**	ug/L	25.0	8.2	25		06/03/22 18:06	75-09-2	

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Sample: MW-2 / T68 **Lab ID: 10610203002** Collected: 05/25/22 12:58 Received: 05/26/22 15:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
4-Methyl-2-pentanone (MIBK)	**35.3J**	ug/L	250	20.1	25		06/03/22 18:06	108-10-1	
Methyl-tert-butyl ether	**<3.2**	ug/L	25.0	3.2	25		06/03/22 18:06	1634-04-4	
Naphthalene	**315**	ug/L	25.0	4.5	25		06/03/22 18:06	91-20-3	
n-Propylbenzene	**139**	ug/L	25.0	2.7	25		06/03/22 18:06	103-65-1	
Styrene	**<2.4**	ug/L	25.0	2.4	25		06/03/22 18:06	100-42-5	
1,1,1,2-Tetrachloroethane	**<4.8**	ug/L	25.0	4.8	25		06/03/22 18:06	630-20-6	
1,1,2,2-Tetrachloroethane	**<3.6**	ug/L	25.0	3.6	25		06/03/22 18:06	79-34-5	
Tetrachloroethene	**<2.6**	ug/L	25.0	2.6	25		06/03/22 18:06	127-18-4	
Tetrahydrofuran	**<34.8**	ug/L	250	34.8	25		06/03/22 18:06	109-99-9	
Toluene	**13200**	ug/L	200	20.6	200		06/09/22 15:01	108-88-3	H5
1,2,3-Trichlorobenzene	**<3.3**	ug/L	25.0	3.3	25		06/03/22 18:06	87-61-6	
1,2,4-Trichlorobenzene	**<3.5**	ug/L	25.0	3.5	25		06/03/22 18:06	120-82-1	
1,1,1-Trichloroethane	**<3.1**	ug/L	25.0	3.1	25		06/03/22 18:06	71-55-6	
1,1,2-Trichloroethane	**<5.6**	ug/L	25.0	5.6	25		06/03/22 18:06	79-00-5	
Trichloroethene	**<3.0**	ug/L	25.0	3.0	25		06/03/22 18:06	79-01-6	
Trichlorofluoromethane	**<3.1**	ug/L	25.0	3.1	25		06/03/22 18:06	75-69-4	
1,2,3-Trichloropropane	**<9.4**	ug/L	62.5	9.4	25		06/03/22 18:06	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<3.8**	ug/L	25.0	3.8	25		06/03/22 18:06	76-13-1	
1,2,4-Trimethylbenzene	**2250**	ug/L	25.0	3.2	25		06/03/22 18:06	95-63-6	
1,3,5-Trimethylbenzene	**620**	ug/L	25.0	2.8	25		06/03/22 18:06	108-67-8	
Vinyl chloride	**<1.2**	ug/L	25.0	1.2	25		06/03/22 18:06	75-01-4	
Xylene (Total)	**14000**	ug/L	75.0	5.0	25		06/03/22 18:06	1330-20-7	
m&p-Xylene	**9380**	ug/L	50.0	5.0	25		06/03/22 18:06	179601-23-1	
o-Xylene	**4650**	ug/L	25.0	4.4	25		06/03/22 18:06	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	101	%.	75-125		25		06/03/22 18:06	2199-69-1	D4
4-Bromofluorobenzene (S)	99	%.	75-125		25		06/03/22 18:06	460-00-4	
Toluene-d8 (S)	101	%.	75-125		25		06/03/22 18:06	2037-26-5	

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1700 Elm Street
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(612)607-1700

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Sample: MW-4 / T68 **Lab ID: 10610203003** Collected: 05/25/22 13:07 Received: 05/26/22 15:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Acetone	**<1.9**	ug/L	10.0	1.9	1		06/03/22 17:20	67-64-1	
Allyl chloride	**<0.15**	ug/L	2.5	0.15	1		06/03/22 17:20	107-05-1	
Benzene	**1500**	ug/L	20.0	2.1	20		06/08/22 13:02	71-43-2	
Bromobenzene	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:20	108-86-1	
Bromochloromethane	**<0.15**	ug/L	1.0	0.15	1		06/03/22 17:20	74-97-5	
Bromodichloromethane	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:20	75-27-4	
Bromoform	**<0.22**	ug/L	1.0	0.22	1		06/03/22 17:20	75-25-2	
Bromomethane	**<0.38**	ug/L	2.5	0.38	1		06/03/22 17:20	74-83-9	
2-Butanone (MEK)	**<0.93**	ug/L	10.0	0.93	1		06/03/22 17:20	78-93-3	
n-Butylbenzene	**4.5**	ug/L	1.0	0.096	1		06/03/22 17:20	104-51-8	
sec-Butylbenzene	**2.9**	ug/L	1.0	0.097	1		06/03/22 17:20	135-98-8	
tert-Butylbenzene	**0.18J**	ug/L	1.0	0.091	1		06/03/22 17:20	98-06-6	
Carbon tetrachloride	**<0.13**	ug/L	1.0	0.13	1		06/03/22 17:20	56-23-5	
Chlorobenzene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 17:20	108-90-7	
Chloroethane	**<0.21**	ug/L	1.0	0.21	1		06/03/22 17:20	75-00-3	
Chloroform	**<0.23**	ug/L	1.0	0.23	1		06/03/22 17:20	67-66-3	
Chloromethane	**<0.17**	ug/L	1.0	0.17	1		06/03/22 17:20	74-87-3	
2-Chlorotoluene	**<0.098**	ug/L	1.0	0.098	1		06/03/22 17:20	95-49-8	
4-Chlorotoluene	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:20	106-43-4	
1,2-Dibromo-3-chloropropane	**<0.36**	ug/L	2.5	0.36	1		06/03/22 17:20	96-12-8	
Dibromochloromethane	**<0.20**	ug/L	1.0	0.20	1		06/03/22 17:20	124-48-1	
1,2-Dibromoethane (EDB)	**<0.20**	ug/L	1.0	0.20	1		06/03/22 17:20	106-93-4	
Dibromomethane	**<0.17**	ug/L	1.0	0.17	1		06/03/22 17:20	74-95-3	
1,2-Dichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 17:20	95-50-1	
1,3-Dichlorobenzene	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:20	541-73-1	
1,4-Dichlorobenzene	**<0.15**	ug/L	1.0	0.15	1		06/03/22 17:20	106-46-7	
Dichlorodifluoromethane	**<0.079**	ug/L	1.0	0.079	1		06/03/22 17:20	75-71-8	
1,1-Dichloroethane	**<0.11**	ug/L	1.0	0.11	1		06/03/22 17:20	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		06/03/22 17:20	107-06-2	
1,1-Dichloroethene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 17:20	75-35-4	
cis-1,2-Dichloroethene	**<0.15**	ug/L	1.0	0.15	1		06/03/22 17:20	156-59-2	
trans-1,2-Dichloroethene	**<0.14**	ug/L	1.0	0.14	1		06/03/22 17:20	156-60-5	
Dichlorofluoromethane	**<0.15**	ug/L	1.0	0.15	1		06/03/22 17:20	75-43-4	
1,2-Dichloropropane	**<0.15**	ug/L	1.0	0.15	1		06/03/22 17:20	78-87-5	
1,3-Dichloropropane	**<0.16**	ug/L	1.0	0.16	1		06/03/22 17:20	142-28-9	
2,2-Dichloropropane	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:20	594-20-7	
1,1-Dichloropropene	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:20	563-58-6	
cis-1,3-Dichloropropene	**<0.057**	ug/L	1.0	0.057	1		06/03/22 17:20	10061-01-5	
trans-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 17:20	10061-02-6	
Diethyl ether (Ethyl ether)	**<0.19**	ug/L	2.5	0.19	1		06/03/22 17:20	60-29-7	
Ethylbenzene	**357**	ug/L	10.0	1.1	10		06/07/22 15:29	100-41-4	
Hexachloro-1,3-butadiene	**<0.24**	ug/L	1.0	0.24	1		06/03/22 17:20	87-68-3	
Isopropylbenzene (Cumene)	**19.0**	ug/L	1.0	0.12	1		06/03/22 17:20	98-82-8	
p-Isopropyltoluene	**7.7**	ug/L	1.0	0.11	1		06/03/22 17:20	99-87-6	
Methylene Chloride	**<0.33**	ug/L	1.0	0.33	1		06/03/22 17:20	75-09-2	

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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Sample: MW-4 / T68 **Lab ID: 10610203003** Collected: 05/25/22 13:07 Received: 05/26/22 15:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
4-Methyl-2-pentanone (MIBK)	**<0.80**	ug/L	10.0	0.80	1		06/03/22 17:20	108-10-1	
Methyl-tert-butyl ether	**<0.13**	ug/L	1.0	0.13	1		06/03/22 17:20	1634-04-4	
Naphthalene	**2.1**	ug/L	1.0	0.18	1		06/03/22 17:20	91-20-3	
n-Propylbenzene	**36.1**	ug/L	1.0	0.11	1		06/03/22 17:20	103-65-1	
Styrene	**<0.097**	ug/L	1.0	0.097	1		06/03/22 17:20	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.19**	ug/L	1.0	0.19	1		06/03/22 17:20	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.15**	ug/L	1.0	0.15	1		06/03/22 17:20	79-34-5	
Tetrachloroethene	**<0.10**	ug/L	1.0	0.10	1		06/03/22 17:20	127-18-4	
Tetrahydrofuran	**<1.4**	ug/L	10.0	1.4	1		06/03/22 17:20	109-99-9	
Toluene	**4.3**	ug/L	1.0	0.10	1		06/03/22 17:20	108-88-3	
1,2,3-Trichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 17:20	87-61-6	
1,2,4-Trichlorobenzene	**<0.14**	ug/L	1.0	0.14	1		06/03/22 17:20	120-82-1	
1,1,1-Trichloroethane	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:20	71-55-6	
1,1,2-Trichloroethane	**<0.22**	ug/L	1.0	0.22	1		06/03/22 17:20	79-00-5	
Trichloroethene	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:20	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	1.0	0.12	1		06/03/22 17:20	75-69-4	
1,2,3-Trichloropropane	**<0.38**	ug/L	2.5	0.38	1		06/03/22 17:20	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<0.15**	ug/L	1.0	0.15	1		06/03/22 17:20	76-13-1	
1,2,4-Trimethylbenzene	**676**	ug/L	10.0	1.3	10		06/07/22 15:29	95-63-6	
1,3,5-Trimethylbenzene	**15.9**	ug/L	1.0	0.11	1		06/03/22 17:20	108-67-8	
Vinyl chloride	**<0.046**	ug/L	1.0	0.046	1		06/03/22 17:20	75-01-4	
Xylene (Total)	**383**	ug/L	3.0	0.20	1		06/03/22 17:20	1330-20-7	
m&p-Xylene	**382**	ug/L	2.0	0.20	1		06/03/22 17:20	179601-23-1	
o-Xylene	**0.52J**	ug/L	1.0	0.18	1		06/03/22 17:20	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	100	%.	75-125		1		06/03/22 17:20	2199-69-1	
4-Bromofluorobenzene (S)	99	%.	75-125		1		06/03/22 17:20	460-00-4	
Toluene-d8 (S)	102	%.	75-125		1		06/03/22 17:20	2037-26-5	

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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Sample: MW-5 / T68 **Lab ID: 10610203004** Collected: 05/25/22 13:15 Received: 05/26/22 15:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Acetone	**132J**	ug/L	250	47.5	25		06/03/22 18:21	67-64-1	
Allyl chloride	**<3.6**	ug/L	62.5	3.6	25		06/03/22 18:21	107-05-1	
Benzene	**18600**	ug/L	200	20.6	200		06/07/22 17:44	71-43-2	
Bromobenzene	**<3.0**	ug/L	25.0	3.0	25		06/03/22 18:21	108-86-1	
Bromochloromethane	**<3.8**	ug/L	25.0	3.8	25		06/03/22 18:21	74-97-5	
Bromodichloromethane	**<2.9**	ug/L	25.0	2.9	25		06/03/22 18:21	75-27-4	
Bromoform	**<5.6**	ug/L	25.0	5.6	25		06/03/22 18:21	75-25-2	
Bromomethane	**<9.6**	ug/L	62.5	9.6	25		06/03/22 18:21	74-83-9	
2-Butanone (MEK)	**79.6J**	ug/L	250	23.4	25		06/03/22 18:21	78-93-3	
n-Butylbenzene	**<2.4**	ug/L	25.0	2.4	25		06/03/22 18:21	104-51-8	
sec-Butylbenzene	**10.5J**	ug/L	25.0	2.4	25		06/03/22 18:21	135-98-8	
tert-Butylbenzene	**<2.3**	ug/L	25.0	2.3	25		06/03/22 18:21	98-06-6	
Carbon tetrachloride	**<3.4**	ug/L	25.0	3.4	25		06/03/22 18:21	56-23-5	
Chlorobenzene	**<3.3**	ug/L	25.0	3.3	25		06/03/22 18:21	108-90-7	
Chloroethane	**<5.2**	ug/L	25.0	5.2	25		06/03/22 18:21	75-00-3	
Chloroform	**<5.8**	ug/L	25.0	5.8	25		06/03/22 18:21	67-66-3	
Chloromethane	**<4.2**	ug/L	25.0	4.2	25		06/03/22 18:21	74-87-3	
2-Chlorotoluene	**<2.4**	ug/L	25.0	2.4	25		06/03/22 18:21	95-49-8	
4-Chlorotoluene	**<3.1**	ug/L	25.0	3.1	25		06/03/22 18:21	106-43-4	
1,2-Dibromo-3-chloropropane	**<8.9**	ug/L	62.5	8.9	25		06/03/22 18:21	96-12-8	
Dibromochloromethane	**<5.1**	ug/L	25.0	5.1	25		06/03/22 18:21	124-48-1	
1,2-Dibromoethane (EDB)	**<5.0**	ug/L	25.0	5.0	25		06/03/22 18:21	106-93-4	
Dibromomethane	**<4.3**	ug/L	25.0	4.3	25		06/03/22 18:21	74-95-3	
1,2-Dichlorobenzene	**<3.3**	ug/L	25.0	3.3	25		06/03/22 18:21	95-50-1	
1,3-Dichlorobenzene	**<3.1**	ug/L	25.0	3.1	25		06/03/22 18:21	541-73-1	
1,4-Dichlorobenzene	**<3.7**	ug/L	25.0	3.7	25		06/03/22 18:21	106-46-7	
Dichlorodifluoromethane	**<2.0**	ug/L	25.0	2.0	25		06/03/22 18:21	75-71-8	
1,1-Dichloroethane	**<2.7**	ug/L	25.0	2.7	25		06/03/22 18:21	75-34-3	
1,2-Dichloroethane	**<4.2**	ug/L	25.0	4.2	25		06/03/22 18:21	107-06-2	
1,1-Dichloroethene	**<3.3**	ug/L	25.0	3.3	25		06/03/22 18:21	75-35-4	
cis-1,2-Dichloroethene	**<3.8**	ug/L	25.0	3.8	25		06/03/22 18:21	156-59-2	
trans-1,2-Dichloroethene	**<3.4**	ug/L	25.0	3.4	25		06/03/22 18:21	156-60-5	
Dichlorofluoromethane	**<3.8**	ug/L	25.0	3.8	25		06/03/22 18:21	75-43-4	
1,2-Dichloropropane	**<3.7**	ug/L	25.0	3.7	25		06/03/22 18:21	78-87-5	
1,3-Dichloropropane	**<4.0**	ug/L	25.0	4.0	25		06/03/22 18:21	142-28-9	
2,2-Dichloropropane	**<2.9**	ug/L	25.0	2.9	25		06/03/22 18:21	594-20-7	
1,1-Dichloropropene	**<3.1**	ug/L	25.0	3.1	25		06/03/22 18:21	563-58-6	
cis-1,3-Dichloropropene	**<1.4**	ug/L	25.0	1.4	25		06/03/22 18:21	10061-01-5	
trans-1,3-Dichloropropene	**<3.2**	ug/L	25.0	3.2	25		06/03/22 18:21	10061-02-6	
Diethyl ether (Ethyl ether)	**<4.8**	ug/L	62.5	4.8	25		06/03/22 18:21	60-29-7	
Ethylbenzene	**1820**	ug/L	25.0	2.7	25		06/03/22 18:21	100-41-4	
Hexachloro-1,3-butadiene	**<5.9**	ug/L	25.0	5.9	25		06/03/22 18:21	87-68-3	
Isopropylbenzene (Cumene)	**55.1**	ug/L	25.0	2.9	25		06/03/22 18:21	98-82-8	
p-Isopropyltoluene	**5.3J**	ug/L	25.0	2.6	25		06/03/22 18:21	99-87-6	
Methylene Chloride	**<8.2**	ug/L	25.0	8.2	25		06/03/22 18:21	75-09-2	

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Sample: MW-5 / T68 **Lab ID: 10610203004** Collected: 05/25/22 13:15 Received: 05/26/22 15:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
4-Methyl-2-pentanone (MIBK)	**91.0J**	ug/L	250	20.1	25		06/03/22 18:21	108-10-1	
Methyl-tert-butyl ether	**<3.2**	ug/L	25.0	3.2	25		06/03/22 18:21	1634-04-4	
Naphthalene	**535**	ug/L	25.0	4.5	25		06/03/22 18:21	91-20-3	
n-Propylbenzene	**148**	ug/L	25.0	2.7	25		06/03/22 18:21	103-65-1	
Styrene	**<2.4**	ug/L	25.0	2.4	25		06/03/22 18:21	100-42-5	
1,1,1,2-Tetrachloroethane	**<4.8**	ug/L	25.0	4.8	25		06/03/22 18:21	630-20-6	
1,1,2,2-Tetrachloroethane	**<3.6**	ug/L	25.0	3.6	25		06/03/22 18:21	79-34-5	
Tetrachloroethene	**<2.6**	ug/L	25.0	2.6	25		06/03/22 18:21	127-18-4	
Tetrahydrofuran	**<34.8**	ug/L	250	34.8	25		06/03/22 18:21	109-99-9	
Toluene	**31500**	ug/L	200	20.6	200		06/07/22 17:44	108-88-3	
1,2,3-Trichlorobenzene	**<3.3**	ug/L	25.0	3.3	25		06/03/22 18:21	87-61-6	
1,2,4-Trichlorobenzene	**<3.5**	ug/L	25.0	3.5	25		06/03/22 18:21	120-82-1	
1,1,1-Trichloroethane	**<3.1**	ug/L	25.0	3.1	25		06/03/22 18:21	71-55-6	
1,1,2-Trichloroethane	**<5.6**	ug/L	25.0	5.6	25		06/03/22 18:21	79-00-5	
Trichloroethene	**<3.0**	ug/L	25.0	3.0	25		06/03/22 18:21	79-01-6	
Trichlorofluoromethane	**<3.1**	ug/L	25.0	3.1	25		06/03/22 18:21	75-69-4	
1,2,3-Trichloropropane	**<9.4**	ug/L	62.5	9.4	25		06/03/22 18:21	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<3.8**	ug/L	25.0	3.8	25		06/03/22 18:21	76-13-1	
1,2,4-Trimethylbenzene	**2580**	ug/L	25.0	3.2	25		06/03/22 18:21	95-63-6	
1,3,5-Trimethylbenzene	**779**	ug/L	25.0	2.8	25		06/03/22 18:21	108-67-8	
Vinyl chloride	**<1.2**	ug/L	25.0	1.2	25		06/03/22 18:21	75-01-4	
Xylene (Total)	**21900**	ug/L	600	39.8	200		06/07/22 17:44	1330-20-7	
m&p-Xylene	**15100**	ug/L	400	39.8	200		06/07/22 17:44	179601-23-1	
o-Xylene	**6820**	ug/L	200	35.4	200		06/07/22 17:44	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	101	%.	75-125		25		06/03/22 18:21	2199-69-1	D4
4-Bromofluorobenzene (S)	98	%.	75-125		25		06/03/22 18:21	460-00-4	
Toluene-d8 (S)	102	%.	75-125		25		06/03/22 18:21	2037-26-5	

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1700 Elm Street
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(612)607-1700

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Sample: MW-5 / T66 **Lab ID: 10610203005** Collected: 05/25/22 13:34 Received: 05/26/22 15:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Acetone	**37.4J**	ug/L	100	19.0	10		06/03/22 17:50	67-64-1	
Allyl chloride	**<1.5**	ug/L	25.0	1.5	10		06/03/22 17:50	107-05-1	
Benzene	**5340**	ug/L	100	10.3	100		06/07/22 16:29	71-43-2	
Bromobenzene	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:50	108-86-1	
Bromochloromethane	**<1.5**	ug/L	10.0	1.5	10		06/03/22 17:50	74-97-5	
Bromodichloromethane	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:50	75-27-4	
Bromoform	**<2.2**	ug/L	10.0	2.2	10		06/03/22 17:50	75-25-2	
Bromomethane	**<3.8**	ug/L	25.0	3.8	10		06/03/22 17:50	74-83-9	
2-Butanone (MEK)	**13.7J**	ug/L	100	9.3	10		06/03/22 17:50	78-93-3	
n-Butylbenzene	**<0.96**	ug/L	10.0	0.96	10		06/03/22 17:50	104-51-8	
sec-Butylbenzene	**10.0**	ug/L	10.0	0.97	10		06/03/22 17:50	135-98-8	
tert-Butylbenzene	**<0.91**	ug/L	10.0	0.91	10		06/03/22 17:50	98-06-6	
Carbon tetrachloride	**<1.3**	ug/L	10.0	1.3	10		06/03/22 17:50	56-23-5	
Chlorobenzene	**<1.3**	ug/L	10.0	1.3	10		06/03/22 17:50	108-90-7	
Chloroethane	**<2.1**	ug/L	10.0	2.1	10		06/03/22 17:50	75-00-3	
Chloroform	**<2.3**	ug/L	10.0	2.3	10		06/03/22 17:50	67-66-3	
Chloromethane	**<1.7**	ug/L	10.0	1.7	10		06/03/22 17:50	74-87-3	
2-Chlorotoluene	**<0.98**	ug/L	10.0	0.98	10		06/03/22 17:50	95-49-8	
4-Chlorotoluene	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:50	106-43-4	
1,2-Dibromo-3-chloropropane	**<3.6**	ug/L	25.0	3.6	10		06/03/22 17:50	96-12-8	
Dibromochloromethane	**<2.0**	ug/L	10.0	2.0	10		06/03/22 17:50	124-48-1	
1,2-Dibromoethane (EDB)	**<2.0**	ug/L	10.0	2.0	10		06/03/22 17:50	106-93-4	
Dibromomethane	**<1.7**	ug/L	10.0	1.7	10		06/03/22 17:50	74-95-3	
1,2-Dichlorobenzene	**<1.3**	ug/L	10.0	1.3	10		06/03/22 17:50	95-50-1	
1,3-Dichlorobenzene	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:50	541-73-1	
1,4-Dichlorobenzene	**<1.5**	ug/L	10.0	1.5	10		06/03/22 17:50	106-46-7	
Dichlorodifluoromethane	**<0.79**	ug/L	10.0	0.79	10		06/03/22 17:50	75-71-8	
1,1-Dichloroethane	**<1.1**	ug/L	10.0	1.1	10		06/03/22 17:50	75-34-3	
1,2-Dichloroethane	**<1.7**	ug/L	10.0	1.7	10		06/03/22 17:50	107-06-2	
1,1-Dichloroethene	**<1.3**	ug/L	10.0	1.3	10		06/03/22 17:50	75-35-4	
cis-1,2-Dichloroethene	**<1.5**	ug/L	10.0	1.5	10		06/03/22 17:50	156-59-2	
trans-1,2-Dichloroethene	**<1.4**	ug/L	10.0	1.4	10		06/03/22 17:50	156-60-5	
Dichlorofluoromethane	**<1.5**	ug/L	10.0	1.5	10		06/03/22 17:50	75-43-4	
1,2-Dichloropropane	**<1.5**	ug/L	10.0	1.5	10		06/03/22 17:50	78-87-5	
1,3-Dichloropropane	**<1.6**	ug/L	10.0	1.6	10		06/03/22 17:50	142-28-9	
2,2-Dichloropropane	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:50	594-20-7	
1,1-Dichloropropene	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:50	563-58-6	
cis-1,3-Dichloropropene	**<0.57**	ug/L	10.0	0.57	10		06/03/22 17:50	10061-01-5	
trans-1,3-Dichloropropene	**<1.3**	ug/L	10.0	1.3	10		06/03/22 17:50	10061-02-6	
Diethyl ether (Ethyl ether)	**<1.9**	ug/L	25.0	1.9	10		06/03/22 17:50	60-29-7	
Ethylbenzene	**2540**	ug/L	100	10.9	100		06/07/22 16:29	100-41-4	
Hexachloro-1,3-butadiene	**<2.4**	ug/L	10.0	2.4	10		06/03/22 17:50	87-68-3	
Isopropylbenzene (Cumene)	**66.6**	ug/L	10.0	1.2	10		06/03/22 17:50	98-82-8	
p-Isopropyltoluene	**5.4J**	ug/L	10.0	1.1	10		06/03/22 17:50	99-87-6	
Methylene Chloride	**<3.3**	ug/L	10.0	3.3	10		06/03/22 17:50	75-09-2	

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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Sample: MW-5 / T66 **Lab ID: 10610203005** Collected: 05/25/22 13:34 Received: 05/26/22 15:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
4-Methyl-2-pentanone (MIBK)	**15.5J**	ug/L	100	8.0	10		06/03/22 17:50	108-10-1	
Methyl-tert-butyl ether	**<1.3**	ug/L	10.0	1.3	10		06/03/22 17:50	1634-04-4	
Naphthalene	**402**	ug/L	10.0	1.8	10		06/03/22 17:50	91-20-3	
n-Propylbenzene	**217**	ug/L	10.0	1.1	10		06/03/22 17:50	103-65-1	
Styrene	**<0.97**	ug/L	10.0	0.97	10		06/03/22 17:50	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.9**	ug/L	10.0	1.9	10		06/03/22 17:50	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.5**	ug/L	10.0	1.5	10		06/03/22 17:50	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	10.0	1.0	10		06/03/22 17:50	127-18-4	
Tetrahydrofuran	**<13.9**	ug/L	100	13.9	10		06/03/22 17:50	109-99-9	
Toluene	**1730**	ug/L	10.0	1.0	10		06/03/22 17:50	108-88-3	
1,2,3-Trichlorobenzene	**<1.3**	ug/L	10.0	1.3	10		06/03/22 17:50	87-61-6	
1,2,4-Trichlorobenzene	**<1.4**	ug/L	10.0	1.4	10		06/03/22 17:50	120-82-1	
1,1,1-Trichloroethane	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:50	71-55-6	
1,1,2-Trichloroethane	**<2.2**	ug/L	10.0	2.2	10		06/03/22 17:50	79-00-5	
Trichloroethene	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:50	79-01-6	
Trichlorofluoromethane	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:50	75-69-4	
1,2,3-Trichloropropane	**<3.8**	ug/L	25.0	3.8	10		06/03/22 17:50	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<1.5**	ug/L	10.0	1.5	10		06/03/22 17:50	76-13-1	
1,2,4-Trimethylbenzene	**2420**	ug/L	100	13.0	100		06/07/22 16:29	95-63-6	
1,3,5-Trimethylbenzene	**644**	ug/L	10.0	1.1	10		06/03/22 17:50	108-67-8	
Vinyl chloride	**<0.46**	ug/L	10.0	0.46	10		06/03/22 17:50	75-01-4	
Xylene (Total)	**14800**	ug/L	300	19.9	100		06/07/22 16:29	1330-20-7	
m&p-Xylene	**11400**	ug/L	200	19.9	100		06/07/22 16:29	179601-23-1	
o-Xylene	**3420**	ug/L	100	17.7	100		06/07/22 16:29	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	99	%.	75-125		10		06/03/22 17:50	2199-69-1	D4
4-Bromofluorobenzene (S)	100	%.	75-125		10		06/03/22 17:50	460-00-4	
Toluene-d8 (S)	102	%.	75-125		10		06/03/22 17:50	2037-26-5	

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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Sample: MW-6 / T68 **Lab ID: 10610203006** Collected: 05/25/22 13:24 Received: 05/26/22 15:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Acetone	**52.3J**	ug/L	100	19.0	10		06/03/22 17:35	67-64-1	
Allyl chloride	**<1.5**	ug/L	25.0	1.5	10		06/03/22 17:35	107-05-1	
Benzene	**17400**	ug/L	200	20.6	200		06/08/22 13:17	71-43-2	
Bromobenzene	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:35	108-86-1	
Bromochloromethane	**<1.5**	ug/L	10.0	1.5	10		06/03/22 17:35	74-97-5	
Bromodichloromethane	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:35	75-27-4	
Bromoform	**<2.2**	ug/L	10.0	2.2	10		06/03/22 17:35	75-25-2	
Bromomethane	**<3.8**	ug/L	25.0	3.8	10		06/03/22 17:35	74-83-9	
2-Butanone (MEK)	**48.0J**	ug/L	100	9.3	10		06/03/22 17:35	78-93-3	
n-Butylbenzene	**<0.96**	ug/L	10.0	0.96	10		06/03/22 17:35	104-51-8	
sec-Butylbenzene	**9.8J**	ug/L	10.0	0.97	10		06/03/22 17:35	135-98-8	
tert-Butylbenzene	**<0.91**	ug/L	10.0	0.91	10		06/03/22 17:35	98-06-6	
Carbon tetrachloride	**<1.3**	ug/L	10.0	1.3	10		06/03/22 17:35	56-23-5	
Chlorobenzene	**<1.3**	ug/L	10.0	1.3	10		06/03/22 17:35	108-90-7	
Chloroethane	**<2.1**	ug/L	10.0	2.1	10		06/03/22 17:35	75-00-3	
Chloroform	**<2.3**	ug/L	10.0	2.3	10		06/03/22 17:35	67-66-3	
Chloromethane	**<1.7**	ug/L	10.0	1.7	10		06/03/22 17:35	74-87-3	
2-Chlorotoluene	**<0.98**	ug/L	10.0	0.98	10		06/03/22 17:35	95-49-8	
4-Chlorotoluene	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:35	106-43-4	
1,2-Dibromo-3-chloropropane	**<3.6**	ug/L	25.0	3.6	10		06/03/22 17:35	96-12-8	
Dibromochloromethane	**<2.0**	ug/L	10.0	2.0	10		06/03/22 17:35	124-48-1	
1,2-Dibromoethane (EDB)	**<2.0**	ug/L	10.0	2.0	10		06/03/22 17:35	106-93-4	
Dibromomethane	**<1.7**	ug/L	10.0	1.7	10		06/03/22 17:35	74-95-3	
1,2-Dichlorobenzene	**<1.3**	ug/L	10.0	1.3	10		06/03/22 17:35	95-50-1	
1,3-Dichlorobenzene	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:35	541-73-1	
1,4-Dichlorobenzene	**<1.5**	ug/L	10.0	1.5	10		06/03/22 17:35	106-46-7	
Dichlorodifluoromethane	**<0.79**	ug/L	10.0	0.79	10		06/03/22 17:35	75-71-8	
1,1-Dichloroethane	**<1.1**	ug/L	10.0	1.1	10		06/03/22 17:35	75-34-3	
1,2-Dichloroethane	**<1.7**	ug/L	10.0	1.7	10		06/03/22 17:35	107-06-2	
1,1-Dichloroethene	**<1.3**	ug/L	10.0	1.3	10		06/03/22 17:35	75-35-4	
cis-1,2-Dichloroethene	**<1.5**	ug/L	10.0	1.5	10		06/03/22 17:35	156-59-2	
trans-1,2-Dichloroethene	**<1.4**	ug/L	10.0	1.4	10		06/03/22 17:35	156-60-5	
Dichlorofluoromethane	**<1.5**	ug/L	10.0	1.5	10		06/03/22 17:35	75-43-4	
1,2-Dichloropropane	**<1.5**	ug/L	10.0	1.5	10		06/03/22 17:35	78-87-5	
1,3-Dichloropropane	**<1.6**	ug/L	10.0	1.6	10		06/03/22 17:35	142-28-9	
2,2-Dichloropropane	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:35	594-20-7	
1,1-Dichloropropene	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:35	563-58-6	
cis-1,3-Dichloropropene	**<0.57**	ug/L	10.0	0.57	10		06/03/22 17:35	10061-01-5	
trans-1,3-Dichloropropene	**<1.3**	ug/L	10.0	1.3	10		06/03/22 17:35	10061-02-6	
Diethyl ether (Ethyl ether)	**<1.9**	ug/L	25.0	1.9	10		06/03/22 17:35	60-29-7	
Ethylbenzene	**1540**	ug/L	10.0	1.1	10		06/03/22 17:35	100-41-4	
Hexachloro-1,3-butadiene	**<2.4**	ug/L	10.0	2.4	10		06/03/22 17:35	87-68-3	
Isopropylbenzene (Cumene)	**48.4**	ug/L	10.0	1.2	10		06/03/22 17:35	98-82-8	
p-Isopropyltoluene	**5.3J**	ug/L	10.0	1.1	10		06/03/22 17:35	99-87-6	
Methylene Chloride	**<3.3**	ug/L	10.0	3.3	10		06/03/22 17:35	75-09-2	

