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BARR

February 28, 2024

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

Re: 2023 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 2023.

1 Facility and Site Background Information

Figure 1 shows the location of Tank 68 within the refinery boundaries, the approximate property boundary of the refinery, and areas surrounding the refinery. The Tank 68 site 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.

Figure 2 presents the site layout and monitoring locations. The ground surface of the Tank 68 basin 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 expected to be 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) for the refinery site, 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 (SRC). In January 2021, Husky and Cenovus Energy Inc. (Cenovus) merged to become Cenovus; however, the refinery is still be referred to as SRC.

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 product recovery. This report presents groundwater monitoring and product gauging data for 2023.

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 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 2022 remediation progress report submitted to the WDNR (Barr, 2023).

3 Remedial and Monitoring Activities in 2023

Since the most recent remediation progress report was submitted to the WDNR on March 27, 2023 (Barr, 2023), work at Tank 68 has included the gauging of water and product levels in site monitoring wells and monitoring points, and the collection of groundwater samples from six monitoring wells.

Year-round access to monitoring wells and monitoring points at the site 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 API oil/water separator. Separated oil is stored for used at the refinery and the water is treated at the on-site WWTP.

In 2023, monitoring wells and monitoring points were gauged and/or purged and sampled in spring and fall (April/May and September/October). The monitoring wells and points were checked for the presence of product on a quarterly basis. If encountered, the product was removed by bailing. Monitoring well and monitoring point gauging activities conducted in 2023 are summarized below and fluid levels are summarized in Table 1. Cumulative groundwater analytical results from the six monitoring wells for compounds detected above criteria are summarized on Table 2.

3.1 Groundwater Levels

During this reporting period, the depth to groundwater was measured during each purging and sampling event. The depth to water measurements are summarized on Table 1. Groundwater levels in the wells are either 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).

3.2 Product Recovery

During this reporting period, measurable product was not encountered in the monitoring wells or monitoring points (Table 1). 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 quarterly, but for all practical purposes, free product likely has been recovered to the extent practical from the Tank 68 basin.

3.3 Groundwater Sampling and Results

Groundwater samples were collected by Barr and Insight Environmental (Insight) field staff during May and October 2023. 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 groundwater 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 30, 2023, and October 16, 2023. Field staff used a new one-time-use polyethylene disposable bailer with new nylon rope to collect each groundwater sample. The May 2023 and October 2023 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. Copies of the laboratory reports and chain of custody records for the groundwater samples collected in 2023 are provided in Attachment A.

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 all detected compounds compared to NR 140 PAL and ES is provided in Attachment B. A discussion of the 2023 data is provided below.

- Samples collected from the downgradient Tank 68 monitoring wells (MW-2/T68 MW-4/T68, MW-5/T66, MW-5/T68, and MW-6/T68) in May and October 2023 contained one or more VOCs at concentrations equal to or greater than NR 140 ES. However, because of the ongoing product recovery over the years, the benzene concentrations in these wells have generally been stable or decreasing over time shown in Figure 3.

- The benzene trend analysis plots in Figure 3 include data from MW-2/T68, MW-4/T68, MW-5/T66, MW-5/T68 and MW-6/T68. MW-1/T68 is considered upgradient and historically has had not ES exceedances. For the five plotted wells, if benzene was not detected in a sample, 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.

- Best-fit exponential trend lines were generated using a scatter plot chart. As shown on Figure 3, historical dissolved-phase benzene concentrations have followed a general long-term downward trend in MW2/T68, MW4/T68, MW-5/T66, and MW-6/T68. Historical dissolved-phase benzene concentrations in MW-5/T68 show a slight long-term upward trend as shown with the solid linear trend line on Figure 3. However, based a review of benzene data from eight semi-annual sampling events over the past four years (2020-2023), the benzene concentration at MW-5/T68 is

decreasing as shown with the dashed linear tread line on Figure 3. With the relatively low groundwater flow velocity of approximately 0.01 foot/year (GF, 2014) and decreasing benzene concentrations in the wells over the past four year (8 rounds of semi-annual data), results indicate the overall benzene concentration in groundwater remains stable or is decreasing.

- The VOC compound 1,1-Dichloroethane had reported detections for the first time in the May 2023 sample at MW-2/T68 (1.3 ug/l J). The detection was below the NR140 PAL. The concentration was flagged as an estimated detected value where the concentration is between the laboratory's detection and quantitation limits. In October 2023 this compound was not detected above the method detection limit.

- Likewise, the VOC compound chloroethane has reported detection for the first time in the May 2023 samples at MW-2/T68 (2.3 ug/l J). The detection was below the NR140 PAL. This concentration was also flagged as an estimated detected value where the concentration is between the laboratory's detection and quantitation limits. In October 2023 this compound detection was below the NR140 PAL and was not detected above the detection limit.

- Chloroform and bromodichloromethane were detected in the May 2023 sampling event in upgradient MW-1/T68 at estimated concentrations of 0.76 ug/l J and 0.12 ug/l J, respectively. Both results were also flagged as the concentrations were between the laboratory's detection and quantitation limits. Both flagged results fall between the NR140 PAL and NR140 ES. These compounds were not detected above the laboratory method detection limits (MDLs) during the October 2023 event.

The flagged detections of 1,1-Dichloroethane (MW-2/T68), chloroethane (MW-2/T68), and detection of chloroform and bromodichloromethane (MW-1/T68) in May 2023 were not verified in October 2023 suggesting the presence of these compounds may represent false positives.

Attachment A provides copies of the laboratory reports and chain of custody records for groundwater samples collected in May and October 2023.

4 Future Work

SRC's work plan for 2024 is as follows:

- Continue to check for, and if present, manually bail product, quarterly (as conditions allow) from monitoring wells MW-5/T66 and MW-5/T68. If, however, product is observed during the spring gauging event, these wells will be checked monthly. 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.

- 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

Table 1	2023 Fluid Level Monitoring Data
Table 2	Historical Groundwater Analytical Results for Detected Compounds above NR140 PAL and/or ES

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Figure 3	Benzene Groundwater Concentrations vs. Time – Tank 68 Basin

Attachments

Attachment A	Pace Analytical Laboratory Reports
Attachment B	Historical Groundwater Analytical Results for Detected Compounds

References

Barr Engineering Co., 2023. 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. March 27, 2023.

Gannett Fleming, Inc. (GF), 2014. Final Memorandum of Agreement, Site Investigation and Remedial Action Plan, Superior Refinery, Superior, Wisconsin, WDNR BRRTS# 02-16-559511. April 2014.

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.

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

February 28, 2024
Date

Tables

Table 1
2023 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)																	
05/03/23	--	5.85	--	6.49	--	5.09	--	4.54	--	4.50	--	4.13	--	3.90	--	2.92	--	3.66	(1)
05/17/23	--	5.96	--	6.56	--	5.40	--	4.90	--	4.55	--	4.48	--	4.09	--	7.21	--	4.10	(1)
05/30/23	--	6.34	--	7.35	--	6.57	--	5.49	--	5.50	--	5.75	--	5.10	--	8.18	--	4.75	(2)
07/19/23	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	--	4.55	--	6.15	nm	nm	(3)
09/20/23	--	5.71	--	6.35	--	5.19	--	4.65	--	4.66	--	4.12	--	5.74	--	3.92	--	3.42	(1)
10/03/23	--	5.23	--	6.00	--	5.10	--	4.12	--	4.23	--	4.09	--	3.12	--	9.25	--	5.72	(1)
10/16/23	--	5.90	--	6.80	--	5.40	--	4.50	--	4.70	--	4.20	--	3.80	--	10.10	--	7.50	(2)

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

FOOTNOTES:
(1) Bailed the MWs dry in preparation for sampling.
(2) Sampled the MWs (see Table 2 for summary of analytical results).

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
5/30/2023	< 0.10	< 0.11	< 0.10	< 0.38	< 0.24	< 0.17	*0.12* J	< 0.38	*0.76* J	< 0.17	< 0.33	na	< 0.18	< 0.097	< 0.10	na
10/16/2023	< 0.21	< 0.11	< 0.21	< 0.60	< 0.24	< 0.17	< 0.12	< 1.0	< 0.23	< 0.40	< 0.44	na	< 0.18	< 0.22	< 0.22	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
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
5/30/2023	***10100***	620	***8790***	***12220***	***3040***	***825***	< 0.58	< 1.9	< 1.2	< 0.85	< 1.6	na	***266***	< 0.48	< 0.52	na
10/16/2023	***6180***	*180*	***4250***	***7980***	***2306***	***553***	< 11.7	< 99.7	< 23.0	< 40.1	< 43.6	na	***174***	< 21.9	< 21.7	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
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	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
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	< 3.6	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
5/30/2023	***1480***	*218*	3.5 J	57.3	*367*	< 0.84	< 0.58	< 1.9	< 1.2	< 0.85	< 1.6	na	6.9	< 0.48	< 0.52	na
10/16/2023	***2360***	*340*	4.6 J	19.3 a	***717***	< 3.4	< 2.3	< 19.9	< 4.6	< 8.0	< 8.7	na	< 3.5	< 4.4	< 4.3	na

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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
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
5/30/2023	***4310***	***1640***	***2440***	***14340***	***3286***	< 8.4	< 5.8	< 19.2	< 11.5	< 8.5	< 16.5	na	***381***	< 4.8	< 5.2	na
10/16/2023	***2850***	***910***	***1700***	***11880***	***2797***	< 8.4	< 5.8	< 49.8	< 11.5	< 20.0	< 21.8	na	***272***	< 11.0	< 10.8	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
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
5/30/2023	***15600***	***1890***	***24300***	***21780***	***4243***	< 8.4	< 5.8	< 19.2	< 11.5	< 8.5	< 16.5	na	***540***	< 4.8	< 5.2	na
10/16/2023	***17200***	***2260***	***30400***	***22150***	***3961***	< 42.2	< 29.2	< 249	< 57.5	< 100	< 109	na	***541***	< 54.8	< 54.2	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
5/30/2023	***20600***	***1810***	***16900***	***19250***	***3596***	< 33.8	< 23.4	< 77.0	< 46.0	< 34.0	< 66.0	na	***367***	< 19.3	< 21.0	na
10/16/2023	***22200***	***2070***	***17700***	***21890***	***4115***	< 33.8	< 23.4	< 199	< 46.0	< 80.2	< 87.2	na	***495***	< 43.8	< 43.4	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

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

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

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

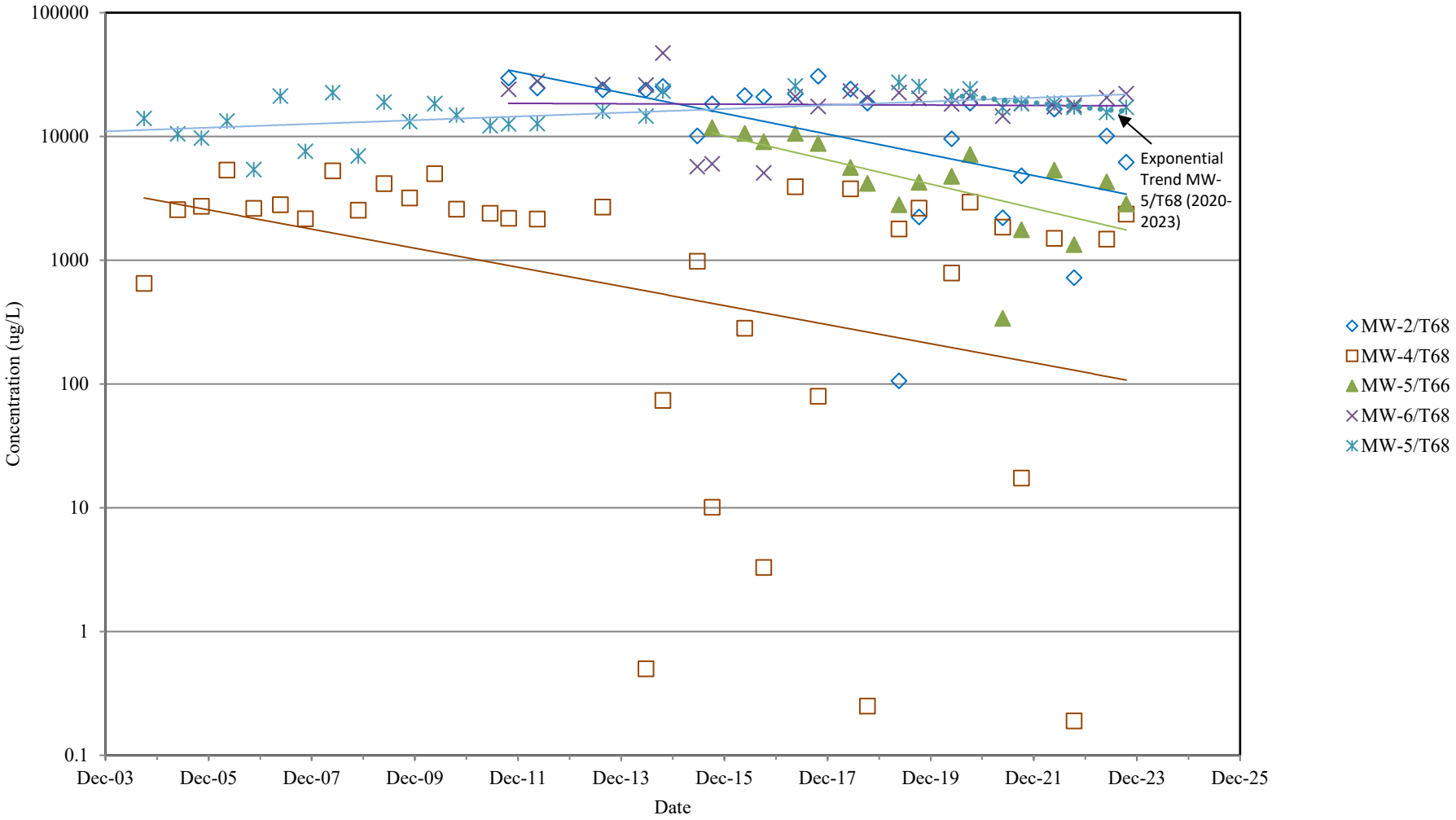
TANK 68 SITE LAYOUT & MONITORING LOCATIONS
Superior Refining Company LLC (SRC)
Superior, WI

FIGURE 2

BARR

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

FIGURE 3



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

BENZENE GROUNDWATER CONCENTRATIONS 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 09, 2023

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

RE: Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Dear Jim Taraldsen:

Enclosed are the analytical results for sample(s) received by the laboratory on June 01, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

CERTIFICATIONS

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Pace Analytical Services, LLC - Minneapolis MN
1700 Elm Street SE, Minneapolis, MN 55414
A2LA Certification #: 2926.01
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
GMP+ Certification #: GMP050884
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
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

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

SAMPLE SUMMARY

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10655687001	**MW-1 / T68**	Water	05/30/23 08:50	06/01/23 10:55
10655687002	**MW-2 / T68**	Water	05/30/23 10:40	06/01/23 10:55
10655687003	**MW-4 / T68**	Water	05/30/23 10:27	06/01/23 10:55
10655687004	**MW-5 / T66**	Water	05/30/23 10:10	06/01/23 10:55
10655687005	**MW-5 / T68**	Water	05/30/23 10:18	06/01/23 10:55
10655687006	**MW-6 / T68**	Water	05/30/23 10:50	06/01/23 10:55
10655687007	**Trip Blank**	Water	05/30/23 00:00	06/01/23 10:55

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10655687001	**MW-1 / T68**	EPA 8260D	JEM	64	PASI-M
10655687002	**MW-2 / T68**	EPA 8260D	JEM, NMB, PAB	64	PASI-M
10655687003	**MW-4 / T68**	EPA 8260D	JEM, PAB	64	PASI-M
10655687004	**MW-5 / T66**	EPA 8260D	PAB	64	PASI-M
10655687005	**MW-5 / T68**	EPA 8260D	JEM, PAB	64	PASI-M
10655687006	**MW-6 / T68**	EPA 8260D	JEM	64	PASI-M
10655687007	**Trip Blank**	EPA 8260D	JEM	64	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

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

PROJECT NARRATIVE

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Date: June 09, 2023

Case Narrative

Volatile Organics Analysis

8260D VOA

Batch 885701

Recovery for bromomethane in the continuing calibration verification was outside of laboratory control limits at 78.75% 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.

