

Revitalizing Auto Communities Environmental Response
Trust (RACER)

2023 Joslyn South Parcel Groundwater Sampling Summary Report

Pontiac North Campus

August 13, 2024

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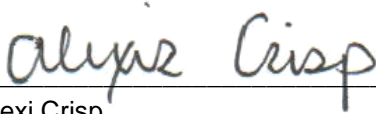
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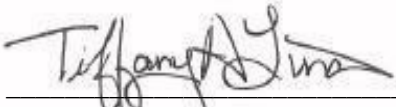
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1 Introduction

Arcadis of Michigan, LLC (Arcadis) prepared this report on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER). This report describes routine groundwater monitoring conducted during the 2023 calendar year. These activities were conducted by Arcadis at a vacant 0.455-acre parcel (Parcel ID 14-21-205-001) in the vicinity of the RACER Pontiac North Site in Pontiac, Michigan. The parcel (herein referred to as the Joslyn South Parcel or “Site”) is bounded to the west by Joslyn Avenue, north by Wesbrook Street, south by Lenox Avenue, and east by residential properties. The Site is owned by RACER Properties, LLC, a wholly owned subsidiary of RACER. The location of the Site and Site layout is shown in **Figures 1** and **2**.

RACER’s objective is to obtain no further action status for the Site based on completing necessary response activities, which are anticipated to include recording deed restrictions such as restricting use to non-residential, prohibiting installation of wells and use of groundwater, requiring contaminated soil management, and requiring soil vapor management.

1.1 Site Background

A historical review of the Joslyn property is provided as the *Joslyn Avenue Parcels Historical Summary Memorandum*, dated January 19, 2021 (Arcadis 2021a), which was provided to the U.S. Environmental Protection Agency (USEPA). The memorandum was later provided to the Michigan Department of Environment, Great Lakes, and Energy (EGLE) on September 1, 2021, for reference. The Joslyn South parcel operated as a gasoline station from at least 1952 through at least 1967. Aerial photographs, from 1952 through 1967, show a building in the east-central portion of the Joslyn South Parcel with paved surfaces on the west side and access from Lennox Ave. and Joslyn Ave. From 1972 through 2016, aerial photographs depict the parcel as vacant/landscaped lawn. The Site is currently vacant/undeveloped property.

The Joslyn South parcel was identified in the 2001 ENCORE Current Conditions Report (CCR), as area of interest (AOI) P-8, which contained a former underground storage tank (UST). The vacant lot was considered an AOI because a release from a previously unknown UST was discovered in 1996. There are no records indicating that former GMC manufacturing operational activities occurred on this parcel. The tank number, capacity, and date of installation are unknown. An initial investigation report was submitted by Parsons in 1997 following a subsurface investigation conducted in October 1996. In October 1998, Conestoga-Rovers and Associates (CRA) submitted a “Leaking Underground Storage Tank Closure Report” to MDEQ (currently EGLE). In 1999, the Site was closed per Act 451 Section 21315 (administrative closure as MDEQ did not review within the review timeframe), and no further action was recommended in the CCR. However, as stated in a March 3, 2021, letter from USEPA it was determined that RACER Trust was going to continue environmental investigation activities at the Site even though USEPA determined that the Site was not part of the former GMC Pontiac North Campus facility and would not appear to be subject to RCRA. Previous investigations by RACER Trust can be found in the *Joslyn – Wesbrook South Parcel Screening Investigation Report* (Arcadis 2021b), *Joslyn South Parcel Investigation Report* (Arcadis 2022), and *2022 Joslyn South Parcel Groundwater and Soil Investigation Summary Report* (Arcadis 2023).

2 Sampling Procedures

Four consecutive quarters of groundwater monitoring was conducted in 2023 for groundwater data trend evaluation. Monitoring activities included monitoring well gauging, followed by sample collection for volatile organic compound (VOC) analysis. Monitoring activities were completed as follows:

- First quarter - March 8th to March 14th
- Second quarter - June 19th to June 22nd
- Third quarter - September 22nd to September 26th
- Fourth quarter - December 14th to December 19th

Groundwater monitoring, laboratory analytical results, and analytical trends are summarized in the following sections.

2.1 Groundwater Gauging and Sampling

During gauging events groundwater level measurements were recorded from selected monitoring wells in accordance with USEPA Low-Stress (or Low-Flow) Purging and Sampling Procedures (USEPA 2017). Groundwater was measured to the nearest 0.01 foot with an electronic water level meter. Groundwater elevations were calculated using surveyed top-of-well casing elevations. A summary of water levels and groundwater elevations is presented in **Table 1**. Refer to **Figure 2** for locations of existing monitoring wells gauged and sampled in 2023.

Following gauging activities, groundwater samples were collected using low-flow sampling procedures (USEPA 2017), which is the USEPA Region V standard method for collecting low-stress/low-flow groundwater samples from monitoring wells.

During sampling, purge water was monitored for dissolved oxygen (DO), temperature, specific conductivity, turbidity, oxygen reduction potential (ORP), and pH. These water quality measurements were used to determine groundwater sample stability prior to collection of the groundwater samples. All groundwater sampling logs are provided in **Appendix A**.

Groundwater samples were collected and submitted to Merit Laboratories, Inc. (Merit) in Lansing, Michigan for analysis of VOCs using USEPA Method 8260C. Due to a lack of groundwater present in monitoring well JS-MW-06, a groundwater sample was unable to be collected for laboratory analysis during the first quarter event.

3 Monitoring Results

The monitoring results from activities completed in 2023 are summarized in the sections below.

3.1 Groundwater Elevation

The shallow geology at the site consists of primarily clay with thin seams of more permeable sand. The results of the groundwater gauging events indicate that groundwater is encountered at depths ranging from near surface to 16.70 feet below ground surface. A summary of groundwater elevations collected during the 2023 monitoring events is provided in **Table 1**. The wide range in groundwater depth is due to the poor connectivity of sand seams within the dominant clay matrix. Apparent groundwater flow direction is to the south-southeast. Groundwater flow direction was determined by selecting monitoring wells with similar measured depth to groundwater. Groundwater elevation and groundwater flow direction in second and fourth quarter 2023 are shown on **Figures 3A** and **3B**.

3.2 Groundwater Analytical Results

Over the four quarters of sampling at the Site in 2023, a total of 54 groundwater samples plus duplicates were collected and analyzed. Monitoring wells sampled in the first quarter were completed in accordance with recommendations made in the 2021 Investigation Report (Arcadis 2021b), while second, third and fourth quarter events were completed in accordance with the 2023 Joslyn Temporary Groundwater Monitoring Plan (TGMP) (**Figure 2**) provided as part of the 2022 *Joslyn South Parcel Groundwater and Soil Investigation Summary Report* (Arcadis 2023), submitted on May 12th, 2023.

Groundwater data was compared to Joslyn Site-Specific Volatilization to Indoor Air Criteria (SSVIAC) obtained from EGLE (April 2022) and Part 201 EGLE Clean-up Criteria (October 2023). The SSVIAC criteria included residential criteria for basement scenarios and nonresidential criteria for slab-on-grade scenarios. A summary of the groundwater analytical results for compounds that exceed criteria is provided as **Figure 4**. A complete summary of the groundwater analytical results is provided as **Table 2**. The laboratory analytical reports are provided as **Appendix B**. Trend graphs and Mann-Kendall stability analysis are provided in **Appendix C** and discussed further in Section 3.3.

A summary of the four quarters of groundwater analytical results follows:

- There were exceedances of Groundwater Surface Water Interface, Residential Drinking Water, Nonresidential Drinking Water, Residential SSVIAC, or Nonresidential SSVIAC in eight (8) of the 17 wells sampled. A figure showing groundwater analytical results is provided in **Figure 4**.
- The primary compounds exceeding criteria in groundwater include 1,2,3-trimethylbenzene (1,2,3-TMB), 1,2,4-trimethylbenzene (1,2,4-TMB), 1,3,5-trimethylbenzene (1,3,5-TMB), 1,2-dichloroethane (1,2-DCA), 2-methylnaphthalene, benzene, ethylbenzene, isopropyl benzene, naphthalene, N-propylbenzene, and total xylenes.
 - Other compounds that were detected but did not exceed criteria include chloroform, cis-1,2-dichloroethene, 2-butanone, cymene, N-butylbenzene, 2-phenylbutane, toluene, and trichloroethene.
- The highest VOC detections are in or near the suspected former dispenser area at the south-central portion of the Site and decrease as they approach the south and southeast property boundaries.

- On the eastern property boundary, JS-MW-06, JS-MW-16 and JS-MW-19 have exceeded residential SSVIAC for one or more of the following: 1,2-DCA, benzene, and ethylbenzene.
 - 1,2-DCA exceeded SSVIAC at JS-MW-16 during the first and second quarter 2023 (12 µg/L and 3 µg/L, respectively), but decreased to 1 µg/L (below the SSVIAC 1.4 µg/L) during the third and fourth quarter 2023. The Mann-Kendall analysis for 1,2-DCA at JS-MW-16 (**Appendix C**), shows no significant trend.
 - Benzene has been detected above SSVIAC (i.e., 1 µg/L) at JS-MW-19 and JS-MW-16. At JS-MW-19, benzene was not detected during the first and fourth quarter, and during the second and third quarter benzene was detected at 4 and 3 µg/L, respectively. At JS-MW-16, benzene varied from 2 to 7 µg/L since sampling began in 2021. Mann-Kendall trend analysis show benzene concentrations are decreasing at JS-MW-19 and show no significant trend at JS-MW-16.
 - Ethylbenzene has been detected at JS-MW-06 at concentrations ranging from 14 to 16 µg/L in 2023, exceeding the SSVIAC of 2.8 µg/L. Concentrations of ethylbenzene at JS-MW-06 have decreased from 446 µg/L in May of 2021 to 14 µg/L in December 2023 and Mann-Kendall results indicate a decreasing trend.
- Monitoring well JS-MW-29, located in the right-of-way south of the Site, exceeded Residential (but not non-residential) SSVIAC for ethylbenzene with concentrations ranging from 2 to 3 µg/L in 2023. Monitoring wells further south of JS-MW-29 (JS-MW-23, JS-MW-24, JS-MW-26 and JS-MW-30) were all below criteria or non-detect for VOCs.