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Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Sample: MW-6 / T68 **Lab ID: 10610203006** Collected: 05/25/22 13:24 Received: 05/26/22 15:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
4-Methyl-2-pentanone (MIBK)	**41.9J**	ug/L	100	8.0	10		06/03/22 17:35	108-10-1	
Methyl-tert-butyl ether	**<1.3**	ug/L	10.0	1.3	10		06/03/22 17:35	1634-04-4	
Naphthalene	**434**	ug/L	10.0	1.8	10		06/03/22 17:35	91-20-3	
n-Propylbenzene	**131**	ug/L	10.0	1.1	10		06/03/22 17:35	103-65-1	
Styrene	**<0.97**	ug/L	10.0	0.97	10		06/03/22 17:35	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.9**	ug/L	10.0	1.9	10		06/03/22 17:35	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.5**	ug/L	10.0	1.5	10		06/03/22 17:35	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	10.0	1.0	10		06/03/22 17:35	127-18-4	
Tetrahydrofuran	**<13.9**	ug/L	100	13.9	10		06/03/22 17:35	109-99-9	
Toluene	**18000**	ug/L	100	10.3	100		06/07/22 16:44	108-88-3	
1,2,3-Trichlorobenzene	**<1.3**	ug/L	10.0	1.3	10		06/03/22 17:35	87-61-6	
1,2,4-Trichlorobenzene	**<1.4**	ug/L	10.0	1.4	10		06/03/22 17:35	120-82-1	
1,1,1-Trichloroethane	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:35	71-55-6	
1,1,2-Trichloroethane	**<2.2**	ug/L	10.0	2.2	10		06/03/22 17:35	79-00-5	
Trichloroethene	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:35	79-01-6	
Trichlorofluoromethane	**<1.2**	ug/L	10.0	1.2	10		06/03/22 17:35	75-69-4	
1,2,3-Trichloropropane	**<3.8**	ug/L	25.0	3.8	10		06/03/22 17:35	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<1.5**	ug/L	10.0	1.5	10		06/03/22 17:35	76-13-1	
1,2,4-Trimethylbenzene	**3190**	ug/L	100	13.0	100		06/07/22 16:44	95-63-6	
1,3,5-Trimethylbenzene	**804**	ug/L	10.0	1.1	10		06/03/22 17:35	108-67-8	
Vinyl chloride	**<0.46**	ug/L	10.0	0.46	10		06/03/22 17:35	75-01-4	
Xylene (Total)	**21000**	ug/L	300	19.9	100		06/07/22 16:44	1330-20-7	
m&p-Xylene	**14400**	ug/L	200	19.9	100		06/07/22 16:44	179601-23-1	
o-Xylene	**6590**	ug/L	100	17.7	100		06/07/22 16:44	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	100	%.	75-125		10		06/03/22 17:35	2199-69-1	D4
4-Bromofluorobenzene (S)	98	%.	75-125		10		06/03/22 17:35	460-00-4	
Toluene-d8 (S)	104	%.	75-125		10		06/03/22 17:35	2037-26-5	

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(612)607-1700

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Sample: Trip Blank **Lab ID: 10610203007** Collected: 05/25/22 00:00 Received: 05/26/22 15:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Acetone	**<1.9**	ug/L	10.0	1.9	1		06/03/22 13:44	67-64-1	
Allyl chloride	**<0.15**	ug/L	2.5	0.15	1		06/03/22 13:44	107-05-1	
Benzene	**<0.10**	ug/L	1.0	0.10	1		06/03/22 13:44	71-43-2	
Bromobenzene	**<0.12**	ug/L	1.0	0.12	1		06/03/22 13:44	108-86-1	
Bromochloromethane	**<0.15**	ug/L	1.0	0.15	1		06/03/22 13:44	74-97-5	
Bromodichloromethane	**<0.12**	ug/L	1.0	0.12	1		06/03/22 13:44	75-27-4	
Bromoform	**<0.22**	ug/L	1.0	0.22	1		06/03/22 13:44	75-25-2	
Bromomethane	**<0.38**	ug/L	2.5	0.38	1		06/03/22 13:44	74-83-9	
2-Butanone (MEK)	**<0.93**	ug/L	10.0	0.93	1		06/03/22 13:44	78-93-3	
n-Butylbenzene	**<0.096**	ug/L	1.0	0.096	1		06/03/22 13:44	104-51-8	
sec-Butylbenzene	**<0.097**	ug/L	1.0	0.097	1		06/03/22 13:44	135-98-8	
tert-Butylbenzene	**<0.091**	ug/L	1.0	0.091	1		06/03/22 13:44	98-06-6	
Carbon tetrachloride	**<0.13**	ug/L	1.0	0.13	1		06/03/22 13:44	56-23-5	
Chlorobenzene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 13:44	108-90-7	
Chloroethane	**<0.21**	ug/L	1.0	0.21	1		06/03/22 13:44	75-00-3	
Chloroform	**<0.23**	ug/L	1.0	0.23	1		06/03/22 13:44	67-66-3	
Chloromethane	**<0.17**	ug/L	1.0	0.17	1		06/03/22 13:44	74-87-3	
2-Chlorotoluene	**<0.098**	ug/L	1.0	0.098	1		06/03/22 13:44	95-49-8	
4-Chlorotoluene	**<0.12**	ug/L	1.0	0.12	1		06/03/22 13:44	106-43-4	
1,2-Dibromo-3-chloropropane	**<0.36**	ug/L	2.5	0.36	1		06/03/22 13:44	96-12-8	
Dibromochloromethane	**<0.20**	ug/L	1.0	0.20	1		06/03/22 13:44	124-48-1	
1,2-Dibromoethane (EDB)	**<0.20**	ug/L	1.0	0.20	1		06/03/22 13:44	106-93-4	
Dibromomethane	**<0.17**	ug/L	1.0	0.17	1		06/03/22 13:44	74-95-3	
1,2-Dichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 13:44	95-50-1	
1,3-Dichlorobenzene	**<0.12**	ug/L	1.0	0.12	1		06/03/22 13:44	541-73-1	
1,4-Dichlorobenzene	**<0.15**	ug/L	1.0	0.15	1		06/03/22 13:44	106-46-7	
Dichlorodifluoromethane	**<0.079**	ug/L	1.0	0.079	1		06/03/22 13:44	75-71-8	
1,1-Dichloroethane	**<0.11**	ug/L	1.0	0.11	1		06/03/22 13:44	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		06/03/22 13:44	107-06-2	
1,1-Dichloroethene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 13:44	75-35-4	
cis-1,2-Dichloroethene	**<0.15**	ug/L	1.0	0.15	1		06/03/22 13:44	156-59-2	
trans-1,2-Dichloroethene	**<0.14**	ug/L	1.0	0.14	1		06/03/22 13:44	156-60-5	
Dichlorofluoromethane	**<0.15**	ug/L	1.0	0.15	1		06/03/22 13:44	75-43-4	
1,2-Dichloropropane	**<0.15**	ug/L	1.0	0.15	1		06/03/22 13:44	78-87-5	
1,3-Dichloropropane	**<0.16**	ug/L	1.0	0.16	1		06/03/22 13:44	142-28-9	
2,2-Dichloropropane	**<0.12**	ug/L	1.0	0.12	1		06/03/22 13:44	594-20-7	
1,1-Dichloropropene	**<0.12**	ug/L	1.0	0.12	1		06/03/22 13:44	563-58-6	
cis-1,3-Dichloropropene	**<0.057**	ug/L	1.0	0.057	1		06/03/22 13:44	10061-01-5	
trans-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 13:44	10061-02-6	
Diethyl ether (Ethyl ether)	**<0.19**	ug/L	2.5	0.19	1		06/03/22 13:44	60-29-7	
Ethylbenzene	**<0.11**	ug/L	1.0	0.11	1		06/03/22 13:44	100-41-4	
Hexachloro-1,3-butadiene	**<0.24**	ug/L	1.0	0.24	1		06/03/22 13:44	87-68-3	
Isopropylbenzene (Cumene)	**<0.12**	ug/L	1.0	0.12	1		06/03/22 13:44	98-82-8	
p-Isopropyltoluene	**<0.11**	ug/L	1.0	0.11	1		06/03/22 13:44	99-87-6	
Methylene Chloride	**0.45J**	ug/L	1.0	0.33	1		06/03/22 13:44	75-09-2	

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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Sample: Trip Blank **Lab ID: 10610203007** Collected: 05/25/22 00:00 Received: 05/26/22 15:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
4-Methyl-2-pentanone (MIBK)	**<0.80**	ug/L	10.0	0.80	1		06/03/22 13:44	108-10-1	
Methyl-tert-butyl ether	**<0.13**	ug/L	1.0	0.13	1		06/03/22 13:44	1634-04-4	
Naphthalene	**<0.18**	ug/L	1.0	0.18	1		06/03/22 13:44	91-20-3	
n-Propylbenzene	**<0.11**	ug/L	1.0	0.11	1		06/03/22 13:44	103-65-1	
Styrene	**<0.097**	ug/L	1.0	0.097	1		06/03/22 13:44	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.19**	ug/L	1.0	0.19	1		06/03/22 13:44	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.15**	ug/L	1.0	0.15	1		06/03/22 13:44	79-34-5	
Tetrachloroethene	**<0.10**	ug/L	1.0	0.10	1		06/03/22 13:44	127-18-4	
Tetrahydrofuran	**<1.4**	ug/L	10.0	1.4	1		06/03/22 13:44	109-99-9	
Toluene	**<0.10**	ug/L	1.0	0.10	1		06/03/22 13:44	108-88-3	
1,2,3-Trichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 13:44	87-61-6	
1,2,4-Trichlorobenzene	**<0.14**	ug/L	1.0	0.14	1		06/03/22 13:44	120-82-1	
1,1,1-Trichloroethane	**<0.12**	ug/L	1.0	0.12	1		06/03/22 13:44	71-55-6	
1,1,2-Trichloroethane	**<0.22**	ug/L	1.0	0.22	1		06/03/22 13:44	79-00-5	
Trichloroethene	**<0.12**	ug/L	1.0	0.12	1		06/03/22 13:44	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	1.0	0.12	1		06/03/22 13:44	75-69-4	
1,2,3-Trichloropropane	**<0.38**	ug/L	2.5	0.38	1		06/03/22 13:44	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<0.15**	ug/L	1.0	0.15	1		06/03/22 13:44	76-13-1	
1,2,4-Trimethylbenzene	**<0.13**	ug/L	1.0	0.13	1		06/03/22 13:44	95-63-6	
1,3,5-Trimethylbenzene	**<0.11**	ug/L	1.0	0.11	1		06/03/22 13:44	108-67-8	
Vinyl chloride	**<0.046**	ug/L	1.0	0.046	1		06/03/22 13:44	75-01-4	
Xylene (Total)	**<0.20**	ug/L	3.0	0.20	1		06/03/22 13:44	1330-20-7	
m&p-Xylene	**<0.20**	ug/L	2.0	0.20	1		06/03/22 13:44	179601-23-1	
o-Xylene	**<0.18**	ug/L	1.0	0.18	1		06/03/22 13:44	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	100	%.	75-125		1		06/03/22 13:44	2199-69-1	
4-Bromofluorobenzene (S)	103	%.	75-125		1		06/03/22 13:44	460-00-4	
Toluene-d8 (S)	99	%.	75-125		1		06/03/22 13:44	2037-26-5	

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QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

QC Batch: 819128
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV 465 W
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10610203001, 10610203002, 10610203003, 10610203004, 10610203005, 10610203006, 10610203007

METHOD BLANK: 4340588 Matrix: Water
Associated Lab Samples: 10610203001, 10610203002, 10610203003, 10610203004, 10610203005, 10610203006, 10610203007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.19	1.0	06/03/22 12:42	
1,1,1-Trichloroethane	ug/L	<0.12	1.0	06/03/22 12:42	
1,1,2,2-Tetrachloroethane	ug/L	<0.15	1.0	06/03/22 12:42	
1,1,2-Trichloroethane	ug/L	<0.22	1.0	06/03/22 12:42	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.15	1.0	06/03/22 12:42	
1,1-Dichloroethane	ug/L	<0.11	1.0	06/03/22 12:42	
1,1-Dichloroethene	ug/L	<0.13	1.0	06/03/22 12:42	
1,1-Dichloropropene	ug/L	<0.12	1.0	06/03/22 12:42	
1,2,3-Trichlorobenzene	ug/L	<0.13	1.0	06/03/22 12:42	
1,2,3-Trichloropropane	ug/L	<0.38	2.5	06/03/22 12:42	
1,2,4-Trichlorobenzene	ug/L	<0.14	1.0	06/03/22 12:42	
1,2,4-Trimethylbenzene	ug/L	<0.13	1.0	06/03/22 12:42	
1,2-Dibromo-3-chloropropane	ug/L	<0.36	2.5	06/03/22 12:42	
1,2-Dibromoethane (EDB)	ug/L	<0.20	1.0	06/03/22 12:42	
1,2-Dichlorobenzene	ug/L	<0.13	1.0	06/03/22 12:42	
1,2-Dichloroethane	ug/L	<0.17	1.0	06/03/22 12:42	
1,2-Dichloropropane	ug/L	<0.15	1.0	06/03/22 12:42	
1,3,5-Trimethylbenzene	ug/L	<0.11	1.0	06/03/22 12:42	
1,3-Dichlorobenzene	ug/L	<0.12	1.0	06/03/22 12:42	
1,3-Dichloropropane	ug/L	<0.16	1.0	06/03/22 12:42	
1,4-Dichlorobenzene	ug/L	<0.15	1.0	06/03/22 12:42	
2,2-Dichloropropane	ug/L	<0.12	1.0	06/03/22 12:42	
2-Butanone (MEK)	ug/L	<0.93	10.0	06/03/22 12:42	
2-Chlorotoluene	ug/L	<0.098	1.0	06/03/22 12:42	
4-Chlorotoluene	ug/L	<0.12	1.0	06/03/22 12:42	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.80	10.0	06/03/22 12:42	
Acetone	ug/L	<1.9	10.0	06/03/22 12:42	
Allyl chloride	ug/L	<0.15	2.5	06/03/22 12:42	
Benzene	ug/L	<0.10	1.0	06/03/22 12:42	
Bromobenzene	ug/L	<0.12	1.0	06/03/22 12:42	
Bromochloromethane	ug/L	<0.15	1.0	06/03/22 12:42	
Bromodichloromethane	ug/L	<0.12	1.0	06/03/22 12:42	
Bromoform	ug/L	<0.22	1.0	06/03/22 12:42	
Bromomethane	ug/L	<0.38	2.5	06/03/22 12:42	
Carbon tetrachloride	ug/L	<0.13	1.0	06/03/22 12:42	
Chlorobenzene	ug/L	<0.13	1.0	06/03/22 12:42	
Chloroethane	ug/L	<0.21	1.0	06/03/22 12:42	
Chloroform	ug/L	<0.23	1.0	06/03/22 12:42	
Chloromethane	ug/L	<0.17	1.0	06/03/22 12:42	
cis-1,2-Dichloroethene	ug/L	<0.15	1.0	06/03/22 12:42	

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

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QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

METHOD BLANK: 4340588 Matrix: Water
Associated Lab Samples: 10610203001, 10610203002, 10610203003, 10610203004, 10610203005, 10610203006, 10610203007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,3-Dichloropropene	ug/L	<0.057	1.0	06/03/22 12:42	
Dibromochloromethane	ug/L	<0.20	1.0	06/03/22 12:42	
Dibromomethane	ug/L	<0.17	1.0	06/03/22 12:42	
Dichlorodifluoromethane	ug/L	<0.079	1.0	06/03/22 12:42	
Dichlorofluoromethane	ug/L	<0.15	1.0	06/03/22 12:42	
Diethyl ether (Ethyl ether)	ug/L	<0.19	2.5	06/03/22 12:42	
Ethylbenzene	ug/L	<0.11	1.0	06/03/22 12:42	
Hexachloro-1,3-butadiene	ug/L	<0.24	1.0	06/03/22 12:42	
Isopropylbenzene (Cumene)	ug/L	<0.12	1.0	06/03/22 12:42	
m&p-Xylene	ug/L	<0.20	2.0	06/03/22 12:42	
Methyl-tert-butyl ether	ug/L	<0.13	1.0	06/03/22 12:42	
Methylene Chloride	ug/L	<0.33	1.0	06/03/22 12:42	
n-Butylbenzene	ug/L	<0.096	1.0	06/03/22 12:42	
n-Propylbenzene	ug/L	<0.11	1.0	06/03/22 12:42	
Naphthalene	ug/L	<0.18	1.0	06/03/22 12:42	
o-Xylene	ug/L	<0.18	1.0	06/03/22 12:42	
p-Isopropyltoluene	ug/L	<0.11	1.0	06/03/22 12:42	
sec-Butylbenzene	ug/L	<0.097	1.0	06/03/22 12:42	
Styrene	ug/L	<0.097	1.0	06/03/22 12:42	
tert-Butylbenzene	ug/L	<0.091	1.0	06/03/22 12:42	
Tetrachloroethene	ug/L	<0.10	1.0	06/03/22 12:42	
Tetrahydrofuran	ug/L	<1.4	10.0	06/03/22 12:42	
Toluene	ug/L	<0.10	1.0	06/03/22 12:42	
trans-1,2-Dichloroethene	ug/L	<0.14	1.0	06/03/22 12:42	
trans-1,3-Dichloropropene	ug/L	<0.13	1.0	06/03/22 12:42	
Trichloroethene	ug/L	<0.12	1.0	06/03/22 12:42	
Trichlorofluoromethane	ug/L	<0.12	1.0	06/03/22 12:42	
Vinyl chloride	ug/L	<0.046	1.0	06/03/22 12:42	
Xylene (Total)	ug/L	<0.20	3.0	06/03/22 12:42	
1,2-Dichlorobenzene-d4 (S)	%.	102	75-125	06/03/22 12:42	
4-Bromofluorobenzene (S)	%.	107	75-125	06/03/22 12:42	
Toluene-d8 (S)	%.	101	75-125	06/03/22 12:42	

LABORATORY CONTROL SAMPLE: 4340589

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.7	99	75-125	
1,1,1-Trichloroethane	ug/L	20	20.1	100	72-125	
1,1,2,2-Tetrachloroethane	ug/L	20	21.1	105	70-125	
1,1,2-Trichloroethane	ug/L	20	19.6	98	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	20	21.9	109	63-125	
1,1-Dichloroethane	ug/L	20	20.5	103	67-125	
1,1-Dichloroethene	ug/L	20	19.9	99	67-125	
1,1-Dichloropropene	ug/L	20	20.9	105	70-125	

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(612)607-1700

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

LABORATORY CONTROL SAMPLE: 4340589

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,3-Trichlorobenzene	ug/L	20	18.1	91	68-125	
1,2,3-Trichloropropane	ug/L	20	20.8	104	74-125	
1,2,4-Trichlorobenzene	ug/L	20	17.9	89	68-125	
1,2,4-Trimethylbenzene	ug/L	20	20.1	101	75-125	
1,2-Dibromo-3-chloropropane	ug/L	20	20.9	105	54-131	
1,2-Dibromoethane (EDB)	ug/L	20	19.8	99	75-125	
1,2-Dichlorobenzene	ug/L	20	18.8	94	75-125	
1,2-Dichloroethane	ug/L	20	21.9	109	75-125	
1,2-Dichloropropane	ug/L	20	20.7	104	70-128	
1,3,5-Trimethylbenzene	ug/L	20	20.4	102	75-125	
1,3-Dichlorobenzene	ug/L	20	19.1	96	75-125	
1,3-Dichloropropane	ug/L	20	20.3	102	75-125	
1,4-Dichlorobenzene	ug/L	20	19.1	95	75-125	
2,2-Dichloropropane	ug/L	20	20.1	101	49-125	
2-Butanone (MEK)	ug/L	100	118	118	56-138	
2-Chlorotoluene	ug/L	20	20.3	101	70-125	
4-Chlorotoluene	ug/L	20	20.3	102	70-125	
4-Methyl-2-pentanone (MIBK)	ug/L	100	119	119	64-133	
Acetone	ug/L	100	104	104	42-131	
Allyl chloride	ug/L	20	20.6	103	51-133	
Benzene	ug/L	20	19.9	100	73-125	
Bromobenzene	ug/L	20	18.9	94	75-125	
Bromochloromethane	ug/L	20	18.5	92	75-125	
Bromodichloromethane	ug/L	20	20.3	102	74-125	
Bromoform	ug/L	20	18.4	92	61-125	
Bromomethane	ug/L	20	13.6	68	30-125	
Carbon tetrachloride	ug/L	20	20.8	104	58-125	
Chlorobenzene	ug/L	20	19.5	97	75-125	
Chloroethane	ug/L	20	20.7	103	58-125	
Chloroform	ug/L	20	19.0	95	74-125	
Chloromethane	ug/L	20	20.9	104	38-142	
cis-1,2-Dichloroethene	ug/L	20	18.8	94	75-125	
cis-1,3-Dichloropropene	ug/L	20	19.7	99	72-125	
Dibromochloromethane	ug/L	20	19.6	98	73-125	
Dibromomethane	ug/L	20	18.9	94	68-125	
Dichlorodifluoromethane	ug/L	20	24.1	121	46-149	
Dichlorofluoromethane	ug/L	20	22.8	114	71-126	
Diethyl ether (Ethyl ether)	ug/L	20	19.8	99	68-127	
Ethylbenzene	ug/L	20	19.5	98	75-125	
Hexachloro-1,3-butadiene	ug/L	20	18.5	93	52-131	
Isopropylbenzene (Cumene)	ug/L	20	19.8	99	74-125	
m&p-Xylene	ug/L	40	38.2	95	72-125	
Methyl-tert-butyl ether	ug/L	20	20.2	101	75-125	
Methylene Chloride	ug/L	20	18.1	90	70-125	
n-Butylbenzene	ug/L	20	20.9	105	68-125	
n-Propylbenzene	ug/L	20	20.7	104	70-125	
Naphthalene	ug/L	20	20.0	100	66-127	

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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

LABORATORY CONTROL SAMPLE: 4340589

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
o-Xylene	ug/L	20	19.0	95	73-125	
p-Isopropyltoluene	ug/L	20	20.1	100	72-125	
sec-Butylbenzene	ug/L	20	20.9	104	72-125	
Styrene	ug/L	20	22.4	112	75-125	
tert-Butylbenzene	ug/L	20	19.9	100	74-125	
Tetrachloroethene	ug/L	20	19.0	95	72-125	
Tetrahydrofuran	ug/L	100	118	118	75-125	
Toluene	ug/L	20	19.2	96	74-125	
trans-1,2-Dichloroethene	ug/L	20	19.6	98	73-125	
trans-1,3-Dichloropropene	ug/L	20	19.4	97	72-125	
Trichloroethene	ug/L	20	19.1	95	75-125	
Trichlorofluoromethane	ug/L	20	23.2	116	62-136	
Vinyl chloride	ug/L	20	21.7	109	55-139	
Xylene (Total)	ug/L	60	57.1	95	72-125	
1,2-Dichlorobenzene-d4 (S)	%.			101	75-125	
4-Bromofluorobenzene (S)	%.			102	75-125	
Toluene-d8 (S)	%.			101	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4340590 4340591

Parameter	Units	10609964002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	15.2	18.0	76	90	75-130	17	30	
1,1,1-Trichloroethane	ug/L	ND	20	20	16.6	18.8	83	94	64-143	12	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	14.9	16.8	74	84	48-139	12	30	
1,1,2-Trichloroethane	ug/L	ND	20	20	15.3	17.2	77	86	68-135	12	30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	20	18.7	19.6	93	98	52-150	5	30	
1,1-Dichloroethane	ug/L	ND	20	20	16.1	18.1	81	90	62-146	11	30	
1,1-Dichloroethene	ug/L	ND	20	20	16.4	17.5	82	88	44-150	7	30	
1,1-Dichloropropene	ug/L	ND	20	20	17.2	18.7	86	94	55-150	8	30	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	14.2	15.3	71	77	44-150	8	30	
1,2,3-Trichloropropane	ug/L	ND	20	20	14.5	16.7	73	83	64-126	14	30	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	13.7	15.0	69	75	42-147	9	30	
1,2,4-Trimethylbenzene	ug/L	ND	20	20	14.8	16.6	74	83	62-138	12	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	14.0	16.2	70	81	53-132	15	30	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	15.0	17.0	75	85	69-129	12	30	
1,2-Dichlorobenzene	ug/L	ND	20	20	15.0	16.1	75	81	70-125	8	30	
1,2-Dichloroethane	ug/L	ND	20	20	16.1	18.6	81	93	70-133	15	30	
1,2-Dichloropropane	ug/L	ND	20	20	16.0	18.2	80	91	61-142	13	30	
1,3,5-Trimethylbenzene	ug/L	ND	20	20	15.4	17.0	77	85	64-135	10	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	15.0	16.7	75	84	69-131	11	30	
1,3-Dichloropropane	ug/L	ND	20	20	15.5	17.5	77	87	70-129	12	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	14.8	16.0	74	80	67-127	8	30	
2,2-Dichloropropane	ug/L	ND	20	20	15.7	18.0	79	90	38-148	14	30	

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(612)607-1700

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4340590 4340591

Parameter	Units	10609964002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
2-Butanone (MEK)	ug/L	ND	100	100	76.7	93.2	77	93	46-138	19	30	
2-Chlorotoluene	ug/L	ND	20	20	15.0	16.9	75	85	52-142	12	30	
4-Chlorotoluene	ug/L	ND	20	20	14.8	16.5	74	83	59-132	11	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	73.3	89.4	73	89	42-145	20	30	
Acetone	ug/L	ND	100	100	68.3	85.2	68	85	42-132	22	30	
Allyl chloride	ug/L	ND	20	20	14.6	16.9	73	84	31-150	15	30	
Benzene	ug/L	ND	20	20	16.3	18.3	81	92	65-140	12	30	
Bromobenzene	ug/L	ND	20	20	15.3	16.7	77	83	65-129	8	30	
Bromochloromethane	ug/L	ND	20	20	16.1	17.7	80	89	67-147	10	30	
Bromodichloromethane	ug/L	ND	20	20	16.2	18.1	81	90	66-136	11	30	
Bromoform	ug/L	ND	20	20	14.3	17.0	72	85	59-137	17	30	
Bromomethane	ug/L	ND	20	20	10.2	11.4	51	57	30-150	11	30	
Carbon tetrachloride	ug/L	ND	20	20	17.7	19.3	88	96	58-149	9	30	
Chlorobenzene	ug/L	ND	20	20	15.6	17.3	78	86	74-125	10	30	
Chloroethane	ug/L	ND	20	20	14.6	15.3	73	76	34-150	5	30	
Chloroform	ug/L	ND	20	20	15.3	17.0	76	85	54-148	11	30	
Chloromethane	ug/L	ND	20	20	13.8	14.6	69	73	38-150	6	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	16.1	17.7	80	88	54-149	10	30	
cis-1,3-Dichloropropene	ug/L	ND	20	20	15.4	17.6	77	88	64-130	13	30	
Dibromochloromethane	ug/L	ND	20	20	15.0	17.3	75	87	71-135	14	30	
Dibromomethane	ug/L	ND	20	20	16.7	18.5	84	92	65-141	10	30	
Dichlorodifluoromethane	ug/L	ND	20	20	17.9	19.0	90	95	32-150	6	30	
Dichlorofluoromethane	ug/L	ND	20	20	16.5	17.2	82	86	58-150	4	30	
Diethyl ether (Ethyl ether)	ug/L	ND	20	20	15.1	16.4	75	82	51-148	8	30	
Ethylbenzene	ug/L	ND	20	20	15.3	17.0	77	85	66-126	10	30	
Hexachloro-1,3-butadiene	ug/L	ND	20	20	15.8	16.3	79	82	31-150	4	30	
Isopropylbenzene (Cumene)	ug/L	ND	20	20	16.0	17.6	80	88	72-133	10	30	
m&p-Xylene	ug/L	ND	40	40	31.2	34.8	78	87	69-134	11	30	
Methyl-tert-butyl ether	ug/L	ND	20	20	15.0	16.8	75	84	65-137	12	30	
Methylene Chloride	ug/L	ND	20	20	14.8	16.5	74	83	59-137	11	30	
n-Butylbenzene	ug/L	ND	20	20	14.8	15.9	74	80	52-141	7	30	
n-Propylbenzene	ug/L	ND	20	20	15.3	17.0	77	85	53-138	10	30	
Naphthalene	ug/L	ND	20	20	13.9	16.4	69	82	56-141	17	30	
o-Xylene	ug/L	ND	20	20	15.7	17.4	78	87	73-133	10	30	
p-Isopropyltoluene	ug/L	ND	20	20	15.1	16.6	76	83	59-139	10	30	
sec-Butylbenzene	ug/L	ND	20	20	15.9	17.3	79	87	60-138	9	30	
Styrene	ug/L	ND	20	20	18.2	20.2	91	101	67-138	10	30	
tert-Butylbenzene	ug/L	ND	20	20	15.6	17.3	78	86	58-141	10	30	
Tetrachloroethene	ug/L	ND	20	20	16.0	17.4	80	87	66-141	9	30	
Tetrahydrofuran	ug/L	ND	100	100	79.4	96.4	79	96	57-133	19	30	
Toluene	ug/L	ND	20	20	15.5	17.5	78	88	69-131	12	30	
trans-1,2-Dichloroethene	ug/L	ND	20	20	16.5	17.8	82	89	47-150	8	30	
trans-1,3-Dichloropropene	ug/L	ND	20	20	14.4	16.4	72	82	68-129	14	30	
Trichloroethene	ug/L	ND	20	20	16.8	18.5	84	93	68-139	10	30	

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QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4340590 4340591

Parameter	Units	10609964002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Trichlorofluoromethane	ug/L	ND	20	20	18.1	18.7	90	93	49-150	3	30	
Vinyl chloride	ug/L	ND	20	20	15.6	16.6	78	83	55-150	6	30	
Xylene (Total)	ug/L	ND	60	60	46.9	52.2	78	87	68-136	11	30	
1,2-Dichlorobenzene-d4 (S)	%.						99	100	75-125			
4-Bromofluorobenzene (S)	%.						100	101	75-125			
Toluene-d8 (S)	%.						101	102	75-125			

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QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

QC Batch: 820062
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV 465 W
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10610203003, 10610203004, 10610203005, 10610203006

METHOD BLANK: 4345501 Matrix: Water
Associated Lab Samples: 10610203003, 10610203004, 10610203005, 10610203006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.13	1.0	06/07/22 14:58	
Benzene	ug/L	<0.10	1.0	06/07/22 14:58	
Ethylbenzene	ug/L	<0.11	1.0	06/07/22 14:58	
m&p-Xylene	ug/L	<0.20	2.0	06/07/22 14:58	
o-Xylene	ug/L	<0.18	1.0	06/07/22 14:58	
Toluene	ug/L	<0.10	1.0	06/07/22 14:58	
Xylene (Total)	ug/L	<0.20	3.0	06/07/22 14:58	
1,2-Dichlorobenzene-d4 (S)	%.	98	75-125	06/07/22 14:58	
4-Bromofluorobenzene (S)	%.	95	75-125	06/07/22 14:58	
Toluene-d8 (S)	%.	101	75-125	06/07/22 14:58	

LABORATORY CONTROL SAMPLE: 4345502

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	20.4	102	75-125	
Benzene	ug/L	20	20.4	102	73-125	
Ethylbenzene	ug/L	20	19.7	99	75-125	
m&p-Xylene	ug/L	40	41.4	104	72-125	
o-Xylene	ug/L	20	20.2	101	73-125	
Toluene	ug/L	20	19.8	99	74-125	
Xylene (Total)	ug/L	60	61.6	103	72-125	
1,2-Dichlorobenzene-d4 (S)	%.			99	75-125	
4-Bromofluorobenzene (S)	%.			95	75-125	
Toluene-d8 (S)	%.			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4345514 4345515

Parameter	Units	10611426008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	ug/L	ND	20	20	19.6	14.1	98	71	62-138	32	30	R1
Benzene	ug/L	3.8	20	20	27.5	21.1	118	87	65-140	26	30	
Ethylbenzene	ug/L	ND	20	20	20.0	14.6	100	73	66-126	31	30	R1
m&p-Xylene	ug/L	ND	40	40	42.2	30.3	106	76	69-134	33	30	R1
o-Xylene	ug/L	ND	20	20	20.7	15.0	103	75	73-133	32	30	R1
Toluene	ug/L	ND	20	20	22.1	17.0	110	85	69-131	26	30	
Xylene (Total)	ug/L	ND	60	60	62.9	45.3	105	75	68-136	33	30	RS
1,2-Dichlorobenzene-d4 (S)	%.						97	99	75-125			

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QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4345514 4345515

Parameter	Units	10611426008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4-Bromofluorobenzene (S)	%.						101	98	75-125			
Toluene-d8 (S)	%.						102	102	75-125			

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QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

QC Batch: 820326
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV 465 W
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10610203003, 10610203006

METHOD BLANK: 4346759 Matrix: Water
Associated Lab Samples: 10610203003, 10610203006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	<0.10	1.0	06/08/22 12:31	
1,2-Dichlorobenzene-d4 (S)	%.	102	75-125	06/08/22 12:31	
4-Bromofluorobenzene (S)	%.	97	75-125	06/08/22 12:31	
Toluene-d8 (S)	%.	102	75-125	06/08/22 12:31	

LABORATORY CONTROL SAMPLE & LCSD: 4346760 4346761

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	ug/L	20	19.2	18.8	96	94	73-125	2	20	
1,2-Dichlorobenzene-d4 (S)	%.				98	100	75-125			
4-Bromofluorobenzene (S)	%.				99	98	75-125			
Toluene-d8 (S)	%.				101	100	75-125			

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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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

QC Batch: 820683
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV 465 W
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10610203002

METHOD BLANK: 4348560 Matrix: Water
Associated Lab Samples: 10610203002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	<0.10	1.0	06/09/22 14:01	
Toluene	ug/L	<0.10	1.0	06/09/22 14:01	
1,2-Dichlorobenzene-d4 (S)	%.	96	75-125	06/09/22 14:01	
4-Bromofluorobenzene (S)	%.	105	75-125	06/09/22 14:01	
Toluene-d8 (S)	%.	111	75-125	06/09/22 14:01	

LABORATORY CONTROL SAMPLE: 4348561

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.2	101	73-125	
Toluene	ug/L	20	18.2	91	74-125	
1,2-Dichlorobenzene-d4 (S)	%.			100	75-125	
4-Bromofluorobenzene (S)	%.			103	75-125	
Toluene-d8 (S)	%.			95	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4348588 4348589

Parameter	Units	10611784001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	7.8	20	20	23.0	31.0	76	116	65-140	30	30	
Toluene	ug/L	3.6	20	20	16.9	23.9	66	101	69-131	34	30	M1,R1
1,2-Dichlorobenzene-d4 (S)	%.						100	101	75-125			P2
4-Bromofluorobenzene (S)	%.						102	107	75-125			
Toluene-d8 (S)	%.						97	94	75-125			

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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Minneapolis, MN 55414
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QUALIFIERS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

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.