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

ANALYTICAL RESULTS

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Sample: MW-1 / T68 **Lab ID: 10655687001** Collected: 05/30/23 08:50 Received: 06/01/23 10:55 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		06/06/23 18:08	71-43-2	
Bromobenzene	**<0.12**	ug/L	1.0	0.12	1		06/06/23 18:08	108-86-1	
Bromochloromethane	**<0.15**	ug/L	1.0	0.15	1		06/06/23 18:08	74-97-5	
Bromodichloromethane	**0.12J**	ug/L	1.0	0.12	1		06/06/23 18:08	75-27-4	
Bromoform	**<0.22**	ug/L	1.0	0.22	1		06/06/23 18:08	75-25-2	
Bromomethane	**<0.38**	ug/L	2.5	0.38	1		06/06/23 18:08	74-83-9	
n-Butylbenzene	**<0.096**	ug/L	1.0	0.096	1		06/06/23 18:08	104-51-8	
sec-Butylbenzene	**<0.097**	ug/L	1.0	0.097	1		06/06/23 18:08	135-98-8	
tert-Butylbenzene	**<0.091**	ug/L	1.0	0.091	1		06/06/23 18:08	98-06-6	
Carbon tetrachloride	**<0.13**	ug/L	1.0	0.13	1		06/06/23 18:08	56-23-5	
Chlorobenzene	**<0.13**	ug/L	1.0	0.13	1		06/06/23 18:08	108-90-7	
Chloroethane	**<0.21**	ug/L	1.0	0.21	1		06/06/23 18:08	75-00-3	
Chloroform	**0.76J**	ug/L	1.0	0.23	1		06/06/23 18:08	67-66-3	
Chloromethane	**<0.17**	ug/L	1.0	0.17	1		06/06/23 18:08	74-87-3	
2-Chlorotoluene	**<0.098**	ug/L	1.0	0.098	1		06/06/23 18:08	95-49-8	
4-Chlorotoluene	**<0.12**	ug/L	1.0	0.12	1		06/06/23 18:08	106-43-4	
1,2-Dibromo-3-chloropropane	**<0.36**	ug/L	2.5	0.36	1		06/06/23 18:08	96-12-8	
Dibromochloromethane	**<0.20**	ug/L	1.0	0.20	1		06/06/23 18:08	124-48-1	
1,2-Dibromoethane (EDB)	**<0.20**	ug/L	1.0	0.20	1		06/06/23 18:08	106-93-4	
Dibromomethane	**<0.17**	ug/L	1.0	0.17	1		06/06/23 18:08	74-95-3	
1,2-Dichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		06/06/23 18:08	95-50-1	
1,3-Dichlorobenzene	**<0.12**	ug/L	1.0	0.12	1		06/06/23 18:08	541-73-1	
1,4-Dichlorobenzene	**<0.15**	ug/L	1.0	0.15	1		06/06/23 18:08	106-46-7	
Dichlorodifluoromethane	**<0.079**	ug/L	1.0	0.079	1		06/06/23 18:08	75-71-8	
1,1-Dichloroethane	**<0.11**	ug/L	1.0	0.11	1		06/06/23 18:08	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		06/06/23 18:08	107-06-2	
1,1-Dichloroethene	**<0.13**	ug/L	1.0	0.13	1		06/06/23 18:08	75-35-4	
cis-1,2-Dichloroethene	**<0.15**	ug/L	1.0	0.15	1		06/06/23 18:08	156-59-2	
trans-1,2-Dichloroethene	**<0.14**	ug/L	1.0	0.14	1		06/06/23 18:08	156-60-5	
1,2-Dichloropropane	**<0.15**	ug/L	1.0	0.15	1		06/06/23 18:08	78-87-5	
1,3-Dichloropropane	**<0.16**	ug/L	1.0	0.16	1		06/06/23 18:08	142-28-9	
2,2-Dichloropropane	**<0.12**	ug/L	1.0	0.12	1		06/06/23 18:08	594-20-7	
1,1-Dichloropropene	**<0.12**	ug/L	1.0	0.12	1		06/06/23 18:08	563-58-6	
cis-1,3-Dichloropropene	**<0.057**	ug/L	1.0	0.057	1		06/06/23 18:08	10061-01-5	
trans-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		06/06/23 18:08	10061-02-6	
Diethyl ether (Ethyl ether)	**<0.19**	ug/L	2.5	0.19	1		06/06/23 18:08	60-29-7	
Ethylbenzene	**<0.11**	ug/L	1.0	0.11	1		06/06/23 18:08	100-41-4	
Hexachloro-1,3-butadiene	**<0.24**	ug/L	1.0	0.24	1		06/06/23 18:08	87-68-3	
Isopropylbenzene (Cumene)	**<0.12**	ug/L	1.0	0.12	1		06/06/23 18:08	98-82-8	
p-Isopropyltoluene	**<0.11**	ug/L	1.0	0.11	1		06/06/23 18:08	99-87-6	
Methylene Chloride	**<0.33**	ug/L	2.0	0.33	1		06/06/23 18:08	75-09-2	
Methyl-tert-butyl ether	**<0.13**	ug/L	1.0	0.13	1		06/06/23 18:08	1634-04-4	
Naphthalene	**<0.18**	ug/L	1.0	0.18	1		06/06/23 18:08	91-20-3	
n-Propylbenzene	**<0.11**	ug/L	1.0	0.11	1		06/06/23 18:08	103-65-1	
Styrene	**<0.097**	ug/L	1.0	0.097	1		06/06/23 18:08	100-42-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Sample: MW-1 / T68 **Lab ID: 10655687001** Collected: 05/30/23 08:50 Received: 06/01/23 10:55 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		06/06/23 18:08	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.15**	ug/L	1.0	0.15	1		06/06/23 18:08	79-34-5	
Tetrachloroethene	**<0.10**	ug/L	1.0	0.10	1		06/06/23 18:08	127-18-4	
Toluene	**<0.10**	ug/L	1.0	0.10	1		06/06/23 18:08	108-88-3	
1,2,3-Trichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		06/06/23 18:08	87-61-6	
1,2,4-Trichlorobenzene	**<0.14**	ug/L	1.0	0.14	1		06/06/23 18:08	120-82-1	
1,1,1-Trichloroethane	**<0.12**	ug/L	1.0	0.12	1		06/06/23 18:08	71-55-6	
1,1,2-Trichloroethane	**<0.22**	ug/L	1.0	0.22	1		06/06/23 18:08	79-00-5	
Trichloroethene	**<0.12**	ug/L	1.0	0.12	1		06/06/23 18:08	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	1.0	0.12	1		06/06/23 18:08	75-69-4	
1,2,3-Trichloropropane	**<0.38**	ug/L	2.5	0.38	1		06/06/23 18:08	96-18-4	
1,2,4-Trimethylbenzene	**<0.13**	ug/L	1.0	0.13	1		06/06/23 18:08	95-63-6	
1,3,5-Trimethylbenzene	**<0.11**	ug/L	1.0	0.11	1		06/06/23 18:08	108-67-8	
Vinyl chloride	**<0.046**	ug/L	1.0	0.046	1		06/06/23 18:08	75-01-4	
m&p-Xylene	**<0.20**	ug/L	2.0	0.20	1		06/06/23 18:08	179601-23-1	
o-Xylene	**<0.18**	ug/L	1.0	0.18	1		06/06/23 18:08	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	101	%.	75-125		1		06/06/23 18:08	2199-69-1	
4-Bromofluorobenzene (S)	103	%.	75-125		1		06/06/23 18:08	460-00-4	
Toluene-d8 (S)	108	%.	75-125		1		06/06/23 18:08	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Sample: MW-2 / T68 **Lab ID: 10655687002** Collected: 05/30/23 10:40 Received: 06/01/23 10:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Benzene	**10100**	ug/L	100	10.3	100		06/08/23 16:10	71-43-2	
Bromobenzene	**<0.60**	ug/L	5.0	0.60	5		06/06/23 18:24	108-86-1	
Bromochloromethane	**<0.76**	ug/L	5.0	0.76	5		06/06/23 18:24	74-97-5	
Bromodichloromethane	**<0.58**	ug/L	5.0	0.58	5		06/06/23 18:24	75-27-4	
Bromoform	**<1.1**	ug/L	5.0	1.1	5		06/06/23 18:24	75-25-2	
Bromomethane	**<1.9**	ug/L	12.5	1.9	5		06/06/23 18:24	74-83-9	
n-Butylbenzene	**32.0**	ug/L	5.0	0.48	5		06/06/23 18:24	104-51-8	
sec-Butylbenzene	**3.0J**	ug/L	5.0	0.48	5		06/06/23 18:24	135-98-8	
tert-Butylbenzene	**<0.45**	ug/L	5.0	0.45	5		06/06/23 18:24	98-06-6	
Carbon tetrachloride	**<0.67**	ug/L	5.0	0.67	5		06/06/23 18:24	56-23-5	
Chlorobenzene	**<0.66**	ug/L	5.0	0.66	5		06/06/23 18:24	108-90-7	
Chloroethane	**2.3J**	ug/L	5.0	1.0	5		06/06/23 18:24	75-00-3	
Chloroform	**<1.2**	ug/L	5.0	1.2	5		06/06/23 18:24	67-66-3	
Chloromethane	**<0.85**	ug/L	5.0	0.85	5		06/06/23 18:24	74-87-3	
2-Chlorotoluene	**<0.49**	ug/L	5.0	0.49	5		06/06/23 18:24	95-49-8	
4-Chlorotoluene	**<0.62**	ug/L	5.0	0.62	5		06/06/23 18:24	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	12.5	1.8	5		06/06/23 18:24	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	5.0	1.0	5		06/06/23 18:24	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	5.0	1.0	5		06/06/23 18:24	106-93-4	
Dibromomethane	**<0.86**	ug/L	5.0	0.86	5		06/06/23 18:24	74-95-3	
1,2-Dichlorobenzene	**<0.66**	ug/L	5.0	0.66	5		06/06/23 18:24	95-50-1	
1,3-Dichlorobenzene	**<0.62**	ug/L	5.0	0.62	5		06/06/23 18:24	541-73-1	
1,4-Dichlorobenzene	**<0.74**	ug/L	5.0	0.74	5		06/06/23 18:24	106-46-7	
Dichlorodifluoromethane	**<0.40**	ug/L	5.0	0.40	5		06/06/23 18:24	75-71-8	
1,1-Dichloroethane	**1.3J**	ug/L	5.0	0.54	5		06/06/23 18:24	75-34-3	
1,2-Dichloroethane	**825**	ug/L	5.0	0.84	5		06/06/23 18:24	107-06-2	
1,1-Dichloroethene	**<0.66**	ug/L	5.0	0.66	5		06/06/23 18:24	75-35-4	
cis-1,2-Dichloroethene	**<0.75**	ug/L	5.0	0.75	5		06/06/23 18:24	156-59-2	
trans-1,2-Dichloroethene	**<0.68**	ug/L	5.0	0.68	5		06/06/23 18:24	156-60-5	
1,2-Dichloropropane	**<0.74**	ug/L	5.0	0.74	5		06/06/23 18:24	78-87-5	
1,3-Dichloropropane	**<0.79**	ug/L	5.0	0.79	5		06/06/23 18:24	142-28-9	
2,2-Dichloropropane	**<0.58**	ug/L	5.0	0.58	5		06/06/23 18:24	594-20-7	
1,1-Dichloropropene	**<0.62**	ug/L	5.0	0.62	5		06/06/23 18:24	563-58-6	
cis-1,3-Dichloropropene	**<0.28**	ug/L	5.0	0.28	5		06/06/23 18:24	10061-01-5	
trans-1,3-Dichloropropene	**<0.64**	ug/L	5.0	0.64	5		06/06/23 18:24	10061-02-6	
Diethyl ether (Ethyl ether)	**<0.97**	ug/L	12.5	0.97	5		06/06/23 18:24	60-29-7	
Ethylbenzene	**620**	ug/L	5.0	0.54	5		06/06/23 18:24	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	5		06/06/23 18:24	87-68-3	
Isopropylbenzene (Cumene)	**15.9**	ug/L	5.0	0.58	5		06/06/23 18:24	98-82-8	
p-Isopropyltoluene	**6.0**	ug/L	5.0	0.53	5		06/06/23 18:24	99-87-6	
Methylene Chloride	**<1.6**	ug/L	10.0	1.6	5		06/06/23 18:24	75-09-2	
Methyl-tert-butyl ether	**<0.63**	ug/L	5.0	0.63	5		06/06/23 18:24	1634-04-4	
Naphthalene	**266**	ug/L	5.0	0.90	5		06/06/23 18:24	91-20-3	
n-Propylbenzene	**38.1**	ug/L	5.0	0.54	5		06/06/23 18:24	103-65-1	
Styrene	**<0.48**	ug/L	5.0	0.48	5		06/06/23 18:24	100-42-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Sample: MW-2 / T68 **Lab ID: 10655687002** Collected: 05/30/23 10:40 Received: 06/01/23 10:55 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	**<0.95**	ug/L	5.0	0.95	5		06/06/23 18:24	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.73**	ug/L	5.0	0.73	5		06/06/23 18:24	79-34-5	
Tetrachloroethene	**<0.52**	ug/L	5.0	0.52	5		06/06/23 18:24	127-18-4	
Toluene	**8790**	ug/L	50.0	5.2	50		06/07/23 19:27	108-88-3	
1,2,3-Trichlorobenzene	**<0.66**	ug/L	5.0	0.66	5		06/06/23 18:24	87-61-6	
1,2,4-Trichlorobenzene	**<0.70**	ug/L	5.0	0.70	5		06/06/23 18:24	120-82-1	
1,1,1-Trichloroethane	**<0.62**	ug/L	5.0	0.62	5		06/06/23 18:24	71-55-6	
1,1,2-Trichloroethane	**<1.1**	ug/L	5.0	1.1	5		06/06/23 18:24	79-00-5	
Trichloroethene	**<0.61**	ug/L	5.0	0.61	5		06/06/23 18:24	79-01-6	
Trichlorofluoromethane	**<0.62**	ug/L	5.0	0.62	5		06/06/23 18:24	75-69-4	
1,2,3-Trichloropropane	**<1.9**	ug/L	12.5	1.9	5		06/06/23 18:24	96-18-4	
1,2,4-Trimethylbenzene	**2360**	ug/L	50.0	6.5	50		06/07/23 19:27	95-63-6	
1,3,5-Trimethylbenzene	**680**	ug/L	5.0	0.56	5		06/06/23 18:24	108-67-8	
Vinyl chloride	**<0.23**	ug/L	5.0	0.23	5		06/06/23 18:24	75-01-4	
m&p-Xylene	**8000**	ug/L	100	10	50		06/07/23 19:27	179601-23-1	
o-Xylene	**4220**	ug/L	50.0	8.8	50		06/07/23 19:27	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	101	%.	75-125		5		06/06/23 18:24	2199-69-1	D4
4-Bromofluorobenzene (S)	99	%.	75-125		5		06/06/23 18:24	460-00-4	
Toluene-d8 (S)	99	%.	75-125		5		06/06/23 18:24	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Sample: MW-4 / T68 **Lab ID: 10655687003** Collected: 05/30/23 10:27 Received: 06/01/23 10:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Benzene	**1480**	ug/L	10.0	1.0	10		06/07/23 18:35	71-43-2	
Bromobenzene	**<0.60**	ug/L	5.0	0.60	5		06/06/23 18:39	108-86-1	
Bromochloromethane	**<0.76**	ug/L	5.0	0.76	5		06/06/23 18:39	74-97-5	
Bromodichloromethane	**<0.58**	ug/L	5.0	0.58	5		06/06/23 18:39	75-27-4	
Bromoform	**<1.1**	ug/L	5.0	1.1	5		06/06/23 18:39	75-25-2	
Bromomethane	**<1.9**	ug/L	12.5	1.9	5		06/06/23 18:39	74-83-9	
n-Butylbenzene	**2.5J**	ug/L	5.0	0.48	5		06/06/23 18:39	104-51-8	
sec-Butylbenzene	**1.9J**	ug/L	5.0	0.48	5		06/06/23 18:39	135-98-8	
tert-Butylbenzene	**<0.45**	ug/L	5.0	0.45	5		06/06/23 18:39	98-06-6	
Carbon tetrachloride	**<0.67**	ug/L	5.0	0.67	5		06/06/23 18:39	56-23-5	
Chlorobenzene	**<0.66**	ug/L	5.0	0.66	5		06/06/23 18:39	108-90-7	
Chloroethane	**<1.0**	ug/L	5.0	1.0	5		06/06/23 18:39	75-00-3	
Chloroform	**<1.2**	ug/L	5.0	1.2	5		06/06/23 18:39	67-66-3	
Chloromethane	**<0.85**	ug/L	5.0	0.85	5		06/06/23 18:39	74-87-3	
2-Chlorotoluene	**<0.49**	ug/L	5.0	0.49	5		06/06/23 18:39	95-49-8	
4-Chlorotoluene	**<0.62**	ug/L	5.0	0.62	5		06/06/23 18:39	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	12.5	1.8	5		06/06/23 18:39	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	5.0	1.0	5		06/06/23 18:39	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	5.0	1.0	5		06/06/23 18:39	106-93-4	
Dibromomethane	**<0.86**	ug/L	5.0	0.86	5		06/06/23 18:39	74-95-3	
1,2-Dichlorobenzene	**<0.66**	ug/L	5.0	0.66	5		06/06/23 18:39	95-50-1	
1,3-Dichlorobenzene	**<0.62**	ug/L	5.0	0.62	5		06/06/23 18:39	541-73-1	
1,4-Dichlorobenzene	**<0.74**	ug/L	5.0	0.74	5		06/06/23 18:39	106-46-7	
Dichlorodifluoromethane	**<0.40**	ug/L	5.0	0.40	5		06/06/23 18:39	75-71-8	
1,1-Dichloroethane	**<0.54**	ug/L	5.0	0.54	5		06/06/23 18:39	75-34-3	
1,2-Dichloroethane	**<0.84**	ug/L	5.0	0.84	5		06/06/23 18:39	107-06-2	
1,1-Dichloroethene	**<0.66**	ug/L	5.0	0.66	5		06/06/23 18:39	75-35-4	
cis-1,2-Dichloroethene	**<0.75**	ug/L	5.0	0.75	5		06/06/23 18:39	156-59-2	
trans-1,2-Dichloroethene	**<0.68**	ug/L	5.0	0.68	5		06/06/23 18:39	156-60-5	
1,2-Dichloropropane	**<0.74**	ug/L	5.0	0.74	5		06/06/23 18:39	78-87-5	
1,3-Dichloropropane	**<0.79**	ug/L	5.0	0.79	5		06/06/23 18:39	142-28-9	
2,2-Dichloropropane	**<0.58**	ug/L	5.0	0.58	5		06/06/23 18:39	594-20-7	
1,1-Dichloropropene	**<0.62**	ug/L	5.0	0.62	5		06/06/23 18:39	563-58-6	
cis-1,3-Dichloropropene	**<0.28**	ug/L	5.0	0.28	5		06/06/23 18:39	10061-01-5	
trans-1,3-Dichloropropene	**<0.64**	ug/L	5.0	0.64	5		06/06/23 18:39	10061-02-6	
Diethyl ether (Ethyl ether)	**<0.97**	ug/L	12.5	0.97	5		06/06/23 18:39	60-29-7	
Ethylbenzene	**218**	ug/L	5.0	0.54	5		06/06/23 18:39	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	5		06/06/23 18:39	87-68-3	
Isopropylbenzene (Cumene)	**11.5**	ug/L	5.0	0.58	5		06/06/23 18:39	98-82-8	
p-Isopropyltoluene	**4.0J**	ug/L	5.0	0.53	5		06/06/23 18:39	99-87-6	
Methylene Chloride	**<1.6**	ug/L	10.0	1.6	5		06/06/23 18:39	75-09-2	
Methyl-tert-butyl ether	**<0.63**	ug/L	5.0	0.63	5		06/06/23 18:39	1634-04-4	
Naphthalene	**6.9**	ug/L	5.0	0.90	5		06/06/23 18:39	91-20-3	
n-Propylbenzene	**20.8**	ug/L	5.0	0.54	5		06/06/23 18:39	103-65-1	
Styrene	**<0.48**	ug/L	5.0	0.48	5		06/06/23 18:39	100-42-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Sample: MW-4 / T68 **Lab ID: 10655687003** Collected: 05/30/23 10:27 Received: 06/01/23 10:55 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	**<0.95**	ug/L	5.0	0.95	5		06/06/23 18:39	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.73**	ug/L	5.0	0.73	5		06/06/23 18:39	79-34-5	
Tetrachloroethene	**<0.52**	ug/L	5.0	0.52	5		06/06/23 18:39	127-18-4	
Toluene	**3.5J**	ug/L	5.0	0.52	5		06/07/23 20:18	108-88-3	
1,2,3-Trichlorobenzene	**<0.66**	ug/L	5.0	0.66	5		06/06/23 18:39	87-61-6	
1,2,4-Trichlorobenzene	**<0.70**	ug/L	5.0	0.70	5		06/06/23 18:39	120-82-1	
1,1,1-Trichloroethane	**<0.62**	ug/L	5.0	0.62	5		06/06/23 18:39	71-55-6	
1,1,2-Trichloroethane	**<1.1**	ug/L	5.0	1.1	5		06/06/23 18:39	79-00-5	
Trichloroethene	**<0.61**	ug/L	5.0	0.61	5		06/06/23 18:39	79-01-6	
Trichlorofluoromethane	**<0.62**	ug/L	5.0	0.62	5		06/06/23 18:39	75-69-4	
1,2,3-Trichloropropane	**<1.9**	ug/L	12.5	1.9	5		06/06/23 18:39	96-18-4	
1,2,4-Trimethylbenzene	**351**	ug/L	5.0	0.65	5		06/06/23 18:39	95-63-6	
1,3,5-Trimethylbenzene	**15.9**	ug/L	5.0	0.56	5		06/06/23 18:39	108-67-8	
Vinyl chloride	**<0.23**	ug/L	5.0	0.23	5		06/06/23 18:39	75-01-4	
m&p-Xylene	**56.4**	ug/L	10.0	1.0	5		06/07/23 20:18	179601-23-1	
o-Xylene	**<0.88**	ug/L	5.0	0.88	5		06/07/23 20:18	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	99	%.	75-125		5		06/06/23 18:39	2199-69-1	D4
4-Bromofluorobenzene (S)	103	%.	75-125		5		06/06/23 18:39	460-00-4	
Toluene-d8 (S)	100	%.	75-125		5		06/06/23 18:39	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Sample: MW-5 / T66 **Lab ID: 10655687004** Collected: 05/30/23 10:10 Received: 06/01/23 10:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Benzene	**4310**	ug/L	50.0	5.2	50		06/07/23 19:45	71-43-2	
Bromobenzene	**<6.0**	ug/L	50.0	6.0	50		06/07/23 19:45	108-86-1	
Bromochloromethane	**<7.6**	ug/L	50.0	7.6	50		06/07/23 19:45	74-97-5	
Bromodichloromethane	**<5.8**	ug/L	50.0	5.8	50		06/07/23 19:45	75-27-4	
Bromoform	**<11.2**	ug/L	50.0	11.2	50		06/07/23 19:45	75-25-2	
Bromomethane	**<19.2**	ug/L	125	19.2	50		06/07/23 19:45	74-83-9	
n-Butylbenzene	**47.6J**	ug/L	50.0	4.8	50		06/07/23 19:45	104-51-8	
sec-Butylbenzene	**10.3J**	ug/L	50.0	4.8	50		06/07/23 19:45	135-98-8	
tert-Butylbenzene	**<4.5**	ug/L	50.0	4.5	50		06/07/23 19:45	98-06-6	
Carbon tetrachloride	**<6.7**	ug/L	50.0	6.7	50		06/07/23 19:45	56-23-5	
Chlorobenzene	**<6.6**	ug/L	50.0	6.6	50		06/07/23 19:45	108-90-7	
Chloroethane	**<10.3**	ug/L	50.0	10.3	50		06/07/23 19:45	75-00-3	
Chloroform	**<11.5**	ug/L	50.0	11.5	50		06/07/23 19:45	67-66-3	
Chloromethane	**<8.5**	ug/L	50.0	8.5	50		06/07/23 19:45	74-87-3	
2-Chlorotoluene	**<4.9**	ug/L	50.0	4.9	50		06/07/23 19:45	95-49-8	
4-Chlorotoluene	**<6.2**	ug/L	50.0	6.2	50		06/07/23 19:45	106-43-4	
1,2-Dibromo-3-chloropropane	**<17.8**	ug/L	125	17.8	50		06/07/23 19:45	96-12-8	
Dibromochloromethane	**<10.2**	ug/L	50.0	10.2	50		06/07/23 19:45	124-48-1	
1,2-Dibromoethane (EDB)	**<10.1**	ug/L	50.0	10.1	50		06/07/23 19:45	106-93-4	
Dibromomethane	**<8.6**	ug/L	50.0	8.6	50		06/07/23 19:45	74-95-3	
1,2-Dichlorobenzene	**<6.6**	ug/L	50.0	6.6	50		06/07/23 19:45	95-50-1	
1,3-Dichlorobenzene	**<6.2**	ug/L	50.0	6.2	50		06/07/23 19:45	541-73-1	
1,4-Dichlorobenzene	**<7.4**	ug/L	50.0	7.4	50		06/07/23 19:45	106-46-7	
Dichlorodifluoromethane	**<4.0**	ug/L	50.0	4.0	50		06/07/23 19:45	75-71-8	
1,1-Dichloroethane	**<5.4**	ug/L	50.0	5.4	50		06/07/23 19:45	75-34-3	
1,2-Dichloroethane	**<8.4**	ug/L	50.0	8.4	50		06/07/23 19:45	107-06-2	
1,1-Dichloroethene	**<6.6**	ug/L	50.0	6.6	50		06/07/23 19:45	75-35-4	
cis-1,2-Dichloroethene	**<7.5**	ug/L	50.0	7.5	50		06/07/23 19:45	156-59-2	
trans-1,2-Dichloroethene	**<6.8**	ug/L	50.0	6.8	50		06/07/23 19:45	156-60-5	
1,2-Dichloropropane	**<7.4**	ug/L	50.0	7.4	50		06/07/23 19:45	78-87-5	
1,3-Dichloropropane	**<7.9**	ug/L	50.0	7.9	50		06/07/23 19:45	142-28-9	
2,2-Dichloropropane	**<5.8**	ug/L	50.0	5.8	50		06/07/23 19:45	594-20-7	
1,1-Dichloropropene	**<6.2**	ug/L	50.0	6.2	50		06/07/23 19:45	563-58-6	
cis-1,3-Dichloropropene	**<2.8**	ug/L	50.0	2.8	50		06/07/23 19:45	10061-01-5	
trans-1,3-Dichloropropene	**<6.4**	ug/L	50.0	6.4	50		06/07/23 19:45	10061-02-6	
Diethyl ether (Ethyl ether)	**<9.7**	ug/L	125	9.7	50		06/07/23 19:45	60-29-7	
Ethylbenzene	**1640**	ug/L	50.0	5.4	50		06/07/23 19:45	100-41-4	
Hexachloro-1,3-butadiene	**<11.8**	ug/L	50.0	11.8	50		06/07/23 19:45	87-68-3	
Isopropylbenzene (Cumene)	**51.3**	ug/L	50.0	5.8	50		06/07/23 19:45	98-82-8	
p-Isopropyltoluene	**7.2J**	ug/L	50.0	5.3	50		06/07/23 19:45	99-87-6	
Methylene Chloride	**<16.5**	ug/L	50.0	16.5	50		06/07/23 19:45	75-09-2	
Methyl-tert-butyl ether	**<6.3**	ug/L	50.0	6.3	50		06/07/23 19:45	1634-04-4	
Naphthalene	**381**	ug/L	50.0	9.0	50		06/07/23 19:45	91-20-3	
n-Propylbenzene	**151**	ug/L	50.0	5.4	50		06/07/23 19:45	103-65-1	
Styrene	**<4.8**	ug/L	50.0	4.8	50		06/07/23 19:45	100-42-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Sample: MW-5 / T66 **Lab ID: 10655687004** Collected: 05/30/23 10:10 Received: 06/01/23 10:55 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	**<9.5**	ug/L	50.0	9.5	50		06/07/23 19:45	630-20-6	
1,1,2,2-Tetrachloroethane	**<7.3**	ug/L	50.0	7.3	50		06/07/23 19:45	79-34-5	
Tetrachloroethene	**<5.2**	ug/L	50.0	5.2	50		06/07/23 19:45	127-18-4	
Toluene	**2440**	ug/L	50.0	5.2	50		06/07/23 19:45	108-88-3	
1,2,3-Trichlorobenzene	**<6.6**	ug/L	50.0	6.6	50		06/07/23 19:45	87-61-6	
1,2,4-Trichlorobenzene	**<7.0**	ug/L	50.0	7.0	50		06/07/23 19:45	120-82-1	
1,1,1-Trichloroethane	**<6.2**	ug/L	50.0	6.2	50		06/07/23 19:45	71-55-6	
1,1,2-Trichloroethane	**<11.2**	ug/L	50.0	11.2	50		06/07/23 19:45	79-00-5	
Trichloroethene	**<6.1**	ug/L	50.0	6.1	50		06/07/23 19:45	79-01-6	
Trichlorofluoromethane	**<6.2**	ug/L	50.0	6.2	50		06/07/23 19:45	75-69-4	
1,2,3-Trichloropropane	**<18.8**	ug/L	125	18.8	50		06/07/23 19:45	96-18-4	
1,2,4-Trimethylbenzene	**2560**	ug/L	50.0	6.5	50		06/07/23 19:45	95-63-6	
1,3,5-Trimethylbenzene	**726**	ug/L	50.0	5.6	50		06/07/23 19:45	108-67-8	
Vinyl chloride	**<2.3**	ug/L	50.0	2.3	50		06/07/23 19:45	75-01-4	
m&p-Xylene	**10500**	ug/L	100	10	50		06/07/23 19:45	179601-23-1	
o-Xylene	**3840**	ug/L	50.0	8.8	50		06/07/23 19:45	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	99	%.	75-125		50		06/07/23 19:45	2199-69-1	D4
4-Bromofluorobenzene (S)	102	%.	75-125		50		06/07/23 19:45	460-00-4	
Toluene-d8 (S)	103	%.	75-125		50		06/07/23 19:45	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Sample: MW-5 / T68 **Lab ID: 10655687005** Collected: 05/30/23 10:18 Received: 06/01/23 10:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Benzene	**15600**	ug/L	250	25.8	250		06/07/23 20:01	71-43-2	
Bromobenzene	**<6.0**	ug/L	50.0	6.0	50		06/06/23 18:55	108-86-1	
Bromochloromethane	**<7.6**	ug/L	50.0	7.6	50		06/06/23 18:55	74-97-5	
Bromodichloromethane	**<5.8**	ug/L	50.0	5.8	50		06/06/23 18:55	75-27-4	
Bromoform	**<11.2**	ug/L	50.0	11.2	50		06/06/23 18:55	75-25-2	
Bromomethane	**<19.2**	ug/L	125	19.2	50		06/06/23 18:55	74-83-9	
n-Butylbenzene	**29.8J**	ug/L	50.0	4.8	50		06/06/23 18:55	104-51-8	
sec-Butylbenzene	**13.2J**	ug/L	50.0	4.8	50		06/06/23 18:55	135-98-8	
tert-Butylbenzene	**<4.5**	ug/L	50.0	4.5	50		06/06/23 18:55	98-06-6	
Carbon tetrachloride	**<6.7**	ug/L	50.0	6.7	50		06/06/23 18:55	56-23-5	
Chlorobenzene	**<6.6**	ug/L	50.0	6.6	50		06/06/23 18:55	108-90-7	
Chloroethane	**<10.3**	ug/L	50.0	10.3	50		06/06/23 18:55	75-00-3	
Chloroform	**<11.5**	ug/L	50.0	11.5	50		06/06/23 18:55	67-66-3	
Chloromethane	**<8.5**	ug/L	50.0	8.5	50		06/06/23 18:55	74-87-3	
2-Chlorotoluene	**<4.9**	ug/L	50.0	4.9	50		06/06/23 18:55	95-49-8	
4-Chlorotoluene	**<6.2**	ug/L	50.0	6.2	50		06/06/23 18:55	106-43-4	
1,2-Dibromo-3-chloropropane	**<17.8**	ug/L	125	17.8	50		06/06/23 18:55	96-12-8	
Dibromochloromethane	**<10.2**	ug/L	50.0	10.2	50		06/06/23 18:55	124-48-1	
1,2-Dibromoethane (EDB)	**<10.1**	ug/L	50.0	10.1	50		06/06/23 18:55	106-93-4	
Dibromomethane	**<8.6**	ug/L	50.0	8.6	50		06/06/23 18:55	74-95-3	
1,2-Dichlorobenzene	**<6.6**	ug/L	50.0	6.6	50		06/06/23 18:55	95-50-1	
1,3-Dichlorobenzene	**<6.2**	ug/L	50.0	6.2	50		06/06/23 18:55	541-73-1	
1,4-Dichlorobenzene	**<7.4**	ug/L	50.0	7.4	50		06/06/23 18:55	106-46-7	
Dichlorodifluoromethane	**<4.0**	ug/L	50.0	4.0	50		06/06/23 18:55	75-71-8	
1,1-Dichloroethane	**<5.4**	ug/L	50.0	5.4	50		06/06/23 18:55	75-34-3	
1,2-Dichloroethane	**<8.4**	ug/L	50.0	8.4	50		06/06/23 18:55	107-06-2	
1,1-Dichloroethene	**<6.6**	ug/L	50.0	6.6	50		06/06/23 18:55	75-35-4	
cis-1,2-Dichloroethene	**<7.5**	ug/L	50.0	7.5	50		06/06/23 18:55	156-59-2	
trans-1,2-Dichloroethene	**<6.8**	ug/L	50.0	6.8	50		06/06/23 18:55	156-60-5	
1,2-Dichloropropane	**<7.4**	ug/L	50.0	7.4	50		06/06/23 18:55	78-87-5	
1,3-Dichloropropane	**<7.9**	ug/L	50.0	7.9	50		06/06/23 18:55	142-28-9	
2,2-Dichloropropane	**<5.8**	ug/L	50.0	5.8	50		06/06/23 18:55	594-20-7	
1,1-Dichloropropene	**<6.2**	ug/L	50.0	6.2	50		06/06/23 18:55	563-58-6	
cis-1,3-Dichloropropene	**<2.8**	ug/L	50.0	2.8	50		06/06/23 18:55	10061-01-5	
trans-1,3-Dichloropropene	**<6.4**	ug/L	50.0	6.4	50		06/06/23 18:55	10061-02-6	
Diethyl ether (Ethyl ether)	**<9.7**	ug/L	125	9.7	50		06/06/23 18:55	60-29-7	
Ethylbenzene	**1890**	ug/L	50.0	5.4	50		06/06/23 18:55	100-41-4	
Hexachloro-1,3-butadiene	**<11.8**	ug/L	50.0	11.8	50		06/06/23 18:55	87-68-3	
Isopropylbenzene (Cumene)	**60.7**	ug/L	50.0	5.8	50		06/06/23 18:55	98-82-8	
p-Isopropyltoluene	**8.2J**	ug/L	50.0	5.3	50		06/06/23 18:55	99-87-6	
Methylene Chloride	**<16.5**	ug/L	100	16.5	50		06/06/23 18:55	75-09-2	
Methyl-tert-butyl ether	**<6.3**	ug/L	50.0	6.3	50		06/06/23 18:55	1634-04-4	
Naphthalene	**540**	ug/L	50.0	9.0	50		06/06/23 18:55	91-20-3	
n-Propylbenzene	**168**	ug/L	50.0	5.4	50		06/06/23 18:55	103-65-1	
Styrene	**<4.8**	ug/L	50.0	4.8	50		06/06/23 18:55	100-42-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Sample: MW-5 / T68 **Lab ID: 10655687005** Collected: 05/30/23 10:18 Received: 06/01/23 10:55 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	**<9.5**	ug/L	50.0	9.5	50		06/06/23 18:55	630-20-6	
1,1,2,2-Tetrachloroethane	**<7.3**	ug/L	50.0	7.3	50		06/06/23 18:55	79-34-5	
Tetrachloroethene	**<5.2**	ug/L	50.0	5.2	50		06/06/23 18:55	127-18-4	
Toluene	**24300**	ug/L	250	25.8	250		06/07/23 20:01	108-88-3	
1,2,3-Trichlorobenzene	**<6.6**	ug/L	50.0	6.6	50		06/06/23 18:55	87-61-6	
1,2,4-Trichlorobenzene	**<7.0**	ug/L	50.0	7.0	50		06/06/23 18:55	120-82-1	
1,1,1-Trichloroethane	**<6.2**	ug/L	50.0	6.2	50		06/06/23 18:55	71-55-6	
1,1,2-Trichloroethane	**<11.2**	ug/L	50.0	11.2	50		06/06/23 18:55	79-00-5	
Trichloroethene	**<6.1**	ug/L	50.0	6.1	50		06/06/23 18:55	79-01-6	
Trichlorofluoromethane	**<6.2**	ug/L	50.0	6.2	50		06/06/23 18:55	75-69-4	
1,2,3-Trichloropropane	**<18.8**	ug/L	125	18.8	50		06/06/23 18:55	96-18-4	
1,2,4-Trimethylbenzene	**3270**	ug/L	50.0	6.5	50		06/06/23 18:55	95-63-6	
1,3,5-Trimethylbenzene	**973**	ug/L	50.0	5.6	50		06/06/23 18:55	108-67-8	
Vinyl chloride	**<2.3**	ug/L	50.0	2.3	50		06/06/23 18:55	75-01-4	
m&p-Xylene	**14700**	ug/L	100	10	50		06/06/23 18:55	179601-23-1	
o-Xylene	**7080**	ug/L	50.0	8.8	50		06/06/23 18:55	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	101	%.	75-125		50		06/06/23 18:55	2199-69-1	D4
4-Bromofluorobenzene (S)	103	%.	75-125		50		06/06/23 18:55	460-00-4	
Toluene-d8 (S)	101	%.	75-125		50		06/06/23 18:55	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Sample: MW-6 / T68 **Lab ID: 10655687006** Collected: 05/30/23 10:50 Received: 06/01/23 10:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260D VOC	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis								
Benzene	**20600**	ug/L	200	20.6	200		06/06/23 19:27	71-43-2	
Bromobenzene	**<24.0**	ug/L	200	24.0	200		06/06/23 19:27	108-86-1	
Bromochloromethane	**<30.4**	ug/L	200	30.4	200		06/06/23 19:27	74-97-5	
Bromodichloromethane	**<23.4**	ug/L	200	23.4	200		06/06/23 19:27	75-27-4	
Bromoform	**<44.6**	ug/L	200	44.6	200		06/06/23 19:27	75-25-2	
Bromomethane	**<77.0**	ug/L	500	77.0	200		06/06/23 19:27	74-83-9	
n-Butylbenzene	**31.0J**	ug/L	200	19.2	200		06/06/23 19:27	104-51-8	
sec-Butylbenzene	**<19.4**	ug/L	200	19.4	200		06/06/23 19:27	135-98-8	
tert-Butylbenzene	**<18.2**	ug/L	200	18.2	200		06/06/23 19:27	98-06-6	
Carbon tetrachloride	**<26.8**	ug/L	200	26.8	200		06/06/23 19:27	56-23-5	
Chlorobenzene	**<26.6**	ug/L	200	26.6	200		06/06/23 19:27	108-90-7	
Chloroethane	**<41.2**	ug/L	200	41.2	200		06/06/23 19:27	75-00-3	
Chloroform	**<46.0**	ug/L	200	46.0	200		06/06/23 19:27	67-66-3	
Chloromethane	**<34.0**	ug/L	200	34.0	200		06/06/23 19:27	74-87-3	
2-Chlorotoluene	**<19.5**	ug/L	200	19.5	200		06/06/23 19:27	95-49-8	
4-Chlorotoluene	**<25.0**	ug/L	200	25.0	200		06/06/23 19:27	106-43-4	
1,2-Dibromo-3-chloropropane	**<71.2**	ug/L	500	71.2	200		06/06/23 19:27	96-12-8	
Dibromochloromethane	**<40.6**	ug/L	200	40.6	200		06/06/23 19:27	124-48-1	
1,2-Dibromoethane (EDB)	**<40.4**	ug/L	200	40.4	200		06/06/23 19:27	106-93-4	
Dibromomethane	**<34.6**	ug/L	200	34.6	200		06/06/23 19:27	74-95-3	
1,2-Dichlorobenzene	**<26.2**	ug/L	200	26.2	200		06/06/23 19:27	95-50-1	
1,3-Dichlorobenzene	**<24.6**	ug/L	200	24.6	200		06/06/23 19:27	541-73-1	
1,4-Dichlorobenzene	**<29.4**	ug/L	200	29.4	200		06/06/23 19:27	106-46-7	
Dichlorodifluoromethane	**<15.9**	ug/L	200	15.9	200		06/06/23 19:27	75-71-8	
1,1-Dichloroethane	**<21.8**	ug/L	200	21.8	200		06/06/23 19:27	75-34-3	
1,2-Dichloroethane	**<33.8**	ug/L	200	33.8	200		06/06/23 19:27	107-06-2	
1,1-Dichloroethene	**<26.4**	ug/L	200	26.4	200		06/06/23 19:27	75-35-4	
cis-1,2-Dichloroethene	**<30.0**	ug/L	200	30.0	200		06/06/23 19:27	156-59-2	
trans-1,2-Dichloroethene	**<27.0**	ug/L	200	27.0	200		06/06/23 19:27	156-60-5	
1,2-Dichloropropane	**<29.6**	ug/L	200	29.6	200		06/06/23 19:27	78-87-5	
1,3-Dichloropropane	**<31.6**	ug/L	200	31.6	200		06/06/23 19:27	142-28-9	
2,2-Dichloropropane	**<23.2**	ug/L	200	23.2	200		06/06/23 19:27	594-20-7	
1,1-Dichloropropene	**<25.0**	ug/L	200	25.0	200		06/06/23 19:27	563-58-6	
cis-1,3-Dichloropropene	**<11.3**	ug/L	200	11.3	200		06/06/23 19:27	10061-01-5	
trans-1,3-Dichloropropene	**<25.8**	ug/L	200	25.8	200		06/06/23 19:27	10061-02-6	
Diethyl ether (Ethyl ether)	**<38.8**	ug/L	500	38.8	200		06/06/23 19:27	60-29-7	
Ethylbenzene	**1810**	ug/L	200	21.8	200		06/06/23 19:27	100-41-4	
Hexachloro-1,3-butadiene	**<47.4**	ug/L	200	47.4	200		06/06/23 19:27	87-68-3	
Isopropylbenzene (Cumene)	**52.6J**	ug/L	200	23.2	200		06/06/23 19:27	98-82-8	
p-Isopropyltoluene	**<21.2**	ug/L	200	21.2	200		06/06/23 19:27	99-87-6	
Methylene Chloride	**<66.0**	ug/L	400	66.0	200		06/06/23 19:27	75-09-2	
Methyl-tert-butyl ether	**<25.2**	ug/L	200	25.2	200		06/06/23 19:27	1634-04-4	
Naphthalene	**367**	ug/L	200	36.2	200		06/06/23 19:27	91-20-3	
n-Propylbenzene	**142J**	ug/L	200	21.8	200		06/06/23 19:27	103-65-1	
Styrene	**<19.3**	ug/L	200	19.3	200		06/06/23 19:27	100-42-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Sample: MW-6 / T68 **Lab ID: 10655687006** Collected: 05/30/23 10:50 Received: 06/01/23 10:55 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		06/06/23 19:27	630-20-6	
1,1,2,2-Tetrachloroethane	**<29.2**	ug/L	200	29.2	200		06/06/23 19:27	79-34-5	
Tetrachloroethene	**<21.0**	ug/L	200	21.0	200		06/06/23 19:27	127-18-4	
Toluene	**16900**	ug/L	200	20.6	200		06/06/23 19:27	108-88-3	
1,2,3-Trichlorobenzene	**<26.6**	ug/L	200	26.6	200		06/06/23 19:27	87-61-6	
1,2,4-Trichlorobenzene	**<28.2**	ug/L	200	28.2	200		06/06/23 19:27	120-82-1	
1,1,1-Trichloroethane	**<24.8**	ug/L	200	24.8	200		06/06/23 19:27	71-55-6	
1,1,2-Trichloroethane	**<44.8**	ug/L	200	44.8	200		06/06/23 19:27	79-00-5	
Trichloroethene	**<24.4**	ug/L	200	24.4	200		06/06/23 19:27	79-01-6	
Trichlorofluoromethane	**<24.6**	ug/L	200	24.6	200		06/06/23 19:27	75-69-4	
1,2,3-Trichloropropane	**<75.0**	ug/L	500	75.0	200		06/06/23 19:27	96-18-4	
1,2,4-Trimethylbenzene	**2720**	ug/L	200	26.0	200		06/06/23 19:27	95-63-6	
1,3,5-Trimethylbenzene	**876**	ug/L	200	22.6	200		06/06/23 19:27	108-67-8	
Vinyl chloride	**<9.2**	ug/L	200	9.2	200		06/06/23 19:27	75-01-4	
m&p-Xylene	**12900**	ug/L	400	39.8	200		06/06/23 19:27	179601-23-1	
o-Xylene	**6350**	ug/L	200	35.4	200		06/06/23 19:27	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	99	%.	75-125		200		06/06/23 19:27	2199-69-1	D4
4-Bromofluorobenzene (S)	104	%.	75-125		200		06/06/23 19:27	460-00-4	
Toluene-d8 (S)	105	%.	75-125		200		06/06/23 19:27	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Sample: Trip Blank **Lab ID: 10655687007** Collected: 05/30/23 00:00 Received: 06/01/23 10:55 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		06/06/23 14:43	71-43-2	
Bromobenzene	**<0.12**	ug/L	1.0	0.12	1		06/06/23 14:43	108-86-1	
Bromochloromethane	**<0.15**	ug/L	1.0	0.15	1		06/06/23 14:43	74-97-5	
Bromodichloromethane	**<0.12**	ug/L	1.0	0.12	1		06/06/23 14:43	75-27-4	
Bromoform	**<0.22**	ug/L	1.0	0.22	1		06/06/23 14:43	75-25-2	
Bromomethane	**<0.38**	ug/L	2.5	0.38	1		06/06/23 14:43	74-83-9	
n-Butylbenzene	**<0.096**	ug/L	1.0	0.096	1		06/06/23 14:43	104-51-8	
sec-Butylbenzene	**<0.097**	ug/L	1.0	0.097	1		06/06/23 14:43	135-98-8	
tert-Butylbenzene	**<0.091**	ug/L	1.0	0.091	1		06/06/23 14:43	98-06-6	
Carbon tetrachloride	**<0.13**	ug/L	1.0	0.13	1		06/06/23 14:43	56-23-5	
Chlorobenzene	**<0.13**	ug/L	1.0	0.13	1		06/06/23 14:43	108-90-7	
Chloroethane	**<0.21**	ug/L	1.0	0.21	1		06/06/23 14:43	75-00-3	
Chloroform	**<0.23**	ug/L	1.0	0.23	1		06/06/23 14:43	67-66-3	
Chloromethane	**<0.17**	ug/L	1.0	0.17	1		06/06/23 14:43	74-87-3	
2-Chlorotoluene	**<0.098**	ug/L	1.0	0.098	1		06/06/23 14:43	95-49-8	
4-Chlorotoluene	**<0.12**	ug/L	1.0	0.12	1		06/06/23 14:43	106-43-4	
1,2-Dibromo-3-chloropropane	**<0.36**	ug/L	2.5	0.36	1		06/06/23 14:43	96-12-8	
Dibromochloromethane	**<0.20**	ug/L	1.0	0.20	1		06/06/23 14:43	124-48-1	
1,2-Dibromoethane (EDB)	**<0.20**	ug/L	1.0	0.20	1		06/06/23 14:43	106-93-4	
Dibromomethane	**<0.17**	ug/L	1.0	0.17	1		06/06/23 14:43	74-95-3	
1,2-Dichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		06/06/23 14:43	95-50-1	
1,3-Dichlorobenzene	**<0.12**	ug/L	1.0	0.12	1		06/06/23 14:43	541-73-1	
1,4-Dichlorobenzene	**<0.15**	ug/L	1.0	0.15	1		06/06/23 14:43	106-46-7	
Dichlorodifluoromethane	**<0.079**	ug/L	1.0	0.079	1		06/06/23 14:43	75-71-8	
1,1-Dichloroethane	**<0.11**	ug/L	1.0	0.11	1		06/06/23 14:43	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		06/06/23 14:43	107-06-2	
1,1-Dichloroethene	**<0.13**	ug/L	1.0	0.13	1		06/06/23 14:43	75-35-4	
cis-1,2-Dichloroethene	**<0.15**	ug/L	1.0	0.15	1		06/06/23 14:43	156-59-2	
trans-1,2-Dichloroethene	**<0.14**	ug/L	1.0	0.14	1		06/06/23 14:43	156-60-5	
1,2-Dichloropropane	**<0.15**	ug/L	1.0	0.15	1		06/06/23 14:43	78-87-5	
1,3-Dichloropropane	**<0.16**	ug/L	1.0	0.16	1		06/06/23 14:43	142-28-9	
2,2-Dichloropropane	**<0.12**	ug/L	1.0	0.12	1		06/06/23 14:43	594-20-7	
1,1-Dichloropropene	**<0.12**	ug/L	1.0	0.12	1		06/06/23 14:43	563-58-6	
cis-1,3-Dichloropropene	**<0.057**	ug/L	1.0	0.057	1		06/06/23 14:43	10061-01-5	
trans-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		06/06/23 14:43	10061-02-6	
Diethyl ether (Ethyl ether)	**<0.19**	ug/L	2.5	0.19	1		06/06/23 14:43	60-29-7	
Ethylbenzene	**<0.11**	ug/L	1.0	0.11	1		06/06/23 14:43	100-41-4	
Hexachloro-1,3-butadiene	**<0.24**	ug/L	1.0	0.24	1		06/06/23 14:43	87-68-3	
Isopropylbenzene (Cumene)	**<0.12**	ug/L	1.0	0.12	1		06/06/23 14:43	98-82-8	
p-Isopropyltoluene	**<0.11**	ug/L	1.0	0.11	1		06/06/23 14:43	99-87-6	
Methylene Chloride	**0.62J**	ug/L	2.0	0.33	1		06/06/23 14:43	75-09-2	
Methyl-tert-butyl ether	**<0.13**	ug/L	1.0	0.13	1		06/06/23 14:43	1634-04-4	
Naphthalene	**<0.18**	ug/L	1.0	0.18	1		06/06/23 14:43	91-20-3	
n-Propylbenzene	**<0.11**	ug/L	1.0	0.11	1		06/06/23 14:43	103-65-1	
Styrene	**<0.097**	ug/L	1.0	0.097	1		06/06/23 14:43	100-42-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Sample: Trip Blank **Lab ID: 10655687007** Collected: 05/30/23 00:00 Received: 06/01/23 10:55 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		06/06/23 14:43	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.15**	ug/L	1.0	0.15	1		06/06/23 14:43	79-34-5	
Tetrachloroethene	**<0.10**	ug/L	1.0	0.10	1		06/06/23 14:43	127-18-4	
Toluene	**<0.10**	ug/L	1.0	0.10	1		06/06/23 14:43	108-88-3	
1,2,3-Trichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		06/06/23 14:43	87-61-6	
1,2,4-Trichlorobenzene	**<0.14**	ug/L	1.0	0.14	1		06/06/23 14:43	120-82-1	
1,1,1-Trichloroethane	**<0.12**	ug/L	1.0	0.12	1		06/06/23 14:43	71-55-6	
1,1,2-Trichloroethane	**<0.22**	ug/L	1.0	0.22	1		06/06/23 14:43	79-00-5	
Trichloroethene	**<0.12**	ug/L	1.0	0.12	1		06/06/23 14:43	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	1.0	0.12	1		06/06/23 14:43	75-69-4	
1,2,3-Trichloropropane	**<0.38**	ug/L	2.5	0.38	1		06/06/23 14:43	96-18-4	
1,2,4-Trimethylbenzene	**<0.13**	ug/L	1.0	0.13	1		06/06/23 14:43	95-63-6	
1,3,5-Trimethylbenzene	**<0.11**	ug/L	1.0	0.11	1		06/06/23 14:43	108-67-8	
Vinyl chloride	**<0.046**	ug/L	1.0	0.046	1		06/06/23 14:43	75-01-4	
m&p-Xylene	**<0.20**	ug/L	2.0	0.20	1		06/06/23 14:43	179601-23-1	
o-Xylene	**<0.18**	ug/L	1.0	0.18	1		06/06/23 14:43	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	101	%.	75-125		1		06/06/23 14:43	2199-69-1	
4-Bromofluorobenzene (S)	103	%.	75-125		1		06/06/23 14:43	460-00-4	
Toluene-d8 (S)	108	%.	75-125		1		06/06/23 14:43	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