3.3 Groundwater Analytical Trends

Compounds exceeding criteria in groundwater, including 1,2,3-TMB, 1,2,4-TMB, 1,3,5-TMB, 1,2-DCA, 2-Methylnaphthalene, benzene, ethylbenzene, isopropyl benzene, naphthalene, N-butylbenzene, N-propylbenzene, and total xylenes were evaluated for concentration trends. Trend analysis from monitoring wells can provide insights regarding source maturity. Stable concentrations (i.e., no trend with low variability in concentrations over time) and decreasing trends indicate that the source is mature or depleted. Increasing trends at individual source area wells can indicate an expanding plume but also can reflect the wide range of concentrations and temporal variability common at source areas.

Mann-Kendall statistical analysis was completed for wells with SSVIAC exceedances noted for 1,2-DCA, benzene, and ethylbenzene. The Mann-Kendall trend analysis included data from 2021 through 2023, to coincide with the more frequent sampling events, and only included wells with at least 5 data points and at least 50 percent detection for the specific compound of concern. The methodology, Mann-Kendall results summary and trend graphs associated with the Mann-Kendall trend tests are included in **Appendix C**. Concentration trend graphs for wells that exceed criteria for other compounds (i.e., not 1,2-DCA, benzene or ethylbenzene), or wells that did not meet criteria for Mann-Kendall analysis are also provided as part of **Appendix C**. The Mann-Kendall statistical trends are summarized on **Figure 5**.

Key findings of the trend analysis are summarized below:

- Concentrations observed from monitoring wells at or near the suspected former dispenser area, along the eastern property boundary and along the western property boundary show stable or decreasing trends for 1,2-DCA, benzene, and ethylbenzene.

- Concentrations observed from monitoring wells along the southern boundary of the Site and off-site to the south show stable trends for the primary detected compounds, except for JS-MW-10, which shows an increasing trend for 1,2-DCA. Monitoring wells downgradient of JS-MW-10 show stable trends (i.e., JS-MW-23) or are non-detect for 1,2-DCA.

The results of 2023 monitoring indicate that groundwater impacts are largely confined to the Site and delineated off-site to the south. Concentration trends at JW-MW-06, JS-MW-16 and JS-MW-19 near the east property boundary vary around criteria but are statistically stable.

4 Next Steps

The approximate distances from wells JS-MW-16, JS-MW-19, and JS-MW-06 to the nearest structure, a garage, are 58 feet, 52 feet, and 66 feet, respectively. The distances from these wells to the associated residence are approximately 85 feet, 76 feet, and 82 feet, respectively. For hydrocarbons, the EGLE “default lateral inclusion distance of 30 feet is a conservative buffer developed to account for the uncertainty with contaminant stability, or with the lateral edge of contamination, due to the typical spacing of borings or monitoring wells laterally from the vapor source area”. For 1,2-DCA the default exclusion zone would be 100 feet consistent with the EGLE guidance; however, 1,2-DCA has not been detected during the last 2 quarters of sampling at the perimeter monitoring wells. Review of the eastern boundary analytical results show slight (and in the case of JS-MW-19 inconsistent) exceedances and stable to decreasing trends for benzene at JS-MW-16 and JS-MW-19, and exceedances with decreasing trends for ethylbenzene in JS-MW-06.

Based on these results and to verify detections and concentration trends, additional sampling is proposed for the eastern property boundary monitoring wells (JS-MW-16, JS-MW-19 and JS-MW-06) for the third quarter 2024. Additional sampling for these three monitoring wells will be re-evaluated for 2025.

5 References

- Arcadis 2021a. Joslyn Avenue Parcels Historical Summary Memorandum and Request for Determination for Parcels Not Being Regulated Under RCRA, including Corrective Action, and Not Being Covered Under Administrative Order on Consent RCRA-05-2011-00019, RACER Trust, Pontiac Michigan, January 19, 2021.
- Arcadis 2021b. Joslyn – Wesbrook South Parcel Screening Investigation Report, RACER Trust, Pontiac, Michigan, August 24, 2021.
- Arcadis 2022. Joslyn South Parcel Investigation Report, RACER Trust, Pontiac, Michigan, July 15, 2022.
- Arcadis 2023. 2022 Joslyn South Parcel Groundwater and Soil Investigation Summary Report, RACER Trust, Pontiac, Michigan, May 12, 2023.
- Conestoga-Rovers, and Associates (CRA). 1998. Leaking Underground Storage Tank Closure Report. October 30, 1998.
- EGLE. 2020. Clean Up Criteria Requirements Table 1: Groundwater: Residential and Nonresidential, Part 201 Generic Cleanup Criteria and Screening Levels, October 12, 2023.
- EGLE. 2022. SSVIAC for RACER PNC Joslyn South Parcel Property Table1: Residential Part 201 SSVIAC or Part 213 VIAP STTLs, April 21, 2022.

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ENCORE. 2001. Current Conditions Report, Pontiac North Campus, Volume I of IV. General Motors Corporation. Pontiac, Michigan. January 31.

Parsons. 1997a. Initial Assessment Report, Vacant Lot, GM Powertrain, Pontiac, Michigan. January 30, 1997.

Parsons. 1997c. Final Assessment Report, Vacant Lot, GM Powertrain, Pontiac, Michigan. October 29, 1997.

U.S. Environmental Protection Agency (USEPA; Region I). 1996. Low-Stress (or Low-Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells – Revision 4. July 30, 1996; Revised September 19, 2017.

Tables

Table 1
Summary of Groundwater Elevations
Joslyn South Parcel
RACER Trust Pontiac North Campus



Well ID	Ground Elevation	Well Elevation ¹	Total Depth (ft)	1Q			2Q			3Q			4Q		
				Date	Depth to Water (ft) ²	Groundwater Elevation	Date	Depth to Water (ft) ²	Groundwater Elevation	Date	Depth to Water (ft) ²	Groundwater Elevation	Date	Depth to Water (ft) ²	Groundwater Elevation
Joslyn-Wesbrook South Parcel Monitoring Wells															
JS-MW-03	987.34	987.11	13.81	3/8/2023	13.40	973.71	6/19/2023	10.45	976.66	9/22/2023	8.65	978.46	12/14/2023	6.67	980.44
JS-MW-04	987.69	987.49	13.47	3/8/2023	4.67	982.82	6/19/2023	6.44	981.05	9/22/2023	5.66	981.83	12/14/2023	5.53	981.96
JS-MW-05	986.29	985.94	10.29	3/8/2023	2.45	983.49	6/19/2023	4.97	980.97	9/25/2023	4.35	981.59	12/14/2023	3.4	982.54
JS-MW-06	984.97	984.71	13.90	3/8/2023	13.76	970.95	6/19/2023	11.83	972.88	9/22/2023	10.98	973.73	12/14/2023	10.51	974.20
JS-MW-07	985.74	985.42	14.62	3/8/2023	12.56	972.86	6/19/2023	9.03	976.39	9/22/2023	6.92	978.50	12/14/2023	5.12	980.30
JS-MW-09	986.99	986.61	13.00	3/8/2023	11.29	975.32	6/19/2023	10.19	976.42	9/22/2023	8.49	978.12	12/14/2023	7.64	978.97
JS-MW-10	986.96	986.72	15.71	3/8/2023	11.68	975.04	6/19/2023	10.92	975.80	9/22/2023	9.79	976.93	12/14/2023	9.68	977.04
JS-MW-11	985.69	985.40	13.76	3/8/2023	12.07	973.33	6/19/2023	11.85	973.55	9/22/2023	10.08	975.32	12/14/2023	8.68	976.72
JS-MW-16	985.75	985.34	15.66	3/8/2023	13.17	972.17	6/19/2023	11.54	973.80	9/22/2023	10.38	974.96	12/14/2023	9.65	975.69
JS-MW-19	984.48	984.05	16.69	3/8/2023	16.70	967.35	6/19/2023	11.51	972.54	9/22/2023	10.96	973.09	12/14/2023	10.41	973.64
JS-MW-20	986.07	985.64	17.84	3/8/2023	13.09	972.55	6/19/2023	10.47	975.17	9/22/2023	9.38	976.26	12/14/2023	9.46	976.18
JS-MW-21	984.13	983.59	16.87	3/8/2023	13.05	970.54	6/19/2023	10.99	972.60	9/22/2023	12.29	971.30	12/14/2023	9.91	973.68
JS-MW-22	983.52	983.14	17.71	3/8/2023	12.66	970.48	6/19/2023	10.59	972.55	9/22/2023	9.81	973.33	12/14/2023	9.52	973.62
JS-MW-23	984.63	984.30	10.33	3/8/2023	0.60	983.70	6/19/2023	1.70	982.60	9/22/2023	1.53	982.77	12/14/2023	2.32	981.98
JS-MW-24	983.70	983.32	7.25	3/8/2023	0.02	983.30	6/19/2023	0.92	982.40	9/22/2023	0.25	983.07	12/14/2023	1.63	981.69
JS-MW-25	983.51	983.11	7.35	3/8/2023	1.79	981.32	6/19/2023	2.32	980.79	9/22/2023	2.26	980.85	12/14/2023	2.6	980.51
JS-MW-26	984.64	984.22	18.05	3/8/2023	10.17	974.05	6/19/2023	8.90	975.32	9/22/2023	7.15	977.07	12/14/2023	8.29	975.93
JS-MW-27	987.90	987.55	15.63	3/8/2023	11.47	976.08	6/19/2023	10.51	977.04	9/22/2023	10.33	977.22	12/14/2023	10.13	977.42
JS-MW-28	985.72	985.26	9.70	3/8/2023	1.27	983.99	6/19/2023	2.74	982.52	9/22/2023	1.85	983.41	12/14/2023	3.16	982.10
JS-MW-29	985.28	984.93	10.20	3/8/2023	2.13	982.80	6/19/2023	3.73	981.20	9/22/2023	3.42	981.51	12/14/2023	2.6	982.33
JS-MW-30	984.54	984.07	8.18	3/8/2023	0.70	983.37	6/19/2023	1.52	982.55	9/22/2023	0.82	983.25	12/14/2023	2.05	982.02