BATCH QUALIFIERS

Batch: 819128

[1] The continuing calibration verification was below the method acceptance limit for bromomethane. The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard.

[2] The continuing calibration verification was above the method acceptance limit for dichlorodifluoromethane. Any detection for the analyte in the associated samples may have a high bias.

Batch: 820062

[1] The continuing calibration verification was below the method acceptance limit for bromomethane, allyl chloride, and 2-butanone. The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard.

[2] The continuing calibration verification was above the method acceptance limit for bromoform. Any detection for the analyte in the associated samples may have a high bias.

Batch: 820326

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

D4 Sample was diluted due to the presence of high levels of target analytes.

H5 Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold time.

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

P2 Re-extraction or re-analysis could not be performed due to insufficient sample amount.

R1 RPD value was outside control limits.

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10610203

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10610203001	**MW-1 / T68**	EPA 8260D	819128		
10610203002	**MW-2 / T68**	EPA 8260D	819128		
10610203002	**MW-2 / T68**	EPA 8260D	820683		
10610203003	**MW-4 / T68**	EPA 8260D	819128		
10610203003	**MW-4 / T68**	EPA 8260D	820062		
10610203003	**MW-4 / T68**	EPA 8260D	820326		
10610203004	**MW-5 / T68**	EPA 8260D	819128		
10610203004	**MW-5 / T68**	EPA 8260D	820062		
10610203005	**MW-5 / T66**	EPA 8260D	819128		
10610203005	**MW-5 / T66**	EPA 8260D	820062		
10610203006	**MW-6 / T68**	EPA 8260D	819128		
10610203006	**MW-6 / T68**	EPA 8260D	820062		
10610203006	**MW-6 / T68**	EPA 8260D	820326		
10610203007	**Trip Blank**	EPA 8260D	819128		

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Barr Engineering Co. Chain of Custody

Sample Origination State

☐ CO ☐ MI ☐ MN ☐ MO ☐ ND ☐ TX ☐ UT ☒ WI ☐ Other: _____

COC Number: № 589270

COC 1 of 1

REPORT TO	INVOICE TO
Company: Barr Engineering Co.	Company: Barr
Address: 325 S. Lake Ave	Address:
Address: Duluth, MN 55802	Address:
Name: Lynette Carney	Name:
email: lcarney@barr.com	email:
Copy to: BarrDM@barr.com	P.O. —
Project Name: SRC GW TK68	Barr Project No: 49161494.02 100 102

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 = HNO_3; D = H_2SO_4; E = NaOH; F = MeOH; G = $NaHSO_4$; H = $Na_2S_2O_3$; I = Ascorbic Acid; J = Zn Acetate; K = Other

Location	Sample Depth Start	Stop	Unit (m./ft. or in.)	Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix Code	Perform MS/MSD Y / N	Total Number Of Containers	Analysis Requested: Water VOCs	Water B	Water N	Soil % Solids	Preservative Code	Field Filtered Y/N	
1. MW-1/T68	—			05/25/2022	1245	GW	N	3	X						001
2. MW-2/T68	—				1258		N	3	X						002
3. MW-4/T68	—				1307		N	3	X						003
4. MW-5/T68	—				1315		N	3	X						004
5. MW-5/T66	—				1334		N	3	X						005
6. MW-6/T68	—				1324		N	3	X						006
7. Trip Blank	—				—	—	N	2	X						007
8.															
9.															
10.															

WO# : 10610203

10610203

BARR USE ONLY	Relinquished by	On Ice?	Date	Time	Received by	Date	Time
Sampled by: KMS	[signature]	⊙ N	5/25/22	1502	[signature]	5/26/22	1500
Barr Proj. Manager: LMC	Relinquished by:	On Ice? Y N	Date	Time	Received by:	Date	Time
Barr DQ Manager: JET	Samples Shipped VIA: ☐ Ground Courier ☐ Air Carrier ☐ Sampler ☐ Other: _____				Air Bill Number:		
Lab Name: Pace	Lab WO:	Temperature on Receipt (°C): 4.4			Custody Seal Intact? ☐ Y ☐ N ☐ None		
Lab Location: Green Bay or Minneapolis							

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

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

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

Page 2 of 333

DC#_Title: ENV-FRM-MIN4-0150 v05_Sample Condition Upon Receipt (SCUR)

Effective Date: 04/12/2022

Sample Condition Upon Receipt

Client Name: Barr Engineering

Project #:

WO#: 10610203

PM: MKH Due Date: 06/10/22

CLIENT: BARR

Courier: ☐Fed Ex ☐UPS ☐USPS ☐Client ☑Pace ☐SpeeDee ☐Commercial

See Exceptions ☐ENV-FRM-MIN4-0142

Tracking Number: _____

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

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

Thermometer: ☐T1(0461) ☐T2(1336) ☐T3(0459) ☐T4(0254) ☐T5(0489) ☑T6(0235) ☐T7 (0042) ☐01339252/1710 ☐122639816 ☐140792808

Type of Ice: ☑Wet ☐Blue ☐None ☐Dry ☐Melted

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

Temp should be above freezing to 6°C Cooler Temp Read w/temp blank: 4.4 °C

Correction Factor: True Cooler Temp Corrected w/temp blank: 4.4 °C

Average Corrected Temp (no temp blank only): _____ °C ☐See Exceptions ENV-FRM-MIN4-0142 ☐1 Container

USDA Regulated Soil: (☑N/A, water sample/Other:_____) Date/Initials of Person Examining Contents: MS 5/26/22

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

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

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

Location (check one): ☐ Duluth ☑ Minneapolis ☐ Virginia

				COMMENTS:
Chain of Custody Present and Filled Out?	☑Yes	☐No		1.
Chain of Custody Relinquished?	☑Yes	☐No		2.
Sampler Name and/or Signature on COC?	☑Yes	☐No	☐N/A	3.
Samples Arrived within Hold Time?	☑Yes	☐No		4. If Fecal: ☐<8 hrs ☐>8hr, <24 hrs, ☐>24 hrs
Short Hold Time Analysis (<72 hr)?	☐Yes	☑No		5. ☐Fecal Coliform ☐HPC ☐Total Coliform/E coli ☐BOD/cBOD ☐Hex Chrome ☐Turbidity ☐Nitrate ☐Nitrite ☐Orthophos ☐Other
Rush Turn Around Time Requested?	☐Yes	☑No		6.
Sufficient Volume?	☑Yes	☐No		7.
Correct Containers Used? -Pace Containers Used?	☑Yes ☑Yes	☐No ☐No		8.
Containers Intact?	☑Yes	☐No		9.
Field Filtered Volume Received for Dissolved Tests?	☐Yes	☐No	☑N/A	10. Is sediment visible in the dissolved container? ☐Yes ☐No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☑Water ☐Soil ☐Oil ☐Other-	☑Yes	☐No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐ **ENV-FRM-MIN4-0142**
All containers needing acid/base preservation have been checked?	☐Yes	☐No	☑N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐Yes	☐No	☑N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☑Yes MS 5/26/22	☐No	~~☑N/A~~	Positive for Res. Chlorine? ☐Yes ☐No **pH Paper Lot#** **See Exception** ☐ **ENV-FRM-MIN4-0142**
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in Methyl Mercury Container?	☐Yes	☐No	☑N/A	
Extra labels present on soil VOA or WIDRO containers?	☐Yes	☐No	☑N/A	13. **See Exception** ☐ **ENV-FRM-MIN4-0140**
Headspace in VOA Vials (greater than 6mm)?	☐Yes	☑No	☐N/A	
Trip Blank Present?	☑Yes	☐No	☐N/A	14.
Trip Blank Custody Seals Present?	☑Yes	☐No	☐N/A	Pace Trip Blank Lot # (if purchased): 365294

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

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** 5/27/22

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

Labeled by: MKZ

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

October 24, 2022

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

RE: Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Dear Jim Taraldsen:

Enclosed are the analytical results for sample(s) received by the laboratory on October 12, 2022. 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 - Minneapolis

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

Sincerely,

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

Enclosures

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

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Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
A2LA Certification #: 2926.01*
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification (A2LA) #: R-036
North Dakota Certification (MN) #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
*Please Note: Applicable air certifications are denoted with an asterisk (*).

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Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10629410001	**MW-1/T68**	Water	10/11/22 14:42	10/12/22 08:00
10629410002	**MW-2/T68**	Water	10/11/22 14:34	10/12/22 08:00
10629410003	**MW-4/T68**	Water	10/11/22 14:28	10/12/22 08:00
10629410004	**MW-5/T68**	Water	10/11/22 14:21	10/12/22 08:00
10629410005	**MW-5/T66**	Water	10/11/22 14:08	10/12/22 08:00
10629410006	**MW-6/T68**	Water	10/11/22 14:50	10/12/22 08:00
10629410007	**Trip Blank**	Water	10/11/22 00:00	10/12/22 08:00

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(612)607-1700

SAMPLE ANALYTE COUNT

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10629410001	**MW-1/T68**	EPA 8260D	NMB	64	PASI-M
10629410002	**MW-2/T68**	EPA 8260D	NMB	64	PASI-M
10629410003	**MW-4/T68**	EPA 8260D	NMB	64	PASI-M
10629410004	**MW-5/T68**	EPA 8260D	NMB	64	PASI-M
10629410005	**MW-5/T66**	EPA 8260D	NMB	64	PASI-M
10629410006	**MW-6/T68**	EPA 8260D	NMB	64	PASI-M
10629410007	**Trip Blank**	EPA 8260D	NMB	64	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

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PROJECT NARRATIVE

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Date: October 24, 2022

Case Narrative

Volatile Organics

8260D VOA

Batch 846686

Recovery for styrene in the continuing calibration verification was outside of laboratory control limits at 126% recovery (limits 80-120%). The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard . Reported values may be biased high.

Batch 847898

Recovery for bromomethane in the continuing calibration verification was outside of laboratory control limits at 122% recovery (limits 80-120%). The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard . Reported values may be biased high.

Recovery for tetrahydrofuran in the continuing calibration verification was outside of laboratory control limits at 122% recovery (limits 80-120%). The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard . Reported values may be biased high.

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Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Sample: MW-1/T68 **Lab ID: 10629410001** Collected: 10/11/22 14:42 Received: 10/12/22 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Benzene	**<0.10**	ug/L	1.0	0.10	1		10/13/22 14:43	71-43-2	
Bromobenzene	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:43	108-86-1	
Bromochloromethane	**<0.15**	ug/L	1.0	0.15	1		10/13/22 14:43	74-97-5	
Bromodichloromethane	**1.9**	ug/L	1.0	0.12	1		10/13/22 14:43	75-27-4	
Bromoform	**<0.22**	ug/L	1.0	0.22	1		10/13/22 14:43	75-25-2	
Bromomethane	**<0.38**	ug/L	2.5	0.38	1		10/13/22 14:43	74-83-9	
n-Butylbenzene	**<0.096**	ug/L	1.0	0.096	1		10/13/22 14:43	104-51-8	
sec-Butylbenzene	**<0.097**	ug/L	1.0	0.097	1		10/13/22 14:43	135-98-8	
tert-Butylbenzene	**<0.091**	ug/L	1.0	0.091	1		10/13/22 14:43	98-06-6	
Carbon tetrachloride	**<0.13**	ug/L	1.0	0.13	1		10/13/22 14:43	56-23-5	
Chlorobenzene	**<0.13**	ug/L	1.0	0.13	1		10/13/22 14:43	108-90-7	
Chloroethane	**<0.21**	ug/L	1.0	0.21	1		10/13/22 14:43	75-00-3	
Chloroform	**8.4**	ug/L	1.0	0.23	1		10/13/22 14:43	67-66-3	
Chloromethane	**<0.17**	ug/L	1.0	0.17	1		10/13/22 14:43	74-87-3	
2-Chlorotoluene	**<0.098**	ug/L	1.0	0.098	1		10/13/22 14:43	95-49-8	
4-Chlorotoluene	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:43	106-43-4	
1,2-Dibromo-3-chloropropane	**<0.36**	ug/L	2.5	0.36	1		10/13/22 14:43	96-12-8	
Dibromochloromethane	**0.63J**	ug/L	1.0	0.20	1		10/13/22 14:43	124-48-1	
1,2-Dibromoethane (EDB)	**<0.20**	ug/L	1.0	0.20	1		10/13/22 14:43	106-93-4	
Dibromomethane	**<0.17**	ug/L	1.0	0.17	1		10/13/22 14:43	74-95-3	
1,2-Dichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		10/13/22 14:43	95-50-1	
1,3-Dichlorobenzene	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:43	541-73-1	
1,4-Dichlorobenzene	**<0.15**	ug/L	1.0	0.15	1		10/13/22 14:43	106-46-7	
Dichlorodifluoromethane	**<0.079**	ug/L	1.0	0.079	1		10/13/22 14:43	75-71-8	
1,1-Dichloroethane	**<0.11**	ug/L	1.0	0.11	1		10/13/22 14:43	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		10/13/22 14:43	107-06-2	
1,1-Dichloroethene	**<0.13**	ug/L	1.0	0.13	1		10/13/22 14:43	75-35-4	
cis-1,2-Dichloroethene	**<0.15**	ug/L	1.0	0.15	1		10/13/22 14:43	156-59-2	
trans-1,2-Dichloroethene	**<0.14**	ug/L	1.0	0.14	1		10/13/22 14:43	156-60-5	
1,2-Dichloropropane	**<0.15**	ug/L	1.0	0.15	1		10/13/22 14:43	78-87-5	
1,3-Dichloropropane	**<0.16**	ug/L	1.0	0.16	1		10/13/22 14:43	142-28-9	
2,2-Dichloropropane	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:43	594-20-7	
1,1-Dichloropropene	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:43	563-58-6	
cis-1,3-Dichloropropene	**<0.057**	ug/L	1.0	0.057	1		10/13/22 14:43	10061-01-5	
trans-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		10/13/22 14:43	10061-02-6	
Diethyl ether (Ethyl ether)	**<0.19**	ug/L	2.5	0.19	1		10/13/22 14:43	60-29-7	
Ethylbenzene	**<0.11**	ug/L	1.0	0.11	1		10/13/22 14:43	100-41-4	
Hexachloro-1,3-butadiene	**<0.24**	ug/L	1.0	0.24	1		10/13/22 14:43	87-68-3	
Isopropylbenzene (Cumene)	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:43	98-82-8	
p-Isopropyltoluene	**<0.11**	ug/L	1.0	0.11	1		10/13/22 14:43	99-87-6	
Methylene Chloride	**<0.33**	ug/L	2.0	0.33	1		10/13/22 14:43	75-09-2	
Methyl-tert-butyl ether	**<0.13**	ug/L	1.0	0.13	1		10/13/22 14:43	1634-04-4	
Naphthalene	**<0.18**	ug/L	1.0	0.18	1		10/13/22 14:43	91-20-3	
n-Propylbenzene	**<0.11**	ug/L	1.0	0.11	1		10/13/22 14:43	103-65-1	
Styrene	**<0.097**	ug/L	1.0	0.097	1		10/13/22 14:43	100-42-5	L1

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Sample: MW-1/T68 **Lab ID: 10629410001** Collected: 10/11/22 14:42 Received: 10/12/22 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
1,1,1,2-Tetrachloroethane	**<0.19**	ug/L	1.0	0.19	1		10/13/22 14:43	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.15**	ug/L	1.0	0.15	1		10/13/22 14:43	79-34-5	
Tetrachloroethene	**<0.10**	ug/L	1.0	0.10	1		10/13/22 14:43	127-18-4	
Toluene	**<0.10**	ug/L	1.0	0.10	1		10/13/22 14:43	108-88-3	
1,2,3-Trichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		10/13/22 14:43	87-61-6	
1,2,4-Trichlorobenzene	**<0.14**	ug/L	1.0	0.14	1		10/13/22 14:43	120-82-1	
1,1,1-Trichloroethane	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:43	71-55-6	
1,1,2-Trichloroethane	**<0.22**	ug/L	1.0	0.22	1		10/13/22 14:43	79-00-5	
Trichloroethene	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:43	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:43	75-69-4	
1,2,3-Trichloropropane	**<0.38**	ug/L	2.5	0.38	1		10/13/22 14:43	96-18-4	
1,2,4-Trimethylbenzene	**<0.13**	ug/L	1.0	0.13	1		10/13/22 14:43	95-63-6	
1,3,5-Trimethylbenzene	**<0.11**	ug/L	1.0	0.11	1		10/13/22 14:43	108-67-8	
Vinyl chloride	**<0.046**	ug/L	1.0	0.046	1		10/13/22 14:43	75-01-4	
m&p-Xylene	**<0.20**	ug/L	2.0	0.20	1		10/13/22 14:43	179601-23-1	
o-Xylene	**<0.18**	ug/L	1.0	0.18	1		10/13/22 14:43	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	102	%.	75-125		1		10/13/22 14:43	2199-69-1	
4-Bromofluorobenzene (S)	98	%.	75-125		1		10/13/22 14:43	460-00-4	
Toluene-d8 (S)	97	%.	75-125		1		10/13/22 14:43	2037-26-5	

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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Sample: MW-2/T68 **Lab ID: 10629410002** Collected: 10/11/22 14:34 Received: 10/12/22 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Benzene	**724**	ug/L	10.0	1.0	10		10/19/22 13:58	71-43-2	
Bromobenzene	**<1.2**	ug/L	10.0	1.2	10		10/19/22 13:58	108-86-1	
Bromochloromethane	**<1.5**	ug/L	10.0	1.5	10		10/19/22 13:58	74-97-5	
Bromodichloromethane	**<1.2**	ug/L	10.0	1.2	10		10/19/22 13:58	75-27-4	
Bromoform	**<2.2**	ug/L	10.0	2.2	10		10/19/22 13:58	75-25-2	
Bromomethane	**4.5J**	ug/L	25.0	3.8	10		10/19/22 13:58	74-83-9	B,L1
n-Butylbenzene	**<0.96**	ug/L	10.0	0.96	10		10/19/22 13:58	104-51-8	
sec-Butylbenzene	**<0.97**	ug/L	10.0	0.97	10		10/19/22 13:58	135-98-8	
tert-Butylbenzene	**<0.91**	ug/L	10.0	0.91	10		10/19/22 13:58	98-06-6	
Carbon tetrachloride	**<1.3**	ug/L	10.0	1.3	10		10/19/22 13:58	56-23-5	
Chlorobenzene	**<1.3**	ug/L	10.0	1.3	10		10/19/22 13:58	108-90-7	
Chloroethane	**<2.1**	ug/L	10.0	2.1	10		10/19/22 13:58	75-00-3	
Chloroform	**<2.3**	ug/L	10.0	2.3	10		10/19/22 13:58	67-66-3	
Chloromethane	**<1.7**	ug/L	10.0	1.7	10		10/19/22 13:58	74-87-3	
2-Chlorotoluene	**<0.98**	ug/L	10.0	0.98	10		10/19/22 13:58	95-49-8	
4-Chlorotoluene	**<1.2**	ug/L	10.0	1.2	10		10/19/22 13:58	106-43-4	
1,2-Dibromo-3-chloropropane	**<3.6**	ug/L	25.0	3.6	10		10/19/22 13:58	96-12-8	
Dibromochloromethane	**<2.0**	ug/L	10.0	2.0	10		10/19/22 13:58	124-48-1	
1,2-Dibromoethane (EDB)	**<2.0**	ug/L	10.0	2.0	10		10/19/22 13:58	106-93-4	
Dibromomethane	**<1.7**	ug/L	10.0	1.7	10		10/19/22 13:58	74-95-3	
1,2-Dichlorobenzene	**<1.3**	ug/L	10.0	1.3	10		10/19/22 13:58	95-50-1	
1,3-Dichlorobenzene	**<1.2**	ug/L	10.0	1.2	10		10/19/22 13:58	541-73-1	
1,4-Dichlorobenzene	**<1.5**	ug/L	10.0	1.5	10		10/19/22 13:58	106-46-7	
Dichlorodifluoromethane	**<0.79**	ug/L	10.0	0.79	10		10/19/22 13:58	75-71-8	
1,1-Dichloroethane	**<1.1**	ug/L	10.0	1.1	10		10/19/22 13:58	75-34-3	
1,2-Dichloroethane	**94.7**	ug/L	10.0	1.7	10		10/19/22 13:58	107-06-2	
1,1-Dichloroethene	**<1.3**	ug/L	10.0	1.3	10		10/19/22 13:58	75-35-4	
cis-1,2-Dichloroethene	**<1.5**	ug/L	10.0	1.5	10		10/19/22 13:58	156-59-2	
trans-1,2-Dichloroethene	**<1.4**	ug/L	10.0	1.4	10		10/19/22 13:58	156-60-5	
1,2-Dichloropropane	**<1.5**	ug/L	10.0	1.5	10		10/19/22 13:58	78-87-5	
1,3-Dichloropropane	**<1.6**	ug/L	10.0	1.6	10		10/19/22 13:58	142-28-9	
2,2-Dichloropropane	**<1.2**	ug/L	10.0	1.2	10		10/19/22 13:58	594-20-7	
1,1-Dichloropropene	**<1.2**	ug/L	10.0	1.2	10		10/19/22 13:58	563-58-6	
cis-1,3-Dichloropropene	**<0.57**	ug/L	10.0	0.57	10		10/19/22 13:58	10061-01-5	
trans-1,3-Dichloropropene	**<1.3**	ug/L	10.0	1.3	10		10/19/22 13:58	10061-02-6	
Diethyl ether (Ethyl ether)	**<1.9**	ug/L	25.0	1.9	10		10/19/22 13:58	60-29-7	
Ethylbenzene	**2.0J**	ug/L	10.0	1.1	10		10/19/22 13:58	100-41-4	
Hexachloro-1,3-butadiene	**<2.4**	ug/L	10.0	2.4	10		10/19/22 13:58	87-68-3	
Isopropylbenzene (Cumene)	**<1.2**	ug/L	10.0	1.2	10		10/19/22 13:58	98-82-8	
p-Isopropyltoluene	**<1.1**	ug/L	10.0	1.1	10		10/19/22 13:58	99-87-6	
Methylene Chloride	**3.7J**	ug/L	10.0	3.3	10		10/19/22 13:58	75-09-2	
Methyl-tert-butyl ether	**<1.3**	ug/L	10.0	1.3	10		10/19/22 13:58	1634-04-4	
Naphthalene	**31.4**	ug/L	10.0	1.8	10		10/19/22 13:58	91-20-3	
n-Propylbenzene	**<1.1**	ug/L	10.0	1.1	10		10/19/22 13:58	103-65-1	
Styrene	**<0.97**	ug/L	10.0	0.97	10		10/19/22 13:58	100-42-5	

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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Sample: MW-2/T68 **Lab ID: 10629410002** Collected: 10/11/22 14:34 Received: 10/12/22 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
1,1,1,2-Tetrachloroethane	**<1.9**	ug/L	10.0	1.9	10		10/19/22 13:58	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.5**	ug/L	10.0	1.5	10		10/19/22 13:58	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	10.0	1.0	10		10/19/22 13:58	127-18-4	
Toluene	**251**	ug/L	10.0	1.0	10		10/19/22 13:58	108-88-3	
1,2,3-Trichlorobenzene	**<1.3**	ug/L	10.0	1.3	10		10/19/22 13:58	87-61-6	
1,2,4-Trichlorobenzene	**<1.4**	ug/L	10.0	1.4	10		10/19/22 13:58	120-82-1	
1,1,1-Trichloroethane	**<1.2**	ug/L	10.0	1.2	10		10/19/22 13:58	71-55-6	
1,1,2-Trichloroethane	**<2.2**	ug/L	10.0	2.2	10		10/19/22 13:58	79-00-5	
Trichloroethene	**<1.2**	ug/L	10.0	1.2	10		10/19/22 13:58	79-01-6	
Trichlorofluoromethane	**<1.2**	ug/L	10.0	1.2	10		10/19/22 13:58	75-69-4	
1,2,3-Trichloropropane	**<3.8**	ug/L	25.0	3.8	10		10/19/22 13:58	96-18-4	
1,2,4-Trimethylbenzene	**479**	ug/L	10.0	1.3	10		10/19/22 13:58	95-63-6	
1,3,5-Trimethylbenzene	**304**	ug/L	10.0	1.1	10		10/19/22 13:58	108-67-8	
Vinyl chloride	**<0.46**	ug/L	10.0	0.46	10		10/19/22 13:58	75-01-4	
m&p-Xylene	**1120**	ug/L	20.0	2.0	10		10/19/22 13:58	179601-23-1	
o-Xylene	**935**	ug/L	10.0	1.8	10		10/19/22 13:58	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	100	%.	75-125		10		10/19/22 13:58	2199-69-1	D4
4-Bromofluorobenzene (S)	101	%.	75-125		10		10/19/22 13:58	460-00-4	
Toluene-d8 (S)	99	%.	75-125		10		10/19/22 13:58	2037-26-5	

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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Sample: MW-4/T68 **Lab ID: 10629410003** Collected: 10/11/22 14:28 Received: 10/12/22 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Benzene	**0.19J**	ug/L	1.0	0.10	1		10/19/22 13:42	71-43-2	
Bromobenzene	**<0.12**	ug/L	1.0	0.12	1		10/19/22 13:42	108-86-1	
Bromochloromethane	**<0.15**	ug/L	1.0	0.15	1		10/19/22 13:42	74-97-5	
Bromodichloromethane	**<0.12**	ug/L	1.0	0.12	1		10/19/22 13:42	75-27-4	
Bromoform	**<0.22**	ug/L	1.0	0.22	1		10/19/22 13:42	75-25-2	
Bromomethane	**0.54J**	ug/L	2.5	0.38	1		10/19/22 13:42	74-83-9	B,L1
n-Butylbenzene	**<0.096**	ug/L	1.0	0.096	1		10/19/22 13:42	104-51-8	
sec-Butylbenzene	**<0.097**	ug/L	1.0	0.097	1		10/19/22 13:42	135-98-8	
tert-Butylbenzene	**<0.091**	ug/L	1.0	0.091	1		10/19/22 13:42	98-06-6	
Carbon tetrachloride	**<0.13**	ug/L	1.0	0.13	1		10/19/22 13:42	56-23-5	
Chlorobenzene	**<0.13**	ug/L	1.0	0.13	1		10/19/22 13:42	108-90-7	
Chloroethane	**<0.21**	ug/L	1.0	0.21	1		10/19/22 13:42	75-00-3	
Chloroform	**<0.23**	ug/L	1.0	0.23	1		10/19/22 13:42	67-66-3	
Chloromethane	**<0.17**	ug/L	1.0	0.17	1		10/19/22 13:42	74-87-3	
2-Chlorotoluene	**<0.098**	ug/L	1.0	0.098	1		10/19/22 13:42	95-49-8	
4-Chlorotoluene	**<0.12**	ug/L	1.0	0.12	1		10/19/22 13:42	106-43-4	
1,2-Dibromo-3-chloropropane	**<0.36**	ug/L	2.5	0.36	1		10/19/22 13:42	96-12-8	
Dibromochloromethane	**<0.20**	ug/L	1.0	0.20	1		10/19/22 13:42	124-48-1	
1,2-Dibromoethane (EDB)	**<0.20**	ug/L	1.0	0.20	1		10/19/22 13:42	106-93-4	
Dibromomethane	**<0.17**	ug/L	1.0	0.17	1		10/19/22 13:42	74-95-3	
1,2-Dichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		10/19/22 13:42	95-50-1	
1,3-Dichlorobenzene	**<0.12**	ug/L	1.0	0.12	1		10/19/22 13:42	541-73-1	
1,4-Dichlorobenzene	**<0.15**	ug/L	1.0	0.15	1		10/19/22 13:42	106-46-7	
Dichlorodifluoromethane	**<0.079**	ug/L	1.0	0.079	1		10/19/22 13:42	75-71-8	
1,1-Dichloroethane	**<0.11**	ug/L	1.0	0.11	1		10/19/22 13:42	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		10/19/22 13:42	107-06-2	
1,1-Dichloroethene	**<0.13**	ug/L	1.0	0.13	1		10/19/22 13:42	75-35-4	
cis-1,2-Dichloroethene	**<0.15**	ug/L	1.0	0.15	1		10/19/22 13:42	156-59-2	
trans-1,2-Dichloroethene	**<0.14**	ug/L	1.0	0.14	1		10/19/22 13:42	156-60-5	
1,2-Dichloropropane	**<0.15**	ug/L	1.0	0.15	1		10/19/22 13:42	78-87-5	
1,3-Dichloropropane	**<0.16**	ug/L	1.0	0.16	1		10/19/22 13:42	142-28-9	
2,2-Dichloropropane	**<0.12**	ug/L	1.0	0.12	1		10/19/22 13:42	594-20-7	
1,1-Dichloropropene	**<0.12**	ug/L	1.0	0.12	1		10/19/22 13:42	563-58-6	
cis-1,3-Dichloropropene	**<0.057**	ug/L	1.0	0.057	1		10/19/22 13:42	10061-01-5	
trans-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		10/19/22 13:42	10061-02-6	
Diethyl ether (Ethyl ether)	**<0.19**	ug/L	2.5	0.19	1		10/19/22 13:42	60-29-7	
Ethylbenzene	**<0.11**	ug/L	1.0	0.11	1		10/19/22 13:42	100-41-4	
Hexachloro-1,3-butadiene	**<0.24**	ug/L	1.0	0.24	1		10/19/22 13:42	87-68-3	
Isopropylbenzene (Cumene)	**<0.12**	ug/L	1.0	0.12	1		10/19/22 13:42	98-82-8	
p-Isopropyltoluene	**<0.11**	ug/L	1.0	0.11	1		10/19/22 13:42	99-87-6	
Methylene Chloride	**<0.33**	ug/L	1.0	0.33	1		10/19/22 13:42	75-09-2	
Methyl-tert-butyl ether	**<0.13**	ug/L	1.0	0.13	1		10/19/22 13:42	1634-04-4	
Naphthalene	**0.30J**	ug/L	1.0	0.18	1		10/19/22 13:42	91-20-3	
n-Propylbenzene	**<0.11**	ug/L	1.0	0.11	1		10/19/22 13:42	103-65-1	
Styrene	**<0.097**	ug/L	1.0	0.097	1		10/19/22 13:42	100-42-5	