QC Batch: 885188
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV 465 W
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10655687001, 10655687002, 10655687003, 10655687005, 10655687006, 10655687007

METHOD BLANK: 4664745 Matrix: Water
Associated Lab Samples: 10655687001, 10655687002, 10655687003, 10655687005, 10655687006, 10655687007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.19	1.0	06/06/23 14:11	
1,1,1-Trichloroethane	ug/L	<0.12	1.0	06/06/23 14:11	
1,1,2,2-Tetrachloroethane	ug/L	<0.15	1.0	06/06/23 14:11	
1,1,2-Trichloroethane	ug/L	<0.22	1.0	06/06/23 14:11	
1,1-Dichloroethane	ug/L	<0.11	1.0	06/06/23 14:11	
1,1-Dichloroethene	ug/L	<0.13	1.0	06/06/23 14:11	
1,1-Dichloropropene	ug/L	<0.12	1.0	06/06/23 14:11	
1,2,3-Trichlorobenzene	ug/L	<0.13	1.0	06/06/23 14:11	
1,2,3-Trichloropropane	ug/L	<0.38	2.5	06/06/23 14:11	
1,2,4-Trichlorobenzene	ug/L	<0.14	1.0	06/06/23 14:11	
1,2,4-Trimethylbenzene	ug/L	<0.13	1.0	06/06/23 14:11	
1,2-Dibromo-3-chloropropane	ug/L	<0.36	2.5	06/06/23 14:11	
1,2-Dibromoethane (EDB)	ug/L	<0.20	1.0	06/06/23 14:11	
1,2-Dichlorobenzene	ug/L	<0.13	1.0	06/06/23 14:11	
1,2-Dichloroethane	ug/L	<0.17	1.0	06/06/23 14:11	
1,2-Dichloropropane	ug/L	<0.15	1.0	06/06/23 14:11	
1,3,5-Trimethylbenzene	ug/L	<0.11	1.0	06/06/23 14:11	
1,3-Dichlorobenzene	ug/L	<0.12	1.0	06/06/23 14:11	
1,3-Dichloropropane	ug/L	<0.16	1.0	06/06/23 14:11	
1,4-Dichlorobenzene	ug/L	<0.15	1.0	06/06/23 14:11	
2,2-Dichloropropane	ug/L	<0.12	1.0	06/06/23 14:11	
2-Chlorotoluene	ug/L	<0.098	1.0	06/06/23 14:11	
4-Chlorotoluene	ug/L	<0.12	1.0	06/06/23 14:11	
Benzene	ug/L	<0.10	1.0	06/06/23 14:11	
Bromobenzene	ug/L	<0.12	1.0	06/06/23 14:11	
Bromochloromethane	ug/L	<0.15	1.0	06/06/23 14:11	
Bromodichloromethane	ug/L	<0.12	1.0	06/06/23 14:11	
Bromoform	ug/L	<0.22	1.0	06/06/23 14:11	
Bromomethane	ug/L	<0.38	2.5	06/06/23 14:11	
Carbon tetrachloride	ug/L	<0.13	1.0	06/06/23 14:11	
Chlorobenzene	ug/L	<0.13	1.0	06/06/23 14:11	
Chloroethane	ug/L	<0.21	1.0	06/06/23 14:11	
Chloroform	ug/L	<0.23	1.0	06/06/23 14:11	
Chloromethane	ug/L	<0.17	1.0	06/06/23 14:11	
cis-1,2-Dichloroethene	ug/L	<0.15	1.0	06/06/23 14:11	
cis-1,3-Dichloropropene	ug/L	<0.057	1.0	06/06/23 14:11	
Dibromochloromethane	ug/L	<0.20	1.0	06/06/23 14:11	
Dibromomethane	ug/L	<0.17	1.0	06/06/23 14:11	
Dichlorodifluoromethane	ug/L	<0.079	1.0	06/06/23 14:11	
Diethyl ether (Ethyl ether)	ug/L	<0.19	2.5	06/06/23 14:11	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

METHOD BLANK: 4664745 Matrix: Water
Associated Lab Samples: 10655687001, 10655687002, 10655687003, 10655687005, 10655687006, 10655687007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.11	1.0	06/06/23 14:11	
Hexachloro-1,3-butadiene	ug/L	<0.24	1.0	06/06/23 14:11	
Isopropylbenzene (Cumene)	ug/L	<0.12	1.0	06/06/23 14:11	
m&p-Xylene	ug/L	<0.20	2.0	06/06/23 14:11	
Methyl-tert-butyl ether	ug/L	<0.13	1.0	06/06/23 14:11	
Methylene Chloride	ug/L	<0.33	2.0	06/06/23 14:11	MN
n-Butylbenzene	ug/L	<0.096	1.0	06/06/23 14:11	
n-Propylbenzene	ug/L	<0.11	1.0	06/06/23 14:11	
Naphthalene	ug/L	<0.18	1.0	06/06/23 14:11	
o-Xylene	ug/L	<0.18	1.0	06/06/23 14:11	
p-Isopropyltoluene	ug/L	<0.11	1.0	06/06/23 14:11	
sec-Butylbenzene	ug/L	<0.097	1.0	06/06/23 14:11	
Styrene	ug/L	<0.097	1.0	06/06/23 14:11	
tert-Butylbenzene	ug/L	<0.091	1.0	06/06/23 14:11	
Tetrachloroethene	ug/L	<0.10	1.0	06/06/23 14:11	
Toluene	ug/L	<0.10	1.0	06/06/23 14:11	
trans-1,2-Dichloroethene	ug/L	<0.14	1.0	06/06/23 14:11	
trans-1,3-Dichloropropene	ug/L	<0.13	1.0	06/06/23 14:11	
Trichloroethene	ug/L	<0.12	1.0	06/06/23 14:11	
Trichlorofluoromethane	ug/L	<0.12	1.0	06/06/23 14:11	
Vinyl chloride	ug/L	<0.046	1.0	06/06/23 14:11	
1,2-Dichlorobenzene-d4 (S)	%.	100	75-125	06/06/23 14:11	
4-Bromofluorobenzene (S)	%.	103	75-125	06/06/23 14:11	
Toluene-d8 (S)	%.	108	75-125	06/06/23 14:11	

LABORATORY CONTROL SAMPLE: 4664746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	18.8	94	75-125	
1,1,1-Trichloroethane	ug/L	20	21.1	106	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	18.0	90	71-125	
1,1,2-Trichloroethane	ug/L	20	18.4	92	75-125	
1,1-Dichloroethane	ug/L	20	19.9	99	75-125	
1,1-Dichloroethene	ug/L	20	20.1	100	69-125	
1,1-Dichloropropene	ug/L	20	21.5	108	74-125	
1,2,3-Trichlorobenzene	ug/L	20	19.0	95	70-131	
1,2,3-Trichloropropane	ug/L	20	18.3	91	73-125	
1,2,4-Trichlorobenzene	ug/L	20	19.0	95	75-125	
1,2,4-Trimethylbenzene	ug/L	20	19.7	98	75-125	
1,2-Dibromo-3-chloropropane	ug/L	20	17.1	85	68-129	
1,2-Dibromoethane (EDB)	ug/L	20	18.3	92	75-125	
1,2-Dichlorobenzene	ug/L	20	19.3	96	75-125	
1,2-Dichloroethane	ug/L	20	21.8	109	75-125	
1,2-Dichloropropane	ug/L	20	20.7	103	75-125	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

LABORATORY CONTROL SAMPLE: 4664746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3,5-Trimethylbenzene	ug/L	20	20.0	100	75-125	
1,3-Dichlorobenzene	ug/L	20	19.8	99	75-125	
1,3-Dichloropropane	ug/L	20	19.4	97	75-125	
1,4-Dichlorobenzene	ug/L	20	19.5	98	75-125	
2,2-Dichloropropane	ug/L	20	23.4	117	65-125	
2-Chlorotoluene	ug/L	20	19.3	97	75-125	
4-Chlorotoluene	ug/L	20	19.4	97	75-125	
Benzene	ug/L	20	20.1	100	75-125	
Bromobenzene	ug/L	20	18.7	93	75-125	
Bromochloromethane	ug/L	20	19.8	99	75-125	
Bromodichloromethane	ug/L	20	20.3	102	75-125	
Bromoform	ug/L	20	18.2	91	75-134	
Bromomethane	ug/L	20	17.4	87	32-150	
Carbon tetrachloride	ug/L	20	21.6	108	73-126	
Chlorobenzene	ug/L	20	19.3	97	75-125	
Chloroethane	ug/L	20	19.5	98	70-125	
Chloroform	ug/L	20	20.0	100	75-125	
Chloromethane	ug/L	20	18.2	91	65-125	
cis-1,2-Dichloroethene	ug/L	20	19.6	98	75-125	
cis-1,3-Dichloropropene	ug/L	20	20.1	101	75-125	
Dibromochloromethane	ug/L	20	18.9	94	75-125	
Dibromomethane	ug/L	20	18.8	94	75-125	
Dichlorodifluoromethane	ug/L	20	18.4	92	65-135	
Diethyl ether (Ethyl ether)	ug/L	20	20.4	102	75-125	
Ethylbenzene	ug/L	20	19.6	98	75-125	
Hexachloro-1,3-butadiene	ug/L	20	19.3	96	63-128	
Isopropylbenzene (Cumene)	ug/L	20	20.5	103	75-125	
m&p-Xylene	ug/L	40	40.8	102	75-125	
Methyl-tert-butyl ether	ug/L	20	19.6	98	75-125	
Methylene Chloride	ug/L	20	19.5	97	72-125	
n-Butylbenzene	ug/L	20	19.8	99	68-125	
n-Propylbenzene	ug/L	20	20.6	103	74-125	
Naphthalene	ug/L	20	17.9	90	67-140	
o-Xylene	ug/L	20	20.1	101	75-125	
p-Isopropyltoluene	ug/L	20	20.8	104	75-126	
sec-Butylbenzene	ug/L	20	21.0	105	75-126	
Styrene	ug/L	20	20.2	101	75-139	
tert-Butylbenzene	ug/L	20	20.3	102	75-125	
Tetrachloroethene	ug/L	20	19.5	97	70-125	
Toluene	ug/L	20	19.4	97	74-125	
trans-1,2-Dichloroethene	ug/L	20	20.0	100	75-125	
trans-1,3-Dichloropropene	ug/L	20	19.5	98	75-127	
Trichloroethene	ug/L	20	20.2	101	74-125	
Trichlorofluoromethane	ug/L	20	20.1	101	72-125	
Vinyl chloride	ug/L	20	20.2	101	66-125	
1,2-Dichlorobenzene-d4 (S)	%.			100	75-125	
4-Bromofluorobenzene (S)	%.			102	75-125	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

LABORATORY CONTROL SAMPLE: 4664746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%.			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4664820 4664821

Parameter	Units	10656248001 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	<38.0	4000	4000	3730	3580	93	90	75-125	4	30	
1,1,1-Trichloroethane	ug/L	<24.8	4000	4000	4260	4120	107	103	70-133	4	30	
1,1,2,2-Tetrachloroethane	ug/L	<29.2	4000	4000	3450	3470	86	87	71-125	1	30	
1,1,2-Trichloroethane	ug/L	<44.8	4000	4000	3590	3490	90	87	75-125	3	30	
1,1-Dichloroethane	ug/L	<21.8	4000	4000	3900	3820	97	95	71-125	2	30	
1,1-Dichloroethene	ug/L	<26.4	4000	4000	3980	3870	99	97	60-136	3	30	
1,1-Dichloropropene	ug/L	<25.0	4000	4000	4200	4080	105	102	70-134	3	30	
1,2,3-Trichlorobenzene	ug/L	<26.6	4000	4000	3430	3460	86	86	66-131	1	30	
1,2,3-Trichloropropane	ug/L	<75.0	4000	4000	3440	3440	86	86	73-125	0	30	
1,2,4-Trichlorobenzene	ug/L	<28.2	4000	4000	3390	3410	85	85	66-125	1	30	
1,2,4-Trimethylbenzene	ug/L	2730	4000	4000	6630	6450	98	93	61-143	3	30	
1,2-Dibromo-3-chloropropane	ug/L	<71.2	4000	4000	3240	3320	81	83	61-137	2	30	
1,2-Dibromoethane (EDB)	ug/L	<40.4	4000	4000	3540	3490	88	87	75-125	1	30	
1,2-Dichlorobenzene	ug/L	<26.2	4000	4000	3640	3540	91	89	75-125	3	30	
1,2-Dichloroethane	ug/L	<33.8	4000	4000	4470	4350	112	109	71-133	3	30	
1,2-Dichloropropane	ug/L	<29.6	4000	4000	4000	3920	100	98	75-125	2	30	
1,3,5-Trimethylbenzene	ug/L	778	4000	4000	4590	4450	95	92	70-134	3	30	
1,3-Dichlorobenzene	ug/L	<24.6	4000	4000	3700	3620	92	91	74-125	2	30	
1,3-Dichloropropane	ug/L	<31.6	4000	4000	3750	3630	94	91	75-125	3	30	
1,4-Dichlorobenzene	ug/L	<29.4	4000	4000	3620	3590	91	90	75-125	1	30	
2,2-Dichloropropane	ug/L	<23.2	4000	4000	3710	3620	93	91	52-140	2	30	
2-Chlorotoluene	ug/L	<19.5	4000	4000	3990	3920	100	98	72-125	2	30	
4-Chlorotoluene	ug/L	<25.0	4000	4000	3740	3630	94	91	69-128	3	30	
Benzene	ug/L	4400	4000	4000	8590	8350	105	99	66-127	3	30	
Bromobenzene	ug/L	<24.0	4000	4000	3490	3450	87	86	74-125	1	30	
Bromochloromethane	ug/L	<30.4	4000	4000	3920	3880	98	97	69-126	1	30	
Bromodichloromethane	ug/L	<23.4	4000	4000	3940	3850	99	96	75-125	2	30	
Bromoform	ug/L	<44.6	4000	4000	3490	3510	87	88	66-134	0	30	
Bromomethane	ug/L	<77.0	4000	4000	5510	4970	138	124	30-150	10	30	
Carbon tetrachloride	ug/L	<26.8	4000	4000	4290	4170	107	104	73-135	3	30	
Chlorobenzene	ug/L	<26.6	4000	4000	3700	3630	93	91	75-125	2	30	
Chloroethane	ug/L	<41.2	4000	4000	3820	3770	95	94	54-143	1	30	
Chloroform	ug/L	<46.0	4000	4000	3990	3860	100	96	75-125	3	30	
Chloromethane	ug/L	<34.0	4000	4000	3680	3600	92	90	52-131	2	30	
cis-1,2-Dichloroethene	ug/L	<30.0	4000	4000	3810	3710	95	93	72-125	3	30	
cis-1,3-Dichloropropene	ug/L	<11.3	4000	4000	3740	3670	93	92	73-125	2	30	
Dibromochloromethane	ug/L	<40.6	4000	4000	3720	3590	93	90	73-125	4	30	
Dibromomethane	ug/L	<34.6	4000	4000	3790	3790	95	95	67-129	0	30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4664820 4664821

Parameter	Units	10656248001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dichlorodifluoromethane	ug/L	<15.9	4000	4000	3750	3620	94	91	54-150	4	30	
Diethyl ether (Ethyl ether)	ug/L	<38.8	4000	4000	3990	3930	100	98	70-125	1	30	
Ethylbenzene	ug/L	1760	4000	4000	5610	5440	96	92	74-128	3	30	
Hexachloro-1,3-butadiene	ug/L	<47.4	4000	4000	3180	3230	80	81	54-133	2	30	
Isopropylbenzene (Cumene)	ug/L	55.5J	4000	4000	4050	3890	100	96	75-129	4	30	
m&p-Xylene	ug/L	12000	8000	8000	20400	19600	106	96	70-131	4	30	
Methyl-tert-butyl ether	ug/L	<25.2	4000	4000	3830	3710	96	93	65-132	3	30	
Methylene Chloride	ug/L	<66.0	4000	4000	3780	3720	94	93	67-125	1	30	
n-Butylbenzene	ug/L	36.7J	4000	4000	3550	3470	88	86	64-130	2	30	
n-Propylbenzene	ug/L	166J	4000	4000	3940	3850	94	92	72-127	2	30	
Naphthalene	ug/L	385	4000	4000	3750	3800	84	85	61-150	1	30	
o-Xylene	ug/L	4230	4000	4000	8340	8020	103	95	75-127	4	30	
p-Isopropyltoluene	ug/L	<21.2	4000	4000	3790	3720	95	93	71-130	2	30	
sec-Butylbenzene	ug/L	<19.4	4000	4000	3890	3800	97	95	73-130	2	30	
Styrene	ug/L	<19.3	4000	4000	4020	3920	100	98	73-139	2	30	
tert-Butylbenzene	ug/L	<18.2	4000	4000	3870	3810	97	95	73-125	2	30	
Tetrachloroethene	ug/L	<21.0	4000	4000	3700	3600	93	90	69-129	3	30	
Toluene	ug/L	2790	4000	4000	6490	6290	93	87	66-125	3	30	
trans-1,2-Dichloroethene	ug/L	<27.0	4000	4000	3840	3800	96	95	69-126	1	30	
trans-1,3-Dichloropropene	ug/L	<25.8	4000	4000	3560	3450	89	86	75-127	3	30	
Trichloroethene	ug/L	<24.4	4000	4000	3980	3850	99	96	69-127	3	30	
Trichlorofluoromethane	ug/L	<24.6	4000	4000	3890	3910	97	98	58-150	0	30	
Vinyl chloride	ug/L	<9.2	4000	4000	3940	3860	99	97	54-146	2	30	
1,2-Dichlorobenzene-d4 (S)	%.						101	101	75-125			
4-Bromofluorobenzene (S)	%.						104	103	75-125			
Toluene-d8 (S)	%.						101	102	75-125			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

QC Batch: 885701
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV 465 W
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10655687002, 10655687003, 10655687004, 10655687005

METHOD BLANK: 4667447 Matrix: Water
Associated Lab Samples: 10655687002, 10655687003, 10655687004, 10655687005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.19	1.0	06/07/23 14:12	
1,1,1-Trichloroethane	ug/L	<0.12	1.0	06/07/23 14:12	
1,1,2,2-Tetrachloroethane	ug/L	<0.15	1.0	06/07/23 14:12	
1,1,2-Trichloroethane	ug/L	<0.22	1.0	06/07/23 14:12	
1,1-Dichloroethane	ug/L	<0.11	1.0	06/07/23 14:12	
1,1-Dichloroethene	ug/L	<0.13	1.0	06/07/23 14:12	
1,1-Dichloropropene	ug/L	<0.12	1.0	06/07/23 14:12	
1,2,3-Trichlorobenzene	ug/L	<0.13	1.0	06/07/23 14:12	
1,2,3-Trichloropropane	ug/L	<0.38	2.5	06/07/23 14:12	
1,2,4-Trichlorobenzene	ug/L	<0.14	1.0	06/07/23 14:12	
1,2,4-Trimethylbenzene	ug/L	<0.13	1.0	06/07/23 14:12	
1,2-Dibromo-3-chloropropane	ug/L	<0.36	2.5	06/07/23 14:12	
1,2-Dibromoethane (EDB)	ug/L	<0.20	1.0	06/07/23 14:12	
1,2-Dichlorobenzene	ug/L	<0.13	1.0	06/07/23 14:12	
1,2-Dichloroethane	ug/L	<0.17	1.0	06/07/23 14:12	
1,2-Dichloropropane	ug/L	<0.15	1.0	06/07/23 14:12	
1,3,5-Trimethylbenzene	ug/L	<0.11	1.0	06/07/23 14:12	
1,3-Dichlorobenzene	ug/L	<0.12	1.0	06/07/23 14:12	
1,3-Dichloropropane	ug/L	<0.16	1.0	06/07/23 14:12	
1,4-Dichlorobenzene	ug/L	<0.15	1.0	06/07/23 14:12	
2,2-Dichloropropane	ug/L	<0.12	1.0	06/07/23 14:12	
2-Chlorotoluene	ug/L	<0.098	1.0	06/07/23 14:12	
4-Chlorotoluene	ug/L	<0.12	1.0	06/07/23 14:12	
Benzene	ug/L	<0.10	1.0	06/07/23 14:12	
Bromobenzene	ug/L	<0.12	1.0	06/07/23 14:12	
Bromochloromethane	ug/L	<0.15	1.0	06/07/23 14:12	
Bromodichloromethane	ug/L	<0.12	1.0	06/07/23 14:12	
Bromoform	ug/L	<0.22	1.0	06/07/23 14:12	
Bromomethane	ug/L	<0.38	2.5	06/07/23 14:12	
Carbon tetrachloride	ug/L	<0.13	1.0	06/07/23 14:12	
Chlorobenzene	ug/L	<0.13	1.0	06/07/23 14:12	
Chloroethane	ug/L	<0.21	1.0	06/07/23 14:12	
Chloroform	ug/L	<0.23	1.0	06/07/23 14:12	
Chloromethane	ug/L	<0.17	1.0	06/07/23 14:12	
cis-1,2-Dichloroethene	ug/L	<0.15	1.0	06/07/23 14:12	
cis-1,3-Dichloropropene	ug/L	<0.057	1.0	06/07/23 14:12	
Dibromochloromethane	ug/L	<0.20	1.0	06/07/23 14:12	
Dibromomethane	ug/L	<0.17	1.0	06/07/23 14:12	
Dichlorodifluoromethane	ug/L	<0.079	1.0	06/07/23 14:12	
Diethyl ether (Ethyl ether)	ug/L	<0.19	2.5	06/07/23 14:12	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