Abbreviations:

ft - feet

Footnotes:

¹ Top of Temporary Well Casing/Stickup Elevation is in feet National Vertical Geodetic Datum (1988).

² Depth to water measurements collected from top of temporary well casing/stickup.

Table 2
 Summary of Monitoring Well Analytical Results
 Joslyn South Parcel
 RACER Trust Pontiac North Campus



Chemical Name	Units	Groundwater Surface Water Interface	Residential Drinking Water	Nonresidential Drinking Water	Res Joslyn SSVIAC BASE	NR Joslyn SSVIAC <50k SOG	Location ID	JS-MW-04	JS-MW-04	JS-MW-04	JS-MW-05	JS-MW-05	JS-MW-05	JS-MW-05	JS-MW-06	JS-MW-06	JS-MW-09	JS-MW-09	JS-MW-09	JS-MW-09	JS-MW-10	
								Date Collected	3/9/2023	6/20/2023	12/15/2023	3/13/2023	6/20/2023	9/25/2023	12/14/2023	6/19/2023	12/14/2023	3/9/2023	6/20/2023	9/26/2023	12/14/2023	3/13/2023
Iodomethane	ug/L	--	--	--	--	--		< 1 U [<1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 50 UY	< 50 UY	< 50 UY	< 50 UY	< 50 UY	< 1 U
Isopropyl benzene	ug/L	28	800	2,300	0.60	6.7		< 5 U [<5 U]	< 5 U	< 5 U	< 5 U	12	< 5 U	< 5 U [<5 U]	< 5 U	< 5 U	< 300 UY	< 300 UY	< 300 UY	< 300 UY	< 300 UY	< 5 U
m&p-Xylene	ug/L	--	--	--	--	--		< 2 U [<2 U]	2	< 2 U	< 2 U	1,020 Y	17	3 [3]	26	17	5,000 Y	4,800 Y	3,500 Y	4,600 Y	< 2 U	
Methyl tert butyl ether (MTBE)	ug/L	7,100	40	40	250	810		< 5 U [<5 U]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U	< 5 U	< 300 UY	< 300 UY	< 300 UY	< 300 UY	< 5 U	
Methylene chloride	ug/L	1,500	5.0	5.0	--	--		< 5 U [<5 U]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U	< 5 U	< 300 UY	< 300 UY	< 300 UY	< 300 UY	< 5 U	
Naphthalene	ug/L	11	520	1,500	4.2	12		< 5 U [<5 U]	< 5 U	< 5 U	< 5 U	100 Y	< 5 U	< 5 U [<5 U]	< 5 U	< 5 U	< 300 UY	300 Y	< 300 UY	400 Y	< 5 U	
N-Butylbenzene	ug/L	--	80	230	44	360		< 1 U [<1 U]	< 1 U	< 1 U	< 1 U	< 14 UX	< 1 U	< 1 U [<1 U]	< 1 U	< 1 U	< 50 UY	< 50 UY	< 150 UY	< 50 UY	< 1 U	
N-Propylbenzene	ug/L	--	80	230	43	970		< 1 U [<1 U]	< 1 U	< 1 U	< 1 U	41	1	< 1 U [<1 U]	3	3	170 Y	170 Y	150 Y	270 Y	< 1 U	
o-Xylene	ug/L	--	--	--	--	--		< 1 U [<1 U]	< 1 U	< 1 U	< 1 U	25	< 1 U	< 1 U [<1 U]	< 1 U	< 1 U	100 Y	90 Y	70 Y	100 Y	< 1 U	
Styrene	ug/L	80	100	100	33	170		< 1 U [<1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U [<1 U]	< 1 U	< 1 U	< 50 UY	< 50 UY	< 50 UY	< 50 UY	< 1 U	
tert-Butylbenzene	ug/L	--	80	230	0.077	0.71		< 1 U [<1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U [<1 U]	< 1 U	< 1 U	< 50 UY	< 50 UY	< 50 UY	< 50 UY	< 1 U	
Tetrachloroethene	ug/L	60	5.0	5.0	--	--		< 1 U [<1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U [<1 U]	< 1 U	< 1 U	< 50 UY	< 50 UY	< 50 UY	< 50 UY	< 1 U	
Tetrahydrofuran	ug/L	11,000	95	270	--	--		< 90 U [<90 U]	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U [<90 U]	< 90 U	< 90 U	< 4,500 UY	< 4,500 UY	< 4,500 UY	< 4,500 UY	< 90 U	
Toluene	ug/L	270	790	790	300	6,600		< 1 U [<1 U]	< 1 U	< 1 U	< 1 U	65	< 1 U	< 1 U [<1 U]	< 1 U	< 1 U	130 Y	100 Y	80 Y	100 Y	< 1 U	
trans-1,2-Dichloroethene	ug/L	1,500	100	100	--	--		< 1 U [<1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U [<1 U]	< 1 U	< 1 U	< 50 UY	< 50 UY	< 50 UY	< 50 UY	< 1 U	
trans-1,3-Dichloropropene	ug/L	--	--	--	--	--		< 1 U [<1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U [<1 U]	< 1 U	< 1 U	< 50 UY	< 50 UY	< 50 UY	< 50 UY	< 1 U	
trans-1,4-Dichloro-2-butene	ug/L	--	--	--	--	--		< 1 U [<1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U [<1 U]	< 1 U	< 1 U	< 50 UY	< 50 UY	< 50 UY	< 50 UY	< 1 U	
Trichloroethene	ug/L	200	5.0	5.0	--	--		< 1 U [<1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U [<1 U]	< 1 U	< 1 U	< 50 UY	< 50 UY	< 50 UY	< 50 UY	< 1 U	
Trichlorofluoromethane (CFC-11)	ug/L	--	2,600	7,300	--	--		< 1 U [<1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U [<1 U]	< 1 U	< 1 U	< 50 UY	< 50 UY	< 50 UY	< 50 UY	< 1 U	
Vinyl chloride	ug/L	13	2.0	2.0	--	--		< 1 U [<1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U [<1 U]	< 1 U	< 1 U	< 50 UY	< 50 UY	< 50 UY	< 50 UY	< 1 U	
Xylene, Total	ug/L	49	280	280	75	410		< 2 U [<2 U]	2	< 2 U	< 2 U	1,045	17	3 [3]	26	17	5,100	4,890	3,570	4,700	< 2 U	

Table 2
 Summary of Monitoring Well Analytical Results
 Joslyn South Parcel
 RACER Trust Pontiac North Campus