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Sample: MW-4/T68 **Lab ID: 10629410003** Collected: 10/11/22 14:28 Received: 10/12/22 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
1,1,1,2-Tetrachloroethane	**<0.19**	ug/L	1.0	0.19	1		10/19/22 13:42	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.15**	ug/L	1.0	0.15	1		10/19/22 13:42	79-34-5	
Tetrachloroethene	**<0.10**	ug/L	1.0	0.10	1		10/19/22 13:42	127-18-4	
Toluene	**<0.10**	ug/L	1.0	0.10	1		10/19/22 13:42	108-88-3	
1,2,3-Trichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		10/19/22 13:42	87-61-6	
1,2,4-Trichlorobenzene	**<0.14**	ug/L	1.0	0.14	1		10/19/22 13:42	120-82-1	
1,1,1-Trichloroethane	**<0.12**	ug/L	1.0	0.12	1		10/19/22 13:42	71-55-6	
1,1,2-Trichloroethane	**<0.22**	ug/L	1.0	0.22	1		10/19/22 13:42	79-00-5	
Trichloroethene	**<0.12**	ug/L	1.0	0.12	1		10/19/22 13:42	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	1.0	0.12	1		10/19/22 13:42	75-69-4	
1,2,3-Trichloropropane	**<0.38**	ug/L	2.5	0.38	1		10/19/22 13:42	96-18-4	
1,2,4-Trimethylbenzene	**0.62J**	ug/L	1.0	0.13	1		10/19/22 13:42	95-63-6	
1,3,5-Trimethylbenzene	**0.18J**	ug/L	1.0	0.11	1		10/19/22 13:42	108-67-8	
Vinyl chloride	**<0.046**	ug/L	1.0	0.046	1		10/19/22 13:42	75-01-4	
m&p-Xylene	**0.22J**	ug/L	2.0	0.20	1		10/19/22 13:42	179601-23-1	
o-Xylene	**<0.18**	ug/L	1.0	0.18	1		10/19/22 13:42	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	100	%.	75-125		1		10/19/22 13:42	2199-69-1	
4-Bromofluorobenzene (S)	98	%.	75-125		1		10/19/22 13:42	460-00-4	
Toluene-d8 (S)	99	%.	75-125		1		10/19/22 13:42	2037-26-5	

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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Sample: MW-5/T68 **Lab ID: 10629410004** Collected: 10/11/22 14:21 Received: 10/12/22 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Benzene	**17200**	ug/L	200	20.6	200		10/13/22 15:47	71-43-2	
Bromobenzene	**<24.0**	ug/L	200	24.0	200		10/13/22 15:47	108-86-1	
Bromochloromethane	**<30.4**	ug/L	200	30.4	200		10/13/22 15:47	74-97-5	
Bromodichloromethane	**<23.4**	ug/L	200	23.4	200		10/13/22 15:47	75-27-4	
Bromoform	**<44.6**	ug/L	200	44.6	200		10/13/22 15:47	75-25-2	
Bromomethane	**<77.0**	ug/L	500	77.0	200		10/13/22 15:47	74-83-9	
n-Butylbenzene	**<19.2**	ug/L	200	19.2	200		10/13/22 15:47	104-51-8	
sec-Butylbenzene	**30.9J**	ug/L	200	19.4	200		10/13/22 15:47	135-98-8	
tert-Butylbenzene	**<18.2**	ug/L	200	18.2	200		10/13/22 15:47	98-06-6	
Carbon tetrachloride	**<26.8**	ug/L	200	26.8	200		10/13/22 15:47	56-23-5	
Chlorobenzene	**<26.6**	ug/L	200	26.6	200		10/13/22 15:47	108-90-7	
Chloroethane	**<41.2**	ug/L	200	41.2	200		10/13/22 15:47	75-00-3	
Chloroform	**<46.0**	ug/L	200	46.0	200		10/13/22 15:47	67-66-3	
Chloromethane	**<34.0**	ug/L	200	34.0	200		10/13/22 15:47	74-87-3	
2-Chlorotoluene	**<19.5**	ug/L	200	19.5	200		10/13/22 15:47	95-49-8	
4-Chlorotoluene	**<25.0**	ug/L	200	25.0	200		10/13/22 15:47	106-43-4	
1,2-Dibromo-3-chloropropane	**<71.2**	ug/L	500	71.2	200		10/13/22 15:47	96-12-8	
Dibromochloromethane	**<40.6**	ug/L	200	40.6	200		10/13/22 15:47	124-48-1	
1,2-Dibromoethane (EDB)	**<40.4**	ug/L	200	40.4	200		10/13/22 15:47	106-93-4	
Dibromomethane	**<34.6**	ug/L	200	34.6	200		10/13/22 15:47	74-95-3	
1,2-Dichlorobenzene	**<26.2**	ug/L	200	26.2	200		10/13/22 15:47	95-50-1	
1,3-Dichlorobenzene	**<24.6**	ug/L	200	24.6	200		10/13/22 15:47	541-73-1	
1,4-Dichlorobenzene	**<29.4**	ug/L	200	29.4	200		10/13/22 15:47	106-46-7	
Dichlorodifluoromethane	**<15.9**	ug/L	200	15.9	200		10/13/22 15:47	75-71-8	
1,1-Dichloroethane	**<21.8**	ug/L	200	21.8	200		10/13/22 15:47	75-34-3	
1,2-Dichloroethane	**<33.8**	ug/L	200	33.8	200		10/13/22 15:47	107-06-2	
1,1-Dichloroethene	**<26.4**	ug/L	200	26.4	200		10/13/22 15:47	75-35-4	
cis-1,2-Dichloroethene	**<30.0**	ug/L	200	30.0	200		10/13/22 15:47	156-59-2	
trans-1,2-Dichloroethene	**<27.0**	ug/L	200	27.0	200		10/13/22 15:47	156-60-5	
1,2-Dichloropropane	**<29.6**	ug/L	200	29.6	200		10/13/22 15:47	78-87-5	
1,3-Dichloropropane	**<31.6**	ug/L	200	31.6	200		10/13/22 15:47	142-28-9	
2,2-Dichloropropane	**<23.2**	ug/L	200	23.2	200		10/13/22 15:47	594-20-7	
1,1-Dichloropropene	**<25.0**	ug/L	200	25.0	200		10/13/22 15:47	563-58-6	
cis-1,3-Dichloropropene	**<11.3**	ug/L	200	11.3	200		10/13/22 15:47	10061-01-5	
trans-1,3-Dichloropropene	**<25.8**	ug/L	200	25.8	200		10/13/22 15:47	10061-02-6	
Diethyl ether (Ethyl ether)	**<38.8**	ug/L	500	38.8	200		10/13/22 15:47	60-29-7	
Ethylbenzene	**2350**	ug/L	200	21.8	200		10/13/22 15:47	100-41-4	
Hexachloro-1,3-butadiene	**<47.4**	ug/L	200	47.4	200		10/13/22 15:47	87-68-3	
Isopropylbenzene (Cumene)	**76.5J**	ug/L	200	23.2	200		10/13/22 15:47	98-82-8	
p-Isopropyltoluene	**<21.2**	ug/L	200	21.2	200		10/13/22 15:47	99-87-6	
Methylene Chloride	**89.7J**	ug/L	400	66.0	200		10/13/22 15:47	75-09-2	B
Methyl-tert-butyl ether	**<25.2**	ug/L	200	25.2	200		10/13/22 15:47	1634-04-4	
Naphthalene	**1040**	ug/L	200	36.2	200		10/13/22 15:47	91-20-3	
n-Propylbenzene	**282**	ug/L	200	21.8	200		10/13/22 15:47	103-65-1	
Styrene	**<19.3**	ug/L	200	19.3	200		10/13/22 15:47	100-42-5	L1

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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Sample: MW-5/T68 **Lab ID: 10629410004** Collected: 10/11/22 14:21 Received: 10/12/22 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
1,1,1,2-Tetrachloroethane	**<38.0**	ug/L	200	38.0	200		10/13/22 15:47	630-20-6	
1,1,2,2-Tetrachloroethane	**<29.2**	ug/L	200	29.2	200		10/13/22 15:47	79-34-5	
Tetrachloroethene	**<21.0**	ug/L	200	21.0	200		10/13/22 15:47	127-18-4	
Toluene	**28200**	ug/L	200	20.6	200		10/13/22 15:47	108-88-3	
1,2,3-Trichlorobenzene	**<26.6**	ug/L	200	26.6	200		10/13/22 15:47	87-61-6	
1,2,4-Trichlorobenzene	**<28.2**	ug/L	200	28.2	200		10/13/22 15:47	120-82-1	
1,1,1-Trichloroethane	**<24.8**	ug/L	200	24.8	200		10/13/22 15:47	71-55-6	
1,1,2-Trichloroethane	**<44.8**	ug/L	200	44.8	200		10/13/22 15:47	79-00-5	
Trichloroethene	**<24.4**	ug/L	200	24.4	200		10/13/22 15:47	79-01-6	
Trichlorofluoromethane	**<24.6**	ug/L	200	24.6	200		10/13/22 15:47	75-69-4	
1,2,3-Trichloropropane	**<75.0**	ug/L	500	75.0	200		10/13/22 15:47	96-18-4	
1,2,4-Trimethylbenzene	**4590**	ug/L	200	26.0	200		10/13/22 15:47	95-63-6	
1,3,5-Trimethylbenzene	**1280**	ug/L	200	22.6	200		10/13/22 15:47	108-67-8	
Vinyl chloride	**<9.2**	ug/L	200	9.2	200		10/13/22 15:47	75-01-4	
m&p-Xylene	**14900**	ug/L	400	39.8	200		10/13/22 15:47	179601-23-1	
o-Xylene	**7100**	ug/L	200	35.4	200		10/13/22 15:47	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	100	%.	75-125		200		10/13/22 15:47	2199-69-1	D4
4-Bromofluorobenzene (S)	98	%.	75-125		200		10/13/22 15:47	460-00-4	
Toluene-d8 (S)	98	%.	75-125		200		10/13/22 15:47	2037-26-5	

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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Sample: MW-5/T66 **Lab ID: 10629410005** Collected: 10/11/22 14:08 Received: 10/12/22 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Benzene	**1340**	ug/L	20.0	2.1	20		10/19/22 14:13	71-43-2	
Bromobenzene	**<2.4**	ug/L	20.0	2.4	20		10/19/22 14:13	108-86-1	
Bromochloromethane	**<3.0**	ug/L	20.0	3.0	20		10/19/22 14:13	74-97-5	
Bromodichloromethane	**<2.3**	ug/L	20.0	2.3	20		10/19/22 14:13	75-27-4	
Bromoform	**<4.5**	ug/L	20.0	4.5	20		10/19/22 14:13	75-25-2	
Bromomethane	**10.2J**	ug/L	50.0	7.7	20		10/19/22 14:13	74-83-9	B,L1
n-Butylbenzene	**<1.9**	ug/L	20.0	1.9	20		10/19/22 14:13	104-51-8	
sec-Butylbenzene	**6.7J**	ug/L	20.0	1.9	20		10/19/22 14:13	135-98-8	
tert-Butylbenzene	**<1.8**	ug/L	20.0	1.8	20		10/19/22 14:13	98-06-6	
Carbon tetrachloride	**<2.7**	ug/L	20.0	2.7	20		10/19/22 14:13	56-23-5	
Chlorobenzene	**<2.7**	ug/L	20.0	2.7	20		10/19/22 14:13	108-90-7	
Chloroethane	**<4.1**	ug/L	20.0	4.1	20		10/19/22 14:13	75-00-3	
Chloroform	**<4.6**	ug/L	20.0	4.6	20		10/19/22 14:13	67-66-3	
Chloromethane	**<3.4**	ug/L	20.0	3.4	20		10/19/22 14:13	74-87-3	
2-Chlorotoluene	**<2.0**	ug/L	20.0	2.0	20		10/19/22 14:13	95-49-8	M1
4-Chlorotoluene	**<2.5**	ug/L	20.0	2.5	20		10/19/22 14:13	106-43-4	
1,2-Dibromo-3-chloropropane	**<7.1**	ug/L	50.0	7.1	20		10/19/22 14:13	96-12-8	
Dibromochloromethane	**<4.1**	ug/L	20.0	4.1	20		10/19/22 14:13	124-48-1	
1,2-Dibromoethane (EDB)	**<4.0**	ug/L	20.0	4.0	20		10/19/22 14:13	106-93-4	
Dibromomethane	**<3.5**	ug/L	20.0	3.5	20		10/19/22 14:13	74-95-3	
1,2-Dichlorobenzene	**<2.6**	ug/L	20.0	2.6	20		10/19/22 14:13	95-50-1	
1,3-Dichlorobenzene	**<2.5**	ug/L	20.0	2.5	20		10/19/22 14:13	541-73-1	
1,4-Dichlorobenzene	**<2.9**	ug/L	20.0	2.9	20		10/19/22 14:13	106-46-7	
Dichlorodifluoromethane	**<1.6**	ug/L	20.0	1.6	20		10/19/22 14:13	75-71-8	
1,1-Dichloroethane	**<2.2**	ug/L	20.0	2.2	20		10/19/22 14:13	75-34-3	
1,2-Dichloroethane	**<3.4**	ug/L	20.0	3.4	20		10/19/22 14:13	107-06-2	
1,1-Dichloroethene	**<2.6**	ug/L	20.0	2.6	20		10/19/22 14:13	75-35-4	
cis-1,2-Dichloroethene	**<3.0**	ug/L	20.0	3.0	20		10/19/22 14:13	156-59-2	
trans-1,2-Dichloroethene	**<2.7**	ug/L	20.0	2.7	20		10/19/22 14:13	156-60-5	
1,2-Dichloropropane	**<3.0**	ug/L	20.0	3.0	20		10/19/22 14:13	78-87-5	
1,3-Dichloropropane	**<3.2**	ug/L	20.0	3.2	20		10/19/22 14:13	142-28-9	
2,2-Dichloropropane	**<2.3**	ug/L	20.0	2.3	20		10/19/22 14:13	594-20-7	
1,1-Dichloropropene	**<2.5**	ug/L	20.0	2.5	20		10/19/22 14:13	563-58-6	
cis-1,3-Dichloropropene	**<1.1**	ug/L	20.0	1.1	20		10/19/22 14:13	10061-01-5	
trans-1,3-Dichloropropene	**<2.6**	ug/L	20.0	2.6	20		10/19/22 14:13	10061-02-6	
Diethyl ether (Ethyl ether)	**<3.9**	ug/L	50.0	3.9	20		10/19/22 14:13	60-29-7	
Ethylbenzene	**467**	ug/L	20.0	2.2	20		10/19/22 14:13	100-41-4	
Hexachloro-1,3-butadiene	**<4.7**	ug/L	20.0	4.7	20		10/19/22 14:13	87-68-3	
Isopropylbenzene (Cumene)	**20.5**	ug/L	20.0	2.3	20		10/19/22 14:13	98-82-8	
p-Isopropyltoluene	**<2.1**	ug/L	20.0	2.1	20		10/19/22 14:13	99-87-6	
Methylene Chloride	**<6.6**	ug/L	20.0	6.6	20		10/19/22 14:13	75-09-2	
Methyl-tert-butyl ether	**<2.5**	ug/L	20.0	2.5	20		10/19/22 14:13	1634-04-4	
Naphthalene	**312**	ug/L	20.0	3.6	20		10/19/22 14:13	91-20-3	
n-Propylbenzene	**31.7**	ug/L	20.0	2.2	20		10/19/22 14:13	103-65-1	
Styrene	**<1.9**	ug/L	20.0	1.9	20		10/19/22 14:13	100-42-5	M1

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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Sample: MW-5/T66 **Lab ID: 10629410005** Collected: 10/11/22 14:08 Received: 10/12/22 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
1,1,1,2-Tetrachloroethane	**<3.8**	ug/L	20.0	3.8	20		10/19/22 14:13	630-20-6	
1,1,2,2-Tetrachloroethane	**<2.9**	ug/L	20.0	2.9	20		10/19/22 14:13	79-34-5	
Tetrachloroethene	**<2.1**	ug/L	20.0	2.1	20		10/19/22 14:13	127-18-4	
Toluene	**2050**	ug/L	20.0	2.1	20		10/19/22 14:13	108-88-3	
1,2,3-Trichlorobenzene	**<2.7**	ug/L	20.0	2.7	20		10/19/22 14:13	87-61-6	
1,2,4-Trichlorobenzene	**<2.8**	ug/L	20.0	2.8	20		10/19/22 14:13	120-82-1	
1,1,1-Trichloroethane	**<2.5**	ug/L	20.0	2.5	20		10/19/22 14:13	71-55-6	
1,1,2-Trichloroethane	**<4.5**	ug/L	20.0	4.5	20		10/19/22 14:13	79-00-5	
Trichloroethene	**<2.4**	ug/L	20.0	2.4	20		10/19/22 14:13	79-01-6	
Trichlorofluoromethane	**<2.5**	ug/L	20.0	2.5	20		10/19/22 14:13	75-69-4	
1,2,3-Trichloropropane	**<7.5**	ug/L	50.0	7.5	20		10/19/22 14:13	96-18-4	
1,2,4-Trimethylbenzene	**2650**	ug/L	20.0	2.6	20		10/19/22 14:13	95-63-6	P6
1,3,5-Trimethylbenzene	**784**	ug/L	20.0	2.3	20		10/19/22 14:13	108-67-8	
Vinyl chloride	**<0.92**	ug/L	20.0	0.92	20		10/19/22 14:13	75-01-4	
m&p-Xylene	**8730**	ug/L	100	10	50		10/19/22 15:46	179601-23-1	P6
o-Xylene	**3380**	ug/L	50.0	8.8	50		10/19/22 15:46	95-47-6	P6
Surrogates									
1,2-Dichlorobenzene-d4 (S)	100	%.	75-125		20		10/19/22 14:13	2199-69-1	D4
4-Bromofluorobenzene (S)	107	%.	75-125		20		10/19/22 14:13	460-00-4	
Toluene-d8 (S)	99	%.	75-125		20		10/19/22 14:13	2037-26-5	

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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Sample: MW-6/T68 **Lab ID: 10629410006** Collected: 10/11/22 14:50 Received: 10/12/22 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Benzene	**17900**	ug/L	200	20.6	200		10/13/22 16:03	71-43-2	
Bromobenzene	**<24.0**	ug/L	200	24.0	200		10/13/22 16:03	108-86-1	
Bromochloromethane	**<30.4**	ug/L	200	30.4	200		10/13/22 16:03	74-97-5	
Bromodichloromethane	**<23.4**	ug/L	200	23.4	200		10/13/22 16:03	75-27-4	
Bromoform	**<44.6**	ug/L	200	44.6	200		10/13/22 16:03	75-25-2	
Bromomethane	**<77.0**	ug/L	500	77.0	200		10/13/22 16:03	74-83-9	
n-Butylbenzene	**27.2J**	ug/L	200	19.2	200		10/13/22 16:03	104-51-8	
sec-Butylbenzene	**<19.4**	ug/L	200	19.4	200		10/13/22 16:03	135-98-8	
tert-Butylbenzene	**<18.2**	ug/L	200	18.2	200		10/13/22 16:03	98-06-6	
Carbon tetrachloride	**<26.8**	ug/L	200	26.8	200		10/13/22 16:03	56-23-5	
Chlorobenzene	**<26.6**	ug/L	200	26.6	200		10/13/22 16:03	108-90-7	
Chloroethane	**<41.2**	ug/L	200	41.2	200		10/13/22 16:03	75-00-3	
Chloroform	**<46.0**	ug/L	200	46.0	200		10/13/22 16:03	67-66-3	
Chloromethane	**<34.0**	ug/L	200	34.0	200		10/13/22 16:03	74-87-3	
2-Chlorotoluene	**<19.5**	ug/L	200	19.5	200		10/13/22 16:03	95-49-8	
4-Chlorotoluene	**<25.0**	ug/L	200	25.0	200		10/13/22 16:03	106-43-4	
1,2-Dibromo-3-chloropropane	**<71.2**	ug/L	500	71.2	200		10/13/22 16:03	96-12-8	
Dibromochloromethane	**<40.6**	ug/L	200	40.6	200		10/13/22 16:03	124-48-1	
1,2-Dibromoethane (EDB)	**<40.4**	ug/L	200	40.4	200		10/13/22 16:03	106-93-4	
Dibromomethane	**<34.6**	ug/L	200	34.6	200		10/13/22 16:03	74-95-3	
1,2-Dichlorobenzene	**<26.2**	ug/L	200	26.2	200		10/13/22 16:03	95-50-1	
1,3-Dichlorobenzene	**<24.6**	ug/L	200	24.6	200		10/13/22 16:03	541-73-1	
1,4-Dichlorobenzene	**<29.4**	ug/L	200	29.4	200		10/13/22 16:03	106-46-7	
Dichlorodifluoromethane	**<15.9**	ug/L	200	15.9	200		10/13/22 16:03	75-71-8	
1,1-Dichloroethane	**<21.8**	ug/L	200	21.8	200		10/13/22 16:03	75-34-3	
1,2-Dichloroethane	**<33.8**	ug/L	200	33.8	200		10/13/22 16:03	107-06-2	
1,1-Dichloroethene	**<26.4**	ug/L	200	26.4	200		10/13/22 16:03	75-35-4	
cis-1,2-Dichloroethene	**<30.0**	ug/L	200	30.0	200		10/13/22 16:03	156-59-2	
trans-1,2-Dichloroethene	**<27.0**	ug/L	200	27.0	200		10/13/22 16:03	156-60-5	
1,2-Dichloropropane	**<29.6**	ug/L	200	29.6	200		10/13/22 16:03	78-87-5	
1,3-Dichloropropane	**<31.6**	ug/L	200	31.6	200		10/13/22 16:03	142-28-9	
2,2-Dichloropropane	**<23.2**	ug/L	200	23.2	200		10/13/22 16:03	594-20-7	
1,1-Dichloropropene	**<25.0**	ug/L	200	25.0	200		10/13/22 16:03	563-58-6	
cis-1,3-Dichloropropene	**<11.3**	ug/L	200	11.3	200		10/13/22 16:03	10061-01-5	
trans-1,3-Dichloropropene	**<25.8**	ug/L	200	25.8	200		10/13/22 16:03	10061-02-6	
Diethyl ether (Ethyl ether)	**<38.8**	ug/L	500	38.8	200		10/13/22 16:03	60-29-7	
Ethylbenzene	**1800**	ug/L	200	21.8	200		10/13/22 16:03	100-41-4	
Hexachloro-1,3-butadiene	**<47.4**	ug/L	200	47.4	200		10/13/22 16:03	87-68-3	
Isopropylbenzene (Cumene)	**52.2J**	ug/L	200	23.2	200		10/13/22 16:03	98-82-8	
p-Isopropyltoluene	**<21.2**	ug/L	200	21.2	200		10/13/22 16:03	99-87-6	
Methylene Chloride	**95.5J**	ug/L	400	66.0	200		10/13/22 16:03	75-09-2	B
Methyl-tert-butyl ether	**<25.2**	ug/L	200	25.2	200		10/13/22 16:03	1634-04-4	
Naphthalene	**470**	ug/L	200	36.2	200		10/13/22 16:03	91-20-3	
n-Propylbenzene	**159J**	ug/L	200	21.8	200		10/13/22 16:03	103-65-1	
Styrene	**<19.3**	ug/L	200	19.3	200		10/13/22 16:03	100-42-5	L1

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Sample: MW-6/T68 **Lab ID: 10629410006** Collected: 10/11/22 14:50 Received: 10/12/22 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
1,1,1,2-Tetrachloroethane	**<38.0**	ug/L	200	38.0	200		10/13/22 16:03	630-20-6	
1,1,2,2-Tetrachloroethane	**<29.2**	ug/L	200	29.2	200		10/13/22 16:03	79-34-5	
Tetrachloroethene	**<21.0**	ug/L	200	21.0	200		10/13/22 16:03	127-18-4	
Toluene	**15500**	ug/L	200	20.6	200		10/13/22 16:03	108-88-3	
1,2,3-Trichlorobenzene	**<26.6**	ug/L	200	26.6	200		10/13/22 16:03	87-61-6	
1,2,4-Trichlorobenzene	**<28.2**	ug/L	200	28.2	200		10/13/22 16:03	120-82-1	
1,1,1-Trichloroethane	**<24.8**	ug/L	200	24.8	200		10/13/22 16:03	71-55-6	
1,1,2-Trichloroethane	**<44.8**	ug/L	200	44.8	200		10/13/22 16:03	79-00-5	
Trichloroethene	**<24.4**	ug/L	200	24.4	200		10/13/22 16:03	79-01-6	
Trichlorofluoromethane	**<24.6**	ug/L	200	24.6	200		10/13/22 16:03	75-69-4	
1,2,3-Trichloropropane	**<75.0**	ug/L	500	75.0	200		10/13/22 16:03	96-18-4	
1,2,4-Trimethylbenzene	**2620**	ug/L	200	26.0	200		10/13/22 16:03	95-63-6	
1,3,5-Trimethylbenzene	**725**	ug/L	200	22.6	200		10/13/22 16:03	108-67-8	
Vinyl chloride	**<9.2**	ug/L	200	9.2	200		10/13/22 16:03	75-01-4	
m&p-Xylene	**11800**	ug/L	400	39.8	200		10/13/22 16:03	179601-23-1	
o-Xylene	**5700**	ug/L	200	35.4	200		10/13/22 16:03	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	101	%.	75-125		200		10/13/22 16:03	2199-69-1	D4
4-Bromofluorobenzene (S)	95	%.	75-125		200		10/13/22 16:03	460-00-4	
Toluene-d8 (S)	98	%.	75-125		200		10/13/22 16:03	2037-26-5	

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Sample: Trip Blank **Lab ID: 10629410007** Collected: 10/11/22 00:00 Received: 10/12/22 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Benzene	**<0.10**	ug/L	1.0	0.10	1		10/13/22 14:12	71-43-2	
Bromobenzene	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:12	108-86-1	
Bromochloromethane	**<0.15**	ug/L	1.0	0.15	1		10/13/22 14:12	74-97-5	
Bromodichloromethane	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:12	75-27-4	
Bromoform	**<0.22**	ug/L	1.0	0.22	1		10/13/22 14:12	75-25-2	
Bromomethane	**<0.38**	ug/L	2.5	0.38	1		10/13/22 14:12	74-83-9	
n-Butylbenzene	**<0.096**	ug/L	1.0	0.096	1		10/13/22 14:12	104-51-8	
sec-Butylbenzene	**<0.097**	ug/L	1.0	0.097	1		10/13/22 14:12	135-98-8	
tert-Butylbenzene	**<0.091**	ug/L	1.0	0.091	1		10/13/22 14:12	98-06-6	
Carbon tetrachloride	**<0.13**	ug/L	1.0	0.13	1		10/13/22 14:12	56-23-5	
Chlorobenzene	**<0.13**	ug/L	1.0	0.13	1		10/13/22 14:12	108-90-7	
Chloroethane	**<0.21**	ug/L	1.0	0.21	1		10/13/22 14:12	75-00-3	
Chloroform	**<0.23**	ug/L	1.0	0.23	1		10/13/22 14:12	67-66-3	
Chloromethane	**<0.17**	ug/L	1.0	0.17	1		10/13/22 14:12	74-87-3	
2-Chlorotoluene	**<0.098**	ug/L	1.0	0.098	1		10/13/22 14:12	95-49-8	
4-Chlorotoluene	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:12	106-43-4	
1,2-Dibromo-3-chloropropane	**<0.36**	ug/L	2.5	0.36	1		10/13/22 14:12	96-12-8	
Dibromochloromethane	**<0.20**	ug/L	1.0	0.20	1		10/13/22 14:12	124-48-1	
1,2-Dibromoethane (EDB)	**<0.20**	ug/L	1.0	0.20	1		10/13/22 14:12	106-93-4	
Dibromomethane	**<0.17**	ug/L	1.0	0.17	1		10/13/22 14:12	74-95-3	
1,2-Dichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		10/13/22 14:12	95-50-1	
1,3-Dichlorobenzene	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:12	541-73-1	
1,4-Dichlorobenzene	**<0.15**	ug/L	1.0	0.15	1		10/13/22 14:12	106-46-7	
Dichlorodifluoromethane	**<0.079**	ug/L	1.0	0.079	1		10/13/22 14:12	75-71-8	
1,1-Dichloroethane	**<0.11**	ug/L	1.0	0.11	1		10/13/22 14:12	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		10/13/22 14:12	107-06-2	
1,1-Dichloroethene	**<0.13**	ug/L	1.0	0.13	1		10/13/22 14:12	75-35-4	
cis-1,2-Dichloroethene	**<0.15**	ug/L	1.0	0.15	1		10/13/22 14:12	156-59-2	
trans-1,2-Dichloroethene	**<0.14**	ug/L	1.0	0.14	1		10/13/22 14:12	156-60-5	
1,2-Dichloropropane	**<0.15**	ug/L	1.0	0.15	1		10/13/22 14:12	78-87-5	
1,3-Dichloropropane	**<0.16**	ug/L	1.0	0.16	1		10/13/22 14:12	142-28-9	
2,2-Dichloropropane	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:12	594-20-7	
1,1-Dichloropropene	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:12	563-58-6	
cis-1,3-Dichloropropene	**<0.057**	ug/L	1.0	0.057	1		10/13/22 14:12	10061-01-5	
trans-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		10/13/22 14:12	10061-02-6	
Diethyl ether (Ethyl ether)	**<0.19**	ug/L	2.5	0.19	1		10/13/22 14:12	60-29-7	
Ethylbenzene	**<0.11**	ug/L	1.0	0.11	1		10/13/22 14:12	100-41-4	
Hexachloro-1,3-butadiene	**<0.24**	ug/L	1.0	0.24	1		10/13/22 14:12	87-68-3	
Isopropylbenzene (Cumene)	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:12	98-82-8	
p-Isopropyltoluene	**<0.11**	ug/L	1.0	0.11	1		10/13/22 14:12	99-87-6	
Methylene Chloride	**0.60J**	ug/L	2.0	0.33	1		10/13/22 14:12	75-09-2	B
Methyl-tert-butyl ether	**<0.13**	ug/L	1.0	0.13	1		10/13/22 14:12	1634-04-4	
Naphthalene	**<0.18**	ug/L	1.0	0.18	1		10/13/22 14:12	91-20-3	
n-Propylbenzene	**<0.11**	ug/L	1.0	0.11	1		10/13/22 14:12	103-65-1	
Styrene	**<0.097**	ug/L	1.0	0.097	1		10/13/22 14:12	100-42-5	L1