METHOD BLANK: 4667447 Matrix: Water
Associated Lab Samples: 10655687002, 10655687003, 10655687004, 10655687005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.11	1.0	06/07/23 14:12	
Hexachloro-1,3-butadiene	ug/L	<0.24	1.0	06/07/23 14:12	
Isopropylbenzene (Cumene)	ug/L	<0.12	1.0	06/07/23 14:12	
m&p-Xylene	ug/L	<0.20	2.0	06/07/23 14:12	
Methyl-tert-butyl ether	ug/L	<0.13	1.0	06/07/23 14:12	
Methylene Chloride	ug/L	<0.33	1.0	06/07/23 14:12	
n-Butylbenzene	ug/L	<0.096	1.0	06/07/23 14:12	
n-Propylbenzene	ug/L	<0.11	1.0	06/07/23 14:12	
Naphthalene	ug/L	<0.18	1.0	06/07/23 14:12	
o-Xylene	ug/L	<0.18	1.0	06/07/23 14:12	
p-Isopropyltoluene	ug/L	<0.11	1.0	06/07/23 14:12	
sec-Butylbenzene	ug/L	<0.097	1.0	06/07/23 14:12	
Styrene	ug/L	<0.097	1.0	06/07/23 14:12	
tert-Butylbenzene	ug/L	<0.091	1.0	06/07/23 14:12	
Tetrachloroethene	ug/L	<0.10	1.0	06/07/23 14:12	
Toluene	ug/L	<0.10	1.0	06/07/23 14:12	
trans-1,2-Dichloroethene	ug/L	<0.14	1.0	06/07/23 14:12	
trans-1,3-Dichloropropene	ug/L	<0.13	1.0	06/07/23 14:12	
Trichloroethene	ug/L	<0.12	1.0	06/07/23 14:12	
Trichlorofluoromethane	ug/L	<0.12	1.0	06/07/23 14:12	
Vinyl chloride	ug/L	<0.046	1.0	06/07/23 14:12	
1,2-Dichlorobenzene-d4 (S)	%.	100	75-125	06/07/23 14:12	
4-Bromofluorobenzene (S)	%.	101	75-125	06/07/23 14:12	
Toluene-d8 (S)	%.	104	75-125	06/07/23 14:12	

LABORATORY CONTROL SAMPLE: 4667448

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	21.1	105	75-125	
1,1,1-Trichloroethane	ug/L	20	22.1	111	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	20.4	102	71-125	
1,1,2-Trichloroethane	ug/L	20	21.2	106	75-125	
1,1-Dichloroethane	ug/L	20	21.8	109	75-125	
1,1-Dichloroethene	ug/L	20	21.3	107	69-125	
1,1-Dichloropropene	ug/L	20	22.5	113	74-125	
1,2,3-Trichlorobenzene	ug/L	20	19.4	97	70-131	
1,2,3-Trichloropropane	ug/L	20	20.3	101	73-125	
1,2,4-Trichlorobenzene	ug/L	20	19.8	99	75-125	
1,2,4-Trimethylbenzene	ug/L	20	19.9	100	75-125	
1,2-Dibromo-3-chloropropane	ug/L	20	22.1	110	68-129	
1,2-Dibromoethane (EDB)	ug/L	20	21.6	108	75-125	
1,2-Dichlorobenzene	ug/L	20	19.4	97	75-125	
1,2-Dichloroethane	ug/L	20	22.7	113	75-125	
1,2-Dichloropropane	ug/L	20	22.3	111	75-125	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

LABORATORY CONTROL SAMPLE: 4667448

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3,5-Trimethylbenzene	ug/L	20	20.2	101	75-125	
1,3-Dichlorobenzene	ug/L	20	19.7	99	75-125	
1,3-Dichloropropane	ug/L	20	20.7	104	75-125	
1,4-Dichlorobenzene	ug/L	20	19.5	98	75-125	
2,2-Dichloropropane	ug/L	20	23.3	116	65-125	
2-Chlorotoluene	ug/L	20	19.7	99	75-125	
4-Chlorotoluene	ug/L	20	20.2	101	75-125	
Benzene	ug/L	20	21.2	106	75-125	
Bromobenzene	ug/L	20	19.6	98	75-125	
Bromochloromethane	ug/L	20	20.0	100	75-125	
Bromodichloromethane	ug/L	20	21.2	106	75-125	
Bromoform	ug/L	20	21.3	106	75-134	
Bromomethane	ug/L	20	15.8	79	32-150	
Carbon tetrachloride	ug/L	20	21.9	110	73-126	
Chlorobenzene	ug/L	20	20.3	101	75-125	
Chloroethane	ug/L	20	22.2	111	70-125	
Chloroform	ug/L	20	21.3	107	75-125	
Chloromethane	ug/L	20	20.0	100	65-125	
cis-1,2-Dichloroethene	ug/L	20	20.7	103	75-125	
cis-1,3-Dichloropropene	ug/L	20	21.5	108	75-125	
Dibromochloromethane	ug/L	20	21.6	108	75-125	
Dibromomethane	ug/L	20	20.2	101	75-125	
Dichlorodifluoromethane	ug/L	20	20.5	102	65-135	
Diethyl ether (Ethyl ether)	ug/L	20	23.1	115	75-125	
Ethylbenzene	ug/L	20	20.6	103	75-125	
Hexachloro-1,3-butadiene	ug/L	20	20.8	104	63-128	
Isopropylbenzene (Cumene)	ug/L	20	20.7	104	75-125	
m&p-Xylene	ug/L	40	40.8	102	75-125	
Methyl-tert-butyl ether	ug/L	20	22.4	112	75-125	
Methylene Chloride	ug/L	20	21.0	105	72-125	
n-Butylbenzene	ug/L	20	20.2	101	68-125	
n-Propylbenzene	ug/L	20	20.5	102	74-125	
Naphthalene	ug/L	20	19.8	99	67-140	
o-Xylene	ug/L	20	20.4	102	75-125	
p-Isopropyltoluene	ug/L	20	20.7	104	75-126	
sec-Butylbenzene	ug/L	20	20.0	100	75-126	
Styrene	ug/L	20	20.2	101	75-139	
tert-Butylbenzene	ug/L	20	19.9	99	75-125	
Tetrachloroethene	ug/L	20	20.6	103	70-125	
Toluene	ug/L	20	20.3	102	74-125	
trans-1,2-Dichloroethene	ug/L	20	20.7	104	75-125	
trans-1,3-Dichloropropene	ug/L	20	22.0	110	75-127	
Trichloroethene	ug/L	20	20.6	103	74-125	
Trichlorofluoromethane	ug/L	20	21.8	109	72-125	
Vinyl chloride	ug/L	20	21.4	107	66-125	
1,2-Dichlorobenzene-d4 (S)	%.			99	75-125	
4-Bromofluorobenzene (S)	%.			104	75-125	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

LABORATORY CONTROL SAMPLE: 4667448

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%.			101	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4667449 4667450

Parameter	Units	10656239001 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	<1.0	20	20	18.7	19.5	94	97	75-125	4	30	
1,1,1-Trichloroethane	ug/L	<1.0	20	20	18.8	19.2	94	96	70-133	2	30	
1,1,2,2-Tetrachloroethane	ug/L	<1.0	20	20	19.4	19.4	97	97	71-125	0	30	
1,1,2-Trichloroethane	ug/L	<1.0	20	20	19.1	19.8	96	99	75-125	3	30	
1,1-Dichloroethane	ug/L	<1.0	20	20	19.2	19.9	96	99	71-125	3	30	
1,1-Dichloroethene	ug/L	<1.0	20	20	17.8	17.6	89	88	60-136	2	30	
1,1-Dichloropropene	ug/L	<1.0	20	20	18.5	18.9	92	94	70-134	2	30	
1,2,3-Trichlorobenzene	ug/L	<1.0	20	20	18.0	18.9	90	95	66-131	5	30	
1,2,3-Trichloropropane	ug/L	<2.5	20	20	19.2	20.8	96	104	73-125	8	30	
1,2,4-Trichlorobenzene	ug/L	<1.0	20	20	18.0	18.7	90	94	66-125	4	30	
1,2,4-Trimethylbenzene	ug/L	<1.0	20	20	18.4	18.7	92	93	61-143	2	30	
1,2-Dibromo-3-chloropropane	ug/L	<2.5	20	20	20.0	21.2	100	106	61-137	6	30	
1,2-Dibromoethane (EDB)	ug/L	<1.0	20	20	19.6	20.5	98	103	75-125	5	30	
1,2-Dichlorobenzene	ug/L	<1.0	20	20	18.3	18.6	91	93	75-125	2	30	
1,2-Dichloroethane	ug/L	<1.0	20	20	20.7	21.1	104	105	71-133	2	30	
1,2-Dichloropropane	ug/L	<1.0	20	20	19.9	20.4	99	102	75-125	3	30	
1,3,5-Trimethylbenzene	ug/L	<1.0	20	20	18.1	18.7	90	93	70-134	3	30	
1,3-Dichlorobenzene	ug/L	<1.0	20	20	18.0	18.6	90	93	74-125	3	30	
1,3-Dichloropropane	ug/L	<1.0	20	20	18.7	19.4	94	97	75-125	4	30	
1,4-Dichlorobenzene	ug/L	<1.0	20	20	18.0	18.5	90	92	75-125	3	30	
2,2-Dichloropropane	ug/L	<1.0	20	20	17.8	18.3	89	91	52-140	2	30	
2-Chlorotoluene	ug/L	<1.0	20	20	18.3	18.5	91	93	72-125	1	30	
4-Chlorotoluene	ug/L	<1.0	20	20	18.5	18.9	92	94	69-128	2	30	
Benzene	ug/L	<1.0	20	20	19.1	19.3	96	97	66-127	1	30	
Bromobenzene	ug/L	<1.0	20	20	18.1	19.0	91	95	74-125	5	30	
Bromochloromethane	ug/L	<1.0	20	20	18.7	18.9	93	95	69-126	1	30	
Bromodichloromethane	ug/L	<1.0	20	20	19.2	19.4	96	97	75-125	1	30	
Bromoform	ug/L	<1.0	20	20	18.2	19.2	91	96	66-134	5	30	
Bromomethane	ug/L	<2.5	20	20	10.8	13.0	54	65	30-150	18	30	
Carbon tetrachloride	ug/L	<1.0	20	20	17.4	18.6	87	93	73-135	7	30	
Chlorobenzene	ug/L	<1.0	20	20	18.3	18.6	92	93	75-125	2	30	
Chloroethane	ug/L	<1.0	20	20	18.7	18.4	93	92	54-143	2	30	
Chloroform	ug/L	<1.0	20	20	19.2	19.6	96	98	75-125	2	30	
Chloromethane	ug/L	<1.0	20	20	16.2	17.0	81	85	52-131	5	30	
cis-1,2-Dichloroethene	ug/L	<1.0	20	20	18.7	19.0	93	95	72-125	2	30	
cis-1,3-Dichloropropene	ug/L	<1.0	20	20	18.9	19.5	94	97	73-125	3	30	
Dibromochloromethane	ug/L	<1.0	20	20	19.1	19.8	96	99	73-125	3	30	
Dibromomethane	ug/L	<1.0	20	20	18.7	19.2	93	96	67-129	3	30	

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

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

QUALITY CONTROL DATA

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4667449 4667450

Parameter	Units	10656239001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dichlorodifluoromethane	ug/L	<1.0	20	20	14.2	14.3	71	72	54-150	1	30	
Diethyl ether (Ethyl ether)	ug/L	<2.5	20	20	20.6	20.8	103	104	70-125	1	30	
Ethylbenzene	ug/L	<1.0	20	20	18.3	18.5	91	92	74-128	1	30	
Hexachloro-1,3-butadiene	ug/L	<1.0	20	20	16.8	17.5	84	88	54-133	5	30	
Isopropylbenzene (Cumene)	ug/L	<1.0	20	20	18.2	18.4	90	91	75-129	1	30	
m&p-Xylene	ug/L	<2.0	40	40	36.0	37.3	89	93	70-131	4	30	
Methyl-tert-butyl ether	ug/L	<1.0	20	20	20.0	20.9	100	105	65-132	4	30	
Methylene Chloride	ug/L	<1.0	20	20	18.4	18.5	92	93	67-125	0	30	
n-Butylbenzene	ug/L	<1.0	20	20	17.2	17.7	86	88	64-130	3	30	
n-Propylbenzene	ug/L	<1.0	20	20	18.0	18.8	90	94	72-127	4	30	
Naphthalene	ug/L	<1.0	20	20	19.6	20.7	98	104	61-150	6	30	
o-Xylene	ug/L	<1.0	20	20	18.3	18.6	92	93	75-127	1	30	
p-Isopropyltoluene	ug/L	<1.0	20	20	18.0	18.7	90	93	71-130	4	30	
sec-Butylbenzene	ug/L	<1.0	20	20	17.3	17.8	86	89	73-130	3	30	
Styrene	ug/L	<1.0	20	20	18.2	18.2	91	91	73-139	0	30	
tert-Butylbenzene	ug/L	<1.0	20	20	17.7	18.1	89	91	73-125	2	30	
Tetrachloroethene	ug/L	<1.0	20	20	17.6	18.1	88	90	69-129	2	30	
Toluene	ug/L	<1.0	20	20	18.2	18.4	91	92	66-125	1	30	
trans-1,2-Dichloroethene	ug/L	<1.0	20	20	18.1	18.9	90	95	69-126	5	30	
trans-1,3-Dichloropropene	ug/L	<1.0	20	20	19.1	20.2	95	101	75-127	6	30	
Trichloroethene	ug/L	<1.0	20	20	18.2	18.4	91	92	69-127	1	30	
Trichlorofluoromethane	ug/L	<1.0	20	20	16.8	17.2	84	86	58-150	3	30	
Vinyl chloride	ug/L	<1.0	20	20	16.9	16.6	84	83	54-146	1	30	
1,2-Dichlorobenzene-d4 (S)	%.						100	101	75-125			
4-Bromofluorobenzene (S)	%.						102	102	75-125			
Toluene-d8 (S)	%.						100	101	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

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

QUALITY CONTROL DATA

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

QC Batch: 886035
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV 465 W
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10655687002

METHOD BLANK: 4668950 Matrix: Water
Associated Lab Samples: 10655687002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	<0.10	1.0	06/08/23 12:37	
1,2-Dichlorobenzene-d4 (S)	%.	102	75-125	06/08/23 12:37	
4-Bromofluorobenzene (S)	%.	106	75-125	06/08/23 12:37	
Toluene-d8 (S)	%.	106	75-125	06/08/23 12:37	

LABORATORY CONTROL SAMPLE: 4668951

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.6	98	75-125	
1,2-Dichlorobenzene-d4 (S)	%.			101	75-125	
4-Bromofluorobenzene (S)	%.			103	75-125	
Toluene-d8 (S)	%.			98	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4668953 4668954

Parameter	Units	10655871003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	ND	20	20	20.1	19.3	100	96	66-127	4	30	
1,2-Dichlorobenzene-d4 (S)	%.						100	97	75-125			
4-Bromofluorobenzene (S)	%.						104	103	75-125			
Toluene-d8 (S)	%.						99	102	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

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

QUALIFIERS

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

DL - Adjusted Method Detection Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: 885701

[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.

ANALYTE QUALIFIERS

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

MN The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161494.03 100 102 SRC GWTK68
Pace Project No.: 10655687

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10655687001	**MW-1 / T68**	EPA 8260D	885188		
10655687002	**MW-2 / T68**	EPA 8260D	885188		
10655687002	**MW-2 / T68**	EPA 8260D	885701		
10655687002	**MW-2 / T68**	EPA 8260D	886035		
10655687003	**MW-4 / T68**	EPA 8260D	885188		
10655687003	**MW-4 / T68**	EPA 8260D	885701		
10655687004	**MW-5 / T66**	EPA 8260D	885701		
10655687005	**MW-5 / T68**	EPA 8260D	885188		
10655687005	**MW-5 / T68**	EPA 8260D	885701		
10655687006	**MW-6 / T68**	EPA 8260D	885188		
10655687007	**Trip Blank**	EPA 8260D	885188		

Barr Engineering Co. Chain of Custody

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

COC Number: № 591711
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 TK 68	Barr Project No: 49116494.03 100 102

Matrix Code: GW = Groundwater, SW = Surface Water, DW = Drinking Water, PW = Pore Water, WW = Waste Water, WQ = TB, FB, EB, etc., W = Unspecified, S = Soil/Solid, SD = Sediment, SQ = MeOH blank, OTH = Other (Oil, etc.)

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	Soil % Solids	Preservative Code	Field Filtered Y/N	
1. MW-1 / T68				05/30/2023	8:50	GW	N	3	X				001
2. MW-2 / T68					10:40		N	3	X				002
3. MW-4 / T68					10:27		N	3	X				003
4. MW-5 / T66					10:10		N	3	X				004
5. MW-5 / T68					10:18		N	3	X				005
6. MW-6 / T68					10:50		N	3	X				006
7. Trip Blank					—	WQ	N	2	X				007
8.													
9.													
10.													

See attached list.

WO#: 10655687
10655687

BARR USE ONLY		Relinquished by	On Ice?	Date	Time	Received by	Date	Time
Sampled by:	KLS3	Kinsey Schneider	(Y) N	5/31/2023	13:50	Emily Higgins / Pace	5/31/23	13:58
Barr Proj. Manager:	LMC	Megan Asberg	(Y) N	5/31/23	14:29	[illegible]	6/1/23	1055
Barr DQ Manager:	JET							
Lab Name:	Pace							
Lab Location:	Minneapolis, MN							

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

Air Bill Number:

Lab WO: Temperature on Receipt (°C): 5.9 Custody Seal Intact? ☐ Y ☐ N ☒ None

Requested Due Date: ☑ Standard Turn Around Time (7) ☐ 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 Co.

Project #: WO#: 10655687
PM: MKH Due Date: 06/16/23
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 (0436) ☐ T3 (0459) ☐ T4 (0402) ☐ T5 (0178) ☐ T6 (0235) ☑ T7 (0042) ☐ T8 (0775) ☐ T9(0727) ☐ 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:** 4.2 °C

Correction Factor: +0.1 **Cooler Temp Corrected w/temp blank:** 4.3 °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:** BN 6.2.23

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? -Pace Containers Used?	☑ Yes ☑ Yes	☐ No ☐ No	☐ N/A	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 of container below:** ☐ See Exceptions ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☑ N/A	12. Sample # ☐ NaOH ☐ HNO3 ☐ H2SO4 ☐ Zinc Acetate
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	
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): _____

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

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** 6/2/23

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

Labeled By: BN **Line:** 3

Table 1

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

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

October 30, 2023

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

RE: Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Dear Jim Taraldsen:

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

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

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

CERTIFICATIONS

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Pace Analytical Services, LLC - Minneapolis MN
1700 Elm Street SE, Minneapolis, MN 55414
A2LA Certification #: 2926.01
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
GMP+ Certification #: GMP050884
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
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

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

SAMPLE SUMMARY

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10672877001	**MW-1/T68**	Water	10/16/23 11:29	10/17/23 08:00
10672877002	**MW-2/T68**	Water	10/16/23 11:21	10/17/23 08:00
10672877003	**MW-4/T68**	Water	10/16/23 11:15	10/17/23 08:00
10672877004	**MW-5/T68**	Water	10/16/23 11:05	10/17/23 08:00
10672877005	**MW-5/T66**	Water	10/16/23 10:52	10/17/23 08:00
10672877006	**MW-6/T68**	Water	10/16/23 11:36	10/17/23 08:00
10672877007	**Trip Blank**	Water	10/16/23 00:00	10/17/23 08:00

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

SAMPLE ANALYTE COUNT

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10672877001	**MW-1/T68**	EPA 8260D	NMB	64	PASI-M
10672877002	**MW-2/T68**	EPA 8260D	NMB	64	PASI-M
10672877003	**MW-4/T68**	EPA 8260D	NMB	64	PASI-M
10672877004	**MW-5/T68**	EPA 8260D	NMB	64	PASI-M
10672877005	**MW-5/T66**	EPA 8260D	NMB	64	PASI-M
10672877006	**MW-6/T68**	EPA 8260D	LPM, TKL	64	PASI-M
10672877007	**Trip Blank**	EPA 8260D	TKL	64	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

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

PROJECT NARRATIVE

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Date: October 30, 2023

Case Narrative

Volatile Organics Analysis

8260D VOA

Batch 912960

Recovery for dichlorodifluoromethane in the secondary source was outside of laboratory control limits at 136% recovery (limits 70-130%). Reported values may be biased high.

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

Recovery for chloromethane in the continuing calibration verification was outside of laboratory control limits at 121% recovery (limits 80-120%). Reported values may be biased high.

Batch 913633

Recovery for chloromethane in the continuing calibration verification was outside of laboratory control limits at 79% 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 acetone in the continuing calibration verification was outside of laboratory control limits at 72% 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 72% 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.