Chemical Name	Units	Groundwater Surface Water Interface	Residential Drinking Water	Nonresidential Drinking Water	Res Joslyn SSVIAC BASE	NR Joslyn SSVIAC <50k SOG	Location ID	JS-MW-10	JS-MW-10	JS-MW-10	JS-MW-11	JS-MW-11	JS-MW-16	JS-MW-16	JS-MW-16	JS-MW-16	JS-MW-19	JS-MW-19	JS-MW-19	JS-MW-19	
								Date Collected	6/19/2023	9/26/2023	12/15/2023	6/19/2023	12/15/2023	3/9/2023	6/22/2023	9/25/2023	12/18/2023	3/9/2023	6/20/2023	9/25/2023	12/15/2023
Iodomethane	ug/L	--	--	--	--	--		< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Isopropyl benzene	ug/L	28	800	2,300	0.60	6.7		< 5 U [< 5 U]	< 5 U [< 5 U]	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
m&p-Xylene	ug/L	--	--	--	--	--		< 2 U [< 2 U]	< 2 U [< 2 U]	< 2 U [< 2 U]	< 2 U	< 2 U	5	15	10	10	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Methyl tert butyl ether (MTBE)	ug/L	7,100	40	40	250	810		< 5 U [< 5 U]	< 5 U [< 5 U]	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylene chloride	ug/L	1,500	5.0	5.0	--	--		< 5 U [< 5 U]	< 5 U [< 5 U]	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Naphthalene	ug/L	11	520	1,500	4.2	12		< 5 U [< 5 U]	< 5 U [< 5 U]	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
N-Butylbenzene	ug/L	--	80	230	44	360		< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
N-Propylbenzene	ug/L	--	80	230	43	970		< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U	5	9	9	2	< 1 U	< 1 U	< 1 U	< 1 U
o-Xylene	ug/L	--	--	--	--	--		< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Styrene	ug/L	80	100	100	33	170		< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
tert-Butylbenzene	ug/L	--	80	230	0.077	0.71		< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Tetrachloroethene	ug/L	60	5.0	5.0	--	--		< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Tetrahydrofuran	ug/L	11,000	95	270	--	--		< 90 U [< 90 U]	< 90 U [< 90 U]	< 90 U [< 90 U]	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U
Toluene	ug/L	270	790	790	300	6,600		< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,2-Dichloroethene	ug/L	1,500	100	100	--	--		< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,3-Dichloropropene	ug/L	--	--	--	--	--		< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,4-Dichloro-2-butene	ug/L	--	--	--	--	--		< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Trichloroethene	ug/L	200	5.0	5.0	--	--		< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U	< 1 U	1	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Trichlorofluoromethane (CFC-11)	ug/L	--	2,600	7,300	--	--		< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Vinyl chloride	ug/L	13	2.0	2.0	--	--		< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Xylene, Total	ug/L	49	280	280	75	410		< 2 U [< 2 U]	< 2 U [< 2 U]	< 2 U [< 2 U]	< 2 U	< 2 U	5	15	10	10	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U

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Chemical Name	Units	Groundwater Surface Water Interface	Residential Drinking Water	Nonresidential Drinking Water	Res Joslyn SSVIAC BASE	NR Joslyn SSVIAC <50k SOG	Location ID	JS-MW-20	JS-MW-20	JS-MW-20	JS-MW-21	JS-MW-21	JS-MW-21	JS-MW-22	JS-MW-23	JS-MW-23	JS-MW-23	JS-MW-23	JS-MW-24	JS-MW-24	JS-MW-24	JS-MW-26
							Date Collected	3/13/2023	6/20/2023	12/18/2023	3/13/2023	6/21/2023	12/18/2023	3/13/2023	6/21/2023	12/18/2023	3/13/2023	3/14/2023	6/21/2023	9/26/2023	12/19/2023	3/14/2023
VOCs																						
1,1,1,2-Tetrachloroethane	ug/L	--	77	320	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1,1-Trichloroethane	ug/L	89	200	200	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1,2,2-Tetrachloroethane	ug/L	78	8.5	35.0	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1,2-Trichloroethane	ug/L	330	5.0	5.0	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	ug/L	740	880	2,500	4.7	40		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethene	ug/L	130	7.0	7.0	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2,3-Trichlorobenzene	ug/L	--	--	--	--	--		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,3-Trichloropropane	ug/L	--	42	120	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2,3-Trimethylbenzene	ug/L	--	--	--	43	150		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2,4-Trichlorobenzene	ug/L	99	70	70	--	--		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,4-Trimethylbenzene	ug/L	17	63	63	25	120		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	--	0.2	0.2	--	--		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane (Ethylene dibromide)	ug/L	5.7	0.05	0.05	0.13	0.39		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichlorobenzene	ug/L	13	600	600	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane	ug/L	360	5.0	5.0	1.4	5.1		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloropropane	ug/L	230	5.0	5.0	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,3,5-Trimethylbenzene	ug/L	45	72	72	18	110		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,3-Dichlorobenzene	ug/L	28	6.6	19.0	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,4-Dichlorobenzene	ug/L	17	75	75	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	2,200	13,000	38,000	2,600	12,000		< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U
2-Hexanone	ug/L	--	1,000	2,900	--	--		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
2-Methylnaphthalene	ug/L	19	260	750	66	110		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
2-Phenylbutane (sec-Butylbenzene)	ug/L	--	80	230	270	400		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	--	1,800	5,200	200	5,000		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Acetone	ug/L	1,700	730	2,100	50,000	200,000		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Acrylonitrile	ug/L	2.0	3	11.0	--	--		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Benzene	ug/L	200	5.0	5.0	1.0	8.4		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Bromobenzene	ug/L	--	18	50	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Bromodichloromethane	ug/L	--	80	80	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Bromoform	ug/L	--	80	80	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Bromomethane (Methyl bromide)	ug/L	5.0	10	29	--	--		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon disulfide	ug/L	--	800	2,300	--	--		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon tetrachloride	ug/L	38	5.0	5.0	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chlorobenzene	ug/L	25	100	100	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chlorobromomethane	ug/L	--	--	--	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chloroethane	ug/L	1,100	430	1,700	--	--		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloroform (Trichloromethane)	ug/L	350	80	80	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chloromethane (Methyl chloride)	ug/L	--	260	1,100	--	--		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
cis-1,2-Dichloroethene	ug/L	620	70	70	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
cis-1,3-Dichloropropene	ug/L	--	--	--	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Cymene (p-Isopropyltoluene)	ug/L	--	--	--	--	--		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dibromochloromethane	ug/L	--	80	80	--	--		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dibromomethane	ug/L	--	80	230	--	--		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dichlorodifluoromethane (CFC-12)	ug/L	--	1,700	4,800	--	--		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Ethyl ether	ug/L	--	10	10	--	--		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Ethylbenzene	ug/L	18	74	74	2.8	28		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Hexachloroethane	ug/L	6.7	7.3	21.0	--	--		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U

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Chemical Name	Units	Groundwater Surface Water Interface	Residential Drinking Water	Nonresidential Drinking Water	Res Joslyn SSVIAC BASE	NR Joslyn SSVIAC <50k SOG	Location ID	JS-MW-20	JS-MW-20	JS-MW-20	JS-MW-21	JS-MW-21	JS-MW-21	JS-MW-22	JS-MW-23	JS-MW-23	JS-MW-23	JS-MW-23	JS-MW-24	JS-MW-24	JS-MW-24	JS-MW-26
							Date Collected	3/13/2023	6/20/2023	12/18/2023	3/13/2023	6/21/2023	12/18/2023	3/13/2023	3/14/2023	6/21/2023	9/26/2023	12/19/2023	3/14/2023	6/22/2023	12/19/2023	6/21/2023
Iodomethane	ug/L	--	--	--	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Isopropyl benzene	ug/L	28	800	2,300	0.60	6.7		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
m&p-Xylene	ug/L	--	--	--	--	--		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Methyl tert butyl ether (MTBE)	ug/L	7,100	40	40	250	810		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylene chloride	ug/L	1,500	5.0	5.0	--	--		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Naphthalene	ug/L	11	520	1,500	4.2	12		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
N-Butylbenzene	ug/L	--	80	230	44	360		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
N-Propylbenzene	ug/L	--	80	230	43	970		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	1	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
o-Xylene	ug/L	--	--	--	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Styrene	ug/L	80	100	100	33	170		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
tert-Butylbenzene	ug/L	--	80	230	0.077	0.71		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Tetrachloroethene	ug/L	60	5.0	5.0	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Tetrahydrofuran	ug/L	11,000	95	270	--	--		< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U
Toluene	ug/L	270	790	790	300	6,600		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,2-Dichloroethene	ug/L	1,500	100	100	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,3-Dichloropropene	ug/L	--	--	--	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,4-Dichloro-2-butene	ug/L	--	--	--	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Trichloroethene	ug/L	200	5.0	5.0	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Trichlorofluoromethane (CFC-11)	ug/L	--	2,600	7,300	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Vinyl chloride	ug/L	13	2.0	2.0	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Xylene, Total	ug/L	49	280	280	75	410		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U

Table 2
 Summary of Monitoring Well Analytical Results
 Joslyn South Parcel
 RACER Trust Pontiac North Campus