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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Sample: Trip Blank **Lab ID: 10629410007** Collected: 10/11/22 00:00 Received: 10/12/22 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
1,1,1,2-Tetrachloroethane	**<0.19**	ug/L	1.0	0.19	1		10/13/22 14:12	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.15**	ug/L	1.0	0.15	1		10/13/22 14:12	79-34-5	
Tetrachloroethene	**<0.10**	ug/L	1.0	0.10	1		10/13/22 14:12	127-18-4	
Toluene	**<0.10**	ug/L	1.0	0.10	1		10/13/22 14:12	108-88-3	
1,2,3-Trichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		10/13/22 14:12	87-61-6	
1,2,4-Trichlorobenzene	**<0.14**	ug/L	1.0	0.14	1		10/13/22 14:12	120-82-1	
1,1,1-Trichloroethane	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:12	71-55-6	
1,1,2-Trichloroethane	**<0.22**	ug/L	1.0	0.22	1		10/13/22 14:12	79-00-5	
Trichloroethene	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:12	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	1.0	0.12	1		10/13/22 14:12	75-69-4	
1,2,3-Trichloropropane	**<0.38**	ug/L	2.5	0.38	1		10/13/22 14:12	96-18-4	
1,2,4-Trimethylbenzene	**<0.13**	ug/L	1.0	0.13	1		10/13/22 14:12	95-63-6	
1,3,5-Trimethylbenzene	**<0.11**	ug/L	1.0	0.11	1		10/13/22 14:12	108-67-8	
Vinyl chloride	**<0.046**	ug/L	1.0	0.046	1		10/13/22 14:12	75-01-4	
m&p-Xylene	**<0.20**	ug/L	2.0	0.20	1		10/13/22 14:12	179601-23-1	
o-Xylene	**<0.18**	ug/L	1.0	0.18	1		10/13/22 14:12	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	100	%.	75-125		1		10/13/22 14:12	2199-69-1	
4-Bromofluorobenzene (S)	97	%.	75-125		1		10/13/22 14:12	460-00-4	
Toluene-d8 (S)	97	%.	75-125		1		10/13/22 14:12	2037-26-5	

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QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

QC Batch: 846686
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV 465 W
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10629410001, 10629410004, 10629410006, 10629410007

METHOD BLANK: 4479893 Matrix: Water
Associated Lab Samples: 10629410001, 10629410004, 10629410006, 10629410007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.19	1.0	10/13/22 13:18	
1,1,1-Trichloroethane	ug/L	<0.12	1.0	10/13/22 13:18	
1,1,2,2-Tetrachloroethane	ug/L	<0.15	1.0	10/13/22 13:18	
1,1,2-Trichloroethane	ug/L	<0.22	1.0	10/13/22 13:18	
1,1-Dichloroethane	ug/L	<0.11	1.0	10/13/22 13:18	
1,1-Dichloroethene	ug/L	<0.13	1.0	10/13/22 13:18	
1,1-Dichloropropene	ug/L	<0.12	1.0	10/13/22 13:18	
1,2,3-Trichlorobenzene	ug/L	<0.13	1.0	10/13/22 13:18	
1,2,3-Trichloropropane	ug/L	<0.38	2.5	10/13/22 13:18	
1,2,4-Trichlorobenzene	ug/L	<0.14	1.0	10/13/22 13:18	
1,2,4-Trimethylbenzene	ug/L	<0.13	1.0	10/13/22 13:18	
1,2-Dibromo-3-chloropropane	ug/L	<0.36	2.5	10/13/22 13:18	
1,2-Dibromoethane (EDB)	ug/L	<0.20	1.0	10/13/22 13:18	
1,2-Dichlorobenzene	ug/L	<0.13	1.0	10/13/22 13:18	
1,2-Dichloroethane	ug/L	<0.17	1.0	10/13/22 13:18	
1,2-Dichloropropane	ug/L	<0.15	1.0	10/13/22 13:18	
1,3,5-Trimethylbenzene	ug/L	<0.11	1.0	10/13/22 13:18	
1,3-Dichlorobenzene	ug/L	<0.12	1.0	10/13/22 13:18	
1,3-Dichloropropane	ug/L	<0.16	1.0	10/13/22 13:18	
1,4-Dichlorobenzene	ug/L	<0.15	1.0	10/13/22 13:18	
2,2-Dichloropropane	ug/L	<0.12	1.0	10/13/22 13:18	
2-Chlorotoluene	ug/L	<0.098	1.0	10/13/22 13:18	
4-Chlorotoluene	ug/L	<0.12	1.0	10/13/22 13:18	
Benzene	ug/L	<0.10	1.0	10/13/22 13:18	
Bromobenzene	ug/L	<0.12	1.0	10/13/22 13:18	
Bromochloromethane	ug/L	<0.15	1.0	10/13/22 13:18	
Bromodichloromethane	ug/L	<0.12	1.0	10/13/22 13:18	
Bromoform	ug/L	<0.22	1.0	10/13/22 13:18	
Bromomethane	ug/L	<0.38	2.5	10/13/22 13:18	
Carbon tetrachloride	ug/L	<0.13	1.0	10/13/22 13:18	
Chlorobenzene	ug/L	<0.13	1.0	10/13/22 13:18	
Chloroethane	ug/L	<0.21	1.0	10/13/22 13:18	
Chloroform	ug/L	<0.23	1.0	10/13/22 13:18	
Chloromethane	ug/L	<0.17	1.0	10/13/22 13:18	
cis-1,2-Dichloroethene	ug/L	<0.15	1.0	10/13/22 13:18	
cis-1,3-Dichloropropene	ug/L	<0.057	1.0	10/13/22 13:18	
Dibromochloromethane	ug/L	<0.20	1.0	10/13/22 13:18	
Dibromomethane	ug/L	<0.17	1.0	10/13/22 13:18	
Dichlorodifluoromethane	ug/L	<0.079	1.0	10/13/22 13:18	
Diethyl ether (Ethyl ether)	ug/L	<0.19	2.5	10/13/22 13:18	

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REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

METHOD BLANK: 4479893 Matrix: Water
Associated Lab Samples: 10629410001, 10629410004, 10629410006, 10629410007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.11	1.0	10/13/22 13:18	
Hexachloro-1,3-butadiene	ug/L	<0.24	1.0	10/13/22 13:18	
Isopropylbenzene (Cumene)	ug/L	<0.12	1.0	10/13/22 13:18	
m&p-Xylene	ug/L	<0.20	2.0	10/13/22 13:18	
Methyl-tert-butyl ether	ug/L	<0.13	1.0	10/13/22 13:18	
Methylene Chloride	ug/L	0.83J	2.0	10/13/22 13:18	MN
n-Butylbenzene	ug/L	<0.096	1.0	10/13/22 13:18	
n-Propylbenzene	ug/L	<0.11	1.0	10/13/22 13:18	
Naphthalene	ug/L	<0.18	1.0	10/13/22 13:18	
o-Xylene	ug/L	<0.18	1.0	10/13/22 13:18	
p-Isopropyltoluene	ug/L	<0.11	1.0	10/13/22 13:18	
sec-Butylbenzene	ug/L	<0.097	1.0	10/13/22 13:18	
Styrene	ug/L	<0.097	1.0	10/13/22 13:18	
tert-Butylbenzene	ug/L	<0.091	1.0	10/13/22 13:18	
Tetrachloroethene	ug/L	<0.10	1.0	10/13/22 13:18	
Toluene	ug/L	<0.10	1.0	10/13/22 13:18	
trans-1,2-Dichloroethene	ug/L	<0.14	1.0	10/13/22 13:18	
trans-1,3-Dichloropropene	ug/L	<0.13	1.0	10/13/22 13:18	
Trichloroethene	ug/L	<0.12	1.0	10/13/22 13:18	
Trichlorofluoromethane	ug/L	<0.12	1.0	10/13/22 13:18	
Vinyl chloride	ug/L	<0.046	1.0	10/13/22 13:18	
1,2-Dichlorobenzene-d4 (S)	%.	104	75-125	10/13/22 13:18	
4-Bromofluorobenzene (S)	%.	96	75-125	10/13/22 13:18	
Toluene-d8 (S)	%.	97	75-125	10/13/22 13:18	

LABORATORY CONTROL SAMPLE: 4479894

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	21.3	106	75-125	
1,1,1-Trichloroethane	ug/L	20	20.7	104	72-125	
1,1,2,2-Tetrachloroethane	ug/L	20	21.9	109	70-125	
1,1,2-Trichloroethane	ug/L	20	19.7	99	75-125	
1,1-Dichloroethane	ug/L	20	19.9	99	67-125	
1,1-Dichloroethene	ug/L	20	19.6	98	67-125	
1,1-Dichloropropene	ug/L	20	20.4	102	70-125	
1,2,3-Trichlorobenzene	ug/L	20	21.0	105	68-125	
1,2,3-Trichloropropane	ug/L	20	21.0	105	74-125	
1,2,4-Trichlorobenzene	ug/L	20	20.5	103	68-125	
1,2,4-Trimethylbenzene	ug/L	20	20.8	104	75-125	
1,2-Dibromo-3-chloropropane	ug/L	20	22.0	110	54-131	
1,2-Dibromoethane (EDB)	ug/L	20	20.7	103	75-125	
1,2-Dichlorobenzene	ug/L	20	20.9	104	75-125	
1,2-Dichloroethane	ug/L	20	20.6	103	75-125	
1,2-Dichloropropane	ug/L	20	20.4	102	70-128	

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QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

LABORATORY CONTROL SAMPLE: 4479894

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3,5-Trimethylbenzene	ug/L	20	20.9	105	75-125	
1,3-Dichlorobenzene	ug/L	20	21.1	106	75-125	
1,3-Dichloropropane	ug/L	20	21.0	105	75-125	
1,4-Dichlorobenzene	ug/L	20	20.8	104	75-125	
2,2-Dichloropropane	ug/L	20	20.2	101	49-125	
2-Chlorotoluene	ug/L	20	20.8	104	70-125	
4-Chlorotoluene	ug/L	20	20.8	104	70-125	
Benzene	ug/L	20	20.6	103	73-125	
Bromobenzene	ug/L	20	21.3	107	75-125	
Bromochloromethane	ug/L	20	20.4	102	75-125	
Bromodichloromethane	ug/L	20	20.8	104	74-125	
Bromoform	ug/L	20	22.7	114	61-125	
Bromomethane	ug/L	20	17.4	87	30-125	
Carbon tetrachloride	ug/L	20	20.7	104	58-125	
Chlorobenzene	ug/L	20	20.6	103	75-125	
Chloroethane	ug/L	20	18.7	94	58-125	
Chloroform	ug/L	20	20.3	101	74-125	
Chloromethane	ug/L	20	18.6	93	38-142	
cis-1,2-Dichloroethene	ug/L	20	20.6	103	75-125	
cis-1,3-Dichloropropene	ug/L	20	21.1	106	72-125	
Dibromochloromethane	ug/L	20	21.6	108	73-125	
Dibromomethane	ug/L	20	20.0	100	68-125	
Dichlorodifluoromethane	ug/L	20	20.0	100	46-149	
Diethyl ether (Ethyl ether)	ug/L	20	21.2	106	68-127	
Ethylbenzene	ug/L	20	20.2	101	75-125	
Hexachloro-1,3-butadiene	ug/L	20	16.6	83	52-131	
Isopropylbenzene (Cumene)	ug/L	20	20.6	103	74-125	
m&p-Xylene	ug/L	40	42.0	105	72-125	
Methyl-tert-butyl ether	ug/L	20	20.9	104	75-125	
Methylene Chloride	ug/L	20	19.4	97	70-125	
n-Butylbenzene	ug/L	20	20.2	101	68-125	
n-Propylbenzene	ug/L	20	21.3	107	70-125	
Naphthalene	ug/L	20	23.0	115	66-127	
o-Xylene	ug/L	20	21.1	106	73-125	
p-Isopropyltoluene	ug/L	20	20.6	103	72-125	
sec-Butylbenzene	ug/L	20	21.2	106	72-125	
Styrene	ug/L	20	25.2	126	75-125	L1
tert-Butylbenzene	ug/L	20	21.2	106	74-125	
Tetrachloroethene	ug/L	20	20.4	102	72-125	
Toluene	ug/L	20	20.1	101	74-125	
trans-1,2-Dichloroethene	ug/L	20	20.6	103	73-125	
trans-1,3-Dichloropropene	ug/L	20	20.3	102	72-125	
Trichloroethene	ug/L	20	19.7	99	75-125	
Trichlorofluoromethane	ug/L	20	21.9	110	62-136	
Vinyl chloride	ug/L	20	19.0	95	55-139	
1,2-Dichlorobenzene-d4 (S)	%.			99	75-125	
4-Bromofluorobenzene (S)	%.			97	75-125	

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QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

LABORATORY CONTROL SAMPLE: 4479894

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%.			98	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4479903 4479904

Parameter	Units	10629358004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	200	200	189	183	94	92	75-130	3	30	
1,1,1-Trichloroethane	ug/L	ND	200	200	161	153	80	76	64-143	5	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	200	200	201	200	100	100	48-139	0	30	
1,1,2-Trichloroethane	ug/L	ND	200	200	202	199	101	100	68-135	2	30	
1,1-Dichloroethane	ug/L	ND	200	200	165	158	83	79	62-146	4	30	
1,1-Dichloroethene	ug/L	ND	200	200	142	142	71	71	44-150	0	30	
1,1-Dichloropropene	ug/L	ND	200	200	149	145	75	72	55-150	3	30	
1,2,3-Trichlorobenzene	ug/L	ND	200	200	180	183	90	92	44-150	2	30	
1,2,3-Trichloropropane	ug/L	ND	200	200	189	186	94	93	64-126	2	30	
1,2,4-Trichlorobenzene	ug/L	ND	200	200	179	179	90	90	42-147	0	30	
1,2,4-Trimethylbenzene	ug/L	823	200	200	986	967	82	72	62-138	2	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	200	200	209	206	104	103	53-132	1	30	
1,2-Dibromoethane (EDB)	ug/L	ND	200	200	186	183	93	92	69-129	2	30	
1,2-Dichlorobenzene	ug/L	ND	200	200	177	177	89	88	70-125	0	30	
1,2-Dichloroethane	ug/L	ND	200	200	178	174	89	87	70-133	2	30	
1,2-Dichloropropane	ug/L	ND	200	200	179	177	89	89	61-142	1	30	
1,3,5-Trimethylbenzene	ug/L	240	200	200	413	396	87	78	64-135	4	30	
1,3-Dichlorobenzene	ug/L	ND	200	200	178	175	89	88	69-131	2	30	
1,3-Dichloropropane	ug/L	ND	200	200	188	184	94	92	70-129	2	30	
1,4-Dichlorobenzene	ug/L	ND	200	200	176	174	88	87	67-127	1	30	
2,2-Dichloropropane	ug/L	ND	200	200	149	144	74	72	38-148	3	30	
2-Chlorotoluene	ug/L	ND	200	200	271	265	135	132	52-142	2	30	
4-Chlorotoluene	ug/L	ND	200	200	197	193	98	96	59-132	2	30	
Benzene	ug/L	ND	200	200	177	172	84	81	65-140	3	30	
Bromobenzene	ug/L	ND	200	200	183	184	91	92	65-129	0	30	
Bromochloromethane	ug/L	ND	200	200	174	172	87	86	67-147	1	30	
Bromodichloromethane	ug/L	ND	200	200	192	190	96	95	66-136	1	30	
Bromoform	ug/L	ND	200	200	207	203	104	102	59-137	2	30	
Bromomethane	ug/L	ND	200	200	155	166	77	83	30-150	7	30	
Carbon tetrachloride	ug/L	ND	200	200	151	147	76	74	58-149	3	30	
Chlorobenzene	ug/L	ND	200	200	176	171	88	85	74-125	3	30	
Chloroethane	ug/L	ND	200	200	157	147	78	74	34-150	6	30	
Chloroform	ug/L	ND	200	200	187	183	94	91	54-148	3	30	
Chloromethane	ug/L	ND	200	200	141	134	70	67	38-150	5	30	
cis-1,2-Dichloroethene	ug/L	ND	200	200	170	165	85	83	54-149	3	30	
cis-1,3-Dichloropropene	ug/L	ND	200	200	180	178	90	89	64-130	1	30	
Dibromochloromethane	ug/L	ND	200	200	196	192	98	96	71-135	2	30	
Dibromomethane	ug/L	ND	200	200	180	181	90	91	65-141	1	30	

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QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4479903 4479904

Parameter	Units	10629358004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dichlorodifluoromethane	ug/L	ND	200	200	149	140	75	70	32-150	7	30	
Diethyl ether (Ethyl ether)	ug/L	ND	200	200	182	181	91	91	51-148	0	30	
Ethylbenzene	ug/L	422	200	200	596	574	87	76	66-126	4	30	
Hexachloro-1,3-butadiene	ug/L	ND	200	200	132	134	66	67	31-150	1	30	
Isopropylbenzene (Cumene)	ug/L	29.5	200	200	197	188	84	79	72-133	4	30	
m&p-Xylene	ug/L	1680	400	400	2050	1950	92	67	69-134	5	30	M1
Methyl-tert-butyl ether	ug/L	ND	200	200	184	185	92	92	65-137	0	30	
Methylene Chloride	ug/L	ND	200	200	155	161	78	80	59-137	3	30	
n-Butylbenzene	ug/L	33.4	200	200	203	195	85	81	52-141	4	30	
n-Propylbenzene	ug/L	138	200	200	308	301	85	82	53-138	2	30	
Naphthalene	ug/L	129	200	200	349	351	110	111	56-141	1	30	
o-Xylene	ug/L	647	200	200	825	804	89	79	73-133	3	30	
p-Isopropyltoluene	ug/L	22.1	200	200	186	177	82	77	59-139	5	30	
sec-Butylbenzene	ug/L	12.9	200	200	172	169	80	78	60-138	2	30	
Styrene	ug/L	ND	200	200	236	229	118	115	67-138	3	30	
tert-Butylbenzene	ug/L	ND	200	200	165	160	83	80	58-141	3	30	
Tetrachloroethene	ug/L	ND	200	200	155	147	77	74	66-141	5	30	
Toluene	ug/L	448	200	200	609	592	80	72	69-131	3	30	
trans-1,2-Dichloroethene	ug/L	ND	200	200	158	153	79	77	47-150	3	30	
trans-1,3-Dichloropropene	ug/L	ND	200	200	180	179	90	89	68-129	1	30	
Trichloroethene	ug/L	ND	200	200	159	154	80	77	68-139	3	30	
Trichlorofluoromethane	ug/L	ND	200	200	164	158	82	79	49-150	4	30	
Vinyl chloride	ug/L	ND	200	200	143	138	72	69	55-150	4	30	
1,2-Dichlorobenzene-d4 (S)	%.						100	99	75-125			
4-Bromofluorobenzene (S)	%.						98	96	75-125			
Toluene-d8 (S)	%.						97	97	75-125			

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QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

QC Batch: 847898
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV 465 W
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10629410002, 10629410003, 10629410005

METHOD BLANK: 4485550
Matrix: Water
Associated Lab Samples: 10629410002, 10629410003, 10629410005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.19	1.0	10/19/22 13:11	
1,1,1-Trichloroethane	ug/L	<0.12	1.0	10/19/22 13:11	
1,1,2,2-Tetrachloroethane	ug/L	<0.15	1.0	10/19/22 13:11	
1,1,2-Trichloroethane	ug/L	<0.22	1.0	10/19/22 13:11	
1,1-Dichloroethane	ug/L	<0.11	1.0	10/19/22 13:11	
1,1-Dichloroethene	ug/L	<0.13	1.0	10/19/22 13:11	
1,1-Dichloropropene	ug/L	<0.12	1.0	10/19/22 13:11	
1,2,3-Trichlorobenzene	ug/L	<0.13	1.0	10/19/22 13:11	
1,2,3-Trichloropropane	ug/L	<0.38	2.5	10/19/22 13:11	
1,2,4-Trichlorobenzene	ug/L	<0.14	1.0	10/19/22 13:11	
1,2,4-Trimethylbenzene	ug/L	<0.13	1.0	10/19/22 13:11	
1,2-Dibromo-3-chloropropane	ug/L	<0.36	2.5	10/19/22 13:11	
1,2-Dibromoethane (EDB)	ug/L	<0.20	1.0	10/19/22 13:11	
1,2-Dichlorobenzene	ug/L	<0.13	1.0	10/19/22 13:11	
1,2-Dichloroethane	ug/L	<0.17	1.0	10/19/22 13:11	
1,2-Dichloropropane	ug/L	<0.15	1.0	10/19/22 13:11	
1,3,5-Trimethylbenzene	ug/L	<0.11	1.0	10/19/22 13:11	
1,3-Dichlorobenzene	ug/L	<0.12	1.0	10/19/22 13:11	
1,3-Dichloropropane	ug/L	<0.16	1.0	10/19/22 13:11	
1,4-Dichlorobenzene	ug/L	<0.15	1.0	10/19/22 13:11	
2,2-Dichloropropane	ug/L	<0.12	1.0	10/19/22 13:11	
2-Chlorotoluene	ug/L	<0.098	1.0	10/19/22 13:11	
4-Chlorotoluene	ug/L	<0.12	1.0	10/19/22 13:11	
Benzene	ug/L	<0.10	1.0	10/19/22 13:11	
Bromobenzene	ug/L	<0.12	1.0	10/19/22 13:11	
Bromochloromethane	ug/L	<0.15	1.0	10/19/22 13:11	
Bromodichloromethane	ug/L	<0.12	1.0	10/19/22 13:11	
Bromoform	ug/L	<0.22	1.0	10/19/22 13:11	
Bromomethane	ug/L	0.52J	2.5	10/19/22 13:11	
Carbon tetrachloride	ug/L	<0.13	1.0	10/19/22 13:11	
Chlorobenzene	ug/L	<0.13	1.0	10/19/22 13:11	
Chloroethane	ug/L	<0.21	1.0	10/19/22 13:11	
Chloroform	ug/L	<0.23	1.0	10/19/22 13:11	
Chloromethane	ug/L	<0.17	1.0	10/19/22 13:11	
cis-1,2-Dichloroethene	ug/L	<0.15	1.0	10/19/22 13:11	
cis-1,3-Dichloropropene	ug/L	<0.057	1.0	10/19/22 13:11	
Dibromochloromethane	ug/L	<0.20	1.0	10/19/22 13:11	
Dibromomethane	ug/L	<0.17	1.0	10/19/22 13:11	
Dichlorodifluoromethane	ug/L	<0.079	1.0	10/19/22 13:11	
Diethyl ether (Ethyl ether)	ug/L	<0.19	2.5	10/19/22 13:11	

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QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

METHOD BLANK: 4485550 Matrix: Water
Associated Lab Samples: 10629410002, 10629410003, 10629410005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.11	1.0	10/19/22 13:11	
Hexachloro-1,3-butadiene	ug/L	<0.24	1.0	10/19/22 13:11	
Isopropylbenzene (Cumene)	ug/L	<0.12	1.0	10/19/22 13:11	
m&p-Xylene	ug/L	<0.20	2.0	10/19/22 13:11	
Methyl-tert-butyl ether	ug/L	<0.13	1.0	10/19/22 13:11	
Methylene Chloride	ug/L	<0.33	1.0	10/19/22 13:11	
n-Butylbenzene	ug/L	<0.096	1.0	10/19/22 13:11	
n-Propylbenzene	ug/L	<0.11	1.0	10/19/22 13:11	
Naphthalene	ug/L	<0.18	1.0	10/19/22 13:11	
o-Xylene	ug/L	<0.18	1.0	10/19/22 13:11	
p-Isopropyltoluene	ug/L	<0.11	1.0	10/19/22 13:11	
sec-Butylbenzene	ug/L	<0.097	1.0	10/19/22 13:11	
Styrene	ug/L	<0.097	1.0	10/19/22 13:11	
tert-Butylbenzene	ug/L	<0.091	1.0	10/19/22 13:11	
Tetrachloroethene	ug/L	<0.10	1.0	10/19/22 13:11	
Toluene	ug/L	<0.10	1.0	10/19/22 13:11	
trans-1,2-Dichloroethene	ug/L	<0.14	1.0	10/19/22 13:11	
trans-1,3-Dichloropropene	ug/L	<0.13	1.0	10/19/22 13:11	
Trichloroethene	ug/L	<0.12	1.0	10/19/22 13:11	
Trichlorofluoromethane	ug/L	<0.12	1.0	10/19/22 13:11	
Vinyl chloride	ug/L	<0.046	1.0	10/19/22 13:11	
1,2-Dichlorobenzene-d4 (S)	%.	98	75-125	10/19/22 13:11	
4-Bromofluorobenzene (S)	%.	97	75-125	10/19/22 13:11	
Toluene-d8 (S)	%.	99	75-125	10/19/22 13:11	

LABORATORY CONTROL SAMPLE: 4485551

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	21.2	106	75-125	
1,1,1-Trichloroethane	ug/L	20	20.9	105	72-125	
1,1,2,2-Tetrachloroethane	ug/L	20	18.9	95	70-125	
1,1,2-Trichloroethane	ug/L	20	19.8	99	75-125	
1,1-Dichloroethane	ug/L	20	19.4	97	67-125	
1,1-Dichloroethene	ug/L	20	19.9	100	67-125	
1,1-Dichloropropene	ug/L	20	21.1	106	70-125	
1,2,3-Trichlorobenzene	ug/L	20	20.3	102	68-125	
1,2,3-Trichloropropane	ug/L	20	20.7	103	74-125	
1,2,4-Trichlorobenzene	ug/L	20	19.9	99	68-125	
1,2,4-Trimethylbenzene	ug/L	20	21.8	109	75-125	
1,2-Dibromo-3-chloropropane	ug/L	20	19.2	96	54-131	
1,2-Dibromoethane (EDB)	ug/L	20	20.4	102	75-125	
1,2-Dichlorobenzene	ug/L	20	20.0	100	75-125	
1,2-Dichloroethane	ug/L	20	20.1	101	75-125	
1,2-Dichloropropane	ug/L	20	18.7	93	70-128	

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REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

LABORATORY CONTROL SAMPLE: 4485551

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3,5-Trimethylbenzene	ug/L	20	21.4	107	75-125	
1,3-Dichlorobenzene	ug/L	20	20.7	103	75-125	
1,3-Dichloropropane	ug/L	20	19.5	97	75-125	
1,4-Dichlorobenzene	ug/L	20	20.5	102	75-125	
2,2-Dichloropropane	ug/L	20	20.7	103	49-125	
2-Chlorotoluene	ug/L	20	20.7	103	70-125	
4-Chlorotoluene	ug/L	20	20.8	104	70-125	
Benzene	ug/L	20	19.5	98	73-125	
Bromobenzene	ug/L	20	19.8	99	75-125	
Bromochloromethane	ug/L	20	20.6	103	75-125	
Bromodichloromethane	ug/L	20	20.1	101	74-125	
Bromoform	ug/L	20	23.4	117	61-125	
Bromomethane	ug/L	20	25.6	128	30-125	L1
Carbon tetrachloride	ug/L	20	20.9	105	58-125	
Chlorobenzene	ug/L	20	20.5	103	75-125	
Chloroethane	ug/L	20	15.2	76	58-125	
Chloroform	ug/L	20	20.4	102	74-125	
Chloromethane	ug/L	20	16.8	84	38-142	
cis-1,2-Dichloroethene	ug/L	20	19.8	99	75-125	
cis-1,3-Dichloropropene	ug/L	20	19.5	98	72-125	
Dibromochloromethane	ug/L	20	20.3	102	73-125	
Dibromomethane	ug/L	20	21.5	107	68-125	
Dichlorodifluoromethane	ug/L	20	22.7	114	46-149	
Diethyl ether (Ethyl ether)	ug/L	20	19.5	98	68-127	
Ethylbenzene	ug/L	20	21.4	107	75-125	
Hexachloro-1,3-butadiene	ug/L	20	21.4	107	52-131	
Isopropylbenzene (Cumene)	ug/L	20	22.4	112	74-125	
m&p-Xylene	ug/L	40	42.6	106	72-125	
Methyl-tert-butyl ether	ug/L	20	19.6	98	75-125	
Methylene Chloride	ug/L	20	18.7	94	70-125	
n-Butylbenzene	ug/L	20	20.6	103	68-125	
n-Propylbenzene	ug/L	20	21.4	107	70-125	
Naphthalene	ug/L	20	20.5	102	66-127	
o-Xylene	ug/L	20	20.9	104	73-125	
p-Isopropyltoluene	ug/L	20	22.5	112	72-125	
sec-Butylbenzene	ug/L	20	22.5	112	72-125	
Styrene	ug/L	20	23.2	116	75-125	
tert-Butylbenzene	ug/L	20	21.8	109	74-125	
Tetrachloroethene	ug/L	20	22.1	111	72-125	
Toluene	ug/L	20	20.1	100	74-125	
trans-1,2-Dichloroethene	ug/L	20	21.3	106	73-125	
trans-1,3-Dichloropropene	ug/L	20	21.9	110	72-125	
Trichloroethene	ug/L	20	21.3	107	75-125	
Trichlorofluoromethane	ug/L	20	20.2	101	62-136	
Vinyl chloride	ug/L	20	17.2	86	55-139	
1,2-Dichlorobenzene-d4 (S)	%.			96	75-125	
4-Bromofluorobenzene (S)	%.			103	75-125	

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

LABORATORY CONTROL SAMPLE: 4485551

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%.			99	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4485553 4485554