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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Sample: MW-1/T68 **Lab ID: 10672877001** Collected: 10/16/23 11:29 Received: 10/17/23 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	**<0.21**	ug/L	1.0	0.21	1		10/19/23 18:27	71-43-2	
Bromobenzene	**<0.12**	ug/L	1.0	0.12	1		10/19/23 18:27	108-86-1	
Bromochloromethane	**<0.15**	ug/L	1.0	0.15	1		10/19/23 18:27	74-97-5	
Bromodichloromethane	**<0.12**	ug/L	1.0	0.12	1		10/19/23 18:27	75-27-4	
Bromoform	**<0.22**	ug/L	1.0	0.22	1		10/19/23 18:27	75-25-2	
Bromomethane	**<1.0**	ug/L	2.5	1.0	1		10/19/23 18:27	74-83-9	
n-Butylbenzene	**<0.32**	ug/L	1.0	0.32	1		10/19/23 18:27	104-51-8	
sec-Butylbenzene	**<0.20**	ug/L	1.0	0.20	1		10/19/23 18:27	135-98-8	
tert-Butylbenzene	**<0.20**	ug/L	1.0	0.20	1		10/19/23 18:27	98-06-6	
Carbon tetrachloride	**<0.13**	ug/L	1.0	0.13	1		10/19/23 18:27	56-23-5	
Chlorobenzene	**<0.13**	ug/L	1.0	0.13	1		10/19/23 18:27	108-90-7	
Chloroethane	**<0.41**	ug/L	1.0	0.41	1		10/19/23 18:27	75-00-3	
Chloroform	**<0.23**	ug/L	1.0	0.23	1		10/19/23 18:27	67-66-3	
Chloromethane	**<0.40**	ug/L	1.0	0.40	1		10/19/23 18:27	74-87-3	
2-Chlorotoluene	**<0.20**	ug/L	1.0	0.20	1		10/19/23 18:27	95-49-8	
4-Chlorotoluene	**<0.12**	ug/L	1.0	0.12	1		10/19/23 18:27	106-43-4	
1,2-Dibromo-3-chloropropane	**<0.36**	ug/L	2.5	0.36	1		10/19/23 18:27	96-12-8	
Dibromochloromethane	**<0.20**	ug/L	1.0	0.20	1		10/19/23 18:27	124-48-1	
1,2-Dibromoethane (EDB)	**<0.20**	ug/L	1.0	0.20	1		10/19/23 18:27	106-93-4	
Dibromomethane	**<0.17**	ug/L	1.0	0.17	1		10/19/23 18:27	74-95-3	
1,2-Dichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		10/19/23 18:27	95-50-1	
1,3-Dichlorobenzene	**<0.12**	ug/L	1.0	0.12	1		10/19/23 18:27	541-73-1	
1,4-Dichlorobenzene	**<0.15**	ug/L	1.0	0.15	1		10/19/23 18:27	106-46-7	
Dichlorodifluoromethane	**<0.32**	ug/L	1.0	0.32	1		10/19/23 18:27	75-71-8	
1,1-Dichloroethane	**<0.23**	ug/L	1.0	0.23	1		10/19/23 18:27	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		10/19/23 18:27	107-06-2	
1,1-Dichloroethene	**<0.13**	ug/L	1.0	0.13	1		10/19/23 18:27	75-35-4	
cis-1,2-Dichloroethene	**<0.15**	ug/L	1.0	0.15	1		10/19/23 18:27	156-59-2	
trans-1,2-Dichloroethene	**<0.14**	ug/L	1.0	0.14	1		10/19/23 18:27	156-60-5	
1,2-Dichloropropane	**<0.15**	ug/L	1.0	0.15	1		10/19/23 18:27	78-87-5	
1,3-Dichloropropane	**<0.16**	ug/L	1.0	0.16	1		10/19/23 18:27	142-28-9	
2,2-Dichloropropane	**<0.12**	ug/L	1.0	0.12	1		10/19/23 18:27	594-20-7	
1,1-Dichloropropene	**<0.12**	ug/L	1.0	0.12	1		10/19/23 18:27	563-58-6	
cis-1,3-Dichloropropene	**<0.14**	ug/L	1.0	0.14	1		10/19/23 18:27	10061-01-5	
trans-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		10/19/23 18:27	10061-02-6	
Diethyl ether (Ethyl ether)	**<0.19**	ug/L	2.5	0.19	1		10/19/23 18:27	60-29-7	
Ethylbenzene	**<0.11**	ug/L	1.0	0.11	1		10/19/23 18:27	100-41-4	
Hexachloro-1,3-butadiene	**<0.48**	ug/L	1.0	0.48	1		10/19/23 18:27	87-68-3	
Isopropylbenzene (Cumene)	**<0.12**	ug/L	1.0	0.12	1		10/19/23 18:27	98-82-8	
p-Isopropyltoluene	**<0.11**	ug/L	1.0	0.11	1		10/19/23 18:27	99-87-6	
Methylene Chloride	**<0.44**	ug/L	1.0	0.44	1		10/19/23 18:27	75-09-2	
Methyl-tert-butyl ether	**<0.13**	ug/L	1.0	0.13	1		10/19/23 18:27	1634-04-4	
Naphthalene	**<0.18**	ug/L	1.0	0.18	1		10/19/23 18:27	91-20-3	
n-Propylbenzene	**<0.11**	ug/L	1.0	0.11	1		10/19/23 18:27	103-65-1	
Styrene	**<0.22**	ug/L	1.0	0.22	1		10/19/23 18:27	100-42-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Sample: MW-1/T68 **Lab ID: 10672877001** Collected: 10/16/23 11:29 Received: 10/17/23 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		10/19/23 18:27	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.15**	ug/L	1.0	0.15	1		10/19/23 18:27	79-34-5	
Tetrachloroethene	**<0.22**	ug/L	1.0	0.22	1		10/19/23 18:27	127-18-4	
Toluene	**<0.21**	ug/L	1.0	0.21	1		10/19/23 18:27	108-88-3	
1,2,3-Trichlorobenzene	**<0.25**	ug/L	1.0	0.25	1		10/19/23 18:27	87-61-6	
1,2,4-Trichlorobenzene	**<0.26**	ug/L	1.0	0.26	1		10/19/23 18:27	120-82-1	
1,1,1-Trichloroethane	**<0.12**	ug/L	1.0	0.12	1		10/19/23 18:27	71-55-6	
1,1,2-Trichloroethane	**<0.22**	ug/L	1.0	0.22	1		10/19/23 18:27	79-00-5	
Trichloroethene	**<0.12**	ug/L	1.0	0.12	1		10/19/23 18:27	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	1.0	0.12	1		10/19/23 18:27	75-69-4	
1,2,3-Trichloropropane	**<0.38**	ug/L	2.5	0.38	1		10/19/23 18:27	96-18-4	
1,2,4-Trimethylbenzene	**<0.13**	ug/L	1.0	0.13	1		10/19/23 18:27	95-63-6	
1,3,5-Trimethylbenzene	**<0.11**	ug/L	1.0	0.11	1		10/19/23 18:27	108-67-8	
Vinyl chloride	**<0.12**	ug/L	1.0	0.12	1		10/19/23 18:27	75-01-4	
m&p-Xylene	**<0.42**	ug/L	2.0	0.42	1		10/19/23 18:27	179601-23-1	
o-Xylene	**<0.18**	ug/L	1.0	0.18	1		10/19/23 18:27	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	100	%.	75-125		1		10/19/23 18:27	2199-69-1	
4-Bromofluorobenzene (S)	104	%.	75-125		1		10/19/23 18:27	460-00-4	
Toluene-d8 (S)	105	%.	75-125		1		10/19/23 18:27	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Sample: MW-2/T68 **Lab ID: 10672877002** Collected: 10/16/23 11:21 Received: 10/17/23 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	**6180**	ug/L	100	21.3	100		10/19/23 20:12	71-43-2	
Bromobenzene	**<12.0**	ug/L	100	12.0	100		10/19/23 20:12	108-86-1	
Bromochloromethane	**<15.2**	ug/L	100	15.2	100		10/19/23 20:12	74-97-5	
Bromodichloromethane	**<11.7**	ug/L	100	11.7	100		10/19/23 20:12	75-27-4	
Bromoform	**<22.3**	ug/L	100	22.3	100		10/19/23 20:12	75-25-2	
Bromomethane	**<99.7**	ug/L	250	99.7	100		10/19/23 20:12	74-83-9	
n-Butylbenzene	**<31.6**	ug/L	100	31.6	100		10/19/23 20:12	104-51-8	
sec-Butylbenzene	**<20.4**	ug/L	100	20.4	100		10/19/23 20:12	135-98-8	
tert-Butylbenzene	**<19.7**	ug/L	100	19.7	100		10/19/23 20:12	98-06-6	
Carbon tetrachloride	**<13.4**	ug/L	100	13.4	100		10/19/23 20:12	56-23-5	
Chlorobenzene	**<13.3**	ug/L	100	13.3	100		10/19/23 20:12	108-90-7	
Chloroethane	**<41.3**	ug/L	100	41.3	100		10/19/23 20:12	75-00-3	
Chloroform	**<23.0**	ug/L	100	23.0	100		10/19/23 20:12	67-66-3	
Chloromethane	**<40.1**	ug/L	100	40.1	100		10/19/23 20:12	74-87-3	
2-Chlorotoluene	**<19.8**	ug/L	100	19.8	100		10/19/23 20:12	95-49-8	
4-Chlorotoluene	**<12.5**	ug/L	100	12.5	100		10/19/23 20:12	106-43-4	
1,2-Dibromo-3-chloropropane	**<35.6**	ug/L	250	35.6	100		10/19/23 20:12	96-12-8	
Dibromochloromethane	**<20.3**	ug/L	100	20.3	100		10/19/23 20:12	124-48-1	
1,2-Dibromoethane (EDB)	**<20.2**	ug/L	100	20.2	100		10/19/23 20:12	106-93-4	
Dibromomethane	**<17.3**	ug/L	100	17.3	100		10/19/23 20:12	74-95-3	
1,2-Dichlorobenzene	**<13.1**	ug/L	100	13.1	100		10/19/23 20:12	95-50-1	
1,3-Dichlorobenzene	**<12.3**	ug/L	100	12.3	100		10/19/23 20:12	541-73-1	
1,4-Dichlorobenzene	**<14.7**	ug/L	100	14.7	100		10/19/23 20:12	106-46-7	
Dichlorodifluoromethane	**<32.1**	ug/L	100	32.1	100		10/19/23 20:12	75-71-8	
1,1-Dichloroethane	**<23.1**	ug/L	100	23.1	100		10/19/23 20:12	75-34-3	
1,2-Dichloroethane	**553**	ug/L	100	16.9	100		10/19/23 20:12	107-06-2	
1,1-Dichloroethene	**<13.2**	ug/L	100	13.2	100		10/19/23 20:12	75-35-4	
cis-1,2-Dichloroethene	**<15.0**	ug/L	100	15.0	100		10/19/23 20:12	156-59-2	
trans-1,2-Dichloroethene	**<13.5**	ug/L	100	13.5	100		10/19/23 20:12	156-60-5	
1,2-Dichloropropane	**<14.8**	ug/L	100	14.8	100		10/19/23 20:12	78-87-5	
1,3-Dichloropropane	**<15.8**	ug/L	100	15.8	100		10/19/23 20:12	142-28-9	
2,2-Dichloropropane	**<11.6**	ug/L	100	11.6	100		10/19/23 20:12	594-20-7	
1,1-Dichloropropene	**<12.5**	ug/L	100	12.5	100		10/19/23 20:12	563-58-6	
cis-1,3-Dichloropropene	**<13.7**	ug/L	100	13.7	100		10/19/23 20:12	10061-01-5	
trans-1,3-Dichloropropene	**<12.9**	ug/L	100	12.9	100		10/19/23 20:12	10061-02-6	
Diethyl ether (Ethyl ether)	**<19.4**	ug/L	250	19.4	100		10/19/23 20:12	60-29-7	
Ethylbenzene	**180**	ug/L	100	10.9	100		10/19/23 20:12	100-41-4	
Hexachloro-1,3-butadiene	**<48.0**	ug/L	100	48.0	100		10/19/23 20:12	87-68-3	
Isopropylbenzene (Cumene)	**<11.6**	ug/L	100	11.6	100		10/19/23 20:12	98-82-8	
p-Isopropyltoluene	**<10.6**	ug/L	100	10.6	100		10/19/23 20:12	99-87-6	
Methylene Chloride	**<43.6**	ug/L	100	43.6	100		10/19/23 20:12	75-09-2	
Methyl-tert-butyl ether	**<12.6**	ug/L	100	12.6	100		10/19/23 20:12	1634-04-4	
Naphthalene	**174**	ug/L	100	17.5	100		10/19/23 20:12	91-20-3	
n-Propylbenzene	**<10.9**	ug/L	100	10.9	100		10/19/23 20:12	103-65-1	
Styrene	**<21.9**	ug/L	100	21.9	100		10/19/23 20:12	100-42-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Sample: MW-2/T68 **Lab ID: 10672877002** Collected: 10/16/23 11:21 Received: 10/17/23 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	**<19.0**	ug/L	100	19.0	100		10/19/23 20:12	630-20-6	
1,1,2,2-Tetrachloroethane	**<14.6**	ug/L	100	14.6	100		10/19/23 20:12	79-34-5	
Tetrachloroethene	**<21.7**	ug/L	100	21.7	100		10/19/23 20:12	127-18-4	
Toluene	**4250**	ug/L	100	20.7	100		10/19/23 20:12	108-88-3	
1,2,3-Trichlorobenzene	**<25.2**	ug/L	100	25.2	100		10/19/23 20:12	87-61-6	
1,2,4-Trichlorobenzene	**<25.7**	ug/L	100	25.7	100		10/19/23 20:12	120-82-1	
1,1,1-Trichloroethane	**<12.4**	ug/L	100	12.4	100		10/19/23 20:12	71-55-6	
1,1,2-Trichloroethane	**<22.4**	ug/L	100	22.4	100		10/19/23 20:12	79-00-5	
Trichloroethene	**<12.2**	ug/L	100	12.2	100		10/19/23 20:12	79-01-6	
Trichlorofluoromethane	**<12.3**	ug/L	100	12.3	100		10/19/23 20:12	75-69-4	
1,2,3-Trichloropropane	**<37.5**	ug/L	250	37.5	100		10/19/23 20:12	96-18-4	
1,2,4-Trimethylbenzene	**1730**	ug/L	100	13.0	100		10/19/23 20:12	95-63-6	
1,3,5-Trimethylbenzene	**576**	ug/L	100	11.3	100		10/19/23 20:12	108-67-8	
Vinyl chloride	**<11.8**	ug/L	100	11.8	100		10/19/23 20:12	75-01-4	
m&p-Xylene	**5140**	ug/L	200	41.9	100		10/19/23 20:12	179601-23-1	
o-Xylene	**2840**	ug/L	100	17.7	100		10/19/23 20:12	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	102	%.	75-125		100		10/19/23 20:12	2199-69-1	D4
4-Bromofluorobenzene (S)	103	%.	75-125		100		10/19/23 20:12	460-00-4	
Toluene-d8 (S)	104	%.	75-125		100		10/19/23 20:12	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Sample: MW-4/T68 **Lab ID: 10672877003** Collected: 10/16/23 11:15 Received: 10/17/23 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	**2360**	ug/L	20.0	4.3	20		10/19/23 19:42	71-43-2	
Bromobenzene	**<2.4**	ug/L	20.0	2.4	20		10/19/23 19:42	108-86-1	
Bromochloromethane	**<3.0**	ug/L	20.0	3.0	20		10/19/23 19:42	74-97-5	
Bromodichloromethane	**<2.3**	ug/L	20.0	2.3	20		10/19/23 19:42	75-27-4	
Bromoform	**<4.5**	ug/L	20.0	4.5	20		10/19/23 19:42	75-25-2	
Bromomethane	**<19.9**	ug/L	50.0	19.9	20		10/19/23 19:42	74-83-9	
n-Butylbenzene	**10.9J**	ug/L	20.0	6.3	20		10/19/23 19:42	104-51-8	
sec-Butylbenzene	**<4.1**	ug/L	20.0	4.1	20		10/19/23 19:42	135-98-8	
tert-Butylbenzene	**<3.9**	ug/L	20.0	3.9	20		10/19/23 19:42	98-06-6	
Carbon tetrachloride	**<2.7**	ug/L	20.0	2.7	20		10/19/23 19:42	56-23-5	
Chlorobenzene	**<2.7**	ug/L	20.0	2.7	20		10/19/23 19:42	108-90-7	
Chloroethane	**<8.3**	ug/L	20.0	8.3	20		10/19/23 19:42	75-00-3	
Chloroform	**<4.6**	ug/L	20.0	4.6	20		10/19/23 19:42	67-66-3	
Chloromethane	**<8.0**	ug/L	20.0	8.0	20		10/19/23 19:42	74-87-3	
2-Chlorotoluene	**<4.0**	ug/L	20.0	4.0	20		10/19/23 19:42	95-49-8	
4-Chlorotoluene	**<2.5**	ug/L	20.0	2.5	20		10/19/23 19:42	106-43-4	
1,2-Dibromo-3-chloropropane	**<7.1**	ug/L	50.0	7.1	20		10/19/23 19:42	96-12-8	
Dibromochloromethane	**<4.1**	ug/L	20.0	4.1	20		10/19/23 19:42	124-48-1	
1,2-Dibromoethane (EDB)	**<4.0**	ug/L	20.0	4.0	20		10/19/23 19:42	106-93-4	
Dibromomethane	**<3.5**	ug/L	20.0	3.5	20		10/19/23 19:42	74-95-3	
1,2-Dichlorobenzene	**<2.6**	ug/L	20.0	2.6	20		10/19/23 19:42	95-50-1	
1,3-Dichlorobenzene	**<2.5**	ug/L	20.0	2.5	20		10/19/23 19:42	541-73-1	
1,4-Dichlorobenzene	**<2.9**	ug/L	20.0	2.9	20		10/19/23 19:42	106-46-7	
Dichlorodifluoromethane	**<6.4**	ug/L	20.0	6.4	20		10/19/23 19:42	75-71-8	
1,1-Dichloroethane	**<4.6**	ug/L	20.0	4.6	20		10/19/23 19:42	75-34-3	
1,2-Dichloroethane	**<3.4**	ug/L	20.0	3.4	20		10/19/23 19:42	107-06-2	
1,1-Dichloroethene	**<2.6**	ug/L	20.0	2.6	20		10/19/23 19:42	75-35-4	
cis-1,2-Dichloroethene	**<3.0**	ug/L	20.0	3.0	20		10/19/23 19:42	156-59-2	
trans-1,2-Dichloroethene	**<2.7**	ug/L	20.0	2.7	20		10/19/23 19:42	156-60-5	
1,2-Dichloropropane	**<3.0**	ug/L	20.0	3.0	20		10/19/23 19:42	78-87-5	
1,3-Dichloropropane	**<3.2**	ug/L	20.0	3.2	20		10/19/23 19:42	142-28-9	
2,2-Dichloropropane	**<2.3**	ug/L	20.0	2.3	20		10/19/23 19:42	594-20-7	
1,1-Dichloropropene	**<2.5**	ug/L	20.0	2.5	20		10/19/23 19:42	563-58-6	
cis-1,3-Dichloropropene	**<2.7**	ug/L	20.0	2.7	20		10/19/23 19:42	10061-01-5	
trans-1,3-Dichloropropene	**<2.6**	ug/L	20.0	2.6	20		10/19/23 19:42	10061-02-6	
Diethyl ether (Ethyl ether)	**<3.9**	ug/L	50.0	3.9	20		10/19/23 19:42	60-29-7	
Ethylbenzene	**340**	ug/L	20.0	2.2	20		10/19/23 19:42	100-41-4	
Hexachloro-1,3-butadiene	**<9.6**	ug/L	20.0	9.6	20		10/19/23 19:42	87-68-3	
Isopropylbenzene (Cumene)	**21.3**	ug/L	20.0	2.3	20		10/19/23 19:42	98-82-8	
p-Isopropyltoluene	**8.8J**	ug/L	20.0	2.1	20		10/19/23 19:42	99-87-6	
Methylene Chloride	**<8.7**	ug/L	20.0	8.7	20		10/19/23 19:42	75-09-2	
Methyl-tert-butyl ether	**<2.5**	ug/L	20.0	2.5	20		10/19/23 19:42	1634-04-4	
Naphthalene	**<3.5**	ug/L	20.0	3.5	20		10/19/23 19:42	91-20-3	
n-Propylbenzene	**45.8**	ug/L	20.0	2.2	20		10/19/23 19:42	103-65-1	
Styrene	**<4.4**	ug/L	20.0	4.4	20		10/19/23 19:42	100-42-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Sample: MW-4/T68 **Lab ID: 10672877003** Collected: 10/16/23 11:15 Received: 10/17/23 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		10/19/23 19:42	630-20-6	
1,1,2,2-Tetrachloroethane	**<2.9**	ug/L	20.0	2.9	20		10/19/23 19:42	79-34-5	
Tetrachloroethene	**<4.3**	ug/L	20.0	4.3	20		10/19/23 19:42	127-18-4	
Toluene	**4.6J**	ug/L	20.0	4.1	20		10/19/23 19:42	108-88-3	
1,2,3-Trichlorobenzene	**<5.0**	ug/L	20.0	5.0	20		10/19/23 19:42	87-61-6	
1,2,4-Trichlorobenzene	**<5.1**	ug/L	20.0	5.1	20		10/19/23 19:42	120-82-1	
1,1,1-Trichloroethane	**<2.5**	ug/L	20.0	2.5	20		10/19/23 19:42	71-55-6	
1,1,2-Trichloroethane	**<4.5**	ug/L	20.0	4.5	20		10/19/23 19:42	79-00-5	
Trichloroethene	**<2.4**	ug/L	20.0	2.4	20		10/19/23 19:42	79-01-6	
Trichlorofluoromethane	**<2.5**	ug/L	20.0	2.5	20		10/19/23 19:42	75-69-4	
1,2,3-Trichloropropane	**<7.5**	ug/L	50.0	7.5	20		10/19/23 19:42	96-18-4	
1,2,4-Trimethylbenzene	**669**	ug/L	20.0	2.6	20		10/19/23 19:42	95-63-6	
1,3,5-Trimethylbenzene	**47.5**	ug/L	20.0	2.3	20		10/19/23 19:42	108-67-8	
Vinyl chloride	**<2.4**	ug/L	20.0	2.4	20		10/19/23 19:42	75-01-4	
m&p-Xylene	**15.8J**	ug/L	40.0	8.4	20		10/19/23 19:42	179601-23-1	
o-Xylene	**<3.5**	ug/L	20.0	3.5	20		10/19/23 19:42	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	101	%.	75-125		20		10/19/23 19:42	2199-69-1	D4
4-Bromofluorobenzene (S)	103	%.	75-125		20		10/19/23 19:42	460-00-4	
Toluene-d8 (S)	103	%.	75-125		20		10/19/23 19:42	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Sample: MW-5/T68 **Lab ID: 10672877004** Collected: 10/16/23 11:05 Received: 10/17/23 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	250	53.2	250		10/19/23 20:27	71-43-2	
Bromobenzene	**<30.0**	ug/L	250	30.0	250		10/19/23 20:27	108-86-1	
Bromochloromethane	**<38.0**	ug/L	250	38.0	250		10/19/23 20:27	74-97-5	
Bromodichloromethane	**<29.2**	ug/L	250	29.2	250		10/19/23 20:27	75-27-4	
Bromoform	**<55.8**	ug/L	250	55.8	250		10/19/23 20:27	75-25-2	
Bromomethane	**<249**	ug/L	625	249	250		10/19/23 20:27	74-83-9	
n-Butylbenzene	**<79.0**	ug/L	250	79.0	250		10/19/23 20:27	104-51-8	
sec-Butylbenzene	**<51.0**	ug/L	250	51.0	250		10/19/23 20:27	135-98-8	
tert-Butylbenzene	**<49.2**	ug/L	250	49.2	250		10/19/23 20:27	98-06-6	
Carbon tetrachloride	**<33.5**	ug/L	250	33.5	250		10/19/23 20:27	56-23-5	
Chlorobenzene	**<33.2**	ug/L	250	33.2	250		10/19/23 20:27	108-90-7	
Chloroethane	**<103**	ug/L	250	103	250		10/19/23 20:27	75-00-3	
Chloroform	**<57.5**	ug/L	250	57.5	250		10/19/23 20:27	67-66-3	
Chloromethane	**<100**	ug/L	250	100	250		10/19/23 20:27	74-87-3	
2-Chlorotoluene	**<49.5**	ug/L	250	49.5	250		10/19/23 20:27	95-49-8	
4-Chlorotoluene	**<31.2**	ug/L	250	31.2	250		10/19/23 20:27	106-43-4	
1,2-Dibromo-3-chloropropane	**<89.0**	ug/L	625	89.0	250		10/19/23 20:27	96-12-8	
Dibromochloromethane	**<50.8**	ug/L	250	50.8	250		10/19/23 20:27	124-48-1	
1,2-Dibromoethane (EDB)	**<50.5**	ug/L	250	50.5	250		10/19/23 20:27	106-93-4	
Dibromomethane	**<43.2**	ug/L	250	43.2	250		10/19/23 20:27	74-95-3	
1,2-Dichlorobenzene	**<32.8**	ug/L	250	32.8	250		10/19/23 20:27	95-50-1	
1,3-Dichlorobenzene	**<30.8**	ug/L	250	30.8	250		10/19/23 20:27	541-73-1	
1,4-Dichlorobenzene	**<36.8**	ug/L	250	36.8	250		10/19/23 20:27	106-46-7	
Dichlorodifluoromethane	**<80.2**	ug/L	250	80.2	250		10/19/23 20:27	75-71-8	
1,1-Dichloroethane	**<57.8**	ug/L	250	57.8	250		10/19/23 20:27	75-34-3	
1,2-Dichloroethane	**<42.2**	ug/L	250	42.2	250		10/19/23 20:27	107-06-2	
1,1-Dichloroethene	**<33.0**	ug/L	250	33.0	250		10/19/23 20:27	75-35-4	
cis-1,2-Dichloroethene	**<37.5**	ug/L	250	37.5	250		10/19/23 20:27	156-59-2	
trans-1,2-Dichloroethene	**<33.8**	ug/L	250	33.8	250		10/19/23 20:27	156-60-5	
1,2-Dichloropropane	**<37.0**	ug/L	250	37.0	250		10/19/23 20:27	78-87-5	
1,3-Dichloropropane	**<39.5**	ug/L	250	39.5	250		10/19/23 20:27	142-28-9	
2,2-Dichloropropane	**<29.0**	ug/L	250	29.0	250		10/19/23 20:27	594-20-7	
1,1-Dichloropropene	**<31.2**	ug/L	250	31.2	250		10/19/23 20:27	563-58-6	
cis-1,3-Dichloropropene	**<34.2**	ug/L	250	34.2	250		10/19/23 20:27	10061-01-5	
trans-1,3-Dichloropropene	**<32.2**	ug/L	250	32.2	250		10/19/23 20:27	10061-02-6	
Diethyl ether (Ethyl ether)	**<48.5**	ug/L	625	48.5	250		10/19/23 20:27	60-29-7	
Ethylbenzene	**2260**	ug/L	250	27.2	250		10/19/23 20:27	100-41-4	
Hexachloro-1,3-butadiene	**<120**	ug/L	250	120	250		10/19/23 20:27	87-68-3	
Isopropylbenzene (Cumene)	**72.8J**	ug/L	250	29.0	250		10/19/23 20:27	98-82-8	
p-Isopropyltoluene	**<26.5**	ug/L	250	26.5	250		10/19/23 20:27	99-87-6	
Methylene Chloride	**<109**	ug/L	250	109	250		10/19/23 20:27	75-09-2	
Methyl-tert-butyl ether	**<31.5**	ug/L	250	31.5	250		10/19/23 20:27	1634-04-4	
Naphthalene	**541**	ug/L	250	43.8	250		10/19/23 20:27	91-20-3	
n-Propylbenzene	**194J**	ug/L	250	27.2	250		10/19/23 20:27	103-65-1	
Styrene	**<54.8**	ug/L	250	54.8	250		10/19/23 20:27	100-42-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Sample: MW-5/T68 **Lab ID: 10672877004** Collected: 10/16/23 11:05 Received: 10/17/23 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	**<47.5**	ug/L	250	47.5	250		10/19/23 20:27	630-20-6	
1,1,2,2-Tetrachloroethane	**<36.5**	ug/L	250	36.5	250		10/19/23 20:27	79-34-5	
Tetrachloroethene	**<54.2**	ug/L	250	54.2	250		10/19/23 20:27	127-18-4	
Toluene	**30400**	ug/L	250	51.8	250		10/19/23 20:27	108-88-3	
1,2,3-Trichlorobenzene	**<63.0**	ug/L	250	63.0	250		10/19/23 20:27	87-61-6	
1,2,4-Trichlorobenzene	**<64.2**	ug/L	250	64.2	250		10/19/23 20:27	120-82-1	
1,1,1-Trichloroethane	**<31.0**	ug/L	250	31.0	250		10/19/23 20:27	71-55-6	
1,1,2-Trichloroethane	**<56.0**	ug/L	250	56.0	250		10/19/23 20:27	79-00-5	
Trichloroethene	**<30.5**	ug/L	250	30.5	250		10/19/23 20:27	79-01-6	
Trichlorofluoromethane	**<30.8**	ug/L	250	30.8	250		10/19/23 20:27	75-69-4	
1,2,3-Trichloropropane	**<93.8**	ug/L	625	93.8	250		10/19/23 20:27	96-18-4	
1,2,4-Trimethylbenzene	**3100**	ug/L	250	32.5	250		10/19/23 20:27	95-63-6	
1,3,5-Trimethylbenzene	**861**	ug/L	250	28.2	250		10/19/23 20:27	108-67-8	
Vinyl chloride	**<29.5**	ug/L	250	29.5	250		10/19/23 20:27	75-01-4	
m&p-Xylene	**15100**	ug/L	500	105	250		10/19/23 20:27	179601-23-1	
o-Xylene	**7050**	ug/L	250	44.2	250		10/19/23 20:27	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	100	%.	75-125		250		10/19/23 20:27	2199-69-1	D4
4-Bromofluorobenzene (S)	101	%.	75-125		250		10/19/23 20:27	460-00-4	
Toluene-d8 (S)	105	%.	75-125		250		10/19/23 20:27	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Sample: MW-5/T66 **Lab ID: 10672877005** Collected: 10/16/23 10:52 Received: 10/17/23 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	**2850**	ug/L	50.0	10.6	50		10/19/23 19:57	71-43-2	
Bromobenzene	**<6.0**	ug/L	50.0	6.0	50		10/19/23 19:57	108-86-1	
Bromochloromethane	**<7.6**	ug/L	50.0	7.6	50		10/19/23 19:57	74-97-5	
Bromodichloromethane	**<5.8**	ug/L	50.0	5.8	50		10/19/23 19:57	75-27-4	
Bromoform	**<11.2**	ug/L	50.0	11.2	50		10/19/23 19:57	75-25-2	
Bromomethane	**<49.8**	ug/L	125	49.8	50		10/19/23 19:57	74-83-9	
n-Butylbenzene	**<15.8**	ug/L	50.0	15.8	50		10/19/23 19:57	104-51-8	
sec-Butylbenzene	**<10.2**	ug/L	50.0	10.2	50		10/19/23 19:57	135-98-8	
tert-Butylbenzene	**<9.8**	ug/L	50.0	9.8	50		10/19/23 19:57	98-06-6	
Carbon tetrachloride	**<6.7**	ug/L	50.0	6.7	50		10/19/23 19:57	56-23-5	
Chlorobenzene	**<6.6**	ug/L	50.0	6.6	50		10/19/23 19:57	108-90-7	
Chloroethane	**<20.6**	ug/L	50.0	20.6	50		10/19/23 19:57	75-00-3	
Chloroform	**<11.5**	ug/L	50.0	11.5	50		10/19/23 19:57	67-66-3	
Chloromethane	**<20.0**	ug/L	50.0	20.0	50		10/19/23 19:57	74-87-3	
2-Chlorotoluene	**<9.9**	ug/L	50.0	9.9	50		10/19/23 19:57	95-49-8	
4-Chlorotoluene	**<6.2**	ug/L	50.0	6.2	50		10/19/23 19:57	106-43-4	
1,2-Dibromo-3-chloropropane	**<17.8**	ug/L	125	17.8	50		10/19/23 19:57	96-12-8	
Dibromochloromethane	**<10.2**	ug/L	50.0	10.2	50		10/19/23 19:57	124-48-1	
1,2-Dibromoethane (EDB)	**<10.1**	ug/L	50.0	10.1	50		10/19/23 19:57	106-93-4	
Dibromomethane	**<8.6**	ug/L	50.0	8.6	50		10/19/23 19:57	74-95-3	
1,2-Dichlorobenzene	**<6.6**	ug/L	50.0	6.6	50		10/19/23 19:57	95-50-1	
1,3-Dichlorobenzene	**<6.2**	ug/L	50.0	6.2	50		10/19/23 19:57	541-73-1	
1,4-Dichlorobenzene	**<7.4**	ug/L	50.0	7.4	50		10/19/23 19:57	106-46-7	
Dichlorodifluoromethane	**<16.0**	ug/L	50.0	16.0	50		10/19/23 19:57	75-71-8	
1,1-Dichloroethane	**<11.6**	ug/L	50.0	11.6	50		10/19/23 19:57	75-34-3	
1,2-Dichloroethane	**<8.4**	ug/L	50.0	8.4	50		10/19/23 19:57	107-06-2	
1,1-Dichloroethene	**<6.6**	ug/L	50.0	6.6	50		10/19/23 19:57	75-35-4	
cis-1,2-Dichloroethene	**<7.5**	ug/L	50.0	7.5	50		10/19/23 19:57	156-59-2	
trans-1,2-Dichloroethene	**<6.8**	ug/L	50.0	6.8	50		10/19/23 19:57	156-60-5	
1,2-Dichloropropane	**<7.4**	ug/L	50.0	7.4	50		10/19/23 19:57	78-87-5	
1,3-Dichloropropane	**<7.9**	ug/L	50.0	7.9	50		10/19/23 19:57	142-28-9	
2,2-Dichloropropane	**<5.8**	ug/L	50.0	5.8	50		10/19/23 19:57	594-20-7	
1,1-Dichloropropene	**<6.2**	ug/L	50.0	6.2	50		10/19/23 19:57	563-58-6	
cis-1,3-Dichloropropene	**<6.8**	ug/L	50.0	6.8	50		10/19/23 19:57	10061-01-5	
trans-1,3-Dichloropropene	**<6.4**	ug/L	50.0	6.4	50		10/19/23 19:57	10061-02-6	
Diethyl ether (Ethyl ether)	**<9.7**	ug/L	125	9.7	50		10/19/23 19:57	60-29-7	
Ethylbenzene	**910**	ug/L	50.0	5.4	50		10/19/23 19:57	100-41-4	
Hexachloro-1,3-butadiene	**<24.0**	ug/L	50.0	24.0	50		10/19/23 19:57	87-68-3	
Isopropylbenzene (Cumene)	**28.9J**	ug/L	50.0	5.8	50		10/19/23 19:57	98-82-8	
p-Isopropyltoluene	**<5.3**	ug/L	50.0	5.3	50		10/19/23 19:57	99-87-6	
Methylene Chloride	**<21.8**	ug/L	50.0	21.8	50		10/19/23 19:57	75-09-2	
Methyl-tert-butyl ether	**<6.3**	ug/L	50.0	6.3	50		10/19/23 19:57	1634-04-4	
Naphthalene	**272**	ug/L	50.0	8.8	50		10/19/23 19:57	91-20-3	
n-Propylbenzene	**70.8**	ug/L	50.0	5.4	50		10/19/23 19:57	103-65-1	
Styrene	**<11.0**	ug/L	50.0	11.0	50		10/19/23 19:57	100-42-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Sample: MW-5/T66 **Lab ID: 10672877005** Collected: 10/16/23 10:52 Received: 10/17/23 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	**<9.5**	ug/L	50.0	9.5	50		10/19/23 19:57	630-20-6	
1,1,2,2-Tetrachloroethane	**<7.3**	ug/L	50.0	7.3	50		10/19/23 19:57	79-34-5	
Tetrachloroethene	**<10.8**	ug/L	50.0	10.8	50		10/19/23 19:57	127-18-4	
Toluene	**1700**	ug/L	50.0	10.4	50		10/19/23 19:57	108-88-3	
1,2,3-Trichlorobenzene	**<12.6**	ug/L	50.0	12.6	50		10/19/23 19:57	87-61-6	
1,2,4-Trichlorobenzene	**<12.8**	ug/L	50.0	12.8	50		10/19/23 19:57	120-82-1	
1,1,1-Trichloroethane	**<6.2**	ug/L	50.0	6.2	50		10/19/23 19:57	71-55-6	
1,1,2-Trichloroethane	**<11.2**	ug/L	50.0	11.2	50		10/19/23 19:57	79-00-5	
Trichloroethene	**<6.1**	ug/L	50.0	6.1	50		10/19/23 19:57	79-01-6	
Trichlorofluoromethane	**<6.2**	ug/L	50.0	6.2	50		10/19/23 19:57	75-69-4	
1,2,3-Trichloropropane	**<18.8**	ug/L	125	18.8	50		10/19/23 19:57	96-18-4	
1,2,4-Trimethylbenzene	**2170**	ug/L	50.0	6.5	50		10/19/23 19:57	95-63-6	
1,3,5-Trimethylbenzene	**627**	ug/L	50.0	5.6	50		10/19/23 19:57	108-67-8	
Vinyl chloride	**<5.9**	ug/L	50.0	5.9	50		10/19/23 19:57	75-01-4	
m&p-Xylene	**8700**	ug/L	100	21.0	50		10/19/23 19:57	179601-23-1	
o-Xylene	**3180**	ug/L	50.0	8.8	50		10/19/23 19:57	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	102	%.	75-125		50		10/19/23 19:57	2199-69-1	D4
4-Bromofluorobenzene (S)	104	%.	75-125		50		10/19/23 19:57	460-00-4	
Toluene-d8 (S)	106	%.	75-125		50		10/19/23 19:57	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Sample: MW-6/T68 **Lab ID: 10672877006** Collected: 10/16/23 11:36 Received: 10/17/23 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	**22200**	ug/L	200	42.6	200		10/23/23 23:59	71-43-2	
Bromobenzene	**<24.0**	ug/L	200	24.0	200		10/23/23 23:59	108-86-1	
Bromochloromethane	**<30.4**	ug/L	200	30.4	200		10/23/23 23:59	74-97-5	
Bromodichloromethane	**<23.4**	ug/L	200	23.4	200		10/23/23 23:59	75-27-4	
Bromoform	**<44.6**	ug/L	200	44.6	200		10/23/23 23:59	75-25-2	
Bromomethane	**<199**	ug/L	500	199	200		10/23/23 23:59	74-83-9	
n-Butylbenzene	**<63.2**	ug/L	200	63.2	200		10/23/23 23:59	104-51-8	
sec-Butylbenzene	**<40.8**	ug/L	200	40.8	200		10/23/23 23:59	135-98-8	
tert-Butylbenzene	**<39.4**	ug/L	200	39.4	200		10/23/23 23:59	98-06-6	
Carbon tetrachloride	**<26.8**	ug/L	200	26.8	200		10/23/23 23:59	56-23-5	
Chlorobenzene	**<26.6**	ug/L	200	26.6	200		10/23/23 23:59	108-90-7	
Chloroethane	**<82.6**	ug/L	200	82.6	200		10/23/23 23:59	75-00-3	
Chloroform	**<46.0**	ug/L	200	46.0	200		10/23/23 23:59	67-66-3	
Chloromethane	**<80.2**	ug/L	200	80.2	200		10/23/23 23:59	74-87-3	
2-Chlorotoluene	**<39.6**	ug/L	200	39.6	200		10/23/23 23:59	95-49-8	
4-Chlorotoluene	**<25.0**	ug/L	200	25.0	200		10/23/23 23:59	106-43-4	
1,2-Dibromo-3-chloropropane	**<71.2**	ug/L	500	71.2	200		10/23/23 23:59	96-12-8	
Dibromochloromethane	**<40.6**	ug/L	200	40.6	200		10/23/23 23:59	124-48-1	
1,2-Dibromoethane (EDB)	**<40.4**	ug/L	200	40.4	200		10/23/23 23:59	106-93-4	
Dibromomethane	**<34.6**	ug/L	200	34.6	200		10/23/23 23:59	74-95-3	
1,2-Dichlorobenzene	**<26.2**	ug/L	200	26.2	200		10/23/23 23:59	95-50-1	
1,3-Dichlorobenzene	**<24.6**	ug/L	200	24.6	200		10/23/23 23:59	541-73-1	
1,4-Dichlorobenzene	**<29.4**	ug/L	200	29.4	200		10/23/23 23:59	106-46-7	
Dichlorodifluoromethane	**<64.2**	ug/L	200	64.2	200		10/23/23 23:59	75-71-8	
1,1-Dichloroethane	**<46.2**	ug/L	200	46.2	200		10/23/23 23:59	75-34-3	
1,2-Dichloroethane	**<33.8**	ug/L	200	33.8	200		10/23/23 23:59	107-06-2	
1,1-Dichloroethene	**<26.4**	ug/L	200	26.4	200		10/23/23 23:59	75-35-4	
cis-1,2-Dichloroethene	**<30.0**	ug/L	200	30.0	200		10/23/23 23:59	156-59-2	
trans-1,2-Dichloroethene	**<27.0**	ug/L	200	27.0	200		10/23/23 23:59	156-60-5	
1,2-Dichloropropane	**<29.6**	ug/L	200	29.6	200		10/23/23 23:59	78-87-5	
1,3-Dichloropropane	**<31.6**	ug/L	200	31.6	200		10/23/23 23:59	142-28-9	
2,2-Dichloropropane	**<23.2**	ug/L	200	23.2	200		10/23/23 23:59	594-20-7	
1,1-Dichloropropene	**<25.0**	ug/L	200	25.0	200		10/23/23 23:59	563-58-6	
cis-1,3-Dichloropropene	**<27.4**	ug/L	200	27.4	200		10/23/23 23:59	10061-01-5	
trans-1,3-Dichloropropene	**<25.8**	ug/L	200	25.8	200		10/23/23 23:59	10061-02-6	
Diethyl ether (Ethyl ether)	**<38.8**	ug/L	500	38.8	200		10/23/23 23:59	60-29-7	
Ethylbenzene	**2070**	ug/L	200	21.8	200		10/23/23 23:59	100-41-4	
Hexachloro-1,3-butadiene	**<96.0**	ug/L	200	96.0	200		10/23/23 23:59	87-68-3	
Isopropylbenzene (Cumene)	**59.3J**	ug/L	200	23.2	200		10/23/23 23:59	98-82-8	
p-Isopropyltoluene	**<21.2**	ug/L	200	21.2	200		10/23/23 23:59	99-87-6	
Methylene Chloride	**<87.2**	ug/L	200	87.2	200		10/25/23 15:23	75-09-2	D4
Methyl-tert-butyl ether	**<25.2**	ug/L	200	25.2	200		10/23/23 23:59	1634-04-4	
Naphthalene	**495**	ug/L	200	35.0	200		10/23/23 23:59	91-20-3	
n-Propylbenzene	**174J**	ug/L	200	21.8	200		10/23/23 23:59	103-65-1	
Styrene	**<43.8**	ug/L	200	43.8	200		10/23/23 23:59	100-42-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Sample: MW-6/T68 **Lab ID: 10672877006** Collected: 10/16/23 11:36 Received: 10/17/23 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		10/23/23 23:59	630-20-6	
1,1,2,2-Tetrachloroethane	**<29.2**	ug/L	200	29.2	200		10/23/23 23:59	79-34-5	
Tetrachloroethene	**<43.4**	ug/L	200	43.4	200		10/23/23 23:59	127-18-4	
Toluene	**17700**	ug/L	200	41.4	200		10/23/23 23:59	108-88-3	
1,2,3-Trichlorobenzene	**<50.4**	ug/L	200	50.4	200		10/23/23 23:59	87-61-6	
1,2,4-Trichlorobenzene	**<51.4**	ug/L	200	51.4	200		10/23/23 23:59	120-82-1	
1,1,1-Trichloroethane	**<24.8**	ug/L	200	24.8	200		10/23/23 23:59	71-55-6	
1,1,2-Trichloroethane	**<44.8**	ug/L	200	44.8	200		10/23/23 23:59	79-00-5	
Trichloroethene	**<24.4**	ug/L	200	24.4	200		10/23/23 23:59	79-01-6	
Trichlorofluoromethane	**<24.6**	ug/L	200	24.6	200		10/23/23 23:59	75-69-4	
1,2,3-Trichloropropane	**<75.0**	ug/L	500	75.0	200		10/23/23 23:59	96-18-4	
1,2,4-Trimethylbenzene	**3200**	ug/L	200	26.0	200		10/23/23 23:59	95-63-6	
1,3,5-Trimethylbenzene	**915**	ug/L	200	22.6	200		10/23/23 23:59	108-67-8	
Vinyl chloride	**<23.6**	ug/L	200	23.6	200		10/23/23 23:59	75-01-4	
m&p-Xylene	**14500**	ug/L	400	83.8	200		10/23/23 23:59	179601-23-1	
o-Xylene	**7390**	ug/L	200	35.4	200		10/23/23 23:59	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	101	%.	75-125		200		10/23/23 23:59	2199-69-1	D4
4-Bromofluorobenzene (S)	99	%.	75-125		200		10/23/23 23:59	460-00-4	
Toluene-d8 (S)	97	%.	75-125		200		10/23/23 23:59	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Sample: Trip Blank **Lab ID: 10672877007** Collected: 10/16/23 00:00 Received: 10/17/23 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	**<0.21**	ug/L	1.0	0.21	1		10/25/23 14:53	71-43-2	
Bromobenzene	**<0.12**	ug/L	1.0	0.12	1		10/25/23 14:53	108-86-1	
Bromochloromethane	**<0.15**	ug/L	1.0	0.15	1		10/25/23 14:53	74-97-5	
Bromodichloromethane	**<0.12**	ug/L	1.0	0.12	1		10/25/23 14:53	75-27-4	
Bromoform	**<0.22**	ug/L	1.0	0.22	1		10/25/23 14:53	75-25-2	
Bromomethane	**<1.0**	ug/L	2.5	1.0	1		10/25/23 14:53	74-83-9	
n-Butylbenzene	**<0.32**	ug/L	1.0	0.32	1		10/25/23 14:53	104-51-8	
sec-Butylbenzene	**<0.20**	ug/L	1.0	0.20	1		10/25/23 14:53	135-98-8	
tert-Butylbenzene	**<0.20**	ug/L	1.0	0.20	1		10/25/23 14:53	98-06-6	
Carbon tetrachloride	**<0.13**	ug/L	1.0	0.13	1		10/25/23 14:53	56-23-5	
Chlorobenzene	**<0.13**	ug/L	1.0	0.13	1		10/25/23 14:53	108-90-7	
Chloroethane	**<0.41**	ug/L	1.0	0.41	1		10/25/23 14:53	75-00-3	
Chloroform	**<0.23**	ug/L	1.0	0.23	1		10/25/23 14:53	67-66-3	
Chloromethane	**<0.40**	ug/L	1.0	0.40	1		10/25/23 14:53	74-87-3	
2-Chlorotoluene	**<0.20**	ug/L	1.0	0.20	1		10/25/23 14:53	95-49-8	
4-Chlorotoluene	**<0.12**	ug/L	1.0	0.12	1		10/25/23 14:53	106-43-4	
1,2-Dibromo-3-chloropropane	**<0.36**	ug/L	2.5	0.36	1		10/25/23 14:53	96-12-8	
Dibromochloromethane	**<0.20**	ug/L	1.0	0.20	1		10/25/23 14:53	124-48-1	
1,2-Dibromoethane (EDB)	**<0.20**	ug/L	1.0	0.20	1		10/25/23 14:53	106-93-4	
Dibromomethane	**<0.17**	ug/L	1.0	0.17	1		10/25/23 14:53	74-95-3	
1,2-Dichlorobenzene	**<0.13**	ug/L	1.0	0.13	1		10/25/23 14:53	95-50-1	
1,3-Dichlorobenzene	**<0.12**	ug/L	1.0	0.12	1		10/25/23 14:53	541-73-1	
1,4-Dichlorobenzene	**<0.15**	ug/L	1.0	0.15	1		10/25/23 14:53	106-46-7	
Dichlorodifluoromethane	**<0.32**	ug/L	1.0	0.32	1		10/25/23 14:53	75-71-8	
1,1-Dichloroethane	**<0.23**	ug/L	1.0	0.23	1		10/25/23 14:53	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		10/25/23 14:53	107-06-2	
1,1-Dichloroethene	**<0.13**	ug/L	1.0	0.13	1		10/25/23 14:53	75-35-4	
cis-1,2-Dichloroethene	**<0.15**	ug/L	1.0	0.15	1		10/25/23 14:53	156-59-2	
trans-1,2-Dichloroethene	**<0.14**	ug/L	1.0	0.14	1		10/25/23 14:53	156-60-5	
1,2-Dichloropropane	**<0.15**	ug/L	1.0	0.15	1		10/25/23 14:53	78-87-5	
1,3-Dichloropropane	**<0.16**	ug/L	1.0	0.16	1		10/25/23 14:53	142-28-9	
2,2-Dichloropropane	**<0.12**	ug/L	1.0	0.12	1		10/25/23 14:53	594-20-7	
1,1-Dichloropropene	**<0.12**	ug/L	1.0	0.12	1		10/25/23 14:53	563-58-6	
cis-1,3-Dichloropropene	**<0.14**	ug/L	1.0	0.14	1		10/25/23 14:53	10061-01-5	
trans-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		10/25/23 14:53	10061-02-6	
Diethyl ether (Ethyl ether)	**<0.19**	ug/L	2.5	0.19	1		10/25/23 14:53	60-29-7	
Ethylbenzene	**<0.11**	ug/L	1.0	0.11	1		10/25/23 14:53	100-41-4	
Hexachloro-1,3-butadiene	**<0.48**	ug/L	1.0	0.48	1		10/25/23 14:53	87-68-3	
Isopropylbenzene (Cumene)	**<0.12**	ug/L	1.0	0.12	1		10/25/23 14:53	98-82-8	
p-Isopropyltoluene	**<0.11**	ug/L	1.0	0.11	1		10/25/23 14:53	99-87-6	
Methylene Chloride	**<0.44**	ug/L	1.0	0.44	1		10/25/23 14:53	75-09-2	
Methyl-tert-butyl ether	**<0.13**	ug/L	1.0	0.13	1		10/25/23 14:53	1634-04-4	
Naphthalene	**<0.18**	ug/L	1.0	0.18	1		10/25/23 14:53	91-20-3	
n-Propylbenzene	**<0.11**	ug/L	1.0	0.11	1		10/25/23 14:53	103-65-1	
Styrene	**<0.22**	ug/L	1.0	0.22	1		10/25/23 14:53	100-42-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Sample: Trip Blank **Lab ID: 10672877007** Collected: 10/16/23 00:00 Received: 10/17/23 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		10/25/23 14:53	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.15**	ug/L	1.0	0.15	1		10/25/23 14:53	79-34-5	
Tetrachloroethene	**<0.22**	ug/L	1.0	0.22	1		10/25/23 14:53	127-18-4	
Toluene	**<0.21**	ug/L	1.0	0.21	1		10/25/23 14:53	108-88-3	
1,2,3-Trichlorobenzene	**<0.25**	ug/L	1.0	0.25	1		10/25/23 14:53	87-61-6	
1,2,4-Trichlorobenzene	**<0.26**	ug/L	1.0	0.26	1		10/25/23 14:53	120-82-1	
1,1,1-Trichloroethane	**<0.12**	ug/L	1.0	0.12	1		10/25/23 14:53	71-55-6	
1,1,2-Trichloroethane	**<0.22**	ug/L	1.0	0.22	1		10/25/23 14:53	79-00-5	
Trichloroethene	**<0.12**	ug/L	1.0	0.12	1		10/25/23 14:53	79-01-6	
Trichlorofluoromethane	**<0.12**	ug/L	1.0	0.12	1		10/25/23 14:53	75-69-4	
1,2,3-Trichloropropane	**<0.38**	ug/L	2.5	0.38	1		10/25/23 14:53	96-18-4	
1,2,4-Trimethylbenzene	**<0.13**	ug/L	1.0	0.13	1		10/25/23 14:53	95-63-6	
1,3,5-Trimethylbenzene	**<0.11**	ug/L	1.0	0.11	1		10/25/23 14:53	108-67-8	
Vinyl chloride	**<0.12**	ug/L	1.0	0.12	1		10/25/23 14:53	75-01-4	
m&p-Xylene	**<0.42**	ug/L	2.0	0.42	1		10/25/23 14:53	179601-23-1	
o-Xylene	**<0.18**	ug/L	1.0	0.18	1		10/25/23 14:53	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	100	%.	75-125		1		10/25/23 14:53	2199-69-1	
4-Bromofluorobenzene (S)	99	%.	75-125		1		10/25/23 14:53	460-00-4	
Toluene-d8 (S)	101	%.	75-125		1		10/25/23 14:53	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