Chemical Name	Units	Groundwater Surface Water Interface	Residential Drinking Water	Nonresidential Drinking Water	Res Joslyn SSVIAC BASE	NR Joslyn SSVIAC <50k SOG	Location ID	JS-MW-26	JS-MW-27	JS-MW-27	JS-MW-27	JS-MW-27	JS-MW-29	JS-MW-29	JS-MW-29	JS-MW-30	JS-MW-30	JS-MW-30	JS-MW-30
								Date Collected	12/19/2023	3/9/2023	6/22/2023	9/26/2023	12/15/2023	6/22/2023	9/25/2023	12/18/2023	3/14/2023	6/21/2023	9/26/2023
VOCs																			
1,1,1,2-Tetrachloroethane	ug/L	--	77	320	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1,1-Trichloroethane	ug/L	89	200	200	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1,2,2-Tetrachloroethane	ug/L	78	8.5	35.0	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1,2-Trichloroethane	ug/L	330	5.0	5.0	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	ug/L	740	880	2,500	4.7	40		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	ug/L	130	7.0	7.0	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2,3-Trichlorobenzene	ug/L	--	--	--	--	--		< 5 U	< 5 U [$< 5 U$]	< 5 U [$< 5 U$]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,3-Trichloropropane	ug/L	--	42	120	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2,3-Trimethylbenzene	ug/L	--	--	--	43	150		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2,4-Trichlorobenzene	ug/L	99	70	70	--	--		< 5 U	< 5 U [$< 5 U$]	< 5 U [$< 5 U$]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,4-Trimethylbenzene	ug/L	17	63	63	25	120		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	--	0.2	0.2	--	--		< 5 U	< 5 U [$< 5 U$]	< 5 U [$< 5 U$]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane (Ethylene dibromide)	ug/L	5.7	0.05	0.05	0.13	0.39		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichlorobenzene	ug/L	13	600	600	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane	ug/L	360	5.0	5.0	1.4	5.1		< 1 U	1 [1]	1 [1]	2	1	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloropropane	ug/L	230	5.0	5.0	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,3,5-Trimethylbenzene	ug/L	45	72	72	18	110		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,3-Dichlorobenzene	ug/L	28	6.6	19.0	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,4-Dichlorobenzene	ug/L	17	75	75	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	2,200	13,000	38,000	2,600	12,000		< 25 U	< 25 U [$< 25 U$]	< 25 U [$< 25 U$]	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U
2-Hexanone	ug/L	--	1,000	2,900	--	--		< 50 U	< 50 U [$< 50 U$]	< 50 U [$< 50 U$]	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
2-Methylnaphthalene	ug/L	19	260	750	66	110		< 5 U	< 5 U [$< 5 U$]	< 5 U [$< 5 U$]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
2-Phenylbutane (sec-Butylbenzene)	ug/L	--	80	230	270	400		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	2	2	2	< 1 U	< 1 U	< 1 U	< 1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	--	1,800	5,200	200	5,000		< 50 U	< 50 U [$< 50 U$]	< 50 U [$< 50 U$]	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Acetone	ug/L	1,700	730	2,100	50,000	200,000		< 50 U	< 50 U [$< 50 U$]	< 50 U [$< 50 U$]	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Acrylonitrile	ug/L	2.0	3	11.0	--	--		< 2 U	< 2 U [$< 2 U$]	< 2 U [$< 2 U$]	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Benzene	ug/L	200	5.0	5.0	1.0	8.4		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Bromobenzene	ug/L	--	18	50	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Bromodichloromethane	ug/L	--	80	80	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Bromoform	ug/L	--	80	80	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Bromomethane (Methyl bromide)	ug/L	5.0	10	29	--	--		< 5 U	< 5 U [$< 5 U$]	< 5 U [$< 5 U$]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon disulfide	ug/L	--	800	2,300	--	--		< 5 U	< 5 U [$< 5 U$]	< 5 U [$< 5 U$]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon tetrachloride	ug/L	38	5.0	5.0	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chlorobenzene	ug/L	25	100	100	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chlorobromomethane	ug/L	--	--	--	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chloroethane	ug/L	1,100	430	1,700	--	--		< 5 U	< 5 U [$< 5 U$]	< 5 U [$< 5 U$]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloroform (Trichloromethane)	ug/L	350	80	80	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chloromethane (Methyl chloride)	ug/L	--	260	1,100	--	--		< 5 U	< 5 U [$< 5 U$]	< 5 U [$< 5 U$]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
cis-1,2-Dichloroethene	ug/L	620	70	70	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
cis-1,3-Dichloropropene	ug/L	--	--	--	--	--		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Cymene (p-Isopropyltoluene)	ug/L	--	--	--	--	--		< 5 U	< 5 U [$< 5 U$]	< 5 U [$< 5 U$]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dibromochloromethane	ug/L	--	80	80	--	--		< 5 U	< 5 U [$< 5 U$]	< 5 U [$< 5 U$]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dibromomethane	ug/L	--	80	230	--	--		< 5 U	< 5 U [$< 5 U$]	< 5 U [$< 5 U$]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dichlorodifluoromethane (CFC-12)	ug/L	--	1,700	4,800	--	--		< 5 U	< 5 U [$< 5 U$]	< 5 U [$< 5 U$]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Ethyl ether	ug/L	--	10	10	--	--		< 10 U	< 10 U [$< 10 U$]	< 10 U [$< 10 U$]	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Ethylbenzene	ug/L	18	74	74	2.8	28		< 1 U	< 1 U [$< 1 U$]	< 1 U [$< 1 U$]	< 1 U	< 1 U	3	2	3	< 1 U	< 1 U	< 1 U	< 1 U
Hexachloroethane	ug/L	6.7	7.3	21.0	--	--		< 5 U	< 5 U [$< 5 U$]	< 5 U [$< 5 U$]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U

Table 2
 Summary of Monitoring Well Analytical Results
 Joslyn South Parcel
 RACER Trust Pontiac North Campus



Chemical Name	Units	Groundwater Surface Water Interface	Residential Drinking Water	Nonresidential Drinking Water	Res Joslyn SSVIAC BASE	NR Joslyn SSVIAC <50k SOG	Location ID	JS-MW-26	JS-MW-27	JS-MW-27	JS-MW-27	JS-MW-27	JS-MW-27	JS-MW-29	JS-MW-29	JS-MW-29	JS-MW-30	JS-MW-30	JS-MW-30	JS-MW-30
								Date Collected	12/19/2023	3/9/2023	6/22/2023	9/26/2023	12/15/2023	6/22/2023	9/25/2023	12/18/2023	3/14/2023	6/21/2023	9/26/2023	12/19/2023
Iodomethane	ug/L	--	--	--	--	--		< 1 U	< 1 U [<i><1 U</i>]	< 1 U [<i>< 1 U</i>]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Isopropyl benzene	ug/L	28	800	2,300	0.60	6.7		< 5 U	< 5 U [<i><5 U</i>]	< 5 U [<i>< 5 U</i>]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
m&p-Xylene	ug/L	--	--	--	--	--		< 2 U	< 2 U [<i><2 U</i>]	< 2 U [<i>< 2 U</i>]	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Methyl tert butyl ether (MTBE)	ug/L	7,100	40	40	250	810		< 5 U	< 5 U [<i><5 U</i>]	< 5 U [<i>< 5 U</i>]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylene chloride	ug/L	1,500	5.0	5.0	--	--		< 5 U	< 5 U [<i><5 U</i>]	< 5 U [<i>< 5 U</i>]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Naphthalene	ug/L	11	520	1,500	4.2	12		< 5 U	< 5 U [<i><5 U</i>]	< 5 U [<i>< 5 U</i>]	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
N-Butylbenzene	ug/L	--	80	230	44	360		< 1 U	< 1 U [<i><1 U</i>]	< 1 U [<i>< 1 U</i>]	< 1 U	< 1 U	4	3	4	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
N-Propylbenzene	ug/L	--	80	230	43	970		< 1 U	< 1 U [<i><1 U</i>]	< 1 U [<i>< 1 U</i>]	< 1 U	< 1 U	17	17	17	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
o-Xylene	ug/L	--	--	--	--	--		< 1 U	< 1 U [<i><1 U</i>]	< 1 U [<i>< 1 U</i>]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Styrene	ug/L	80	100	100	33	170		< 1 U	< 1 U [<i><1 U</i>]	< 1 U [<i>< 1 U</i>]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
tert-Butylbenzene	ug/L	--	80	230	0.077	0.71		< 1 U	< 1 U [<i><1 U</i>]	< 1 U [<i>< 1 U</i>]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Tetrachloroethene	ug/L	60	5.0	5.0	--	--		< 1 U	< 1 U [<i><1 U</i>]	< 1 U [<i>< 1 U</i>]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Tetrahydrofuran	ug/L	11,000	95	270	--	--		< 90 U	< 90 U [<i><90 U</i>]	< 90 U [<i>< 90 U</i>]	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U	< 90 U
Toluene	ug/L	270	790	790	300	6,600		< 1 U	< 1 U [<i><1 U</i>]	< 1 U [<i>< 1 U</i>]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,2-Dichloroethene	ug/L	1,500	100	100	--	--		< 1 U	< 1 U [<i><1 U</i>]	< 1 U [<i>< 1 U</i>]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,3-Dichloropropene	ug/L	--	--	--	--	--		< 1 U	< 1 U [<i><1 U</i>]	< 1 U [<i>< 1 U</i>]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,4-Dichloro-2-butene	ug/L	--	--	--	--	--		< 1 U	< 1 U [<i><1 U</i>]	< 1 U [<i>< 1 U</i>]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Trichloroethene	ug/L	200	5.0	5.0	--	--		< 1 U	< 1 U [<i><1 U</i>]	< 1 U [<i>< 1 U</i>]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Trichlorofluoromethane (CFC-11)	ug/L	--	2,600	7,300	--	--		< 1 U	< 1 U [<i><1 U</i>]	< 1 U [<i>< 1 U</i>]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Vinyl chloride	ug/L	13	2.0	2.0	--	--		< 1 U	< 1 U [<i><1 U</i>]	< 1 U [<i>< 1 U</i>]	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Xylene, Total	ug/L	49	280	280	75	410		< 2 U	< 2 U [<i><2 U</i>]	< 2 U [<i>< 2 U</i>]	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U

Table 2
Groundwater Analytical Results
Joslyn South Parcel
RACER Trust Pontiac North Campus