Parameter	Units	10629410005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<3.8	400	400	408	412	102	103	75-130	1	30	
1,1,1-Trichloroethane	ug/L	<2.5	400	400	414	416	104	104	64-143	0	30	
1,1,2,2-Tetrachloroethane	ug/L	<2.9	400	400	402	399	101	100	48-139	1	30	
1,1,2-Trichloroethane	ug/L	<4.5	400	400	411	405	103	101	68-135	1	30	
1,1-Dichloroethane	ug/L	<2.2	400	400	379	383	95	96	62-146	1	30	
1,1-Dichloroethene	ug/L	<2.6	400	400	382	393	96	98	44-150	3	30	
1,1-Dichloropropene	ug/L	<2.5	400	400	405	422	101	105	55-150	4	30	
1,2,3-Trichlorobenzene	ug/L	<2.7	400	400	405	412	101	103	44-150	2	30	
1,2,3-Trichloropropane	ug/L	<7.5	400	400	421	415	105	104	64-126	2	30	
1,2,4-Trichlorobenzene	ug/L	<2.8	400	400	410	424	103	106	42-147	3	30	
1,2,4-Trimethylbenzene	ug/L	2650	400	400	2880	2920	56	68	62-138	2	30	P6
1,2-Dibromo-3-chloropropane	ug/L	<7.1	400	400	464	461	116	115	53-132	1	30	
1,2-Dibromoethane (EDB)	ug/L	<4.0	400	400	418	424	104	106	69-129	2	30	
1,2-Dichlorobenzene	ug/L	<2.6	400	400	406	411	102	103	70-125	1	30	
1,2-Dichloroethane	ug/L	<3.4	400	400	446	449	112	112	70-133	1	30	
1,2-Dichloropropane	ug/L	<3.0	400	400	385	392	96	98	61-142	2	30	
1,3,5-Trimethylbenzene	ug/L	784	400	400	1210	1220	106	109	64-135	1	30	
1,3-Dichlorobenzene	ug/L	<2.5	400	400	421	426	105	107	69-131	1	30	
1,3-Dichloropropane	ug/L	<3.2	400	400	398	403	99	101	70-129	1	30	
1,4-Dichlorobenzene	ug/L	<2.9	400	400	406	411	101	103	67-127	1	30	
2,2-Dichloropropane	ug/L	<2.3	400	400	401	399	100	100	38-148	1	30	
2-Chlorotoluene	ug/L	<2.0	400	400	734	727	184	182	52-142	1	30	M1
4-Chlorotoluene	ug/L	<2.5	400	400	510	518	127	129	59-132	2	30	
Benzene	ug/L	1340	400	400	1660	1690	80	88	65-140	2	30	
Bromobenzene	ug/L	<2.4	400	400	401	400	100	100	65-129	0	30	
Bromochloromethane	ug/L	<3.0	400	400	407	413	102	103	67-147	1	30	
Bromodichloromethane	ug/L	<2.3	400	400	397	408	99	102	66-136	3	30	
Bromoform	ug/L	<4.5	400	400	489	487	122	122	59-137	1	30	
Bromomethane	ug/L	10.2J	400	400	562	562	138	138	30-150	0	30	
Carbon tetrachloride	ug/L	<2.7	400	400	416	417	104	104	58-149	0	30	
Chlorobenzene	ug/L	<2.7	400	400	403	408	101	102	74-125	1	30	
Chloroethane	ug/L	<4.1	400	400	327	319	82	80	34-150	3	30	
Chloroform	ug/L	<4.6	400	400	405	402	101	101	54-148	1	30	
Chloromethane	ug/L	<3.4	400	400	332	338	83	85	38-150	2	30	
cis-1,2-Dichloroethene	ug/L	<3.0	400	400	382	400	96	100	54-149	4	30	
cis-1,3-Dichloropropene	ug/L	<1.1	400	400	387	388	97	97	64-130	0	30	
Dibromochloromethane	ug/L	<4.1	400	400	405	412	101	103	71-135	2	30	
Dibromomethane	ug/L	<3.5	400	400	435	411	109	103	65-141	5	30	

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(612)607-1700

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4485553 4485554

Parameter	Units	10629410005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dichlorodifluoromethane	ug/L	<1.6	400	400	442	446	111	111	32-150	1	30	
Diethyl ether (Ethyl ether)	ug/L	<3.9	400	400	387	391	97	98	51-148	1	30	
Ethylbenzene	ug/L	467	400	400	878	898	103	108	66-126	2	30	
Hexachloro-1,3-butadiene	ug/L	<4.7	400	400	403	419	101	105	31-150	4	30	
Isopropylbenzene (Cumene)	ug/L	20.5	400	400	480	487	115	117	72-133	1	30	
m&p-Xylene	ug/L	8730	800	800	9070	9070	43	43	69-134	0	30	E,P6
Methyl-tert-butyl ether	ug/L	<2.5	400	400	388	400	97	100	65-137	3	30	
Methylene Chloride	ug/L	<6.6	400	400	357	364	89	91	59-137	2	30	
n-Butylbenzene	ug/L	<1.9	400	400	461	475	115	119	52-141	3	30	
n-Propylbenzene	ug/L	31.7	400	400	451	466	105	109	53-138	3	30	
Naphthalene	ug/L	312	400	400	760	774	112	115	56-141	2	30	
o-Xylene	ug/L	3380	400	400	4200	4210	204	207	73-133	0	30	E,P6
p-Isopropyltoluene	ug/L	<2.1	400	400	451	469	113	117	59-139	4	30	
sec-Butylbenzene	ug/L	6.7J	400	400	457	462	112	114	60-138	1	30	
Styrene	ug/L	<1.9	400	400	673	672	168	168	67-138	0	30	M1
tert-Butylbenzene	ug/L	<1.8	400	400	443	451	111	113	58-141	2	30	
Tetrachloroethene	ug/L	<2.1	400	400	430	434	108	108	66-141	1	30	
Toluene	ug/L	2050	400	400	2390	2410	84	90	69-131	1	30	
trans-1,2-Dichloroethene	ug/L	<2.7	400	400	385	392	96	98	47-150	2	30	
trans-1,3-Dichloropropene	ug/L	<2.6	400	400	444	459	111	115	68-129	3	30	
Trichloroethene	ug/L	<2.4	400	400	413	420	103	105	68-139	2	30	
Trichlorofluoromethane	ug/L	<2.5	400	400	402	391	101	98	49-150	3	30	
Vinyl chloride	ug/L	<0.92	400	400	351	361	88	90	55-150	3	30	
1,2-Dichlorobenzene-d4 (S)	%.						99	99	75-125			
4-Bromofluorobenzene (S)	%.						108	110	75-125			
Toluene-d8 (S)	%.						99	99	75-125			

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(612)607-1700

QUALIFIERS

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

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.

BATCH QUALIFIERS

Batch: 846686

[1] The continuing calibration verification was above the method acceptance limit for styrene. Any detection for the analyte in the associated samples may have a high bias.

Batch: 847898

[1] The continuing calibration verification was above the method acceptance limit for bromomethane and tetrahydrofuran. Any detection for the analyte in the associated samples may have a high bias.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
D4	Sample was diluted due to the presence of high levels of target analytes.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MN	The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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Minneapolis, MN 55414
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161494.02 100 102 SRC GWTK68
Pace Project No.: 10629410

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10629410001	**MW-1/T68**	EPA 8260D	846686		
10629410002	**MW-2/T68**	EPA 8260D	847898		
10629410003	**MW-4/T68**	EPA 8260D	847898		
10629410004	**MW-5/T68**	EPA 8260D	846686		
10629410005	**MW-5/T66**	EPA 8260D	847898		
10629410006	**MW-6/T68**	EPA 8260D	846686		
10629410007	**Trip Blank**	EPA 8260D	846686		

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Barr Engineering Co. Chain of Custody

Sample Origination State

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

COC Number: № 591384

COC 1 of 1

WO#: 10629410

10629410

REPORT TO		INVOICE TO	
Company:	Barr Engineering Co	Company:	Barr
Address:	325 S. Lake Ave	Address:	
Address:	Duluth, MN 55802	Address:	
Name:	Lynette Carney	Name:	
email:	lcarney@barr.com	email:	
Copy to:	BarrDM@barr.com	P.O.	
Project Name:	SRC GW TK68	Barr Project No:	4916 1494.02 100 102

Location	Sample Depth Start	Sample Depth Stop	Sample Depth Unit (m./ft. or in.)	Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix Code	Perform MS/MSD Y / N	Total Number Of Containers	Analysis Requested: Water: 2 VOCs (EPA 8260)	Analysis Requested: Soil: % Solids	Preservative Code	Field Filtered Y/N	
1. MW-1 / T68				10/11/2022	1442	GW		2			See Attached List!		CW1
2. MW-2 / T68					1434	GW							CW2
3. MW-4 / T68					1428	GW							CW3
4. MW-5 / T68					1421	GW							CW4
5. MW-5 / T66					1408	GW							CW5
6. MW-6 / T68					1450	GW							CW6
7. Trip Blank					—	WQ							CW7
8.													
9.													
10.													

WQ = TB, FB, EB, etc. | W = Unspecified | S = Soil/Solid | SD = Sediment | SQ = MeOH blank | OTH = Other (Oil, etc.)

P = MeOH | G = $NaHSO_4$ | H = $Na_2S_2O_3$ | I = Ascorbic Acid | J = Zn Acetate | K = Other

BARR USE ONLY		Relinquished by:	On Ice?	Date	Time	Received by:	Date	Time
Sampled by:	KLS3	Kinsey Schneider	(Y) N	10/11/22	1542	Delacid Pace	10/11/22	1542
Barr Proj. Manager:	LMC	Delacid Pace	(Y) N	10/11/22	1542		10/12/22	0800
Barr DQ Manager:	JET							
Lab Name:	Pace							
Lab Location:	~~Greenbay~~ or Minneapolis							

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

Air Bill Number:

Lab WO: Temperature on Receipt (°C): 7.3 Custody Seal Intact? ☐ Y ☐ N ☐ None

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

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

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

Sample Condition Upon Receipt

Client Name: Barr Engineering

Project #: **WO#: 10629410**

PM: MKH **Due Date: 10/26/22**

CLIENT: BARR

Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client ☑ Pace ☐ SpeeDee ☐ Commercial

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

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

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

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

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

Temp should be above freezing to 6 °C **Cooler temp Read w/Temp Blank:** 1.4 °C

Correction Factor: +0.2 **Cooler Temp Corrected w/temp blank:** 1.6 °C

Average Corrected Temp (no temp blank only): _____ °C ☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container

USDA Regulated Soil: ☑ N/A, water sample/other: _____) **Date/Initials of Person Examining Contents:** KB 10/12/22

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

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

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

Location (Check one): ☐ Duluth ☑ Minneapolis ☐ Virginia

				COMMENTS
Chain of Custody Present and Filled Out?	☑ Yes	☐ No		1.
Chain of Custody Relinquished?	☑ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☑ Yes	☐ No		4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☐ Yes	☑ No		6.
Sufficient Sample Volume?	☑ Yes	☐ No		7.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	8.
-Pace Containers Used?	☑ Yes	☐ No		
Containers Intact?	☑ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☑ Yes	☐ No		11. **If no, write ID/Date/Time of container below:** ☐ See Exceptions ENV-FRM-MIN4-0142
Matrix: ☐ Water ☐ Soil ☐ Oil ☐ Other				
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☑ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐ Yes	☐ No	☑ N/A	☐ NaOH ☐ HNO3 ☐ H2SO4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	☑ Yes	☐ No	☐ N/A	Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142 **pH Paper Lot #** Residual Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in Methyl Mercury Container?	☐ Yes	☐ No	☑ N/A	13.
Extra labels present on soil VOA or WIDRO containers?	☑ Yes	☐ No	☐ N/A	14. ☐ See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☑ No	☐ N/A	
3 Trip Blanks Present?	☑ Yes	☐ No	☐ N/A	15.
Trip Blank Custody Seals Present?	☑ Yes	☐ No	☐ N/A	Pace Trip Blank Lot # (if purchased): 387586(2)

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

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** 10/12/22

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

Labeled By: KB **Line:** 2

Tank 68 Parameters

Parameter
Volatile Organic Compounds
1,1,1,2-Tetrachloroethane
1,1,1-Trichloroethane
1,1,2,2-Tetrachloroethane
1,1,2-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethylene
1,1-Dichloropropene
1,2,3-Trichlorobenzene
1,2,3-Trichloropropane
1,2,4-Trichlorobenzene
1,2,4-Trimethylbenzene
1,2-Dibromo-3-chloropropane (DBCP)
1,2-Dibromoethane (EDB)
1,2-Dichlorobenzene
1,2-Dichloroethane
1,2-Dichloroethylene, cis
1,2-Dichloroethylene, trans
1,2-Dichloropropane
1,3,5-Trimethylbenzene
1,3-Dichlorobenzene
1,3-Dichloropropane
1,3-Dichloropropene, cis
1,3-Dichloropropene, trans
1,4-Dichlorobenzene
2,2-Dichloropropane
Benzene
Bromobenzene
Bromochloromethane
Bromodichloromethane
Bromoform
Bromomethane
Butylbenzene
Butylbenzene, sec
Butylbenzene, tert
Carbon tetrachloride
Chlorobenzene
Chlorodibromomethane
Chloroethane
Chloroform
Chloromethane
Chlorotoluene, o
Chlorotoluene, p
Cumene (isopropyl benzene)
Cymene p- (toluene isopropyl p-)
Dibromomethane (methylene bromide)
Dichlorodifluoromethane (Freon-12)
Ethyl benzene
Ethyl ether
Hexachlorobutadiene
Methyl tertiary butyl ether (MTBE)
Methylene chloride
Naphthalene
Propylbenzene
Styrene
Tetrachloroethylene
Toluene
Trichloroethylene (TCE)
Trichlorofluoromethane (Freon-11)
Vinyl chloride
Xylene, m & p
Xylene, o

Attachment B

Historical Groundwater Analytical Results for Detected Compounds

Attachment B
Historical Groundwater Analytical Results for Detected Compounds
Tank 68 Release Site (1)
Superior Refining Company LLC
Superior, Wisconsin

Well ID / Date	Substance Concentration (µg/l) and Results Qualifiers (if any)																																
	GRO	Benzene	Ethylbenzene	Toluene	Xylenes	TMBs	1,1,1-Trichloroethane	1,1-Dichloropropene	1,2-Dichloroethane	Acetone	Bromobenzene	Bromodichloromethane	Bromomethane	Chlorodibromomethane	Chloroform	Chloromethane	Isopropyl Ether	Isopropylbenzene (Cumene)	Methyl ethyl ketone (2-butanone)	Methylene chloride	Methyl isobutyl ketone (MIBK)	MTBE	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Dissolved Lead
NR 140 PAL	NS	*0.5*	*140*	*160*	*400*	*96*	40	NS	*0.5*	1800	NS	*0.06*	*1*	6	*0.6*	*3*	NS	NS	800	*0.5*	*50*	12	*10*	NS	NS	NS	NS	*10*	NS	*0.5*	*1.5*
NR 140 ES	NS	**5**	**700**	**800**	**2,000**	**480**	200	NS	**5**	9000	NS	**0.6**	**10**	60	**6**	30	NS	NS	4000	**5**	500	60	**100**	NS	NS	NS	NS	100	NS	5	15
MW-1/T68																																	
3/6/2002	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
5/17/2002	820	< 0.43	5.3	7.1	< 1.45	13.8	< 0.2	< 0.30	< 0.54	(2)	< 0.42	(2)	(2)	(2)	(2)	< 0.69	< 0.30	4.6	(2)	(2)	(2)	< 0.49	< 1.4	19	5.1	5.5	4.2	(2)	2.7	< 1	na
9/12/2002	< 50	< 0.45	< 0.82	< 0.68	< 2.47	< 1.86	na	na	na	(2)	na	(2)	(2)	(2)	(2)	na	na	na	(2)	(2)	(2)	< 0.43	< 0.89	na	na	na	na	(2)	na	na	na
3/12/2003	< 50	< 0.45	< 0.82	< 0.68	< 2.47	< 1.86	na	na	na	(2)	na	(2)	(2)	(2)	(2)	na	na	na	(2)	(2)	(2)	< 0.43	< 0.89	na	na	na	na	(2)	na	na	na
9/30/2004	< 50	< 0.14	< 0.40	< 0.36	< 1.10	< 0.79	na	na	na	(2)	na	(2)	(2)	(2)	(2)	na	na	na	(2)	(2)	(2)	< 0.36	< 0.47	na	na	na	na	(2)	na	na	na
5/26/2005	< 50.0	< 0.31	< 0.5	< 0.3	< 0.92	< 0.71	< 0.2	na	< 0.4	(2)	< 0.41	(2)	(2)	(2)	(2)	< 0.29	< 0.30	< 0.31	(2)	(2)	(2)	< 0.3	< 0.8	< 0.36	< 0.3	< 0.5	< 0.4	(2)	< 0.4	< 0.3	na
11/9/2005	< 50.0	< 0.31	< 0.5	< 0.3	< 0.92	< 0.71	< 0.2	na	< 0.4	(2)	< 0.41	(2)	(2)	(2)	(2)	< 0.29	< 0.30	< 0.31	(2)	(2)	(2)	< 0.3	< 0.8	< 0.36	< 0.3	< 0.5	< 0.4	(2)	< 0.4	< 0.3	na
5/10/2006	< 50.0	< 0.31	< 0.50	< 0.30	< 0.92	< 0.71	< 0.2	na	< 0.40	(2)	< 0.41	(2)	(2)	(2)	(2)	< 0.29	< 0.30	< 0.31	(2)	(2)	(2)	< 0.30	< 0.80	< 0.36	< 0.30	< 0.50	< 0.40	(2)	< 0.40	< 0.3	na
11/16/2006	< 50.0	< 0.15	< 0.10	< 0.40	< 0.50	< 0.30	< 0.2	0.56 J	< 0.10	(2)	< 0.10	(2)	(2)	(2)	(2)	< 0.20	< 0.30	< 0.10	(2)	(2)	(2)	< 0.10	< 1.00	< 0.20	< 0.10	< 0.20	< 0.15	(2)	< 0.15	< 0.3	na
5/23/2007	< 50.0	< 0.20	< 0.10	< 0.40	< 0.60	< 0.40	< 0.2	< 0.30	< 0.20	(2)	< 0.20	(2)	(2)	(2)	(2)	< 0.30	< 0.30	< 0.10	(2)	(2)	(2)	< 0.20	< 1.00	< 0.20	< 0.10	< 0.20	< 0.20	(2)	< 0.20	< 0.3	na
11/15/2007	< 50.0	< 0.20	< 0.10	< 0.40	< 0.60	< 0.40	< 0.2	< 0.30	< 0.20	(2)	< 0.20	(2)	(2)	(2)	(2)	< 0.30	< 0.30	< 0.10	(2)	(2)	(2)	< 0.20	< 1.00	< 0.20	< 0.10	< 0.20	< 0.20	(2)	< 0.20	< 0.3	na
5/27/2008	68	< 0.20	< 0.10	< 0.40	< 0.60	< 0.40	< 0.2	< 0.30	< 0.20	(2)	< 0.20	(2)	(2)	(2)	(2)	< 0.30	< 0.30	< 0.10	(2)	(2)	(2)	< 0.20	< 1.00	< 0.20	< 0.10	< 0.20	< 0.20	(2)	< 0.20	< 0.3	na
11/24/2008	< 50.0	0.42 J	1.55	3.23	10.16	6.97	< 0.2	< 0.50	< 0.30	(2)	< 0.20	(2)	(2)	(2)	(2)	< 0.40	< 0.30	0.16 J	(2)	(2)	(2)	< 0.50	< 1.00	< 0.40	< 0.10	< 0.20	< 0.30	(2)	< 0.30	< 0.3	na
5/27/2009	< 50.0	< 0.20	< 0.20	< 0.40	< 0.60	< 0.40	< 0.5	< 0.80	< 0.30	(2)	< 0.30	(2)	(2)	(2)	(2)	< 0.40	< 0.30	< 0.10	(2)	(2)	(2)	< 0.50	< 1.00	< 0.40	< 0.10	< 0.40	< 0.30	(2)	< 0.30	< 0.3	na
11/23/2009	52.6	< 2.00	78.0	9.88 J	*514*	90	< 5.00	< 8.00	< 3.00	(2)	< 3.00	(2)	(2)	(2)	(2)	< 4.00	na	2.48 J	(2)	(2)	(2)	< 5.00	< 10.0	< 4.00	< 1.00	< 4.00	< 3.00	(2)	< 3.00	< 0.3	na
5/19/2010	< 50.0	< 0.20	< 0.20	< 0.40	< 0.60	< 0.40	< 0.5	< 0.80	< 0.30	(2)	< 0.30	(2)	(2)	(2)	(2)	< 0.40	< 0.30	< 0.10	(2)	(2)	(2)	< 0.50	< 1.00	< 0.40	< 0.10	< 0.40	< 0.30	(2)	< 0.30	< 0.3	na
10/21/2010	< 50.0	< 0.20	< 0.20	< 0.40	< 0.60	< 0.40	< 0.50	< 0.80	< 0.30	(2)	< 0.30	(2)	(2)	(2)	(2)	< 0.40	< 0.30	< 0.10	(2)	(2)	(2)	< 0.50	< 1.00	< 0.40	< 0.10	< 0.40	< 0.30	(2)	< 0.30	*0.90* J	na
6/16/2011	na	< 0.20	< 0.20	< 0.40	< 0.60	< 0.40	< 0.50	< 0.80	< 0.30	(2)	< 0.30	(2)	(2)	(2)	(2)	< 0.40	< 0.30	< 0.20	(2)	(2)	(2)	< 0.50	< 1.00	< 0.40	< 0.20	< 0.40	< 0.30	(2)	< 0.30	< 0.30	na
10/25/2011	na	< 0.20	< 0.20	< 0.40	< 0.60	< 0.70	< 0.50	< 0.80	< 0.30	(2)	< 0.30	(2)	(2)	(2)	(2)	< 0.40	< 0.30	< 0.20	(2)	(2)	(2)	< 0.50	< 1.00	< 0.40	< 0.20	< 0.20	< 0.30	(2)	< 0.30	< 0.30	na
5/16/2012	na	< 0.41	< 0.54	< 0.67	< 2.63	< 1.80	< 0.90	< 0.75	< 0.36	(2)	< 0.82	(2)	(2)	(2)	(2)	< 0.24	na	< 0.59	(2)	(2)	(2)	< 0.61	< 0.89	< 0.93	< 0.81	< 0.67	< 0.89	(2)	< 0.97	< 0.45	na
8/21/2013	na	< 0.50	< 0.50	< 0.44	< 1.32	< 3.07	< 0.44	< 0.51	< 0.48	(2)	< 0.48	(2)	(2)	(2)	(2)	< 0.39	na	< 0.34	(2)	(2)	(2)	< 0.49	< 2.5	< 0.40	< 0.50	< 0.40	< 0.60	(2)	< 0.42	< 0.47	na
6/24/2014	na	< 0.50	< 0.50	< 0.50	< 1.50	< 1.00	< 0.50	< 0.44	< 0.17	(2)	< 0.23	(2)	(2)	(2)	(2)	< 0.50	na	< 0.14	(2)	(2)	(2)	< 0.17	< 2.5	< 0.50	< 0.50	< 0.50	< 2.2	(2)	< 0.18	< 0.50	na
10/21/2014	na	< 0.50	< 0.50	< 0.50	< 1.50	< 1.00	< 0.50	< 0.44	< 0.17	(2)	< 0.23	(2)	(2)	(2)	(2)	< 0.50	na	< 0.14	(2)	(2)	(2)	< 0.17	< 2.5	< 0.50	< 0.50	< 0.50	< 2.2	(2)	< 0.18	< 0.50	na
6/23/2015	na	< 0.50	0.57 J	2.3	2.92 J	< 1.36 J	< 0.50	< 0.44	< 0.17	(2)	< 0.23	(2)	(2)	(2)	(2)	< 0.50	na	< 0.14	(2)	(2)	(2)	< 0.17	< 2.5	< 0.50	< 0.50	< 0.50	< 2.2	(2)	< 0.18	< 0.50	na
10/6/2015	na	< 0.50	< 0.50	< 0.50	< 1.50	< 1.00	< 0.50	< 0.44	< 0.17	(2)	< 0.23	(2)	(2)	(2)	(2)	< 0.50	na	< 0.14	(2)	(2)	(2)	< 0.17	< 2.5	< 0.50	< 0.50	< 0.50	< 2.2	(2)	< 0.18	< 0.50	na
5/24/2016	na	< 0.50	< 0.50	< 0.50	< 1.50	< 1.00	< 0.50	< 0.44	< 0.17	(2)	< 0.23	(2)	(2)	(2)	(2)	< 0.50	na	< 0.14	(2)	(2)	(2)	< 0.17	< 2.5	< 0.50	< 0.50	< 0.50	< 2.2	(2)	< 0.18	< 0.50	na
10/5/2016	na	< 0.50	< 0.50	< 0.50	< 1.50	< 1.00	< 0.50	< 0.44	< 0.17	(2)	< 0.23	(2)	(2)	(2)	(2)	< 0.50	na	< 0.14	(2)	(2)	(2)	< 0.17	< 2.5	< 0.50	< 0.50	< 0.50	< 2.2	(2)	< 0.18	< 0.50	na
5/16/2017	na	< 0.50	< 0.50	< 0.50	< 1.50	< 1.00	< 0.50	< 0.44	< 0.17	(2)	< 0.23	(2)	(2)	(2)	(2)	< 0.50	na	< 0.14	(2)	(2)	(2)	< 0.17	< 2.5	< 0.50	< 0.50	< 0.50	< 2.2	(2)	< 0.18	< 0.50	na
10/25/2017	na	< 0.50	< 0.50	2.3	2.38 J	< 1.08 J	< 0.50	< 0.44	< 0.17	(2)	< 0.23	(2)	(2)	(2)	(2)	< 0.50	na	< 0.14	(2)	(2)	(2)	< 0.17	< 2.5	< 0.50	< 0.50	< 0.50	< 2.2	(2)	< 0.18	< 0.50	na
6/12/2018	na	< 0.50	< 0.50	< 0.50	< 1.50	< 1.00	< 0.50	< 0.44	< 0.17	(2)	< 0.23	(2)	(2)	(2)	(2)	< 0.50	na	< 0.14	(2)	(2)	na	< 0.17	< 2.5	< 0.50	< 0.50	< 0.50	< 2.2	< 0.50	< 0.18	< 0.50	na
10/9/2018	na	< 0.25	< 0.22	0.22 J	< 0.90 J	< 2.37 J	< 0.24	< 0.54	< 0.28	(2)	< 0.24	(2)	(2)	(2)	(2)	< 2.2	na	< 0.39	(2)	(2)	na	< 1.2	< 1.2	< 0.71	< 0.81	< 0.80	< 0.85	< 0.47	< 0.30	< 0.33	na
5/21/2019	na	< 0.25	< 0.22	< 0.17	< 0.73	< 1.71	< 0.24	< 0.54	< 0.28	(2)	< 0.24	(2)	(2)	(2)	(2)	< 2.2	na	< 0.39	(2)	(2)	na	< 1.2	< 1.2	< 0.71	< 0.81	< 0.80	< 0.85	< 0.47	< 0.30	< 0.33	na
10/9/2019	na	< 0.25	0.38 J	0.37 J	4.9	8.9 J	< 0.24	< 0.54	< 0.28	(2)	< 0.24	(2)	(2)	(2)	(2)	< 2.2	na	< 0.39	(2)	(2)	na	< 1.2	1.9 J	< 0.71	< 0.81	< 0.80	< 0.85	< 0.47	< 0.30	< 0.33	na
5/27/2020	na	< 0.25	< 0.32	< 0.27	< 0.73	< 1.71	< 0.24	< 0.54	< 0.28	na	< 0.24	< 0.36	< 0.97	< 2.6	< 1.3	< 2.2	< 1.9	< 1.7	na	< 0.58	na	< 1.2	< 1.2	< 0.71	< 0.81	< 0.80	< 0.85	< 3.0	< 0.30	< 0.33	na
10/6/2020	na	< 0.12	< 0.075	< 0.12	< 0.29	< 0.29	< 0.17	< 0.22	< 0.25	< 2.5	< 0.13	< 0.11	< 0.63	< 0.20	< 0.48	< 0.42	na	< 0.13	< 0.88	< 1.1	< 0.54	< 0.12	< 0.68	< 0.16	< 0.18	< 0.18	< 0.15	< 0.11	< 0.13	< 0.17	na
5/24/2021	na	< 0.30	< 0.33	< 0.29	< 1.05	< 0.81	< 0.30	< 0.41	< 0.29	na	< 0.36	< 0.42	< 1.2	< 2.6	< 1.2	< 1.6	< 1.1	< 1.0	na	< 0.32	na	< 1.1	< 1.1	< 0.86	< 0.35	< 1.0	< 0.42	< 0.36	< 0.59	< 0.41	na
10/4/2021	na	< 0.12	< 0.069	< 0.11	< 0.30	< 0.22	< 0.17	< 0.12	< 0.14	na	< 0.18	< 0.21	< 1.9	< 0.17	< 0.14	< 0.22	na	< 0.11	na	< 0.83	na	< 0.18	< 0.20	< 0.052	< 0.090	< 0.12	< 0.14	< 0.13	< 0.11	< 0.10	na
5/25/2022	na	< 0.10	< 0.11	< 0.10	< 0.20	< 0.24	< 0.12	< 0.12	< 0.17	< 1.9	< 0.12	< 0.12	< 0.38	< 0.20	< 0.23	< 0.17	na	< 0.12	< 0.93	< 0.33	< 0.80	< 0.13	< 0.18	< 0.096	< 0.11	< 0.11	< 0.097	< 0.097	< 0.091	< 0.10	na
10/11/2022	na	< 0.10	< 0.11	< 0.10	< 0.38	< 0.24	< 0.12	< 0.12	< 0.17	na	< 0.12	***1.9***	< 0.38	0.63 J	***8.4***	< 0.17	na	< 0.12	na	< 0.33	na	< 0.13	< 0.18	< 0.096	< 0.11	< 0.11	< 0.097	< 0.097	< 0.091	< 0.10	na
MW-2/T68																																	
5/17/2002	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
9/12/2002	120000	***32000***	***3000***	***38000***	***17400***	***3170***	< 200	< 160	***2800***	(2)	< 150	(2)	(2)	(2)	(2)	< 54	< 300	< 130	(2)	(2)	(2)	< 170	***280*** J	< 130	320 J	< 120	< 120	(2)	< 190	< 300	na
3/12/2003	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	(2)	FP	FP	FP
9/30/2004	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	(2)	FP	FP	FP
5/26/2005	121000	***25200***	***1810***	***29300***	***20850***	***5570***	< 200	na	< 600	(2)	< 410	(2)	(2)	(2)	(2)	< 290	< 300	< 310	(2)	(2)	(2)	< 300	***1810***	< 360	< 300	< 500	< 400	(2)	< 400	< 300	na
11/9/2005	85300	***25800***	***1530***	***27000***	***15700***	***2476***	< 200	na	***2520***	(2)	< 410	(2)	(2)	(2)	(2)	< 290	< 300	< 310	(2)	(2)	(2)	< 300	< 800	< 360	< 300	< 500	< 400	(2)	< 400	< 300	na
5/10/2006	88800	***29700***	***1300***	***25600***	***14830***	***3529***	< 200	na	***2680***	(2)	< 205	(2)	(2)	(2)	(2)	< 145	< 300	< 155	(2)	(2)	(2)	< 150	< 400	< 180	< 150	< 250	< 200	(2)	< 200	< 300	na
11/16/2006	95800	***29100***	***1570***	***26300***	***16440***	***3212***	< 200	544 J	***2370***	(2)	< 100	(2)	(2)	(2)	(2)	< 200	< 300	< 100	(2)	(2)	(2)	< 100	< 1,000	< 200	< 100	< 200	< 150	(2)	< 150	< 300	na
5/23/2007	124000	***30000***	***2440***	***34700***	***18820***	***5500***	< 200	< 300	< 200	(2)	< 200	(2)	(2)	(2)	(2)	< 300	< 300	103	(2)	(2)	(2)	< 200	< 1,000	< 200	< 100	< 200	< 200	(2)	< 200	< 300	na
11/15/2007	98100	***22500***	***2090***	***24800***	***19190***	***5040***	< 200	< 300	***2020***	(2)	< 200	(2)	(2)	(2)	(2)	< 300	< 300	< 100	(2)	(2)	(2)	< 200	***6390***	< 200	< 100	< 200	< 200	(2)	< 200	< 300	na
5/27/2008	103000	***24900***	***1880***	***29000***	***17380***	***4150***	< 200	< 500	***1710***	(2)	< 200	(2)	(2)	(2)	(2)	< 400	< 300	< 100	(2)	(2)	(2)	< 500	< 1,000	< 400	< 100	< 200	< 300	(2)	< 300	< 300	na
11/24/2008	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	(2)	FP	FP	FP
5/27/2009	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	(2)	FP	FP	FP
11/23/2009	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	(2)	FP	FP	FP
5/19/2010	124000	***39800***	***2790***	***44100***	***18080***	***4660***	< 500	< 500	< 300	(2)	< 300	(2)	(2)	(2)	(2)	< 400	< 300	< 100	(2)	(2)	(2)	< 500	< 1,000	< 400	< 100	< 200	< 300	(2)	< 300	< 300	na
10/21/2010	245000	***32300***	***4380***	***41200***	***37800***	***12330***	< 500	< 800	***1510***	(2)	< 300	(2)	(2)	(2)	(2)	< 400	< 300	266 J	(2)	(2)	(2)	< 500	***1180*** J	< 400	< 200	< 400	< 300	(2)	< 300	< 300	na
6/16/2011	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	(2)	FP	FP	FP
10/25/2011	na	***29600***	***2760***	***34800***	***18150***	***3670***	< 100	< 160	< 60.0	(2)	< 60.0	(2)	(2)	(2)	(2)	< 80.0	na	111 J	(2)	(2)	(2)	< 100	***451*** J	< 80.0	< 40.0	< 80.0	< 60.0	(2)	< 60.0	< 60.0	na
5/16/2012	na	***24600***	***1950***	***29200***	***16780***	***2906***	< 112	< 93.8	***1700***	(2)	< 102	(2)	(2)	(2)	(2)	< 30.0	na	< 73.8	(2)	(2)	(2)	< 76.2	***324*** J	< 116	149	< 83.8	< 111	(2)	< 121	< 56.2	na