QC Batch: 912960
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV 465 W
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10672877001, 10672877002, 10672877003, 10672877004, 10672877005

METHOD BLANK: 4804152 Matrix: Water
Associated Lab Samples: 10672877001, 10672877002, 10672877003, 10672877004, 10672877005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.19	1.0	10/19/23 15:03	
1,1,1-Trichloroethane	ug/L	<0.12	1.0	10/19/23 15:03	
1,1,2,2-Tetrachloroethane	ug/L	<0.15	1.0	10/19/23 15:03	
1,1,2-Trichloroethane	ug/L	<0.22	1.0	10/19/23 15:03	
1,1-Dichloroethane	ug/L	<0.23	1.0	10/19/23 15:03	
1,1-Dichloroethene	ug/L	<0.13	1.0	10/19/23 15:03	
1,1-Dichloropropene	ug/L	<0.12	1.0	10/19/23 15:03	
1,2,3-Trichlorobenzene	ug/L	<0.25	1.0	10/19/23 15:03	
1,2,3-Trichloropropane	ug/L	<0.38	2.5	10/19/23 15:03	
1,2,4-Trichlorobenzene	ug/L	<0.26	1.0	10/19/23 15:03	
1,2,4-Trimethylbenzene	ug/L	<0.13	1.0	10/19/23 15:03	
1,2-Dibromo-3-chloropropane	ug/L	<0.36	2.5	10/19/23 15:03	
1,2-Dibromoethane (EDB)	ug/L	<0.20	1.0	10/19/23 15:03	
1,2-Dichlorobenzene	ug/L	<0.13	1.0	10/19/23 15:03	
1,2-Dichloroethane	ug/L	<0.17	1.0	10/19/23 15:03	
1,2-Dichloropropane	ug/L	<0.15	1.0	10/19/23 15:03	
1,3,5-Trimethylbenzene	ug/L	<0.11	1.0	10/19/23 15:03	
1,3-Dichlorobenzene	ug/L	<0.12	1.0	10/19/23 15:03	
1,3-Dichloropropane	ug/L	<0.16	1.0	10/19/23 15:03	
1,4-Dichlorobenzene	ug/L	<0.15	1.0	10/19/23 15:03	
2,2-Dichloropropane	ug/L	<0.12	1.0	10/19/23 15:03	
2-Chlorotoluene	ug/L	<0.20	1.0	10/19/23 15:03	
4-Chlorotoluene	ug/L	<0.12	1.0	10/19/23 15:03	
Benzene	ug/L	<0.21	1.0	10/19/23 15:03	
Bromobenzene	ug/L	<0.12	1.0	10/19/23 15:03	
Bromochloromethane	ug/L	<0.15	1.0	10/19/23 15:03	
Bromodichloromethane	ug/L	<0.12	1.0	10/19/23 15:03	
Bromoform	ug/L	<0.22	1.0	10/19/23 15:03	
Bromomethane	ug/L	<1.0	2.5	10/19/23 15:03	
Carbon tetrachloride	ug/L	<0.13	1.0	10/19/23 15:03	
Chlorobenzene	ug/L	<0.13	1.0	10/19/23 15:03	
Chloroethane	ug/L	<0.41	1.0	10/19/23 15:03	
Chloroform	ug/L	<0.23	1.0	10/19/23 15:03	
Chloromethane	ug/L	<0.40	1.0	10/19/23 15:03	
cis-1,2-Dichloroethene	ug/L	<0.15	1.0	10/19/23 15:03	
cis-1,3-Dichloropropene	ug/L	<0.14	1.0	10/19/23 15:03	
Dibromochloromethane	ug/L	<0.20	1.0	10/19/23 15:03	
Dibromomethane	ug/L	<0.17	1.0	10/19/23 15:03	
Dichlorodifluoromethane	ug/L	<0.32	1.0	10/19/23 15:03	
Diethyl ether (Ethyl ether)	ug/L	<0.19	2.5	10/19/23 15:03	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

METHOD BLANK: 4804152 Matrix: Water
Associated Lab Samples: 10672877001, 10672877002, 10672877003, 10672877004, 10672877005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.11	1.0	10/19/23 15:03	
Hexachloro-1,3-butadiene	ug/L	<0.48	1.0	10/19/23 15:03	
Isopropylbenzene (Cumene)	ug/L	<0.12	1.0	10/19/23 15:03	
m&p-Xylene	ug/L	<0.42	2.0	10/19/23 15:03	
Methyl-tert-butyl ether	ug/L	<0.13	1.0	10/19/23 15:03	
Methylene Chloride	ug/L	<0.44	1.0	10/19/23 15:03	
n-Butylbenzene	ug/L	<0.32	1.0	10/19/23 15:03	
n-Propylbenzene	ug/L	<0.11	1.0	10/19/23 15:03	
Naphthalene	ug/L	<0.18	1.0	10/19/23 15:03	
o-Xylene	ug/L	<0.18	1.0	10/19/23 15:03	
p-Isopropyltoluene	ug/L	<0.11	1.0	10/19/23 15:03	
sec-Butylbenzene	ug/L	<0.20	1.0	10/19/23 15:03	
Styrene	ug/L	<0.22	1.0	10/19/23 15:03	
tert-Butylbenzene	ug/L	<0.20	1.0	10/19/23 15:03	
Tetrachloroethene	ug/L	<0.22	1.0	10/19/23 15:03	
Toluene	ug/L	<0.21	1.0	10/19/23 15:03	
trans-1,2-Dichloroethene	ug/L	<0.14	1.0	10/19/23 15:03	
trans-1,3-Dichloropropene	ug/L	<0.13	1.0	10/19/23 15:03	
Trichloroethene	ug/L	<0.12	1.0	10/19/23 15:03	
Trichlorofluoromethane	ug/L	<0.12	1.0	10/19/23 15:03	
Vinyl chloride	ug/L	<0.12	1.0	10/19/23 15:03	
1,2-Dichlorobenzene-d4 (S)	%.	102	75-125	10/19/23 15:03	
4-Bromofluorobenzene (S)	%.	104	75-125	10/19/23 15:03	
Toluene-d8 (S)	%.	105	75-125	10/19/23 15:03	

LABORATORY CONTROL SAMPLE: 4804153

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.2	96	75-125	
1,1,1-Trichloroethane	ug/L	20	20.8	104	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	19.2	96	71-125	
1,1,2-Trichloroethane	ug/L	20	19.8	99	75-125	
1,1-Dichloroethane	ug/L	20	20.0	100	75-125	
1,1-Dichloroethene	ug/L	20	20.0	100	69-125	
1,1-Dichloropropene	ug/L	20	21.2	106	74-125	
1,2,3-Trichlorobenzene	ug/L	20	16.7	84	70-131	
1,2,3-Trichloropropane	ug/L	20	17.7	88	73-125	
1,2,4-Trichlorobenzene	ug/L	20	17.0	85	75-125	
1,2,4-Trimethylbenzene	ug/L	20	18.3	92	75-125	
1,2-Dibromo-3-chloropropane	ug/L	20	16.8	84	68-129	
1,2-Dibromoethane (EDB)	ug/L	20	19.5	98	75-125	
1,2-Dichlorobenzene	ug/L	20	17.4	87	75-125	
1,2-Dichloroethane	ug/L	20	21.2	106	75-125	
1,2-Dichloropropane	ug/L	20	20.4	102	75-125	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

LABORATORY CONTROL SAMPLE: 4804153

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3,5-Trimethylbenzene	ug/L	20	18.3	92	75-125	
1,3-Dichlorobenzene	ug/L	20	18.6	93	75-125	
1,3-Dichloropropane	ug/L	20	19.5	98	75-125	
1,4-Dichlorobenzene	ug/L	20	17.9	89	75-125	
2,2-Dichloropropane	ug/L	20	20.6	103	65-125	
2-Chlorotoluene	ug/L	20	18.1	91	75-125	
4-Chlorotoluene	ug/L	20	18.4	92	75-125	
Benzene	ug/L	20	19.7	99	75-125	
Bromobenzene	ug/L	20	18.3	92	75-125	
Bromochloromethane	ug/L	20	20.4	102	75-125	
Bromodichloromethane	ug/L	20	20.8	104	75-125	
Bromoform	ug/L	20	18.0	90	75-134	
Bromomethane	ug/L	20	19.8	99	32-150	
Carbon tetrachloride	ug/L	20	20.8	104	73-126	
Chlorobenzene	ug/L	20	18.2	91	75-125	
Chloroethane	ug/L	20	24.2	121	70-125	
Chloroform	ug/L	20	20.4	102	75-125	
Chloromethane	ug/L	20	24.4	122	65-125	
cis-1,2-Dichloroethene	ug/L	20	20.3	102	75-125	
cis-1,3-Dichloropropene	ug/L	20	20.6	103	75-125	
Dibromochloromethane	ug/L	20	18.1	91	75-125	
Dibromomethane	ug/L	20	19.0	95	75-125	
Dichlorodifluoromethane	ug/L	20	24.2	121	65-135	
Diethyl ether (Ethyl ether)	ug/L	20	20.6	103	75-125	
Ethylbenzene	ug/L	20	19.0	95	75-125	
Hexachloro-1,3-butadiene	ug/L	20	17.3	87	63-128	
Isopropylbenzene (Cumene)	ug/L	20	19.9	100	75-125	
m&p-Xylene	ug/L	40	38.3	96	75-125	
Methyl-tert-butyl ether	ug/L	20	20.7	104	75-125	
Methylene Chloride	ug/L	20	19.0	95	72-125	
n-Butylbenzene	ug/L	20	18.9	94	68-125	
n-Propylbenzene	ug/L	20	18.6	93	74-125	
Naphthalene	ug/L	20	16.7	84	67-140	
o-Xylene	ug/L	20	19.2	96	75-125	
p-Isopropyltoluene	ug/L	20	18.5	92	75-126	
sec-Butylbenzene	ug/L	20	18.7	93	75-126	
Styrene	ug/L	20	19.1	96	75-139	
tert-Butylbenzene	ug/L	20	18.2	91	75-125	
Tetrachloroethene	ug/L	20	18.3	92	70-125	
Toluene	ug/L	20	19.3	96	74-125	
trans-1,2-Dichloroethene	ug/L	20	19.6	98	75-125	
trans-1,3-Dichloropropene	ug/L	20	19.3	96	75-127	
Trichloroethene	ug/L	20	19.6	98	74-125	
Trichlorofluoromethane	ug/L	20	22.6	113	72-125	
Vinyl chloride	ug/L	20	23.6	118	66-125	
1,2-Dichlorobenzene-d4 (S)	%.			100	75-125	
4-Bromofluorobenzene (S)	%.			104	75-125	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

LABORATORY CONTROL SAMPLE: 4804153

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%.			103	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4804154 4804155

Parameter	Units	10672801001 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	18.5	18.9	93	94	75-125	2	30	
1,1,1-Trichloroethane	ug/L	ND	20	20	19.5	20.0	98	100	70-133	2	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	19.4	19.0	97	95	71-125	2	30	
1,1,2-Trichloroethane	ug/L	ND	20	20	19.3	19.9	97	99	75-125	3	30	
1,1-Dichloroethane	ug/L	0.33J	20	20	19.4	19.8	96	97	71-125	2	30	
1,1-Dichloroethene	ug/L	ND	20	20	18.7	18.8	93	94	60-136	1	30	
1,1-Dichloropropene	ug/L	ND	20	20	20.0	20.4	100	102	70-134	2	30	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	15.7	16.2	78	81	66-131	3	30	
1,2,3-Trichloropropane	ug/L	ND	20	20	17.1	17.8	85	89	73-125	4	30	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	15.7	16.5	78	82	66-125	5	30	
1,2,4-Trimethylbenzene	ug/L	ND	20	20	17.9	18.1	90	91	61-143	1	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	15.5	17.1	77	86	61-137	10	30	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	19.0	19.0	95	95	75-125	0	30	
1,2-Dichlorobenzene	ug/L	ND	20	20	17.4	17.5	87	87	75-125	1	30	
1,2-Dichloroethane	ug/L	ND	20	20	20.7	20.8	104	104	71-133	0	30	
1,2-Dichloropropane	ug/L	0.23J	20	20	20.3	20.5	100	102	75-125	1	30	
1,3,5-Trimethylbenzene	ug/L	ND	20	20	17.9	18.2	89	91	70-134	2	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	18.1	18.1	91	90	74-125	0	30	
1,3-Dichloropropane	ug/L	ND	20	20	19.2	19.9	96	100	75-125	4	30	
1,4-Dichlorobenzene	ug/L	1.2	20	20	18.5	18.8	87	88	75-125	1	30	
2,2-Dichloropropane	ug/L	ND	20	20	18.5	18.3	92	91	52-140	1	30	
2-Chlorotoluene	ug/L	ND	20	20	17.6	17.9	88	89	72-125	1	30	
4-Chlorotoluene	ug/L	ND	20	20	17.8	18.2	89	91	69-128	2	30	
Benzene	ug/L	ND	20	20	19.4	19.6	96	97	66-127	1	30	
Bromobenzene	ug/L	ND	20	20	17.5	18.2	88	91	74-125	4	30	
Bromochloromethane	ug/L	ND	20	20	20.0	20.4	100	102	69-126	2	30	
Bromodichloromethane	ug/L	ND	20	20	19.7	20.2	98	101	75-125	3	30	
Bromoform	ug/L	ND	20	20	16.6	17.3	83	86	66-134	4	30	
Bromomethane	ug/L	ND	20	20	18.8	18.7	94	94	30-150	1	30	
Carbon tetrachloride	ug/L	ND	20	20	19.0	19.4	95	97	73-135	2	30	
Chlorobenzene	ug/L	ND	20	20	18.1	18.6	90	93	75-125	3	30	
Chloroethane	ug/L	ND	20	20	22.0	22.1	110	111	54-143	0	30	
Chloroform	ug/L	ND	20	20	20.1	20.3	100	101	75-125	1	30	
Chloromethane	ug/L	ND	20	20	23.6	23.4	118	117	52-131	1	30	
cis-1,2-Dichloroethene	ug/L	2.2	20	20	21.8	21.7	98	98	72-125	0	30	
cis-1,3-Dichloropropene	ug/L	ND	20	20	19.3	19.4	96	97	73-125	1	30	
Dibromochloromethane	ug/L	ND	20	20	17.3	17.9	87	89	73-125	3	30	
Dibromomethane	ug/L	ND	20	20	19.6	20.0	98	100	67-129	2	30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4804154 4804155