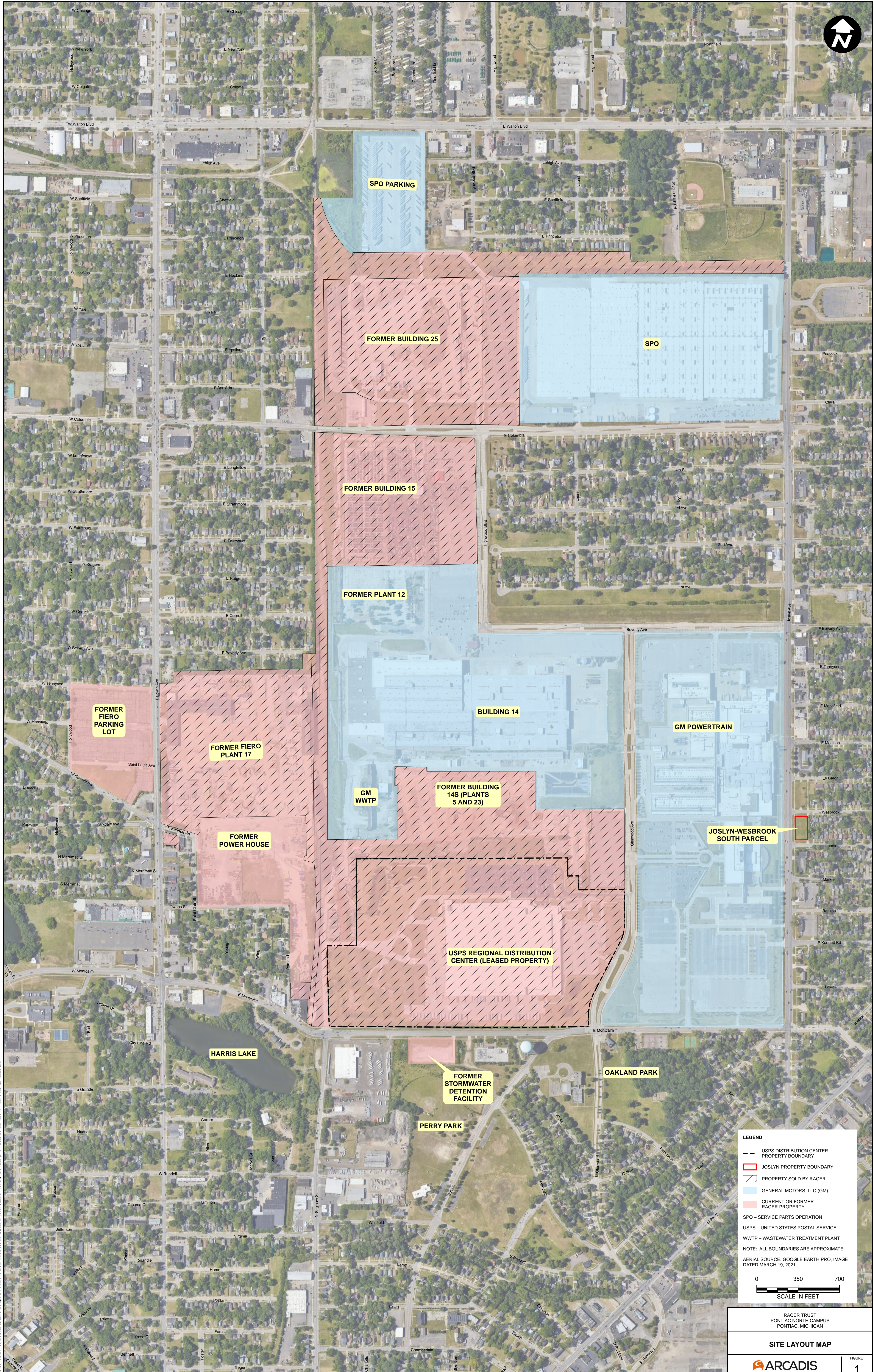
Notes:

- 1) Criteria listed are from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Clean Up Criteria Requirements Table 1: Groundwater: Residential and Nonresidential, Part 201 Generic Cleanup Criteria and Screening Levels, October 12, 2023.
- 2) Criteria listed are from the EGLE Joslyn Site-Specific Criteria Evaluation dated May 3, 2022.
- 3) Nonresidential SSVIAC was calculated from the Residential EGLE site-specific criteria.
- 4) Grey shaded values denotes exceedance and/or equal to Michigan Groundwater Surface Water Interface criteria
- 5) Yellow highlighted values denotes exceedance and/or equal to Michigan Residential Drinking Water criteria
- 6) Orange highlighted values denotes exceedance and/or equal to Nonresidential Drinking Water criteria
- 7) Values in bold denotes exceedance and/or equal to Residential Joslyn site-specific volatilization to indoor air criteria
- 8) Italicized values denotes exceedance and/or equal to Nonresidential Joslyn site-specific volatilization to indoor air criteria <50k - Basement scenario
- 9) Duplicate analyses are presented in brackets.
- 10) Samples were analyzed by EPA Method SW5030C/8260C

Abbreviations:

<	Not detected above the laboratory reporting limit
ug/L	Micrograms per liter
S	Surrogate recovery outside of control limits
U	Compound was analyzed for but not detected. The associated value is the compound quantitation limit.
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
BASE	Basement scenario
NA	Not Analyzed
NR	Nonresidential
RES	Residential
SOG	Slab-On-Grade scenario
SSVIAC	Site-specific volatilization to indoor air criteria
VOCs	Volatile Organic Compounds
<50k	Less than 50,000 square feet

Figures



LEGEND

- USPS DISTRIBUTION CENTER PROPERTY BOUNDARY
- JOSLYN PROPERTY BOUNDARY
- PROPERTY SOLD BY RACER
- GENERAL MOTORS, LLC (GM)
- CURRENT OR FORMER RACER PROPERTY

SPO – SERVICE PARTS OPERATION
 USPS – UNITED STATES POSTAL SERVICE
 WWTP – WASTEWATER TREATMENT PLANT
 NOTE: ALL BOUNDARIES ARE APPROXIMATE
 AERIAL SOURCE: GOOGLE EARTH PRO, IMAGE DATED MARCH 19, 2021

0 350 700

 SCALE IN FEET

RACER TRUST
 PONTIAC NORTH CAMPUS
 PONTIAC, MICHIGAN

SITE LAYOUT MAP

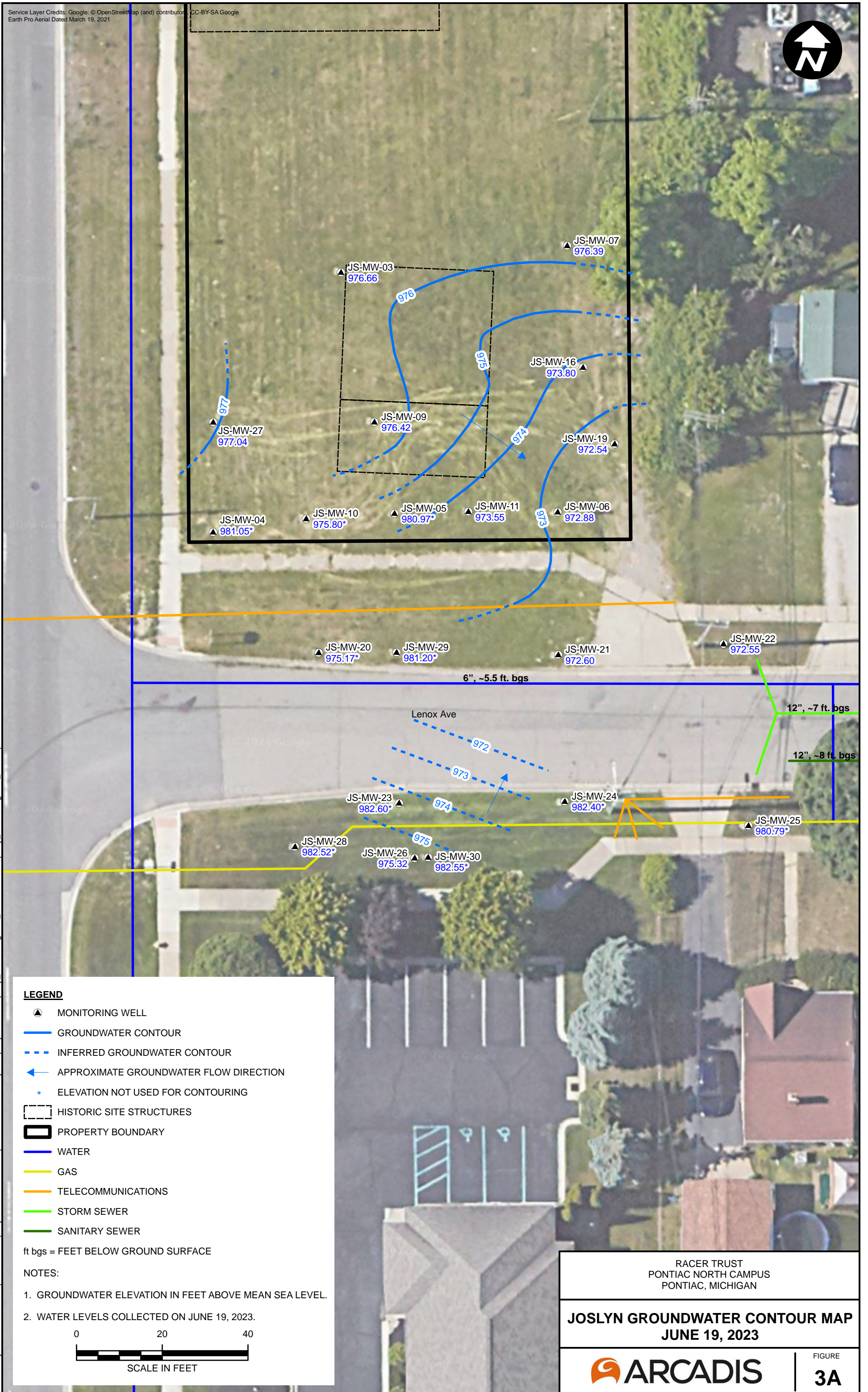
ARCADIS | FIGURE
1

CITY: NOVI, MI; ENV: DB; TRV: J; BAMEL: PM; T: LINDER; TML: L; CRIP: TR; PROJECT NUMBER: 20214041; PLOTTED: 6/22/2024 9:48 PM; BY: TYNATHOUGH; CADD PROJECT: PontiacNorthCampus; Company: PontiacNorthCampus; Document: SiteLayoutMap; User: jacob; Path: C:\Users\jacob\Documents\20214041\PontiacNorthCampus\Drawings\SiteLayoutMap.dwg; Plot: 20240622