Attachment B
Historical Groundwater Analytical Results for Detected Compounds
Tank 68 Release Site (1)
Superior Refining Company LLC
Superior, Wisconsin

Well ID / Date	Substance Concentration (µg/l) and Results Qualifiers (if any)																														
	GRO	Benzene	Ethylbenzene	Toluene	Xylenes	TMBs	1,1,1-Trichloroethane	1,1-Dichloropropene	1,2-Dichloroethane	Acetone	Bromobenzene	Bromodichloromethane	Bromomethane	Chlorodibromomethane	Chloroform	Chloromethane	Isopropyl Ether	Isopropylbenzene (Cumene)	Methyl ethyl ketone (2-butanone)	Methylene chloride	Methyl isobutyl ketone (MIBK)	MTBE	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Dissolved Lead
NR 140 PAL	NS	*0.5*	*140*	*160*	*400*	*96*	40	NS	*0.5*	1800	NS	*0.06*	*1*	6	*0.6*	*3*	NS	NS	800	*0.5*	*50*	12	*10*	NS	NS	NS	NS	*10*	NS	*0.5*	*1.5*
NR 140 ES	NS	**5**	**700**	**800**	**2,000**	**480**	200	NS	**5**	9000	NS	**0.6**	**10**	60	**6**	30	NS	NS	4000	**5**	500	60	**100**	NS	NS	NS	NS	100	NS	5	15
8/21/2013	na	***23800***	***2290***	***28300***	***20740***	***5310***	< 94.4	< 101	***930***	(2)	< 96.7	(2)	(2)	(2)	(2)	< 77.5	na	92.3 J	(2)	(2)	(2)	< 98.7	***604*** J	121 J	277	< 79.4	< 121	(2)	< 84.9	< 88.6	na
6/24/2014	na	***23700***	***892***	***21300***	***16270***	***2757***	< 125	< 110	***1220***	(2)	< 57.5	(2)	(2)	(2)	(2)	< 125	na	< 35.8	(2)	(2)	(2)	< 43.6	< 625	< 125	< 125	< 125	< 547	(2)	< 45.1	< 125	na
10/21/2014	na	***25400***	***975***	***24700***	***15820***	***2149***	< 100	< 88.2	***1180***	(2)	< 46.0	(2)	(2)	(2)	(2)	< 100	na	< 28.7	(2)	(2)	(2)	< 34.8	< 500	< 100	< 100	< 100	< 437	(2)	< 36.1	< 100	na
6/23/2015	na	***10100***	*203*	***11500***	***17270***	***3140***	< 100	< 88.2	***355***	(2)	< 46.0	(2)	(2)	(2)	(2)	< 100	na	< 28.7	(2)	(2)	(2)	< 34.8	< 500	< 100	< 100	< 100	< 437	(2)	< 36.1	< 100	na
10/6/2015	na	***18300***	***995***	***18500***	***15000***	***2627***	< 100	< 88.2	***894***	(2)	< 46.0	(2)	(2)	(2)	(2)	< 100	na	< 28.7	(2)	(2)	(2)	< 34.8	< 500	< 100	< 100	< 100	< 437	(2)	< 36.1	< 100	na
5/24/2016	na	***21400***	***1370***	***22200***	***16160***	***2663***	< 100	< 88.2	***1260***	(2)	< 46.0	(2)	(2)	(2)	(2)	< 100	na	48.3 J	(2)	(2)	(2)	< 34.8	< 500	< 100	104 J	< 100	< 437	(2)	< 36.1	< 100	na
10/5/2016	na	***20900***	***1350***	***20300***	***15370***	***2673***	< 100	< 88.2	***1150***	(2)	< 46.0	(2)	(2)	(2)	(2)	< 100	na	45.3 J	(2)	(2)	(2)	< 34.8	< 500	< 100	105 J	< 100	< 437	(2)	< 36.1	< 100	na
5/16/2017	na	***22100***	***933***	***19200***	***15400***	***3192***	< 100	< 88.2	***1420***	(2)	< 46.0	(2)	(2)	(2)	(2)	< 100	na	< 28.7	(2)	(2)	(2)	< 34.8	< 500	< 100	< 100	< 100	< 437	(2)	< 36.1	< 100	na
10/25/2017	na	***30600***	***1170***	***24500***	***19550***	***3122***	< 125	< 110	***1610***	(2)	< 57.5	(2)	(2)	(2)	(2)	< 125	na	< 35.8	(2)	(2)	(2)	< 43.6	< 625	< 125	< 125	< 125	< 547	(2)	< 45.1	< 125	na
6/12/2018	na	***24200***	***1550***	***25500***	***19050***	***2703***	< 100	< 88.2	***1240***	(2)	< 46.0	(2)	(2)	(2)	(2)	< 100	na	32.8 J	(2)	(2)	na	< 34.8	< 500	< 100	< 100	< 100	< 437	< 100	< 36.1	< 100	na
10/9/2018	na	***18600***	***1120***	***16100***	***15370***	***3389***	< 49.0	< 108	***1520***	(2)	< 48.2	(2)	(2)	(2)	(2)	< 438	na	< 78.6	(2)	(2)	na	< 249	***292*** J	< 142	< 162	< 160	< 170	< 93.1	< 60.8	< 65.3	na
5/21/2019	na	***106***	3.6	105	*999*	*434*	< 0.24	< 0.54	***8.0***	(2)	< 0.24	(2)	(2)	(2)	(2)	< 2.2	na	< 0.39	(2)	(2)	na	< 1.2	*23.8*	< 0.71	< 0.81	< 0.80	19.3	< 0.47	< 0.30	< 0.33	na
10/9/2019	na	***2240***	17.8 J	***1330***	***5060***	***1601***	< 9.8	< 21.6	***287***	(2)	< 9.6	(2)	(2)	(2)	(2)	< 87.6	na	< 15.7	(2)	(2)	na	< 49.8	*98.3* J	< 28.3	< 32.4	< 32.0	< 33.9	< 18.6	< 12.2	< 13.1	na
5/27/2020	na	***9570***	*525*	***7520***	***8520***	***2226***	< 12.2	< 27.0	***941***	na	< 12.1	< 18.2	< 48.6	< 130	< 63.7	< 109	< 94.4	< 84.3	na	< 29.0	na	< 62.3	***173*** J	< 35.4	< 40.5	< 40.0	< 42.4	< 150	< 15.2	< 16.3	na
10/6/2020	na	***18600***	***1250***	***15000***	***16300***	***3525***	< 8.5	< 11.0	***1070***	< 126	< 6.6	< 5.7	< 31.7	< 9.8	< 24.2	< 21.2	na	34.1	< 44.2	< 55.0	*76.2* J	< 5.8	***333***	8.6 J	83.2	9.1 J	< 7.3	< 5.5	< 6.4	< 8.7	na
5/24/2021	na	***2200***	99.2	***1670***	***2445***	***759***	< 3.0	< 4.1	< 2.9	na	< 3.6	< 4.2	< 11.9	< 26.4	< 11.8	< 16.4	< 11.0	< 10.0	na	< 3.2	na	< 11.3	*54.0*	< 8.6	3.8 J	< 10.4	< 4.2	< 3.6	< 5.9	< 4.1	na
10/4/2021	na	***4820***	*233*	***3520***	***5620***	***1462***	< 1.8 H	< 2.6 H	***364***	na	< 1.3 H	< 0.96 H	< 3.2 H	< 1.3 H	< 1.6 H	< 1.8 H	na	7.1 H	na	< 4.7 H	na	< 1.6 H	***150*** H	20.7 H	17.0 H	3.2 JH	< 1.5 H	< 0.88 H	< 1.7 H	< 2.5 H	na
5/25/2022	na	***16600*** H	***1650***	***13200*** H	***14000***	***2870***	< 3.1	< 3.1	< 4.2	188 J	< 3.0	< 2.9	< 9.6	< 5.1	< 5.8	< 4.2	na	52.5	193 J	< 8.2	35.3 J	< 3.2	***315***	< 2.4	139	7.3 J	8.3 J	< 2.4	< 2.3	< 2.6	na
10/11/2022	na	***724***	2.0 J	*251*	***2055***	***783***	< 1.2	< 1.2	***94.7***	na	< 1.2	< 1.2	*4.5* J+	< 2.0	< 2.3	< 1.7	na	< 1.2	na	*3.7* J	na	< 1.3	*31.4*	< 0.96	< 1.1	< 1.1	< 0.97	< 0.97	< 0.91	< 1.0	na
MW-3/T68																															
3/12/2003	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
9/30/2004	< 50	< 0.41	< 0.54	< 0.67	< 2.63	< 1.8	< 0.2	< 0.75	< 0.36	(2)	< 0.82	(2)	(2)	(2)	(2)	< 0.24	< 0.30	< 0.59	(2)	(2)	(2)	< 0.61	< 0.74	< 0.93	< 0.81	< 0.67	< 0.89	(2)	< 0.97	< 0.45	na
5/26/2005	96.8	***15.6***	0.636 J	0.44 J	1.25 J	4.78 J	< 0.2	na	< 0.4	(2)	< 0.8	(2)	(2)	(2)	(2)	< 0.29	< 0.30	< 0.31	(2)	(2)	(2)	< 0.3	1.38 J	1.61	< 0.3	< 0.5	< 0.4	(2)	< 0.4	< 0.45	na
11/9/2005	< 50.0	< 0.31	< 0.5	< 0.3	< 0.92	< 0.71	< 0.2	na	< 0.4	(2)	< 0.41	(2)	(2)	(2)	(2)	< 1.00	< 0.30	< 0.31	(2)	(2)	(2)	< 0.3	< 0.8	< 0.36	< 0.3	< 0.5	< 0.4	(2)	< 0.4	< 0.45	na
5/10/2006	< 50.0	***9.77***	< 0.50	< 0.30	1.93 J	3.09 J	< 0.2	na	< 0.40	(2)	< 0.41	(2)	(2)	(2)	(2)	< 0.29	< 0.30	< 0.60	(2)	(2)	(2)	< 0.30	< 0.80	< 0.36	< 0.30	< 0.50	< 0.40	(2)	< 0.40	< 0.71	na
11/16/2006	< 50.0	< 0.15	< 0.10	< 0.40	< 0.50	< 0.30	< 0.2	< 0.30	< 0.10	(2)	< 0.10	(2)	(2)	(2)	(2)	< 0.20	< 0.30	< 0.10	(2)	(2)	(2)	< 0.10	< 1.00	< 0.20	< 0.10	< 0.20	< 0.15	(2)	< 0.15	< 0.10	na
5/23/2007	< 50.0	< 0.20	0.10 J	< 0.40	< 0.60	< 0.40	< 0.2	< 0.30	< 0.20	(2)	< 0.20	(2)	(2)	(2)	(2)	< 0.30	< 0.30	< 0.10	(2)	(2)	(2)	< 0.20	< 1.00	< 0.20	< 0.10	< 0.20	< 0.20	(2)	< 0.20	< 0.30	na
11/15/2007	< 50.0	< 0.20	< 0.10	< 0.40	< 0.60	< 0.40	< 0.2	< 0.30	< 0.20	(2)	< 0.20	(2)	(2)	(2)	(2)	< 0.30	< 0.30	< 0.10	(2)	(2)	(2)	< 0.20	< 1.00	< 0.20	< 0.10	< 0.20	< 0.20	(2)	< 0.20	< 0.30	na
5/27/2008	< 50.0	< 0.20	< 0.10	< 0.40	< 0.60	< 0.40	< 0.2	< 0.30	< 0.20	(2)	< 0.20	(2)	(2)	(2)	(2)	< 0.30	< 0.30	< 0.10	(2)	(2)	(2)	< 0.20	< 1.00	< 0.20	< 0.10	< 0.20	< 0.20	(2)	< 0.20	< 0.30	na
11/24/2008	Filled and sealed																														
MW-4/T68																															
3/12/2003	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
9/30/2004	5500	***650***	*260*	49	*1090*	***560***	< 20.0	< 3.8	< 1.8	(2)	< 4.1	(2)	(2)	(2)	(2)	< 1.2	< 30.0	17	(2)	(2)	(2)	< 3.0	*38*	< 4.6	24	15	< 4.4	(2)	< 4.8	< 30.0	na
5/26/2005	12800	***2560***	*402*	44.3	***2857***	***1522***	< 20.0	na	< 40.0	(2)	< 41.0	(2)	(2)	(2)	(2)	< 29.0	< 30.0	37.3	(2)	(2)	(2)	< 30.0	***132***	< 36.0	< 30.0	< 50.0	< 40.0	(2)	< 40.0	< 30.0	na
11/9/2005	12100	***2730***	*650*	59.9	***3555***	***1439***	< 20.0	na	< 20.0	(2)	< 20.5	(2)	(2)	(2)	(2)	< 14.5	< 30.0	47	(2)	(2)	(2)	< 15.0	***114***	< 18.0	51.8	< 25.0	< 20.0	(2)	< 20.0	< 30.0	na
5/10/2006	15700	***5350***	*462*	125	***4280***	***1622***	< 20.0	na	< 40.0	(2)	< 41.0	(2)	(2)	(2)	(2)	< 29.0	< 30.0	< 31.0	(2)	(2)	(2)	< 30.0	***154*** J	166	< 30.0	< 50.0	< 40.0	(2)	< 40.0	< 30.0	na
11/16/2006	15300	***2630***	*567*	74.9	***4360***	***2580***	< 20.0	< 15.0	< 5.00	(2)	< 5.00	(2)	(2)	(2)	(2)	*13.6* J	< 30.0	26	(2)	(2)	(2)	< 5.00	***212***	< 10.0	< 5.00	11.4 J	< 7.50	(2)	< 7.50	< 30.0	na
5/23/2007	12200	***2810***	*247*	52.8	***2314***	***625.5***	< 20.0	< 15.0	***56.2***	(2)	< 10.0	(2)	(2)	(2)	(2)	< 15.0	< 30.0	7.83	(2)	(2)	(2)	< 10.0	***118*** J	< 10.0	< 5.00	17.7	< 10.0	(2)	< 10.0	< 30.0	na
11/15/2007	11700	***2160***	*241*	< 40.0	***2410***	***1760***	< 20.0	< 30.0	< 20.0	(2)	< 20.0	(2)	(2)	(2)	(2)	< 30.0	< 30.0	11.8	(2)	(2)	(2)	< 20.0	***164*** J	< 20.0	< 10.0	< 20.0	< 20.0	(2)	< 20.0	< 30.0	na
5/27/2008	14600	***5270***	*554* J	< 400	***3156***	***1071***	< 200	< 500	< 300	(2)	< 200	(2)	(2)	(2)	(2)	< 400	< 300	< 100	(2)	(2)	(2)	< 500	< 1,000	< 400	< 100	< 200	< 300	(2)	< 300	< 300	na
11/24/2008	12100	***2540***	*399*	43.7 J	***2153***	***1425***	20 J	< 50.0	***62.8*** J	(2)	< 20.0	(2)	(2)	(2)	(2)	< 40.0	42.5 J	26.5 J	(2)	(2)	(2)	< 50.0	***157*** J	< 40.0	< 10.0	< 20.0	< 30.0	(2)	< 30.0	< 30.0	na
5/27/2009	11100	***4150***	*335*	52.8 J	***2153***	***1023***	< 50.0	< 40.0	***115***	(2)	< 30.0	(2)	(2)	(2)	(2)	< 40.0	< 30.0	< 10.0	(2)	(2)	(2)	< 50.0	***104*** J	< 40.0	< 10.0	< 40.0	< 30.0	(2)	< 30.0	< 30.0	na
11/23/2009	9880	***3180***	*236*	136	***2090***	***784***	< 50.0	< 80.0	***84.3*** J	(2)	< 30.0	(2)	(2)	(2)	(2)	< 40.0	na	< 10.0	(2)	(2)	(2)	< 50.0	***404***	< 40.0	< 10.0	< 40.0	< 30.0	(2)	< 30.0	< 30.0	na
5/19/2010	9710	***4990***	*243*	< 40.0	*1669*	***839***	< 50.0	< 40.0	***118***	(2)	< 30.0	(2)	(2)	(2)	(2)	< 40.0	< 30.0	< 10.0	(2)	(2)	(2)	< 50.0	< 100	< 40.0	< 10.0	< 40.0	< 30.0	(2)	< 30.0	< 30.0	na
10/21/2010	12400	***2590***	*368*	< 40.0	***2045***	***1790***	< 50.0	< 80.0	***57.6*** J	(2)	< 30.0	(2)	(2)	(2)	(2)	< 40.0	< 30.0	< 20.0	(2)	(2)	(2)	< 50.0	***153*** J	< 40.0	< 20.0	< 40.0	< 30.0	(2)	< 30.0	< 30.0	na
6/16/2011	na	***2390***	*172*	< 40.0	*1096.4* J	***535***	< 50.0	< 80.0	< 30.0	(2)	< 30.0	(2)	(2)	(2)	(2)	< 40.0	na	< 20.0	(2)	(2)	(2)	< 50.0	< 100	< 40.0	< 20.0	< 40.0	< 30.0	(2)	< 30.0	< 30.0	na
10/25/2011	na	***2180***	*247*	45.2 J	*1234.3* J	***857***	< 50.0	< 80.0	***51.3***	(2)	< 30.0	(2)	(2)	(2)	(2)	< 40.0	na	< 20.0	(2)	(2)	(2)	< 50.0	< 100	< 40.0	< 20.0	< 40.0	< 30.0	(2)	< 30.0	< 30.0	na
5/16/2012	na	***2150***	*297*	13.0	*1054.5*	***793***	< 9.0	< 7.5	< 3.6	(2)	< 8.2	(2)	(2)	(2)	(2)	< 2.4	na	8.0 J	(2)	(2)	(2)	< 6.1	*72.4*	< 9.3	14.4	7.0 J	< 8.9	(2)	< 9.7	< 4.5	na
8/21/2013	na	***2690***	*548*	11.4 J	*1157.6* J	***799.6*** J	< 8.9	< 10.1	< 9.5	(2)	< 9.7	(2)	(2)	(2)	(2)	< 7.8	na	16.2 J	(2)	(2)	(2)	< 9.9	*94.1* J	8.5 J	36.3	8.4 J	< 12.1	(2)	< 8.5	< 9.4	na
6/24/2014	na	< 0.50	< 0.50	< 0.50	< 1.50	< 1.0	< 0.50	< 0.44	< 0.17	(2)	< 0.23	(2)	(2)	(2)	(2)	< 0.50	na	< 0.14	(2)	(2)	(2)	< 0.23	< 2.5	< 0.50	< 0.50	< 0.50	< 2.2	(2)	< 0.18	< 0.50	na
10/21/2014	na	***73.8***	19.8	< 0.50	111.97 J	85.4	< 0.50	< 0.44	< 0.17	(2)	< 0.23	(2)	(2)	(2)	(2)	< 0.50	na	< 0.14	(2)	(2)	(2)	< 0.17	3.3 J	< 0.50	< 0.50	< 0.50	< 2.2	(2)	< 0.18	< 0.50	na
6/23/2015	na	***982***	*178*	15.8	*450.6* J	*475.5*	< 5.0	< 4.4	< 1.7	(2)	< 2.3	(2)	(2)	(2)	(2)	< 5.0	na	4.6 J	(2)	(2)	(2)	< 1.7	< 25.0	< 5.0	7.5 J	< 5.0	< 21.9	(2)	< 1.8	< 5.0	na
10/6/2015	na	***10.1***	1.5	< 0.50	2.7	2.6	< 0.50	< 0.44	< 0.17	(2)	< 0.23	(2)	(2)	(2)	(2)	< 0.50	na	< 0.14	(2)	(2)	(2)	< 0.17	< 2.5	< 0.50	< 0.50	< 0.50	< 2.2	(2)	< 0.18	< 0.50	na
5/24/2016	na	***282***	30.6	2.2 J	88.0 J	*148.6*	< 1.2	< 1.1	< 0.42	(2)	< 0.58	(2)	(2)	(2)	(2)	< 1.2	na	0.69 J	(2)	(2)	(2)	< 0.44	< 6.2	< 1.2	< 1.2	< 1.2	< 5.5	(2)	< 0.45	< 1.2	na
10/5/2016	na	*3.3*	0.83 J	0.99 J	4.1	3.2	< 0.50	< 0.44	< 0.17	(2)	< 0.23	(2)	(2)	(2)	(2)	< 0.50	na	< 0.14	(2)	(2)	(2)	< 0.17	< 2.5	< 0.50	< 0.50	< 0.50	< 2.2	(2)	< 0.18	< 0.50	na
5/16/2017	na	***3930***	*602*	< 20.0	*1600*	***674.5***	< 20.0	< 17.6	< 6.7	(2)	< 9.2	(2)	(2)	(2)	(2)	< 20.0	na	10.4 J	(2)	(2)	(2)	< 7.0	< 100	< 20.0	< 20.0	< 20.0	< 87.4	(2)	< 7.2	< 30.0	na
10/25/2017	na	***79.6***	9.7	3.6	30.6	40.6	< 1.2	< 1.1	< 0.42	(2)	< 0.58	(2)	(2)	(2)	(2)	< 1.2	na	0.43 J	(2)	(2)	(2)	< 0.44	< 6.2	< 1.2	2.1 J	< 1.2	8.3 J	(2)	< 0.45	< 1.2	na
6/12/2018	na	***3770***	*531*	< 25.0	< 1305 BQX	***597.7*** J	< 25.0	< 22.1	< 8.4	(2)	< 11.5	(2)	(2)	(2)	(2)	< 25.0	na	< 7.2	(2)	(2)	na	< 8.7	< 125	< 25.0	< 25.0	< 25.0	< 109	< 25.0	< 9.0	< 25.0	na
10/9/2018	na	< 0.25	< 0.22	< 0.17	< 0.73	< 1.71	< 0.24	< 0.54	< 0.28	(2)	< 0.24	(2)	(2)	(2)	(2)	< 2.2	na	< 0.39	(2)	(2)	na	< 1.2	< 1.2	< 0.71	< 0.81	< 0.80	< 0.85	< 0.47	< 0.30	< 0.33	na
5/21/2019	na	***1790***	*278*	4.9 J	< 552.6 BQX	*376.0* J	< 2.4	< 5.4	< 2.8	(2)	< 2.4	(2)	(2)	(2)	(2)	< 21.9	na	8.4 J	(2)	(2)	na	< 12.5	*13.1* J	< 7.1	17.9 J	< 8.0	< 8.5	< 4.7	< 3.0	< 3.3	na

Attachment B
Historical Groundwater Analytical Results for Detected Compounds
Tank 68 Release Site (1)
Superior Refining Company LLC
Superior, Wisconsin