Parameter	Units	10672801001 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	20	20	21.4	21.6	107	108	54-150	1	30	
Diethyl ether (Ethyl ether)	ug/L	13.7	20	20	33.9	33.9	101	101	70-125	0	30	
Ethylbenzene	ug/L	ND	20	20	18.2	18.9	91	95	74-128	4	30	
Hexachloro-1,3-butadiene	ug/L	ND	20	20	13.6	14.2	68	71	54-133	4	30	
Isopropylbenzene (Cumene)	ug/L	ND	20	20	19.2	19.4	96	97	75-129	1	30	
m&p-Xylene	ug/L	ND	40	40	37.6	39.0	94	97	70-131	4	30	
Methyl-tert-butyl ether	ug/L	0.20J	20	20	20.5	20.9	101	103	65-132	2	30	
Methylene Chloride	ug/L	ND	20	20	18.4	18.8	92	94	67-125	3	30	
n-Butylbenzene	ug/L	ND	20	20	17.8	18.2	89	91	64-130	2	30	
n-Propylbenzene	ug/L	ND	20	20	18.1	18.5	91	93	72-127	2	30	
Naphthalene	ug/L	ND	20	20	15.4	16.6	77	83	61-150	7	30	
o-Xylene	ug/L	ND	20	20	18.6	19.3	93	96	75-127	3	30	
p-Isopropyltoluene	ug/L	ND	20	20	17.8	18.3	89	91	71-130	2	30	
sec-Butylbenzene	ug/L	ND	20	20	18.0	18.4	90	92	73-130	2	30	
Styrene	ug/L	ND	20	20	18.8	19.3	94	97	73-139	3	30	
tert-Butylbenzene	ug/L	ND	20	20	17.5	17.8	87	89	73-125	2	30	
Tetrachloroethene	ug/L	ND	20	20	17.4	18.3	87	92	69-129	5	30	
Toluene	ug/L	ND	20	20	19.1	19.3	95	96	66-125	1	30	
trans-1,2-Dichloroethene	ug/L	ND	20	20	18.9	19.1	95	96	69-126	1	30	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.9	18.4	90	92	75-127	3	30	
Trichloroethene	ug/L	0.14J	20	20	19.0	19.3	94	96	69-127	2	30	
Trichlorofluoromethane	ug/L	ND	20	20	20.2	19.1	101	96	58-150	6	30	
Vinyl chloride	ug/L	0.18J	20	20	21.6	22.5	107	111	54-146	4	30	
1,2-Dichlorobenzene-d4 (S)	%.						101	99	75-125			
4-Bromofluorobenzene (S)	%.						104	106	75-125			
Toluene-d8 (S)	%.						104	104	75-125			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

QC Batch: 913633
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV 465 W
Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10672877006

METHOD BLANK: 4807566 Matrix: Water
Associated Lab Samples: 10672877006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.19	1.0	10/23/23 20:11	
1,1,1-Trichloroethane	ug/L	<0.12	1.0	10/23/23 20:11	
1,1,2,2-Tetrachloroethane	ug/L	<0.15	1.0	10/23/23 20:11	
1,1,2-Trichloroethane	ug/L	<0.22	1.0	10/23/23 20:11	
1,1-Dichloroethane	ug/L	<0.23	1.0	10/23/23 20:11	
1,1-Dichloroethene	ug/L	<0.13	1.0	10/23/23 20:11	
1,1-Dichloropropene	ug/L	<0.12	1.0	10/23/23 20:11	
1,2,3-Trichlorobenzene	ug/L	<0.25	1.0	10/23/23 20:11	
1,2,3-Trichloropropane	ug/L	<0.38	2.5	10/23/23 20:11	
1,2,4-Trichlorobenzene	ug/L	<0.26	1.0	10/23/23 20:11	
1,2,4-Trimethylbenzene	ug/L	<0.13	1.0	10/23/23 20:11	
1,2-Dibromo-3-chloropropane	ug/L	<0.36	2.5	10/23/23 20:11	
1,2-Dibromoethane (EDB)	ug/L	<0.20	1.0	10/23/23 20:11	
1,2-Dichlorobenzene	ug/L	<0.13	1.0	10/23/23 20:11	
1,2-Dichloroethane	ug/L	<0.17	1.0	10/23/23 20:11	
1,2-Dichloropropane	ug/L	<0.15	1.0	10/23/23 20:11	
1,3,5-Trimethylbenzene	ug/L	<0.11	1.0	10/23/23 20:11	
1,3-Dichlorobenzene	ug/L	<0.12	1.0	10/23/23 20:11	
1,3-Dichloropropane	ug/L	<0.16	1.0	10/23/23 20:11	
1,4-Dichlorobenzene	ug/L	<0.15	1.0	10/23/23 20:11	
2,2-Dichloropropane	ug/L	<0.12	1.0	10/23/23 20:11	
2-Chlorotoluene	ug/L	<0.20	1.0	10/23/23 20:11	
4-Chlorotoluene	ug/L	<0.12	1.0	10/23/23 20:11	
Benzene	ug/L	<0.21	1.0	10/23/23 20:11	
Bromobenzene	ug/L	<0.12	1.0	10/23/23 20:11	
Bromochloromethane	ug/L	<0.15	1.0	10/23/23 20:11	
Bromodichloromethane	ug/L	<0.12	1.0	10/23/23 20:11	
Bromoform	ug/L	<0.22	1.0	10/23/23 20:11	
Bromomethane	ug/L	<1.0	2.5	10/23/23 20:11	
Carbon tetrachloride	ug/L	<0.13	1.0	10/23/23 20:11	
Chlorobenzene	ug/L	<0.13	1.0	10/23/23 20:11	
Chloroethane	ug/L	<0.41	1.0	10/23/23 20:11	
Chloroform	ug/L	<0.23	1.0	10/23/23 20:11	
Chloromethane	ug/L	<0.40	1.0	10/23/23 20:11	
cis-1,2-Dichloroethene	ug/L	<0.15	1.0	10/23/23 20:11	
cis-1,3-Dichloropropene	ug/L	<0.14	1.0	10/23/23 20:11	
Dibromochloromethane	ug/L	<0.20	1.0	10/23/23 20:11	
Dibromomethane	ug/L	<0.17	1.0	10/23/23 20:11	
Dichlorodifluoromethane	ug/L	<0.32	1.0	10/23/23 20:11	
Diethyl ether (Ethyl ether)	ug/L	<0.19	2.5	10/23/23 20:11	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

METHOD BLANK: 4807566 Matrix: Water
Associated Lab Samples: 10672877006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.11	1.0	10/23/23 20:11	
Hexachloro-1,3-butadiene	ug/L	<0.48	1.0	10/23/23 20:11	
Isopropylbenzene (Cumene)	ug/L	<0.12	1.0	10/23/23 20:11	
m&p-Xylene	ug/L	<0.42	2.0	10/23/23 20:11	
Methyl-tert-butyl ether	ug/L	<0.13	1.0	10/23/23 20:11	
n-Butylbenzene	ug/L	<0.32	1.0	10/23/23 20:11	
n-Propylbenzene	ug/L	<0.11	1.0	10/23/23 20:11	
Naphthalene	ug/L	<0.18	1.0	10/23/23 20:11	
o-Xylene	ug/L	<0.18	1.0	10/23/23 20:11	
p-Isopropyltoluene	ug/L	<0.11	1.0	10/23/23 20:11	
sec-Butylbenzene	ug/L	<0.20	1.0	10/23/23 20:11	
Styrene	ug/L	<0.22	1.0	10/23/23 20:11	
tert-Butylbenzene	ug/L	<0.20	1.0	10/23/23 20:11	
Tetrachloroethene	ug/L	<0.22	1.0	10/23/23 20:11	
Toluene	ug/L	<0.21	1.0	10/23/23 20:11	
trans-1,2-Dichloroethene	ug/L	<0.14	1.0	10/23/23 20:11	
trans-1,3-Dichloropropene	ug/L	<0.13	1.0	10/23/23 20:11	
Trichloroethene	ug/L	<0.12	1.0	10/23/23 20:11	
Trichlorofluoromethane	ug/L	<0.12	1.0	10/23/23 20:11	
Vinyl chloride	ug/L	<0.12	1.0	10/23/23 20:11	
1,2-Dichlorobenzene-d4 (S)	%.	101	75-125	10/23/23 20:11	
4-Bromofluorobenzene (S)	%.	96	75-125	10/23/23 20:11	
Toluene-d8 (S)	%.	103	75-125	10/23/23 20:11	

LABORATORY CONTROL SAMPLE: 4807567

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	20.7	104	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	20.7	104	71-125	
1,1,2-Trichloroethane	ug/L	20	22.9	115	75-125	
1,1-Dichloroethane	ug/L	20	20.7	103	75-125	
1,1-Dichloroethene	ug/L	20	20.9	104	69-125	
1,1-Dichloropropene	ug/L	20	21.0	105	74-125	
1,2,3-Trichlorobenzene	ug/L	20	22.1	110	70-131	
1,2,3-Trichloropropane	ug/L	20	19.4	97	73-125	
1,2,4-Trichlorobenzene	ug/L	20	21.2	106	75-125	
1,2,4-Trimethylbenzene	ug/L	20	21.0	105	75-125	
1,2-Dibromo-3-chloropropane	ug/L	20	21.2	106	68-129	
1,2-Dibromoethane (EDB)	ug/L	20	21.8	109	75-125	
1,2-Dichlorobenzene	ug/L	20	20.1	100	75-125	
1,2-Dichloroethane	ug/L	20	19.7	98	75-125	
1,2-Dichloropropane	ug/L	20	21.4	107	75-125	
1,3,5-Trimethylbenzene	ug/L	20	20.7	104	75-125	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

LABORATORY CONTROL SAMPLE: 4807567

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/L	20	21.2	106	75-125	
1,3-Dichloropropane	ug/L	20	22.5	113	75-125	
1,4-Dichlorobenzene	ug/L	20	20.4	102	75-125	
2,2-Dichloropropane	ug/L	20	17.0	85	65-125	
2-Chlorotoluene	ug/L	20	20.8	104	75-125	
4-Chlorotoluene	ug/L	20	20.7	103	75-125	
Benzene	ug/L	20	20.8	104	75-125	
Bromobenzene	ug/L	20	19.4	97	75-125	
Bromochloromethane	ug/L	20	21.6	108	75-125	
Bromodichloromethane	ug/L	20	21.0	105	75-125	
Bromoform	ug/L	20	17.9	89	75-134	
Bromomethane	ug/L	20	17.4	87	32-150	
Carbon tetrachloride	ug/L	20	20.7	104	73-126	
Chlorobenzene	ug/L	20	20.7	104	75-125	
Chloroethane	ug/L	20	14.2	71	70-125	
Chloroform	ug/L	20	19.8	99	75-125	
Chloromethane	ug/L	20	18.8	94	65-125	
cis-1,2-Dichloroethene	ug/L	20	21.0	105	75-125	
cis-1,3-Dichloropropene	ug/L	20	20.5	103	75-125	
Dibromochloromethane	ug/L	20	20.8	104	75-125	
Dibromomethane	ug/L	20	20.8	104	75-125	
Dichlorodifluoromethane	ug/L	20	18.6	93	65-135	
Diethyl ether (Ethyl ether)	ug/L	20	23.0	115	75-125	
Ethylbenzene	ug/L	20	21.0	105	75-125	
Hexachloro-1,3-butadiene	ug/L	20	21.9	109	63-128	
Isopropylbenzene (Cumene)	ug/L	20	19.4	97	75-125	
m&p-Xylene	ug/L	40	43.2	108	75-125	
Methyl-tert-butyl ether	ug/L	20	20.8	104	75-125	
n-Butylbenzene	ug/L	20	19.5	98	68-125	
n-Propylbenzene	ug/L	20	20.6	103	74-125	
Naphthalene	ug/L	20	22.9	115	67-140	
o-Xylene	ug/L	20	16.9	84	75-125	
p-Isopropyltoluene	ug/L	20	22.0	110	75-126	
sec-Butylbenzene	ug/L	20	22.2	111	75-126	
Styrene	ug/L	20	17.6	88	75-139	
tert-Butylbenzene	ug/L	20	21.4	107	75-125	
Tetrachloroethene	ug/L	20	21.1	105	70-125	
Toluene	ug/L	20	19.9	100	74-125	
trans-1,2-Dichloroethene	ug/L	20	20.9	104	75-125	
trans-1,3-Dichloropropene	ug/L	20	20.1	100	75-127	
Trichloroethene	ug/L	20	20.0	100	74-125	
Trichlorofluoromethane	ug/L	20	19.1	96	72-125	
Vinyl chloride	ug/L	20	18.3	92	66-125	
1,2-Dichlorobenzene-d4 (S)	%.			100	75-125	
4-Bromofluorobenzene (S)	%.			86	75-125	
Toluene-d8 (S)	%.			96	75-125	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4807568 4807569

Parameter	Units	10673180005 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	23.7	23.1	118	115	75-125	3	30	
1,1,1-Trichloroethane	ug/L	ND	20	20	20.9	20.9	105	104	70-133	0	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	23.5	23.2	117	116	71-125	1	30	
1,1,2-Trichloroethane	ug/L	ND	20	20	23.8	23.3	119	117	75-125	2	30	
1,1-Dichloroethane	ug/L	ND	20	20	20.5	20.6	102	103	71-125	1	30	
1,1-Dichloroethene	ug/L	0.58J	20	20	21.1	21.0	102	102	60-136	0	30	
1,1-Dichloropropene	ug/L	ND	20	20	21.6	21.6	108	108	70-134	0	30	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	20.1	19.9	101	100	66-131	1	30	
1,2,3-Trichloropropane	ug/L	ND	20	20	20.9	20.7	104	103	73-125	1	30	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	20.1	19.7	101	98	66-125	2	30	
1,2,4-Trimethylbenzene	ug/L	ND	20	20	21.2	21.1	106	106	61-143	1	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	19.1	19.2	95	96	61-137	1	30	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	23.6	22.9	118	114	75-125	3	30	
1,2-Dichlorobenzene	ug/L	ND	20	20	19.9	19.7	99	99	75-125	1	30	
1,2-Dichloroethane	ug/L	ND	20	20	22.1	21.7	110	108	71-133	2	30	
1,2-Dichloropropane	ug/L	ND	20	20	20.4	21.1	102	105	75-125	3	30	
1,3,5-Trimethylbenzene	ug/L	ND	20	20	21.4	21.2	107	106	70-134	1	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	21.7	21.4	108	107	74-125	1	30	
1,3-Dichloropropane	ug/L	ND	20	20	18.9	18.7	94	93	75-125	1	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	19.2	19.1	96	95	75-125	1	30	
2,2-Dichloropropane	ug/L	ND	20	20	19.2	19.4	96	97	52-140	1	30	
2-Chlorotoluene	ug/L	ND	20	20	20.6	20.9	103	105	72-125	1	30	
4-Chlorotoluene	ug/L	ND	20	20	21.2	21.3	106	106	69-128	1	30	
Benzene	ug/L	ND	20	20	21.7	21.4	107	106	66-127	1	30	
Bromobenzene	ug/L	ND	20	20	21.2	20.9	106	105	74-125	1	30	
Bromochloromethane	ug/L	ND	20	20	23.2	22.7	116	113	69-126	2	30	
Bromodichloromethane	ug/L	ND	20	20	21.1	21.2	106	106	75-125	1	30	
Bromoform	ug/L	ND	20	20	22.0	20.8	110	104	66-134	5	30	
Bromomethane	ug/L	ND	20	20	19.0	18.6	95	93	30-150	2	30	
Carbon tetrachloride	ug/L	ND	20	20	21.0	21.0	105	105	73-135	0	30	
Chlorobenzene	ug/L	ND	20	20	21.3	21.1	107	106	75-125	1	30	
Chloroethane	ug/L	ND	20	20	19.4	19.4	97	97	54-143	0	30	
Chloroform	ug/L	ND	20	20	21.2	20.6	106	103	75-125	3	30	
Chloromethane	ug/L	ND	20	20	18.7	18.3	94	92	52-131	2	30	
cis-1,2-Dichloroethene	ug/L	289	20	20	314	313	17	14	72-125	0	30	E,P6
cis-1,3-Dichloropropene	ug/L	ND	20	20	23.1	23.5	116	117	73-125	2	30	
Dibromochloromethane	ug/L	ND	20	20	22.1	21.8	110	109	73-125	1	30	
Dibromomethane	ug/L	ND	20	20	22.6	21.9	113	110	67-129	3	30	
Dichlorodifluoromethane	ug/L	ND	20	20	19.2	19.9	96	99	54-150	3	30	
Diethyl ether (Ethyl ether)	ug/L	ND	20	20	21.9	22.3	109	112	70-125	2	30	
Ethylbenzene	ug/L	ND	20	20	20.7	20.5	104	103	74-128	1	30	
Hexachloro-1,3-butadiene	ug/L	ND	20	20	17.0	16.7	85	84	54-133	2	30	
Isopropylbenzene (Cumene)	ug/L	ND	20	20	20.9	21.2	105	106	75-129	1	30	
m&p-Xylene	ug/L	ND	40	40	42.0	41.5	105	104	70-131	1	30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4807568 4807569

Parameter	Units	10673180005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Methyl-tert-butyl ether	ug/L	ND	20	20	22.8	23.0	114	115	65-132	1	30	
n-Butylbenzene	ug/L	ND	20	20	18.0	18.1	90	91	64-130	1	30	
n-Propylbenzene	ug/L	ND	20	20	20.6	20.6	103	103	72-127	0	30	
Naphthalene	ug/L	ND	20	20	21.5	21.5	107	108	61-150	0	30	
o-Xylene	ug/L	ND	20	20	21.3	21.0	106	105	75-127	1	30	
p-Isopropyltoluene	ug/L	ND	20	20	20.4	20.0	102	100	71-130	2	30	
sec-Butylbenzene	ug/L	ND	20	20	19.5	19.6	98	98	73-130	0	30	
Styrene	ug/L	ND	20	20	21.0	21.0	105	105	73-139	0	30	
tert-Butylbenzene	ug/L	ND	20	20	19.8	19.6	99	98	73-125	1	30	
Tetrachloroethene	ug/L	4340	20	20	2820	2810	-2340	-2400	69-129	0	30	E,P6
Toluene	ug/L	ND	20	20	21.1	20.7	105	103	66-125	2	30	
trans-1,2-Dichloroethene	ug/L	1.7	20	20	22.0	22.0	101	102	69-126	0	30	
trans-1,3-Dichloropropene	ug/L	ND	20	20	24.2	23.8	121	119	75-127	2	30	
Trichloroethene	ug/L	169	20	20	189	189	100	103	69-127	0	30	
Trichlorofluoromethane	ug/L	ND	20	20	20.6	20.4	103	102	58-150	1	30	
Vinyl chloride	ug/L	7.3	20	20	26.2	26.0	95	94	54-146	1	30	
1,2-Dichlorobenzene-d4 (S)	%.						102	104	75-125			
4-Bromofluorobenzene (S)	%.						99	97	75-125			
Toluene-d8 (S)	%.						100	100	75-125			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

QC Batch: 914165
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV 465 W
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10672877006, 10672877007

METHOD BLANK: 4810453 Matrix: Water
Associated Lab Samples: 10672877006, 10672877007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.19	1.0	10/25/23 13:31	
1,1,1-Trichloroethane	ug/L	<0.12	1.0	10/25/23 13:31	
1,1,2,2-Tetrachloroethane	ug/L	<0.15	1.0	10/25/23 13:31	
1,1,2-Trichloroethane	ug/L	<0.22	1.0	10/25/23 13:31	
1,1-Dichloroethane	ug/L	<0.23	1.0	10/25/23 13:31	
1,1-Dichloroethene	ug/L	<0.13	1.0	10/25/23 13:31	
1,1-Dichloropropene	ug/L	<0.12	1.0	10/25/23 13:31	
1,2,3-Trichlorobenzene	ug/L	<0.25	1.0	10/25/23 13:31	
1,2,3-Trichloropropane	ug/L	<0.38	2.5	10/25/23 13:31	
1,2,4-Trichlorobenzene	ug/L	<0.26	1.0	10/25/23 13:31	
1,2,4-Trimethylbenzene	ug/L	<0.13	1.0	10/25/23 13:31	
1,2-Dibromo-3-chloropropane	ug/L	<0.36	2.5	10/25/23 13:31	
1,2-Dibromoethane (EDB)	ug/L	<0.20	1.0	10/25/23 13:31	
1,2-Dichlorobenzene	ug/L	<0.13	1.0	10/25/23 13:31	
1,2-Dichloroethane	ug/L	<0.17	1.0	10/25/23 13:31	
1,2-Dichloropropane	ug/L	<0.15	1.0	10/25/23 13:31	
1,3,5-Trimethylbenzene	ug/L	<0.11	1.0	10/25/23 13:31	
1,3-Dichlorobenzene	ug/L	<0.12	1.0	10/25/23 13:31	
1,3-Dichloropropane	ug/L	<0.16	1.0	10/25/23 13:31	
1,4-Dichlorobenzene	ug/L	<0.15	1.0	10/25/23 13:31	
2,2-Dichloropropane	ug/L	<0.12	1.0	10/25/23 13:31	
2-Chlorotoluene	ug/L	<0.20	1.0	10/25/23 13:31	
4-Chlorotoluene	ug/L	<0.12	1.0	10/25/23 13:31	
Benzene	ug/L	<0.21	1.0	10/25/23 13:31	
Bromobenzene	ug/L	<0.12	1.0	10/25/23 13:31	
Bromochloromethane	ug/L	<0.15	1.0	10/25/23 13:31	
Bromodichloromethane	ug/L	<0.12	1.0	10/25/23 13:31	
Bromoform	ug/L	<0.22	1.0	10/25/23 13:31	
Bromomethane	ug/L	<1.0	2.5	10/25/23 13:31	
Carbon tetrachloride	ug/L	<0.13	1.0	10/25/23 13:31	
Chlorobenzene	ug/L	<0.13	1.0	10/25/23 13:31	
Chloroethane	ug/L	<0.41	1.0	10/25/23 13:31	
Chloroform	ug/L	<0.23	1.0	10/25/23 13:31	
Chloromethane	ug/L	<0.40	1.0	10/25/23 13:31	
cis-1,2-Dichloroethene	ug/L	<0.15	1.0	10/25/23 13:31	
cis-1,3-Dichloropropene	ug/L	<0.14	1.0	10/25/23 13:31	
Dibromochloromethane	ug/L	<0.20	1.0	10/25/23 13:31	
Dibromomethane	ug/L	<0.17	1.0	10/25/23 13:31	
Dichlorodifluoromethane	ug/L	<0.32	1.0	10/25/23 13:31	
Diethyl ether (Ethyl ether)	ug/L	<0.19	2.5	10/25/23 13:31	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

METHOD BLANK: 4810453 Matrix: Water
Associated Lab Samples: 10672877006, 10672877007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.11	1.0	10/25/23 13:31	
Hexachloro-1,3-butadiene	ug/L	0.52J	1.0	10/25/23 13:31	
Isopropylbenzene (Cumene)	ug/L	<0.12	1.0	10/25/23 13:31	
m&p-Xylene	ug/L	<0.42	2.0	10/25/23 13:31	
Methyl-tert-butyl ether	ug/L	<0.13	1.0	10/25/23 13:31	
Methylene Chloride	ug/L	<0.44	1.0	10/25/23 13:31	
n-Butylbenzene	ug/L	<0.32	1.0	10/25/23 13:31	
n-Propylbenzene	ug/L	<0.11	1.0	10/25/23 13:31	
Naphthalene	ug/L	<0.18	1.0	10/25/23 13:31	
o-Xylene	ug/L	<0.18	1.0	10/25/23 13:31	
p-Isopropyltoluene	ug/L	<0.11	1.0	10/25/23 13:31	
sec-Butylbenzene	ug/L	<0.20	1.0	10/25/23 13:31	
Styrene	ug/L	<0.22	1.0	10/25/23 13:31	
tert-Butylbenzene	ug/L	<0.20	1.0	10/25/23 13:31	
Tetrachloroethene	ug/L	<0.22	1.0	10/25/23 13:31	
Toluene	ug/L	<0.21	1.0	10/25/23 13:31	
trans-1,2-Dichloroethene	ug/L	<0.14	1.0	10/25/23 13:31	
trans-1,3-Dichloropropene	ug/L	<0.13	1.0	10/25/23 13:31	
Trichloroethene	ug/L	<0.12	1.0	10/25/23 13:31	
Trichlorofluoromethane	ug/L	<0.12	1.0	10/25/23 13:31	
Vinyl chloride	ug/L	<0.12	1.0	10/25/23 13:31	
1,2-Dichlorobenzene-d4 (S)	%.	100	75-125	10/25/23 13:31	
4-Bromofluorobenzene (S)	%.	100	75-125	10/25/23 13:31	
Toluene-d8 (S)	%.	101	75-125	10/25/23 13:31	

LABORATORY CONTROL SAMPLE & LCSD: 4810454 4810455

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	21.0	20.9	105	104	75-125	1	20	
1,1,1-Trichloroethane	ug/L	20	21.8	21.0	109	105	75-125	4	20	
1,1,2,2-Tetrachloroethane	ug/L	20	20.6	20.4	103	102	71-125	1	20	
1,1,2-Trichloroethane	ug/L	20	21.4	20.9	107	104	75-125	3	20	
1,1-Dichloroethane	ug/L	20	20.6	19.9	103	99	75-125	3	20	
1,1-Dichloroethene	ug/L	20	21.1	20.2	105	101	69-125	4	20	
1,1-Dichloropropene	ug/L	20	21.7	20.8	108	104	74-125	4	20	
1,2,3-Trichlorobenzene	ug/L	20	22.4	22.5	112	113	70-131	1	20	
1,2,3-Trichloropropane	ug/L	20	19.7	18.9	98	95	73-125	4	20	
1,2,4-Trichlorobenzene	ug/L	20	22.8	22.7	114	113	75-125	1	20	
1,2,4-Trimethylbenzene	ug/L	20	21.9	21.3	109	107	75-125	3	20	
1,2-Dibromo-3-chloropropane	ug/L	20	19.8	20.3	99	102	68-129	2	20	
1,2-Dibromoethane (EDB)	ug/L	20	21.1	20.8	105	104	75-125	1	20	
1,2-Dichlorobenzene	ug/L	20	20.6	20.0	103	100	75-125	3	20	
1,2-Dichloroethane	ug/L	20	20.9	20.4	104	102	75-125	2	20	
1,2-Dichloropropane	ug/L	20	20.7	20.1	104	100	75-125	3	20	

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

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

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

LABORATORY CONTROL SAMPLE & LCSD: 4810454 4810455

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,3,5-Trimethylbenzene	ug/L	20	21.9	21.3	110	107	75-125	3	20	
1,3-Dichlorobenzene	ug/L	20	21.5	21.0	108	105	75-125	2	20	
1,3-Dichloropropane	ug/L	20	21.0	20.5	105	102	75-125	2	20	
1,4-Dichlorobenzene	ug/L	20	21.3	20.9	107	105	75-125	2	20	
2,2-Dichloropropane	ug/L	20	23.6	23.0	118	115	65-125	3	20	
2-Chlorotoluene	ug/L	20	21.2	20.6	106	103	75-125	3	20	
4-Chlorotoluene	ug/L	20	21.3	20.7	106	104	75-125	3	20	
Benzene	ug/L	20	20.7	19.8	104	99	75-125	5	20	
Bromobenzene	ug/L	20	21.1	21.1	105	106	75-125	0	20	
Bromochloromethane	ug/L	20	20.6	20.3	103	102	75-125	1	20	
Bromodichloromethane	ug/L	20	21.3	21.0	106	105	75-125	1	20	
Bromoform	ug/L	20	21.3	20.7	106	103	75-134	3	20	
Bromomethane	ug/L	20	23.7	22.9	119	115	32-150	3	20	
Carbon tetrachloride	ug/L	20	22.0	20.9	110	105	73-126	5	20	
Chlorobenzene	ug/L	20	20.5	20.1	102	100	75-125	2	20	
Chloroethane	ug/L	20	21.1	20.6	106	103	70-125	2	20	
Chloroform	ug/L	20	20.2	19.6	101	98	75-125	3	20	
Chloromethane	ug/L	20	23.0	22.0	115	110	65-125	4	20	
cis-1,2-Dichloroethene	ug/L	20	20.5	19.8	102	99	75-125	3	20	
cis-1,3-Dichloropropene	ug/L	20	22.5	21.9	112	109	75-125	3	20	
Dibromochloromethane	ug/L	20	21.4	20.9	107	105	75-125	2	20	
Dibromomethane	ug/L	20	21.6	21.2	108	106	75-125	2	20	
Dichlorodifluoromethane	ug/L	20	22.4	21.4	112	107	65-135	4	20	
Diethyl ether (Ethyl ether)	ug/L	20	21.3	21.0	107	105	75-125	2	20	
Ethylbenzene	ug/L	20	21.0	20.3	105	101	75-125	4	20	
Hexachloro-1,3-butadiene	ug/L	20	23.2	23.1	116	116	63-128	0	20	
Isopropylbenzene (Cumene)	ug/L	20	21.4	20.9	107	104	75-125	2	20	
m&p-Xylene	ug/L	40	42.5	41.2	106	103	75-125	3	20	
Methyl-tert-butyl ether	ug/L	20	22.1	21.8	111	109	75-125	2	20	
Methylene Chloride	ug/L	20	19.5	18.9	98	95	72-125	3	20	
n-Butylbenzene	ug/L	20	21.8	21.1	109	105	68-125	3	20	
n-Propylbenzene	ug/L	20	21.8	20.9	109	104	74-125	4	20	
Naphthalene	ug/L	20	21.6	21.6	108	108	67-140	0	20	
o-Xylene	ug/L	20	21.2	20.7	106	104	75-125	2	20	
p-Isopropyltoluene	ug/L	20	22.3	21.9	111	109	75-126	2	20	
sec-Butylbenzene	ug/L	20	22.3	21.3	111	106	75-126	4	20	
Styrene	ug/L	20	21.5	21.0	107	105	75-139	2	20	
tert-Butylbenzene	ug/L	20	21.5	20.8	108	104	75-125	3	20	
Tetrachloroethene	ug/L	20	21.6	21.0	108	105	70-125	3	20	
Toluene	ug/L	20	19.2	18.7	96	93	74-125	3	20	
trans-1,2-Dichloroethene	ug/L	20	21.1	20.6	105	103	75-125	2	20	
trans-1,3-Dichloropropene	ug/L	20	22.5	22.3	113	112	75-127	1	20	
Trichloroethene	ug/L	20	21.8	20.7	109	104	74-125	5	20	
Trichlorofluoromethane	ug/L	20	23.9	23.3	120	116	72-125	3	20	
Vinyl chloride	ug/L	20	23.2	22.7	116	113	66-125	2	20	
1,2-Dichlorobenzene-d4 (S)	%.				100	100	75-125			
4-Bromofluorobenzene (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

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

QUALITY CONTROL DATA

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

LABORATORY CONTROL SAMPLE & LCSD: 4810454 4810455

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Toluene-d8 (S)	%.				98	97	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

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

QUALIFIERS

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

DL - Adjusted Method Detection Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: 912960

[1] Dichlorodifluoromethane did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.