CITY: NOVI, MI DIV: ENV DB: TRY PIC: J. Barrett PM: T. Linder TM: L. Crisp TR: PROJECT NUMBER: 30214041 PLOTTED: 6/12/2024 3:49 PM BY: Tyarbrough D:\GIS\Project Files\Motors\Liquidation\Company\Pontiac\North Campus\Documents\Joslyn\Property\LenoxProperty_MonitoringPlan_2023.aprx





CITY: NOVI, MI, DIV: ENV, DB: TRY, PIC: J. Barrett, PM: T. Linder, TM: L. Crisp, TR: PROJECT NUMBER: 30214041 PLOTTED: 6/13/2024 10:05 AM, BY: TYarborough
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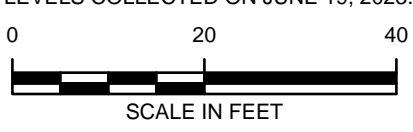
LEGEND

- MONITORING WELL
- GROUNDWATER CONTOUR
- INFERRED GROUNDWATER CONTOUR
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- * ELEVATION NOT USED FOR CONTOURING
- HISTORIC SITE STRUCTURES
- PROPERTY BOUNDARY
- WATER
- GAS
- TELECOMMUNICATIONS
- STORM SEWER
- SANITARY SEWER

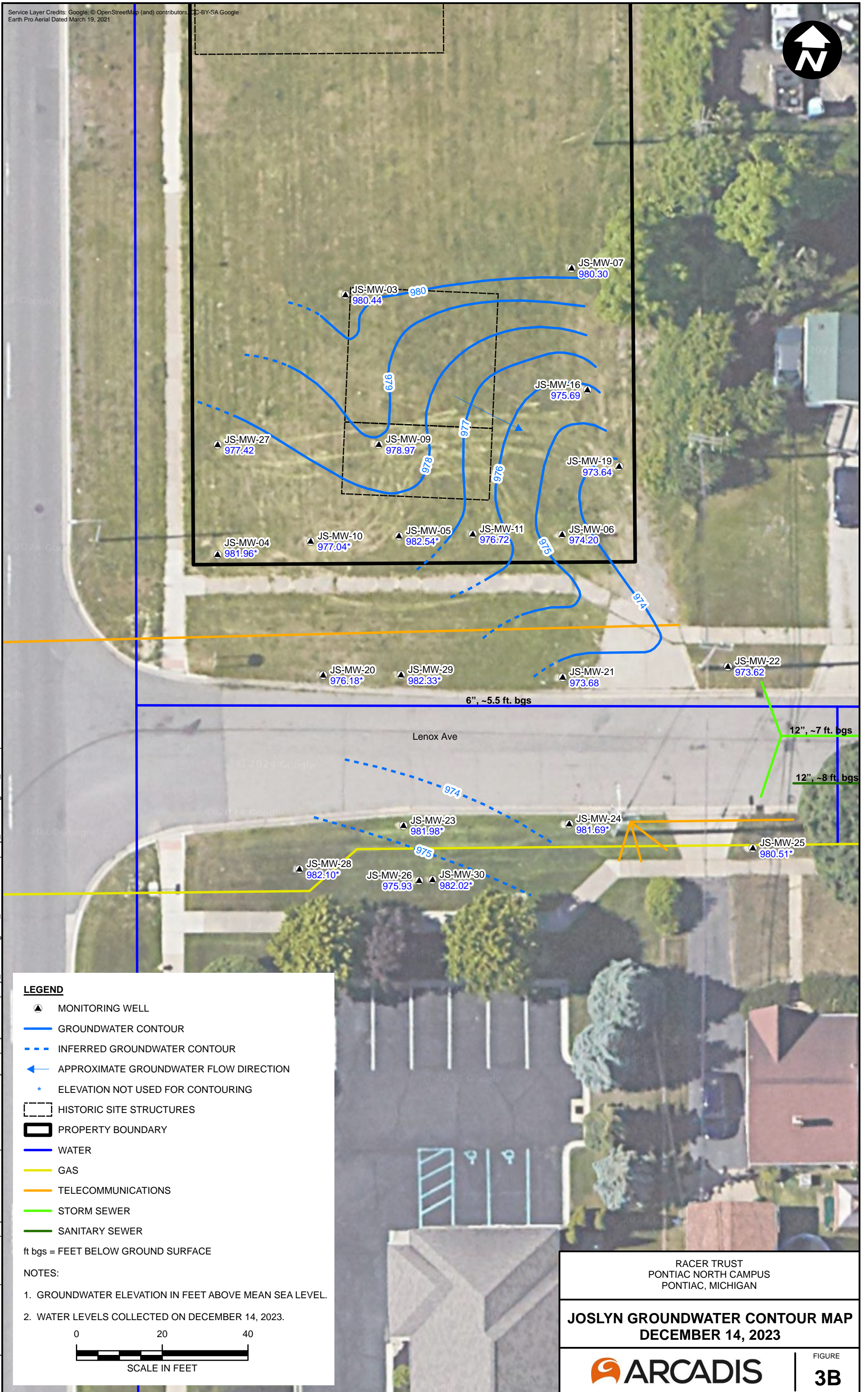
ft bgs = FEET BELOW GROUND SURFACE

NOTES:

1. GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL.
2. WATER LEVELS COLLECTED ON JUNE 19, 2023.



RACER TRUST PONTIAC NORTH CAMPUS PONTIAC, MICHIGAN	
JOSLYN GROUNDWATER CONTOUR MAP JUNE 19, 2023	
	FIGURE 3A



CITY: NOVI, MI DIV: ENV DB: TRY PIC: J. Barrett PM: T. Linder TM: L. Crisp TR: PROJECT NUMBER: 30214041 PLOTTED: 6/12/2024 3:49 PM BY: TYarbrough D:\GIS\Project Files\MotorsLiqudationCompany\Pontiac\NorthCampus\Documents\Joslyn\Property\LenoxProperty_MonitoringPlan_2023.aprx

LEGEND

- MONITORING WELL
- GROUNDWATER CONTOUR
- INFERRED GROUNDWATER CONTOUR
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- * ELEVATION NOT USED FOR CONTOURING
- HISTORIC SITE STRUCTURES
- PROPERTY BOUNDARY
- WATER
- GAS
- TELECOMMUNICATIONS
- STORM SEWER
- SANITARY SEWER

ft bgs = FEET BELOW GROUND SURFACE

NOTES:

1. GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL.
2. WATER LEVELS COLLECTED ON DECEMBER 14, 2023.



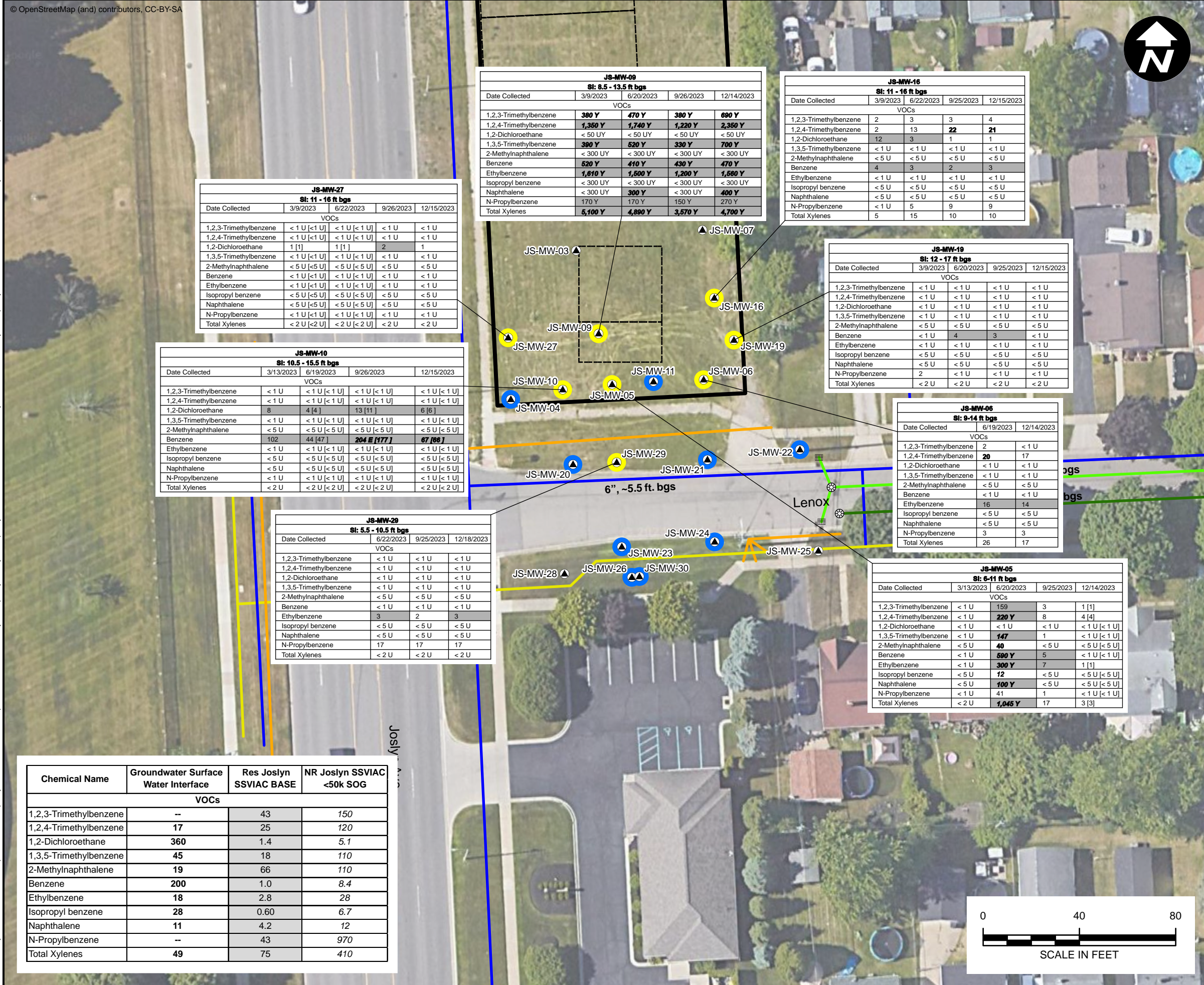
RACER TRUST
PONTIAC NORTH CAMPUS
PONTIAC, MICHIGAN