Well ID / Date	Substance Concentration (µg/l) and Results Qualifiers (if any)																														
	GRO	Benzene	Ethylbenzene	Toluene	Xylenes	TMBs	1,1,1-Trichloroethane	1,1-Dichloropropene	1,2-Dichloroethane	Acetone	Bromobenzene	Bromodichloromethane	Bromomethane	Chlorodibromomethane	Chloroform	Chloromethane	Isopropyl Ether	Isopropylbenzene (Cumene)	Methyl ethyl ketone (2-butanone)	Methylene chloride	Methyl isobutyl ketone (MIBK)	MTBE	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Dissolved Lead
NR 140 PAL	NS	*0.5*	*140*	*160*	*400*	*96*	40	NS	*0.5*	1800	NS	*0.06*	*1*	6	*0.6*	*3*	NS	NS	800	*0.5*	*50*	12	*10*	NS	NS	NS	NS	*10*	NS	*0.5*	*1.5*
NR 140 ES	NS	**5**	**700**	**800**	**2,000**	**480**	200	NS	**5**	9000	NS	**0.6**	**10**	60	**6**	30	NS	NS	4000	**5**	500	60	**100**	NS	NS	NS	NS	100	NS	5	15
10/9/2019	na	***2640***	*420*	4.8 J	< 441.6 BQX	***661.1***	< 2.4	< 5.4	***64.6***	(2)	< 2.4	(2)	(2)	(2)	(2)	< 21.9	na	13.1 J	(2)	(2)	na	< 12.5	< 11.8	< 7.1	30.5 J	< 8.0	< 8.5	< 4.7	< 3.0	< 3.3	na
5/27/2020	na	***790***	133	2.8 J	192.3	*229* a	< 1.2	< 2.7	< 1.4	na	< 1.2	< 1.8	< 4.9	< 13.0	< 6.4	< 10.9	< 9.4	< 8.4	na	< 2.9	na	< 6.2	6 J	< 3.5	9.1 J	< 4.0	< 4.2	< 15.0	< 1.5	< 1.6	na
10/6/2020	na	***2950***	*499*	5.0	*636*	***1027***	< 0.17	< 0.22	*0.96*	< 2.5	< 0.13	< 0.11	< 0.63	< 0.20	< 0.48	< 0.42	na	28.9	< 0.88	< 1.1	< 0.54	< 0.12	8.9	7.0	57.2	11.8	5.4	< 0.11	0.35 J	< 0.17	na
5/24/2021	na	***1850***	*279*	5.4 J	397	*411*	< 3.0	< 4.1	< 2.9	na	< 3.6	< 4.2	< 11.9	< 26.4	< 11.8	< 16.4	< 11.0	< 10.0	na	< 3.2	na	< 11.3	< 11.3	< 8.6	16.4	< 10.4	< 4.2	< 3.6	< 5.9	< 4.1	na
10/4/2021	na	***17.4*** H	2.6 H	< 0.14 H	10.7	13.2	< 0.18 H	< 0.26 H	< 0.16 H	na	< 0.13 H	< 0.096 H	< 0.32 H	< 0.13 H	< 0.16 H	< 0.18 H	na	< 0.16 H	na	< 0.47 H	na	< 0.16 H	0.47 H	< 0.16 H	< 0.18 H	< 0.15 H	< 0.15 H	< 0.088 H	< 0.17 H	< 0.25 H	na
5/25/2022	na	***1500***	*357*	4.3	383	***692***	< 0.12	< 0.12	< 0.17	< 1.9	< 0.12	< 0.12	< 0.38	< 0.20	< 0.23	< 0.17	na	19.0	< 0.93	< 0.33	< 0.80	< 0.13	2.1	4.5	36.1	7.7	2.9	< 0.097	0.18 J	< 0.10	na
10/11/2022	na	0.19 J	*< 0.11*	< 0.10	0.40 a	0.80 a	< 0.12	< 0.12	< 0.17	na	< 0.12	< 0.12	< 0.54 J+UB	< 0.20	< 0.23	< 0.17	na	< 0.12	na	< 0.33	na	< 0.13	0.30 J	< 0.096	< 0.11	< 0.11	< 0.097	< 0.097	< 0.091	< 0.10	na
MW-5/T66																															
11/25/1998	100	< 0.30	1.9	6.7	32	10.4	< 0.20	na	< 0.20	(2)	< 0.20	NI	NI	NI	(2)	< 0.90	< 0.30	< 0.20	(2)	(2)	(2)	< 0.20	< 1.1	2	0.3	< 0.20	< 0.20	(2)	< 0.30	< 0.60	na
12/17/1998	na	na	na	na	na	na	na	na	na	(2)	na	(2)	(2)	(2)	(2)	na	na	na	(2)	(2)	(2)	na	na	na	na	na	na	(2)	na	na	< 1
4/6/1999	997	***44***	8.06	33.1	195	*109*	na	na	na	(2)	na	(2)	(2)	(2)	(2)	na	na	na	(2)	(2)	(2)	< 0.3	na	na	na	na	na	(2)	na	na	*2.41*
6/1/1999	3810	***55.4***	65.7	*170*	*909*	***554***	na	na	na	(2)	na	(2)	(2)	(2)	(2)	na	na	na	(2)	(2)	(2)	< 3.0	na	na	na	na	na	(2)	na	na	*2.75*
9/9/1999	31300	***1920***	***1970***	***5190***	***9590***	***2554***	na	na	na	(2)	na	(2)	(2)	(2)	(2)	na	na	na	(2)	(2)	(2)	< 15	na	na	na	na	na	(2)	na	na	*4.23*
12/10/1999	74600	***7480***	***3070***	***19800***	***15270***	***2786***	na	na	na	(2)	na	(2)	(2)	(2)	(2)	na	na	na	(2)	(2)	(2)	< 60	na	na	na	na	na	(2)	na	na	*3.38*
3/6/2002	44000	***3300***	***3100***	***13000***	***18000***	***4800***	na	na	na	(2)	na	(2)	(2)	(2)	(2)	na	na	na	(2)	(2)	(2)	< 25	***820***	na	na	na	na	(2)	na	na	na
7/11/2002	na	***2100***	***1700***	***8700***	***13400***	***2900***	na	na	na	(2)	na	(2)	(2)	(2)	(2)	na	na	na	(2)	(2)	(2)	< 49	na	na	na	na	na	(2)	na	na	na
9/12/2002	44000	***2200***	***2800***	***10000***	***14500***	***2960***	na	na	na	(2)	na	(2)	(2)	(2)	(2)	na	na	na	(2)	(2)	(2)	< 22	***310***	na	na	na	na	(2)	na	na	na
3/12/2003	48000	***3400***	***3100***	***9900***	***15600***	***3220***	na	na	na	(2)	na	(2)	(2)	(2)	(2)	na	na	na	(2)	(2)	(2)	< 22	***340***	na	na	na	na	(2)	na	na	na
9/30/2004	77000	***13000***	***3600***	***23000***	***17200***	***3350***	na	na	na	(2)	na	(2)	(2)	(2)	(2)	na	na	na	(2)	(2)	(2)	< 72	***520***	na	na	na	na	(2)	na	na	na
5/26/2005	72800	***20700***	***1250***	***23400***	***9990***	***1974***	< 200	na	< 400	(2)	< 410	(2)	(2)	(2)	(2)	< 290	< 300	< 310	(2)	(2)	(2)	< 300	< 800	< 360	< 300	< 500	< 400	(2)	< 400	< 300	na
11/9/2005	53100	***8980***	***2580***	***19700***	***17840***	***2731***	< 200	na	< 80.0	(2)	< 82.0	(2)	(2)	(2)	(2)	< 58.0	< 30.0	68.3	(2)	(2)	(2)	< 60.0	***270***	< 72.0	190	< 100	< 80.0	(2)	< 80.0	< 300	na
5/10/2006	72700	***8620***	***3660***	***19400***	***18340***	***4340***	< 200	na	< 200	(2)	< 205	(2)	(2)	(2)	(2)	< 145	< 300	< 155	(2)	(2)	(2)	< 150	***667*** J	549	602	< 250	< 200	(2)	< 200	< 300	na
11/16/2006	17300	***672***	*425*	***1740***	***4040***	***1852***	< 20.0	< 15.0	***15.4*** J	(2)	102	(2)	(2)	(2)	(2)	< 10.0	< 30.0	17.7 J	(2)	(2)	(2)	< 5.00	*89.6* J	199	< 5.00	11.5 J	< 7.50	(2)	< 7.50	< 30.0	na
5/23/2007	29800	***2620***	***1160***	***5200***	***6840*** J	***2360***	< 20.0	< 15.0	***52.0***	(2)	< 10.0	(2)	(2)	(2)	(2)	*19.7* J	< 30.0	32.3	(2)	(2)	(2)	< 10.0	***174***	< 10.0	< 5.00	< 10.0	< 10.0	(2)	< 10.0	< 30.0	na
11/15/2007	27000	***2440***	***1270***	***4790***	***8180***	***2540***	< 20.0	< 30.0	< 20.0	(2)	< 20.0	(2)	(2)	(2)	(2)	< 30.0	< 30.0	34.2	(2)	(2)	(2)	< 20.0	***221*** J	< 20.0	< 10.0	< 20.0	< 20.0	(2)	< 20.0	< 30.0	na
5/27/2008	39500	***4210***	***2180***	***8750***	***12350***	***2360***	< 200	< 500	< 300	(2)	< 200	(2)	(2)	(2)	(2)	< 400	< 300	< 100	(2)	(2)	(2)	< 500	< 1,000	< 400	< 100	< 200	< 300	(2)	< 300	< 300	na
11/24/2008	19300	***2010***	***1270***	***4340***	***8540***	***1841***	< 20.0	< 50.0	< 30.0	(2)	< 20.0	(2)	(2)	(2)	(2)	< 40.0	< 30.0	33.9 J	(2)	(2)	(2)	< 50.0	***223*** J	230	< 10.0	< 20.0	< 30.0	(2)	< 30.0	< 30.0	na
5/29/2009	27500	***2710***	***1570***	***3590***	***10550***	***3160***	< 500	< 800	< 300	(2)	< 300	(2)	(2)	(2)	(2)	< 400	< 300	< 100	(2)	(2)	(2)	< 500	< 1,000	< 400	< 100	< 400	< 300	(2)	< 300	< 300	na
11/23/2009	20100	***1870***	***926***	***1050***	***6910***	***2760***	< 50.0	< 80.0	***43.6*** J	(2)	< 30.0	(2)	(2)	(2)	(2)	< 40.0	na	31.6	(2)	(2)	(2)	< 50.0	***391***	< 40.0	< 10.0	< 40.0	< 30.0	(2)	< 30.0	< 300	na
5/19/2010	25400	***2980***	***1480***	***4190***	***9050***	***3000***	< 500	< 800	< 300	(2)	< 300	(2)	(2)	(2)	(2)	< 400	< 300	< 100	(2)	(2)	(2)	< 500	< 1,000	< 400	< 100	< 400	< 300	(2)	< 300	< 300	na
10/21/2010	21800	***1630***	***913***	***2090***	***6670***	***1431***	< 500	< 80.0	***34.9*** J	(2)	< 30.0	(2)	(2)	(2)	(2)	< 40.0	< 30.0	21.3 J	(2)	(2)	(2)	< 50.0	***211*** J	< 40.0	< 20.0	< 40.0	< 30.0	(2)	< 30.0	< 30.0	na
6/16/2011	na	***2940***	***1520***	***2470***	***9480***	***2161*** J	< 250	< 400	< 150	(2)	< 150	(2)	(2)	(2)	(2)	< 200	na	< 100	(2)	(2)	(2)	< 250	< 500	< 200	< 100	< 200	< 150	(2)	< 150	< 150	na
10/25/2011	na	***3020***	***820***	***1110***	***7280***	***1745*** J	< 250	< 400	< 150	(2)	< 150	(2)	(2)	(2)	(2)	< 200	na	< 100	(2)	(2)	(2)	< 250	< 500	< 200	< 100	< 200	< 150	(2)	< 150	< 150	na
5/16/2012	na	***3220***	***2550***	***2690***	***13910***	***2828***	< 22.5	< 18.8	< 9.0	(2)	< 20.5	(2)	(2)	(2)	(2)	< 6.0	na	54.1	(2)	(2)	(2)	< 15.2	***317***	< 23.2	210	< 16.8	< 22.2	(2)	< 24.2	< 11.2	na
8/21/2013	na	***3860***	***2540***	***1760***	***15230***	***3450***	< 17.7	< 20.3	< 19.1	(2)	< 19.3	(2)	(2)	(2)	(2)	< 15.5	na	66.4	(2)	(2)	(2)	< 19.7	***404***	56.9	244	16.8 J	< 24.2	(2)	< 17.0	< 18.9	na
6/24/2014	na	***6.0***	0.80 J	2.5	64.5	19.4	< 0.50	< 0.44	< 0.16	(2)	< 0.23	(2)	(2)	(2)	(2)	< 0.50	na	< 0.14	(2)	(2)	(2)	< 0.17	< 2.5	< 0.50	< 0.50	< 0.50	< 2.2	(2)	< 0.18	< 0.50	na
10/21/2014	na	***2050***	***1230***	*423*	***9030***	***1486***	< 10.0	< 8.8	< 3.4	(2)	< 4.6	(2)	(2)	(2)	(2)	< 10.0	na	11.5 J	(2)	(2)	(2)	< 3.5	***172***	< 10.0	43.5	< 10.0	< 43.7	(2)	< 3.6	< 10.0	na
6/23/2015	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	(2)	FP	FP	FP
10/6/2015	na	***11800***	***2080***	***20900***	***16670***	***4585***	< 100	< 88.2	< 33.6	(2)	< 46.0	(2)	(2)	(2)	(2)	< 100	na	74.7 J	(2)	(2)	(2)	< 34.8	***510*** J	< 100	316	< 100	< 437	(2)	< 36.1	< 100	na
5/24/2016	na	***10600***	***3330***	***17000***	***19360***	***4719***	< 100	< 88.2	< 33.6	(2)	< 46.0	(2)	(2)	(2)	(2)	< 100	na	118 J	(2)	(2)	(2)	< 34.8	< 500	< 100	419	< 100	< 437	(2)	< 36.1	< 100	na
10/5/2016	na	***9090***	***2700***	***15900***	***16800***	***3241***	< 100	< 88.2	< 33.6	(2)	< 46.0	(2)	(2)	(2)	(2)	< 100	na	65.2 J	(2)	(2)	(2)	< 34.8	< 500	< 100	222	< 100	< 437	(2)	< 36.1	< 100	na
5/16/2017	na	***10600***	***2950***	***16300***	***18730***	***2902***	< 100	< 88.2	< 33.6	(2)	< 46.0	(2)	(2)	(2)	(2)	< 100	na	74.4 J	(2)	(2)	(2)	< 34.8	< 500	< 100	209	< 100	< 437	(2)	< 36.1	< 100	na
10/25/2017	na	***8790***	***2300***	***15400***	***17250***	***2364***	< 62.5	< 55.1	< 21.0	(2)	< 28.8	(2)	(2)	(2)	(2)	< 62.5	na	66.4 J	(2)	(2)	(2)	< 21.8	< 312	< 62.5	167	< 62.5	< 273	(2)	< 22.5	< 62.5	na
6/12/2018	na	***5630***	***2240***	***8760***	***16810***	***3243***	< 25.0	< 22.1	< 8.4	(2)	< 11.5	(2)	(2)	(2)	(2)	< 25.0	na	40.9 J	(2)	(2)	na	< 8.7	***276***	< 25.0	147	< 25.0	< 109	< 25.0	< 9.0	< 25.0	na
10/9/2018	na	***4180***	***2030***	***10800***	***17330***	***4662***	< 12.2	< 27.0	< 14.0	(2)	< 12.1	(2)	(2)	(2)	(2)	< 109	na	71.6 J	(2)	(2)	na	< 62.3	***549***	< 35.4	263	< 40.0	< 42.4	< 23.3	< 15.2	< 16.3	na
5/21/2019	na	***2810***	***1410***	***7130***	***13160***	***3625***	< 12.2	< 27.0	< 14.0	(2)	< 12.1	(2)	(2)	(2)	(2)	< 109	na	37.0 J	(2)	(2)	na	< 62.3	***382***	< 35.4	108 J	< 40.0	< 42.4	< 23.3	< 15.2	< 16.3	na
10/9/2019	na	***4260***	***1680***	***9810***	***14770***	***3279***	< 12.2	< 27.0	***112***	(2)	< 12.1	(2)	(2)	(2)	(2)	< 109	na	35.9 J	(2)	(2)	na	< 62.3	***358***	< 35.4	106 J	< 40.0	< 42.4	< 23.3	< 15.2	< 16.3	na
5/27/2020	na	***4760***	***2010***	***6000***	***13740***	***2914***	< 24.5	< 54.0	< 28.0	na	< 24.1	< 36.4	< 97.1	< 260	< 127	< 219	< 189	< 169	na	< 58.1	na	< 125	***326*** J	< 70.8	165 J	< 80.0	< 84.9	< 301	< 30.4	< 32.6	na
10/6/2020	na	***7150***	***9730***	***14900***	***43900***	***27960***	< 17.0	< 22.1	< 25.4	< 252	< 13.3	< 11.4	< 63.4	< 19.7	< 48.4	< 42.4	na	559	< 88.3	< 110	< 54.5	< 11.6	***2660***	457	2250	92.4	189	< 11.0	< 12.9	< 17.4	na
5/24/2021	na	***339***	*467*	***901***	***13190***	***3045***	< 7.6	< 10.3	< 7.3	na	< 9.0	< 10.4	< 29.8	< 66.1	< 29.6	< 40.9	< 27.5	< 25.0	na	< 8.0	na	< 28.2	***355***	< 21.4	42.4	< 26.1	< 10.6	< 8.9	< 14.7	< 10.2	na
10/4/2021	na	***1760***	*538*	***2470***	***9780***	***2597***	< 1.8 H	< 2.6 H	< 1.6 H	na	< 1.3 H	< 0.96 H	< 3.2 H	< 1.3 H	< 1.6 H	< 1.8 H	na	19.3 H	na	< 4.7 H	na	< 1.6 H	***302*** H	42.2 H	45.1 H	5.9 H	< 1.5 H	< 0.88 H	< 1.7 H	< 2.5 H	na
5/25/2022	na	***5340***	***2540***	***1730***	***14800***	***3064***	< 1.2	< 1.2	< 1.7	37.4 J	< 1.2	< 1.2	< 3.8	< 2.0	< 2.3	< 1.7	na	66.6	13.7 J	< 3.3	15.5 J	< 1.3	***402***	< 0.96	217	5.4 J	10.0	< 0.97	< 0.91	< 1.0	na
10/11/2022	na	***1340***	*467*	***2050***	***12110***	***3434***	< 2.5	< 2.5	< 3.4	na	< 2.4	< 2.3	***10.2*** J+	< 4.1	< 4.6	< 3.4	na	20.5	na	< 6.6	na	< 2.5	***312***	< 1.9	31.7	< 2.1	6.7 J	< 1.9	< 1.8	< 2.1	na
MW-5/T68																															
3/12/2003	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
9/30/2004	57000	***14000***	*460*	***15000***	***9100***	***1810***	< 200	< 75	< 36	(2)	< 82	(2)	(2)	(2)	(2)	< 24	< 300	< 59	(2)	(2)	(2)	< 61	***330***	< 93	< 81	< 67	< 89	na	< 97	< 300	na
5/26/2005	66600	***10500***	***2240***	***17000***	***17060***	***4084***	< 200	na	< 300	(2)	< 205	(2)	(2)	(2)	(2)	< 145	< 300	< 155	(2)	(2)	(2)	< 150	***431***	513	305	< 250	< 200	na	< 200	< 300	na
11/9/2005	40100	***9710***	*450*	***10100***	***9990***	***1682***	< 200	na	< 200	(2)	< 205	(2)	(2)	(2)	(2)	< 145	< 300	< 155	(2)	(2)	(2)	< 150	< 400	< 180	< 150	< 250	< 200	na	< 200	< 300	na
5/10/2006	45600	***13300***	*422*	***12300***	***9700***	***1881***	< 200	na	< 80.0	(2)	< 82.0	(2)	(2)	(2)	(2)	< 58.0	< 300	< 62.0	(2)	(2)	(2)	< 60.0	***241*** J	< 72.0	< 60.0	< 100	< 80.0	na	< 80.0	< 300	na
11/16/2006	37300	***5410***	***922***	***6820***	***10380***	***3260***	< 200	65.6 J	***109***	(2)	75	(2)	(2)	(2)	(2)	< 20.0	< 300	30.1 J	(2)	(2)	(2)	< 10.0	***265*** J	< 20.0	< 10.0	< 20.0	< 15.0	na	19.9 J	< 300	na

Attachment B
Historical Groundwater Analytical Results for Detected Compounds
Tank 68 Release Site (1)
Superior Refining Company LLC
Superior, Wisconsin

Well ID / Date	Substance Concentration (µg/l) and Results Qualifiers (if any)																													
	GRO	Benzene	Ethylbenzene	Toluene	Xylenes	TMBs	1,1,1-Trichloroethane	1,1-Dichloropropene	1,2-Dichloroethane	Acetone	Bromobenzene	Bromodichloromethane	Bromomethane	Chlorodibromomethane	Chloroform	Chloromethane	Isopropyl Ether	Isopropylbenzene (Cumene)	Methyl ethyl ketone (2-butanone)	Methylene chloride	Methyl isobutyl ketone (MIBK)	MTBE	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Dissolved Lead
NR 140 PAL	NS	*0.5*	*140*	*160*	*400*	*96*	40	NS	*0.5*	1800	NS	*0.06*	*1*	6	*0.6*	*3*	NS	NS	800	*0.5*	*50*	12	*10*	NS	NS	NS	NS	*10*	NS	*0.5*	*1.5*
NR 140 ES	NS	**5**	**700**	**800**	**2,000**	**480**	200	NS	**5**	9000	NS	**0.6**	**10**	60	**6**	30	NS	NS	4000	**5**	500	60	**100**	NS	NS	NS	NS	100	NS	5	15
5/23/2007	103000	***21200***	***2730***	***33800***	***16520***	***4590***	< 200	< 300	< 200	(2)	< 200	(2)	(2)	(2)	(2)	< 300	< 300	< 100	(2)	(2)	(2)	< 200	< 1,000	< 200	< 100	< 200	< 200	na	< 200	< 300	na
11/15/2007	121000	***7580***	***1240***	***13500***	***7180***	***2007***	< 200	< 300	< 200	(2)	< 200	(2)	(2)	(2)	(2)	< 300	< 300	< 100	(2)	(2)	(2)	< 200	< 1,000	< 200	< 100	< 200	< 200	na	< 200	< 300	na
5/27/2008	120000	***22600***	***3310***	***45700***	***20390***	***3327***	< 200	< 500	< 300	(2)	< 200	(2)	(2)	(2)	(2)	< 400	< 300	< 100	(2)	(2)	(2)	< 500	< 1,000	< 400	< 100	< 200	< 300	na	< 300	< 300	na
11/24/2008	109000	***6950***	***1590***	***14200***	***7780***	***1377***	< 200	< 500	< 300	(2)	< 200	(2)	(2)	(2)	(2)	< 400	< 300	< 100	(2)	(2)	(2)	< 500	< 1,000	< 400	< 100	< 200	< 300	na	< 300	< 300	na
5/27/2009	110000	***19000***	***4030***	***45700***	***21860***	***6040***	< 500	< 800	***585*** J	(2)	< 300	(2)	(2)	(2)	(2)	< 400	< 300	134 J	(2)	(2)	(2)	< 500	< 1,000	< 400	< 100	< 400	< 300	na	< 300	< 300	na
11/23/2009	106000	***13200***	***3630***	***30600***	***20610***	***6280***	< 50.0	< 80.0	***315***	(2)	< 30.0	(2)	(2)	(2)	(2)	< 40.0	na	111	(2)	(2)	(2)	< 50.0	***783***	< 40.0	< 10.0	< 40.0	< 30.0	na	< 30.0	< 300	na
5/19/2010	103000	***18400***	***3640***	***42200***	***21540***	***6560***	< 500	< 800	< 300	(2)	< 300	(2)	(2)	(2)	(2)	< 400	< 300	134 J	(2)	(2)	(2)	< 500	< 1,000	< 400	< 100	< 400	< 300	na	< 300	< 300	na
10/21/2010	98000	***14900***	***3730***	***36800***	***24540***	***6240***	< 500	< 400	***339*** J	(2)	< 300	(2)	(2)	(2)	(2)	< 400	< 300	< 200	(2)	(2)	(2)	< 500	***1070*** J	< 400	< 200	< 400	< 300	na	< 300	< 300	na
6/16/2011	na	***12200***	***2760***	***33100***	***16950***	***3324*** J	< 500	< 800	< 300	(2)	< 300	(2)	(2)	(2)	(2)	< 400	na	< 200	(2)	(2)	(2)	< 500	< 1,000	< 400	< 200	< 400	< 300	na	< 300	< 300	na
10/25/2011	na	***12600***	***2250***	***27800***	***18100***	***4288*** J	< 500	< 800	***322*** J	(2)	< 300	(2)	(2)	(2)	(2)	< 400	na	< 200	(2)	(2)	(2)	< 500	< 1,000	< 400	< 200	< 400	< 300	na	< 300	< 300	na
5/16/2012	na	***12700***	***2610***	***28200***	***17680***	***3480***	< 112	< 93.8	< 45.0	(2)	< 102	(2)	(2)	(2)	(2)	< 30.0	na	< 73.8	(2)	(2)	(2)	< 76.2	***476*** J	< 116	214	< 83.8	< 111	na	< 121	< 56.2	na
8/21/2013	na	***16000***	***2390***	***27800***	***16160***	***4261***	< 88.6	< 101	< 95.3	(2)	< 96.7	(2)	(2)	(2)	(2)	< 77.5	na	71.0	(2)	(2)	(2)	< 98.7	***584*** J	< 79.9	273	< 79.4	< 121	na	< 84.9	< 94.4	na
6/24/2014	na	***14600***	***2700***	***26900***	***17940***	***1208***	< 125	< 110	< 41.9	(2)	< 57.5	(2)	(2)	(2)	(2)	< 125	na	57.5 J	(2)	(2)	(2)	< 43.6	< 625	< 125	193 J	< 125	< 547	na	< 45.1	< 125	na
10/21/2014	na	***23300***	***4140***	***48700***	***33400***	***5250***	< 100	< 88.2	< 33.5	(2)	< 46.0	(2)	(2)	(2)	(2)	< 100	na	< 28.7	(2)	(2)	(2)	< 34.8	***617*** J	< 100	260	< 100	< 437	na	< 36.1	< 100	na
6/23/2015	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
10/6/2015	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
5/24/2016	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
10/5/2016	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
5/16/2017	na	***25600***	***3200***	***42700***	***23200***	***3821***	< 312	< 276	< 105	(2)	< 144	(2)	(2)	(2)	(2)	< 312	na	< 89.6	(2)	(2)	(2)	< 109	< 1560	623 J	< 312	< 312	< 1370	na	< 113	< 312	na
10/25/2017	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
6/12/2018	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	na	FP	FP	FP	FP	FP	FP	< 25.0	FP	FP	FP
10/9/2018	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	na	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
5/21/2019	na	***27400***	***2730***	***41600***	***24450***	***3480***	< 61.2	< 135	< 70.0	(2)	< 60.3	(2)	(2)	(2)	(2)	< 547	na	< 98.2	(2)	(2)	na	< 311	***432*** J	< 177	< 203	< 200	< 212	< 116	< 76.0	< 81.6	na
10/9/2019	na	***25400***	***2480***	***39500***	***21620***	***4555***	< 61.2	< 135	***697***	(2)	< 60.3	(2)	(2)	(2)	(2)	< 547	na	< 98.2	(2)	(2)	na	< 311	***717*** J	< 177	258 J	< 200	< 212	< 116	< 76.0	< 81.6	na
5/27/2020	na	***21100***	***2060***	***33700***	***21630***	***3891***	< 61.2	< 135	< 70.0	na	< 60.3	< 90.9	< 243	< 650	< 318	< 547	< 472	< 422	na	< 145	na	< 311	***494*** J	< 177	< 203	< 200	< 212	< 752	< 76.0	< 81.6	na
10/6/2020	na	***24300***	***8670***	***33700***	***162000***	***65080***	< 17.0	< 22.1	***88.7***	< 252	< 13.3	< 11.4	< 63.4	< 19.7	< 48.4	< 42.4	na	569	< 88.3	< 110	*250*	< 11.6	***5690***	573	2080	117	253	*34.4* J	< 12.9	< 17.4	na
5/24/2021	na	***17100***	***1740***	***27900***	***17430***	***3454***	< 37.8	< 51.3	***78.0*** J	na	< 45.1	< 51.9	< 149	< 330	< 148	< 204	< 138	< 125	na	< 39.9	na	< 141	***455*** J	< 107	149	< 130	< 53.0	< 44.5	< 73.3	< 51.1	na
10/4/2021	na	***18500***	***2920***	***38000***	***33100***	***10480***	< 17.4	< 12.2	***56.1***	na	< 17.9	< 20.7	< 188	< 16.8	***18.4*** J	< 22.4	na	143	na	< 82.9	na	< 18.1	***1500***	139	501	28.3 J	49.9	< 12.6	< 11.3	< 10.1	na
5/25/2022	na	***18600***	***1820***	***31500***	***21900***	***3359***	< 3.1	< 3.1	< 4.2	132 J	< 3.0	< 2.9	< 9.6	< 5.1	< 5.8	< 4.2	na	55.1	79.6 J	< 8.2	*91.0* J	< 3.2	***535***	< 2.4	148	5.3 J	10.5 J	< 2.4	< 2.3	< 2.6	na
10/11/2022	na	***17200***	***2350***	***28200***	***22000***	***5870***	< 24.8	< 25.0	< 33.8	na	< 24.0	< 23.4	< 77.0	< 40.6	< 46.0	< 34.0	na	76.5 J	na	***89.7*** J	na	< 25.2	***1040***	< 19.2	282	< 21.2	30.9 J	< 19.3	< 18.2	< 21.0	na
MW-6/T68																															
3/12/2003	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
9/30/2004	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
thru	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
11/9/2005	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
11/19/2006	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
5/23/2007	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
11/15/2007	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
5/27/2008	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
11/24/2008	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
5/27/2009	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
11/23/2009	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
5/19/2010	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
10/21/2010	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
6/16/2011	FP	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	na	FP	FP	FP
10/25/2011	na	***24000***	***2160***	***25200***	***16320***	***3830***	< 100	< 80.0	< 60.0	(2)	< 60.0	(2)	(2)	(2)	(2)	< 80.0	na	61.3 J	(2)	(2)	(2)	< 100	***243*** J	< 80.0	< 40.0	< 80.0	< 60.0	na	< 60.0	< 60.0	na
5/16/2012	na	***27900***	***2270***	***31200***	***19370***	***3059***	< 180	< 150	***293***	(2)	< 164	(2)	(2)	(2)	(2)	< 48.0	na	< 118	(2)	(2)	(2)	< 122	***436*** J	< 186	< 162	< 134	< 178	na	< 194	< 90.0	na
8/21/2013	na	***26100***	***3940***	***32700***	***33400***	***11180***	< 88.6	< 101	< 95.3	(2)	< 96.7	(2)	(2)	(2)	(2)	< 77.5	na	193 J	(2)	(2)	(2)	< 98.7	***852*** J	439	741	124 J	< 121	na	< 84.9	< 94.4	na
6/24/2014	na	***26000***	***1780***	***25700***	***19390***	***3017***	< 125	< 110	***336***	(2)	< 57.5	(2)	(2)	(2)	(2)	< 125	na	< 35.8	(2)	(2)	(2)	< 43.6	< 625	< 125	127 J	< 125	< 547	na	< 45.1	< 125	na
10/21/2014	na	***47200***	***2160***	***47700***	***43200***	***6080***	< 100	< 88.2	< 33.5	(2)	< 46.0	(2)	(2)	(2)	(2)	< 100	na	< 28.7	(2)	(2)	(2)	< 34.8	***543*** J	< 100	121 J	< 100	< 437	na	< 36.1	< 100	na
6/23/2015	na	***5710***	26.3 J	***3900***	***20110***	***4263***	< 25.0	< 22.1	< 8.4	(2)	< 11.5	(2)	(2)	(2)	(2)	< 25.0	na	< 7.2	(2)	(2)	(2)	< 8.7	***383***	< 25.0	< 25.0	< 25.0	< 109	na	< 9.0	< 25.0	na
10/6/2015	na	***6000***	43.0 J	***3010***	***18150***	***4307***	< 25.0	< 22.1	***43.5*** J	(2)	< 11.5	(2)	(2)	(2)	(2)	< 25.0	na	< 7.2	(2)	(2)	(2)	< 8.7	***342***	< 25.0	< 25.0	< 25.0	< 109	na	< 9.0	< 25.0	na
5/24/2016	DP	DP	DP	DP	DP	DP	DP	DP	DP	(2)	DP	(2)	(2)	(2)	(2)	DP	DP	DP	(2)	(2)	(2)	DP	DP	DP	DP	DP	DP	na	DP	DP	DP
10/5/2016	na	***5070***	45.5 J	***1560***	***14320***	***4065***	< 25.0	< 22.1	***37.5*** J	(2)	< 11.5	(2)	(2)	(2)	(2)	< 25.0	na	< 7.2	(2)	(2)	(2)	< 8.7	***334***	< 25.0	< 25.0	< 25.0	< 109	na	< 9.0	< 25.0	na
5/16/2017	na	***21000***	***1170***	***19600***	***20980***	***3928***	< 50.0	< 44.1	***240***	(2)	< 23.0	(2)	(2)	(2)	(2)	< 50.0	na	30.8 J	(2)	(2)	(2)	< 17.4	***273*** J	< 50.0	81.8 J	< 50.0	< 219	na	< 18.0	< 50.0	na
10/25/2017	na	***17500***	*576*	***12500***	***16570***	***3569***	< 62.5	< 55.1	***225***	(2)	< 28.8	(2)	(2)	(2)	(2)	< 62.5	na	< 17.9	(2)	(2)	(2)	< 21.8	< 312	< 62.5	< 62.5	< 62.5	< 273	na	< 22.5	< 62.5	na
6/12/2018	na	***23300***	***2100***	***25200***	***22650***	***3555***	< 25.0	< 22.1	***209***	(2)	< 11.5	(2)	(2)	(2)	(2)	< 25.0	na	37.1 J	(2)	(2)	na	< 8.7	***290***	< 25.0	111	< 25.0	< 109	< 25.0	< 9.0	< 25.0	na
10/9/2018	na	***20600***	***1700***	***19300***	***19490***	***3735***	< 61.2	< 135	< 70.0	(2)	< 60.3	(2)	(2)	(2)	(2)	< 547	na	< 98.2	(2)	(2)	na	< 311	***421*** J	< 177	< 203	< 200	< 212	< 116	< 76.0	< 81.6	na
5/21/2019	na	***22600***	***1550***	***20400***	***20360***	***3487***	< 61.2	< 135	***236*** J	(2)	< 60.3	(2)	(2)	(2)	(2)	< 547	na	< 98.2	(2)	(2)	na	< 311	***297*** J	< 177	< 203	< 200	< 212	< 116	< 76.0	< 81.6	na
10/9/2019	na	***20300***	***1300***	***17700***	***17400***	***3428***	< 61.2	< 135	***743***	(2)	< 60.3	(2)	(2)	(2)	(2)	< 547	na	< 98.2	(2)	(2)	na	< 311	***391*** J	< 177	< 203	< 200	< 212	< 116	< 76.0	< 81.6	na

Attachment B
Historical Groundwater Analytical Results for Detected Compounds
Tank 68 Release Site (1)
Superior Refining Company LLC
Superior, Wisconsin

Well ID	Substance Concentration (µg/l) and Results Qualifiers (if any)																														
Date	GRO	Benzene	Ethylbenzene	Toluene	Xylenes	TMBs	1,1,1-Trichloroethane	1,1-Dichloropropene	1,2-Dichloroethane	Acetone	Bromobenzene	Bromodichloromethane	Bromomethane	Chlorodibromomethane	Chloroform	Chloromethane	Isopropyl Ether	Isopropylbenzene (Cumene)	Methyl ethyl ketone (2-butanone)	Methylene chloride	Methyl isobutyl ketone (MIBK)	MTBE	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Dissolved Lead
NR 140 PAL	NS	*0.5*	*140*	*160*	*400*	*96*	40	NS	*0.5*	1800	NS	*0.06*	*1*	6	*0.6*	*3*	NS	NS	800	*0.5*	*50*	12	*10*	NS	NS	NS	NS	*10*	NS	*0.5*	*1.5*
NR 140 ES	NS	**5**	**700**	**800**	**2,000**	**480**	200	NS	**5**	9000	NS	**0.6**	**10**	60	**6**	30	NS	NS	4000	**5**	500	60	**100**	NS	NS	NS	NS	100	NS	5	15
5/27/2020	na	***18300***	***1410***	***16000***	***15710***	***3205***	< 49.0	< 108	< 56.0	na	< 48.2	< 72.7	< 194	< 520	< 255	< 438	< 378	< 337	na	< 116	na	< 249	***344*** J	< 142	< 162	< 160	< 170	<602	< 60.8	< 65.3	na
10/6/2020	na	***21100***	***1800***	***19000***	***20000***	***3611***	< 8.5	< 11.0	***200***	< 126	< 6.6	< 5.7	< 31.7	< 9.8	< 24.2	< 21.2	na	55.0	< 44.2	< 55.0	*69.0* J	< 5.8	***407***	17.0 J	153	< 8.8	12.0 J	< 5.5	< 6.4	< 8.7	na
5/24/2021	na	***14600***	***1190***	***12500***	***14340***	***2661***	< 37.8	< 51.3	< 36.4	na	< 45.1	< 51.9	< 149	< 330	< 148	< 204	< 138	< 125	na	< 39.9	na	< 141	***212*** J	< 107	75.6 J	< 130	< 53.0	< 44.5	< 73.3	< 51.1	na
10/4/2021	na	***18400***	***1630***	***16400***	***19040***	***3476***	< 17.4	< 12.2	***192***	na	< 17.9	< 20.7	< 188	< 16.8	***21.2*** J	< 22.4	na	52.1	na	< 82.9	na	< 18.1	***477***	21.9	140	< 11.5	< 13.5	< 12.6	< 11.3	< 10.1	na
5/25/2022	na	***17400***	***1540***	***18000***	***21000***	***3994***	< 1.2	< 1.2	< 1.7	52.3 J	< 1.2	< 1.2	< 3.8	< 2.0	< 2.3	< 1.7	na	48.4	48.0 J	< 3.3	41.9 J	< 1.3	***434***	< 0.96	131	5.3 J	9.8 J	< 0.97	< 0.91	< 1.0	na
10/11/2022	na	***17900***	***1800***	***15500***	***17500***	***3345***	< 24.8	< 25.0	< 33.8	na	< 24.0	< 23.4	< 77.0	< 40.6	< 46.0	< 34.0	na	52.2 J	na	***95.5*** J	na	< 25.2	***470***	27.2 J	159 J	< 21.2	< 19.4	< 19.3	< 18.2	< 21.0	na

NOTES:
Detected concentrations at or above an applicable NR 140 PAL are in **bold** font; those at or above an NR 140 ES are in *italicized* font.
a = Estimated value, calculated using some or all values that are estimates.
BQX = Value exceeds PAL despite being classified as not detected. It is possible one or more of the compounds added together to derived this value were detected in the original sample.
DP = Discontinuous product globules, well not sampled.
FP = Free product, well not sampled.
GRO = Gasoline range organics.
H = Recommended sample preservation, extraction or analysis holding time was exceeded.
J (Pre 2020) = Estimated concentration below laboratory quantitation level.
J (Post 2020) = Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quanitation limits.
J+ = The result is an estimated quantity and may be biased high.
MTBE = Methyl tert butyl ether.
na = Not analyzed.
NI = Not installed.
NR 140 ES = Wisconsin Administrative Code NR 140 Enforcement Standard; 7/1/2015.
NR 140 PAL = Wisconsin Administrative Code NR 140 Preventive Action Limit; 7/1/2015.
NS = No standard.
TMBs = Sum of 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.
UB = The analyte was detected in one of the associated laboratory, equipment, field or trip blank samples and is considered non-detect at the concentration reported by the laboratory.
(1) = In addition, 244 µg/ℓ of 1,3-dichloropropane was detected in the sample collected from MW-5/T66 on 10/25/17. However, 1,3-dichloropropane has no NR 140 PAL or NR 140 ES. Consequently, Table 2 was not revised to include all 1,3-dichloropropane data.
(2) = No data available.