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

Batch: 913633

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

Batch: 914165

[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.

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

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161494.02 100 102 SRC GW TK6
Pace Project No.: 10672877

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10672877001	**MW-1/T68**	EPA 8260D	912960		
10672877002	**MW-2/T68**	EPA 8260D	912960		
10672877003	**MW-4/T68**	EPA 8260D	912960		
10672877004	**MW-5/T68**	EPA 8260D	912960		
10672877005	**MW-5/T66**	EPA 8260D	912960		
10672877006	**MW-6/T68**	EPA 8260D	913633		
10672877006	**MW-6/T68**	EPA 8260D	914165		
10672877007	**Trip Blank**	EPA 8260D	914165		

Barr Engineering Co. Chain of Custody

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

COC Number: **№ 595781**
COC 1 of 1

REPORT TO	INVOICE TO
Company: Barr Engineering Co	Company:
Address: 325 South 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; DW = Drinking Water; PW = Pore Water; WW = Waste Water; WQ = TB, FB, EB, etc.; W = Unspecified; S = Soil/Solid; SD = Sediment; SQ = MeOH blank; OTH = Other (Oil, etc.)

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 (EPA 8260)	Soil — % Solids	Preservative Code	Field Filtered Y/N
1. MW-1/T68	—			10/16/2023	11:29	GW	N	3	X			see Attached col
2. MW-2/T68	—				11:21	GW	N	3	X			List! c02
3. MW-4/T68	—				11:15	GW	N	3	X			c03
4. MW-5/T68	—				11:05	GW	N	3	X			c04
5. MW-5/T66	—				10:52	GW	N	3	X			c05
6. MW-6/T68	—				11:36	GW	N	3	X			c06
7. Trip Blank	—				—	WQ	N	2	X			c07
8.												
9.												
10.												

WO#: 10672877
10672877

BARR USE ONLY
Sampled by: KLS3
Barr Proj. Manager: LMC
Barr DQ Manager: JET
Lab Name: Pace Analytical
Lab Location: Minneapolis, MN

Relinquished by: Kelsey Schneider — On Ice? ☐ N — Date: 10/16/2023 — Time: 16:12
Received by: Garrett Nagy/Pace — Date: 10/16/23 — Time: 16:12

Relinquished by: Garrett Nagy/Pace — On Ice? ☒ N — Date: 10/16/23 — Time: 16:15
Received by: DavidPace — Date: 10/17/23 — Time: 1105 3.8

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

Lab WO: Temperature on Receipt (°C): 2.2 Custody Seal Intact? ☐ Y ☐ N ☐ None

Requested Due Date: T4
☑ Standard Turn Around Time
☐ Rush _____ (mm/dd/yyyy)

Rel: 10/17/23 1105 Rec: 10/17/23 0800

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

Sample Condition Upon Receipt

Client Name: Barr

Project #: WO# : 10672877
PM: MKH Due Date: 10/31/23
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 (0436) ☐ T3 (0459) ☐ T4 (0402) ☐ T5 (0178) ☐ T6 (0235) ☐ T7 (0042) ☐ T8 (0775) ☐ T9(0727) ☐ 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:** 3.6 °C

Correction Factor: +.2 **Cooler Temp Corrected w/temp blank:** 3.8 °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:** 10 19 23 MS

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	☑ Yes	☐ No	☐ N/A	Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142
(*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)				**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. 2 total Pace Trip Blank Lot # (if purchased): 436308
Trip Blank Custody Seals Present?	☑ Yes	☐ No	☐ N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** 10/19/23

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

Labeled By: MS **Line:** 2

Table 1

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	Substance Concentration (µg/l) and Results Qualifiers (if any)																																		
Date	GRO	Benzene	Ethylbenzene	Toluene	Xylenes	TMBs	1,1,1-Trichloroethane	1,1-Dichloropropene	1,1-Dichloroethane	1,2-Dichloroethane	Acetone	Bromobenzene	Bromodichloromethane	Bromomethane	Chloroethane	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	85	*0.5*	1800	NS	*0.06*	*1*	80	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	840	**5**	9000	NS	**0.6**	**10**	400	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	NI	NI
5/17/2002	820	< 0.43	5.3	7.1	< 1.45	13.8	< 0.2	< 0.30	(2)	< 0.54	(2)	< 0.42	(2)	(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	(2)	na	(2)	na	(2)	(2)	(2)	(2)	(2)	na	na	na	(2)	(2)	(2)	< 0.43	< 0.89	na	na	na	na	(2)	na	na	na	na
3/12/2003	< 50	< 0.45	< 0.82	< 0.68	< 2.47	< 1.86	na	na	(2)	na	(2)	na	(2)	(2)	(2)	(2)	(2)	na	na	na	(2)	(2)	(2)	< 0.43	< 0.89	na	na	na	na	(2)	na	na	na	na
9/30/2004	< 50	< 0.14	< 0.40	< 0.36	< 1.10	< 0.79	na	na	(2)	na	(2)	na	(2)	(2)	(2)	(2)	(2)	na	na	na	(2)	(2)	(2)	< 0.36	< 0.47	na	na	na	na	(2)	na	na	na	na
5/26/2005	< 50.0	< 0.31	< 0.5	< 0.3	< 0.92	< 0.71	< 0.2	na	(2)	< 0.4	(2)	< 0.41	(2)	(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	(2)	< 0.4	(2)	< 0.41	(2)	(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	(2)	< 0.40	(2)	< 0.41	(2)	(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	(2)	< 0.10	(2)	< 0.10	(2)	(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	(2)	< 0.20	(2)	< 0.20	(2)	(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	(2)	< 0.20	(2)	< 0.20	(2)	(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	(2)	< 0.20	(2)	< 0.20	(2)	(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	(2)	< 0.30	(2)	< 0.20	(2)	(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	(2)	< 0.30	(2)	< 0.30	(2)	(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	(2)	< 3.00	(2)	< 3.00	(2)	(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	(2)	< 0.30	(2)	< 0.30	(2)	(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	(2)	< 0.30	(2)	< 0.30	(2)	(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	(2)	< 0.30	(2)	< 0.30	(2)	(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	(2)	< 0.30	(2)	< 0.30	(2)	(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	(2)	< 0.36	(2)	< 0.82	(2)	(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	(2)	< 0.48	(2)	< 0.48	(2)	(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	(2)	< 0.17	(2)	< 0.23	(2)	(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	(2)	< 0.17	(2)	< 0.23	(2)	(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	(2)	< 0.17	(2)	< 0.23	(2)	(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	(2)	< 0.17	(2)	< 0.23	(2)	(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	(2)	< 0.17	(2)	< 0.23	(2)	(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	(2)	< 0.17	(2)	< 0.23	(2)	(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	(2)	< 0.17	(2)	< 0.23	(2)	(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	(2)	< 0.17	(2)	< 0.23	(2)	(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	(2)	< 0.17	(2)	< 0.23	(2)	(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	(2)	< 0.28	(2)	< 0.24	(2)	(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	(2)	< 0.28	(2)	< 0.24	(2)	(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	(2)	< 0.28	(2)	< 0.24	(2)	(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	< 0.27	< 0.28	na	< 0.24	< 0.36	< 0.97	< 1.3	< 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	< 0.17	< 0.25	< 2.5	< 0.13	< 0.11	< 0.63	< 0.42	< 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	< 0.30	< 0.29	na	< 0.36	< 0.42	< 1.2	< 1.4	< 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	< 0.14	na	< 0.18	< 0.21	< 1.9	< 0.41	< 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	< 0.11	< 0.17	< 1.9	< 0.12	< 0.12	< 0.38	< 0.21	< 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	< 0.11	< 0.17	na	< 0.12	***1.9***	< 0.38	< 0.21	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
5/30/2023	na	< 0.10	< 0.11	< 0.10	< 0.38	< 0.24	< 0.12	< 0.12	< 0.11	< 0.17	na	< 0.12	*0.12* J	< 0.38	< 0.21	< 0.20	*0.76* J	< 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
10/16/2023	na	< 0.21	< 0.11	< 0.21	< 0.60	< 0.24	< 0.12	< 0.12	< 0.23	< 0.17	na	< 0.12	< 0.12	< 1.0	< 0.41	< 0.20	< 0.23	< 0.40	na	< 0.12	na	< 0.44	na	< 0.13	< 0.18	< 0.32	< 0.11	< 0.11	< 0.20	< 0.22	< 0.20	< 0.22	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	1,1-Dichloroethane	1,2-Dichloroethane	Acetone	Bromobenzene	Bromodichloromethane	Bromomethane	Chloroethane	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	85	*0.5*	1800	NS	*0.06*	*1*	80	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	840	**5**	9000	NS	**0.6**	**10**	400	60	**6**	30	NS	NS	4000	**5**	500	60	**100**	NS	NS	NS	NS	100	NS	5	15
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	(2)	***2800***	(2)	< 150	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	< 600	(2)	< 410	(2)	(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	(2)	***2520***	(2)	< 410	(2)	(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	(2)	***2680***	(2)	< 205	(2)	(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	(2)	***2370***	(2)	< 100	(2)	(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	(2)	< 200	(2)	< 200	(2)	(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	(2)	***2020***	(2)	< 200	(2)	(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	(2)	***1710***	(2)	< 200	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	< 300	(2)	< 300	(2)	(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	(2)	***1510***	(2)	< 300	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	< 60.0	(2)	< 60.0	(2)	(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	(2)	***1700***	(2)	< 102	(2)	(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
8/21/2013	na	***23800***	***2290***	***28300***	***20740***	***5310***	< 94.4	< 101	(2)	***930***	(2)	< 96.7	(2)	(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	(2)	***1220***	(2)	< 57.5	(2)	(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	(2)	***1180***	(2)	< 46.0	(2)	(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	(2)	***355***	(2)	< 46.0	(2)	(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	(2)	***894***	(2)	< 46.0	(2)	(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	(2)	***1260***	(2)	< 46.0	(2)	(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	(2)	***1150***	(2)	< 46.0	(2)	(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	(2)	***1420***	(2)	< 46.0	(2)	(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	(2)	***1610***	(2)	< 57.5	(2)	(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	(2)	***1240***	(2)	< 46.0	(2)	(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	(2)	***1520***	(2)	< 48.2	(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	(2)	***8.0***	(2)	< 0.24	(2)	(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	(2)	***287***	(2)	< 9.6	(2)	(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	< 13.6	***941***	na	< 12.1	< 18.2	< 48.6	< 67.1	< 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	< 8.3	***1070***	< 126	< 6.6	< 5.7	< 31.7	< 21.2	< 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	< 3.0	< 2.9	na	< 3.6	< 4.2	< 11.9	< 13.8	< 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	< 2.5 H	***364***	na	< 1.3 H	< 0.96 H	< 3.2 H	< 2.3 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	< 2.7	< 4.2	188 J	< 3.0	< 2.9	< 9.6	< 5.2	< 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	< 1.1	***94.7***	na	< 1.2	< 1.2	4.5 J+	< 2.1	< 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
5/30/2023	na	***10100***	620	***8790***	***12220***	***3040***	< 0.62	< 0.62	1.3 J	***825***	na	< 0.60	< 0.58	< 1.9	2.3 J	< 1.0	< 1.2	< 0.85	na	15.9	na	< 1.6	na	< 0.63	***266***	32.0	38.1	6.0	3.0 J	< 0.48	< 0.45	< 0.52	na
10/16/2023	na	***6180***	*180*	***4250***	***7980***	***2306***	< 12.4	< 12.5	< 23.1	***553***	na	< 12.0	< 11.7	< 99.7	< 41.3	< 20.3	< 23.0	< 40.1	na	< 11.6	na	< 43.6	na	< 12.6	***174***	< 31.6	< 10.9	< 10.6	< 20.4	< 21.9	< 19.7	< 21.7	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	NI	NI
9/30/2004	< 50	< 0.41	< 0.54	< 0.67	< 2.63	< 1.8	< 0.2	< 0.75	(2)	< 0.36	(2)	< 0.82	(2)	(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	(2)	< 0.4	(2)	< 0.8	(2)	(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	(2)	< 0.4	(2)	< 0.41	(2)	(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	(2)	< 0.40	(2)	< 0.41	(2)	(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	(2)	< 0.10	(2)	< 0.10	(2)	(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	(2)	< 0.20	(2)	< 0.20	(2)	(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	(2)	< 0.20	(2)	< 0.20	(2)	(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	(2)	< 0.20	(2)	< 0.20	(2)	(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																																

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	1,1-Dichloroethane	1,2-Dichloroethane	Acetone	Bromobenzene	Bromodichloromethane	Bromomethane	Chloroethane	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	85	*0.5*	1800	NS	*0.06*	*1*	80	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	840	**5**	9000	NS	**0.6**	**10**	400	60	**6**	30	NS	NS	4000	**5**	500	60	**100**	NS	NS	NS	NS	100	NS	5	15
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	NI	NI	NI	NI
9/30/2004	5500	***650***	*260*	49	*1090*	***560***	< 20.0	< 3.8	(2)	< 1.8	(2)	< 4.1	(2)	(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	(2)	< 40.0	(2)	< 41.0	(2)	(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	(2)	< 20.0	(2)	< 20.5	(2)	(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	(2)	< 40.0	(2)	< 41.0	(2)	(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	(2)	< 5.00	(2)	< 5.00	(2)	(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	(2)	***56.2***	(2)	< 10.0	(2)	(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	(2)	< 20.0	(2)	< 20.0	(2)	(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	(2)	< 300	(2)	< 200	(2)	(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	(2)	***62.8*** J	(2)	< 20.0	(2)	(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	(2)	***115***	(2)	< 30.0	(2)	(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	(2)	***84.3*** J	(2)	< 30.0	(2)	(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	(2)	***118***	(2)	< 30.0	(2)	(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	(2)	***57.6*** J	(2)	< 30.0	(2)	(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	(2)	< 30.0	(2)	< 30.0	(2)	(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	(2)	***51.3***	(2)	< 30.0	(2)	(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	(2)	< 3.6	(2)	< 8.2	(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	(2)	< 9.5	(2)	< 9.7	(2)	(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	(2)	< 0.17	(2)	< 0.23	(2)	(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	(2)	< 0.17	(2)	< 0.23	(2)	(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	(2)	< 1.7	(2)	< 2.3	(2)	(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	(2)	< 0.17	(2)	< 0.23	(2)	(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	(2)	< 0.42	(2)	< 0.58	(2)	(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	(2)	< 0.17	(2)	< 0.23	(2)	(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	(2)	< 6.7	(2)	< 9.2	(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	(2)	< 0.42	(2)	< 0.58	(2)	(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	(2)	< 8.4	(2)	< 11.5	(2)	(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	(2)	< 0.28	(2)	< 0.24	(2)	(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)	< 2.8	(2)	< 2.4	(2)	(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
10/9/2019	na	***2640***	*420*	4.8 J	< 441.6 BQX	***661.1***	< 2.4	< 5.4	(2)	***64.6***	(2)	< 2.4	(2)	(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	< 1.4	na	< 1.2	< 1.8	< 4.9	< 6.7	< 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	< 0.17	*0.96*	< 2.5	< 0.13	< 0.11	< 0.63	< 0.42	< 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	< 3.0	< 2.9	na	< 3.6	< 4.2	< 11.9	< 13.8	< 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	< 0.25 H	< 0.16 H	na	< 0.13 H	< 0.096 H	< 0.32 H	< 0.23 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	< 0.11	< 0.17	< 1.9	< 0.12	< 0.12	< 0.38	< 0.21	< 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	< 0.11	< 0.17	na	< 0.12	< 0.12	< 0.54 JB	< 0.21	< 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
5/30/2023	na	***1480***	*218*	3.5 J	57.3	*367*	< 0.62	< 0.62	< 0.54	< 0.84	na	< 0.60	< 0.58	< 1.9	< 1.0	< 1.0	< 1.2	< 0.85	na	11.5	na	< 1.6	na	< 0.63	6.9	2.5 J	20.8	4.0 J	1.9 J	< 0.48	< 0.45	< 0.52	na
10/16/2023	na	***2360***	*340*	4.6 J	19.3 a	***717***	< 2.5	< 2.5	< 4.6	< 3.4	na	< 2.4	< 2.3	< 19.9	< 8.3	< 4.1	< 4.6	< 8.0	na	21.3	na	< 8.7	na	< 2.5	< 3.5	10.9 J	45.8	8.8 J	< 4.1	< 4.4	< 3.9	< 4.3	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	1,1-Dichloroethane	1,2-Dichloroethane	Acetone	Bromobenzene	Bromodichloromethane	Bromomethane	Chloroethane	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	85	*0.5*	1800	NS	*0.06*	*1*	80	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	840	**5**	9000	NS	**0.6**	**10**	400	60	**6**	30	NS	NS	4000	**5**	500	60	**100**	NS	NS	NS	NS	100	NS	5	15
MW-5/T66																																	
11/25/1998	100	< 0.30	1.9	6.7	32	10.4	< 0.20	na	NI	< 0.20	(2)	< 0.20	NI	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	(2)	na	(2)	na	(2)	(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	(2)	na	(2)	na	(2)	(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	(2)	na	(2)	na	(2)	(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	(2)	na	(2)	na	(2)	(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	(2)	na	(2)	na	(2)	(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	(2)	na	(2)	na	(2)	(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	(2)	na	(2)	na	(2)	(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	(2)	na	(2)	na	(2)	(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	(2)	na	(2)	na	(2)	(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	(2)	na	(2)	na	(2)	(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	(2)	< 400	(2)	< 410	(2)	(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	(2)	< 80.0	(2)	< 82.0	(2)	(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	(2)	< 200	(2)	< 205	(2)	(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	(2)	***15.4*** J	(2)	102	(2)	(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	(2)	***52.0***	(2)	< 10.0	(2)	(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	(2)	< 20.0	(2)	< 20.0	(2)	(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	(2)	< 300	(2)	< 200	(2)	(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	(2)	< 30.0	(2)	< 20.0	(2)	(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	(2)	< 300	(2)	< 300	(2)	(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	(2)	***43.6*** J	(2)	< 30.0	(2)	(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	(2)	< 300	(2)	< 300	(2)	(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	(2)	***34.9*** J	(2)	< 30.0	(2)	(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	(2)	< 150	(2)	< 150	(2)	(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	(2)	< 150	(2)	< 150	(2)	(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	(2)	< 9.0	(2)	< 20.5	(2)	(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	(2)	< 19.1	(2)	< 19.3	(2)	(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	(2)	< 0.16	(2)	< 0.23	(2)	(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	(2)	< 3.4	(2)	< 4.6	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	< 33.6	(2)	< 46.0	(2)	(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	(2)	< 33.6	(2)	< 46.0	(2)	(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	(2)	< 33.6	(2)	< 46.0	(2)	(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	(2)	< 33.6	(2)	< 46.0	(2)	(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	(2)	< 21.0	(2)	< 28.8	(2)	(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	(2)	< 8.4	(2)	< 11.5	(2)	(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	(2)	< 14.0	(2)	< 12.1	(2)	(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	(2)	< 14.0	(2)	< 12.1	(2)	(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	(2)	***112***	(2)	< 12.1	(2)	(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	< 27.3	< 28.0	na	< 24.1	< 36.4	< 97.1	< 134	< 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	< 16.6	< 25.4	< 252	< 13.3	< 11.4	< 63.4	< 42.4	< 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	< 7.4	< 7.3	na	< 9.0	< 10.4	< 29.8	< 34.5	< 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	< 2.5 H	< 1.6 H	na	< 1.3 H	< 0.96 H	< 3.2 H	< 2.3 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	< 1.1	< 1.7	37.4 J	< 1.2	< 1.2	< 3.8	< 2.1	< 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	< 2.2	< 3.4	na	< 2.4	< 2.3	***10.2*** J+	< 4.1	< 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
5/30/2023	na	***4310***	***1640***	***2440***	***14340***	***3286***	< 6.2	< 6.2	< 5.4	< 8.4	na	< 6.0	< 5.8	< 19.2	< 10.3	< 10.2	< 11.5	< 8.5	na	51.3	na	< 16.5	na	< 6.3	***381***	47.6 J	151	7.2 J	10.3 J	< 4.8	< 4.5	< 5.2	na
10/16/2023	na	***2850***	***910***	***1700***	***11880***	***2797***	< 6.2	< 6.2	< 11.6	< 8.4	na	< 6.0	< 5.8	< 49.8	< 20.6	< 10.2	< 11.5	< 20.0	na	28.9 J	na	< 21.8	na	< 6.3	***272***	< 15.8	70.8	< 5.3	< 10.2	< 11.0	< 9.8	< 10.8	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	1,1-Dichloroethane	1,2-Dichloroethane	Acetone	Bromobenzene	Bromodichloromethane	Bromomethane	Chloroethane	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	85	*0.5*	1800	NS	*0.06*	*1*	80	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	840	**5**	9000	NS	**0.6**	**10**	400	60	**6**	30	NS	NS	4000	**5**	500	60	**100**	NS	NS	NS	NS	100	NS	5	15
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	NI	NI
9/30/2004	57000	***14000***	*460*	***15000***	***9100***	***1810***	< 200	< 75	(2)	< 36	(2)	< 82	(2)	(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	(2)	< 300	(2)	< 205	(2)	(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	(2)	< 200	(2)	< 205	(2)	(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	(2)	< 80.0	(2)	< 82.0	(2)	(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	(2)	***109***	(2)	75	(2)	(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
5/23/2007	103000	***21200***	***2730***	***33800***	***16520***	***4590***	< 200	< 300	(2)	< 200	(2)	< 200	(2)	(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	(2)	< 200	(2)	< 200	(2)	(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	(2)	< 300	(2)	< 200	(2)	(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	(2)	< 300	(2)	< 200	(2)	(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	(2)	***585*** J	(2)	< 300	(2)	(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	(2)	***315***	(2)	< 30.0	(2)	(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	(2)	< 300	(2)	< 300	(2)	(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	(2)	***339*** J	(2)	< 300	(2)	(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	(2)	< 300	(2)	< 300	(2)	(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	(2)	***322*** J	(2)	< 300	(2)	(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	(2)	< 45.0	(2)	< 102	(2)	(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	(2)	< 95.3	(2)	< 96.7	(2)	(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	(2)	< 41.9	(2)	< 57.5	(2)	(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	(2)	< 33.5	(2)	< 46.0	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	< 105	(2)	< 144	(2)	(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	(2)	FP	(2)	FP	(2)	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	(2)	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
6/12/2018	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	FP	(2)	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	na	FP	FP	FP	FP	FP	FP	FP	< 25.0	FP	FP	FP
10/9/2018	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	FP	(2)	(2)	(2)	(2)	(2)	FP	FP	FP	(2)	(2)	na	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
5/21/2019	na	***27400***	***2730***	***41600***	***24450***	***3480***	< 61.2	< 135	(2)	< 70.0	(2)	< 60.3	(2)	(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	(2)	***697***	(2)	< 60.3	(2)	(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	< 68.1	< 70.0	na	< 60.3	< 90.9	< 243	< 336	< 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	< 16.6	***88.7***	< 252	< 13.3	< 11.4	< 63.4	< 42.4	< 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	< 37.0	***78.0*** J	na	< 45.1	< 51.9	< 149	< 172	< 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	< 14.1	***56.1***	na	< 17.9	< 20.7	< 188	< 40.9	< 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	< 2.7	< 4.2	132 J	< 3.0	< 2.9	< 9.6	< 5.2	< 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	< 21.8	< 33.8	na	< 24.0	< 23.4	< 77.0	< 41.2	< 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
5/30/2023	na	***15600***	***1890***	***24300***	***21780***	***4243***	< 6.2	< 6.2	< 5.4	< 8.4	na	< 6.0	< 5.8	< 19.2	< 10.3	< 10.2	< 11.5	< 8.5	na	60.7	na	< 16.5	na	< 6.3	***540***	29.8 J	168	8.2 J	13.2 J	< 4.8	< 4.5	< 5.2	na
10/16/2023	na	***17200***	***2260***	***30400***	***22150***	***3961***	< 31.0	< 31.2	< 57.8	< 42.2	na	< 30.0	< 29.2	< 249	< 103	< 50.8	< 57.5	< 100	na	72.8 J	na	< 109	na	< 31.5	***541***	< 79.0	194 J	< 26.5	< 51.0	< 54.8	< 49.2	< 54.2	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	1,1-Dichloroethane	1,2-Dichloroethane	Acetone	Bromobenzene	Bromodichloromethane	Bromomethane	Chloroethane	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	85	*0.5*	1800	NS	*0.06*	*1*	80	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	840	**5**	9000	NS	**0.6**	**10**	400	60	**6**	30	NS	NS	4000	**5**	500	60	**100**	NS	NS	NS	NS	100	NS	5	15
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	NI	NI	NI	NI
9/30/2004	FP	FP	FP	FP	FP	FP	FP	FP	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	FP	(2)	FP	(2)	(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	(2)	< 60.0	(2)	< 60.0	(2)	(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	(2)	***293***	(2)	< 164	(2)	(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	(2)	< 95.3	(2)	< 96.7	(2)	(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	(2)	***336***	(2)	< 57.5	(2)	(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	(2)	< 33.5	(2)	< 46.0	(2)	(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	(2)	< 8.4	(2)	< 11.5	(2)	(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	(2)	***43.5*** J	(2)	< 11.5	(2)	(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	(2)	DP	(2)	DP	(2)	(2)	(2)	(2)	DP	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	(2)	***37.5*** J	(2)	< 11.5	(2)	(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	(2)	***240***	(2)	< 23.0	(2)	(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	(2)	***225***	(2)	< 28.8	(2)	(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	(2)	***209***	(2)	< 11.5	(2)	(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	(2)	< 70.0	(2)	< 60.3	(2)	(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	(2)	***236*** J	(2)	< 60.3	(2)	(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	(2)	***743***	(2)	< 60.3	(2)	(2)	(2)	(2)	(2)	< 547	na	< 98.2	(2)	(2)	na	< 311	***391*** J	< 177	< 203	< 200	< 212	< 116	< 76.0	< 81.6	na
5/27/2020	na	***18300***	***1410***	***16000***	***15710***	***3205***	< 49.0	< 108	< 54.5	< 56.0	na	< 48.2	< 72.7	< 194	< 268	< 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	< 8.3	***200***	< 126	< 6.6	< 5.7	< 31.7	< 21.2	< 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	< 37.0	< 36.4	na	< 45.1	< 51.9	< 149	< 172	< 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	< 14.1	***192***	na	< 17.9	< 20.7	< 188	< 40.9	< 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	< 1.1	< 1.7	52.3 J	< 1.2	< 1.2	< 3.8	< 2.1	< 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	< 21.8	< 33.8	na	< 24.0	< 23.4	< 77.0	< 41.2	< 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
5/30/2023	na	***20600***	***1810***	***16900***	***19250***	***3596***	< 24.8	< 25.0	< 21.8	< 33.8	na	< 24.0	< 23.4	< 77.0	< 41.2	< 40.6	< 46.0	< 34.0	na	52.6 J	na	< 66.0	na	< 25.2	***367***	31.0 J	142 J	< 21.2	< 19.4	< 19.3	< 18.2	< 21.0	na
10/16/2023	na	***22200***	***2070***	***17700***	***21890***	***4115***	< 24.8	< 25.0	< 46.2	< 33.8	na	< 24.0	< 23.4	< 199	< 82.6	< 40.6	< 46.0	< 80.2	na	59.3 J	na	< 87.2	na	< 25.2	***495***	< 63.2	174 J	< 21.2	< 40.8	< 43.8	< 39.4	< 43.4	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.