**JOSLYN GROUNDWATER CONTOUR MAP
DECEMBER 14, 2023**



FIGURE
3B

CITY: NOVI, MI DIV: ENV DB: TRY PIC: J. Barrett PM: T. Linder TM: L. Crisp TR: PROJECT NUMBER: 30214041 PLOTTED: 8/9/2024 12:05 PM BY: T.Yarborough
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LEGEND

- MONITORING WELL
- MANHOLE
- CATCH BASIN
- EXCEEDS RESIDENTIAL JOSLYN SSVIAC
- NO EXCEEDANCES OF JOSLYN SSVIAC
- WATER
- GAS
- TELECOMMUNICATIONS
- STORM SEWER
- SANITARY SEWER
- HISTORIC SITE STRUCTURES
- PROPERTY BOUNDARY
- < NOT DETECTED ABOVE THE LABORATORY REPORTING LIMIT
- ft bgs FEET BELOW GROUND SURFACE
- U COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
- Y ELEVATED REPORTING LIMIT DUE TO HIGH TARGET CONCENTRATION
- BASE BASEMENT SCENARIO
- NR NONRESIDENTIAL
- RES RESIDENTIAL
- SI SCREENED INTERVAL
- SOG SLAB-ON-GRADE SCENARIO
- SSVIAC SITE-SPECIFIC VOLATILIZATION TO INDOOR AIR CRITERIA
- VOCs VOLATILE ORGANIC COMPOUNDS
- <50k LESS THAN 50,000 SQUARE FEET

NOTES:

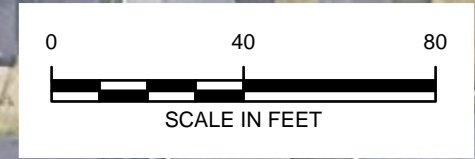
1. ALL CONCENTRATIONS ARE PRESENTED IN MICROGRAMS PER LITER (µg/L).
2. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
3. CRITERIA LISTED ARE FROM THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY (EGLE) CLEAN UP CRITERIA REQUIREMENTS TABLE 1: GROUNDWATER: RESIDENTIAL AND NONRESIDENTIAL, PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS, DECEMBER 21, 2020.
4. CRITERIA LISTED ARE FROM THE EGLE JOSLYN SITE-SPECIFIC CRITERIA EVALUATION DATED MAY 3, 2022.
5. A SAMPLE COULD NOT BE COLLECTED FROM JS-MW-06 DURING 1Q SAMPLING AS PLANNED DUE TO AN INSUFFICIENT AMOUNT OF WATER IN THE WELL.

RACER TRUST
 PONTIAC NORTH CAMPUS
 PONTIAC, MICHIGAN

**JOSLYN SOUTH PARCEL
 2023 ANNUAL GROUNDWATER
 ANALYTICAL RESULTS**

FIGURE
4

Chemical Name	Groundwater Surface Water Interface	Res Joslyn SSVIAC BASE	NR Joslyn SSVIAC <50k SOG
VOCs			
1,2,3-Trimethylbenzene	--	43	150
1,2,4-Trimethylbenzene	17	25	120
1,2-Dichloroethane	360	1.4	5.1
1,3,5-Trimethylbenzene	45	18	110
2-Methylnaphthalene	19	66	110
Benzene	200	1.0	8.4
Ethylbenzene	18	2.8	28
Isopropyl benzene	28	0.60	6.7
Naphthalene	11	4.2	12
N-Propylbenzene	--	43	970
Total Xylenes	49	75	410





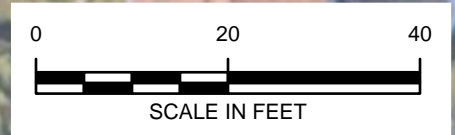
LEGEND

- EXISTING MONITORING WELL
- INCREASING TREND OBSERVED
- DECREASING, STABLE, OR NO SIGNIFICANT TREND OBSERVED
- DOES NOT MEET CRITERIA FOR TREND ANALYSIS
- WATER
- GAS
- TELECOMMUNICATIONS
- STORM SEWER
- SANITARY SEWER
- HISTORIC SITE STRUCTURES
- PROPERTY BOUNDARY
- Roadways

ft bgs - FEET BELOW GROUND SURFACE
 1,2-DCA - 1,2-DICHLOROETHANE
 EGLE - MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

NOTES:

1. MANN-KENDALL TREND ANALYSIS CONDUCTED WHEN AT LEAST FIVE SAMPLES AND 50% DETECTED VALUES ARE AVAILABLE IN BENZENE, ETHYLBENZENE, OR 1,2-DICHLOROETHANE.
2. ALL DATA COLLECTED FROM 2021-2023 IS SHOWN.
3. ANALYTICAL DATA COMPARED AGAINST EGLE PART 201 GROUNDWATER SURFACE WATER INTERFACE, RESIDENTIAL JOSLYN SITE SPECIFIC VOLATILIZATION TO INDOOR AIR CRITERIA (SSVIAC) FOR BASEMENT SCENARIO AND NONRESIDENTIAL SSVIAC FOR <50,000 SQUARE FEET SLAB-ON-GRADE SCENARIO.
4. ANALYTICAL DATA AVAILABLE IN TABLE 2, TREND RESULTS SUMMARIZED IN APPENDIX C.



RACER TRUST
 PONTIAC NORTH CAMPUS
 PONTIAC, MICHIGAN

GROUNDWATER STABILITY ANALYSIS



FIGURE

5

Appendix A

Groundwater Sampling Logs

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-04	Date	03/09/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	39.0 degrees F and Mostly Cloudy. The wind is blowing E at 10.3 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	987.49	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	3.14	Total Depth (ft-bmp)	13.66	Water Column (ft)	10.52
		Gallons in Well			1.71
Purge Start	14:44	Pump Intake (ft-bmp)	8.3	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	15:19	Volumes Purged	0.74	Sample ID	JS-MW-04_GW-030923
				Sampled by	Leticia Ferreira
Sample Time	15:16	Gallons Purged	1.27	Replicate/ Code No.	DUP-02_GW-030923
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:45	0	0	300	3.14	0	7.16	2	1.23	3.85	8.6	94	Clear	None
14:50	5	5	150	3.14	0.2	6.97	1.78	0.69	4.65	8.1	65	Clear	None
14:55	5	10	150	3.14	0.4	6.96	1.24	0.91	9.05	7	83.3	Clear	None
15:00	5	15	150	3.14	0.6	7	1.2	2.29	9.82	7.1	85.1	Clear	None
15:05	5	20	150	3.14	0.79	7.09	2.04	4.54	3.22	8.9	101	Clear	None
15:10	5	25	150	3.14	0.99	7.1	2.04	4	3.19	9	97	Clear	None
15:15	5	30	150	3.14	1.19	7.15	2.1	3.9	3.22	9	97.6	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	6	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-05	Date	03/13/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	27.0 degrees F and Light Snow and Fog/Mist. The wind is blowing N/NE at 4.7 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	985.94	Casing Diameter (in)	2	Well Casing Material	PVC
Static Water Level (ft-bmp)	2.07	Total Depth (ft-bmp)	10.25	Water Column (ft)	8.18	Gallons in Well	1.33
Purge Start	10:31	Pump Intake (ft-bmp)	6.1	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	11:05	Volumes Purged	0.89	Sample ID	JS-MW-05_GW-031323	Sampled by	Leticia Ferreira
Sample Time	11:09	Gallons Purged	1.19	Replicate/Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:32	0	0	300	2.07	0	6.93	1.19	22.8	2.87	4.7	9	Clear	None
10:37	5	5	150	2.07	0.2	6.85	1.18	8.06	2.46	4.4	29.2	Clear	None
10:42	5	10	150	2.07	0.4	6.86	1.18	6.18	2.49	4.5	36.5	Clear	None
10:47	5	15	150	2.07	0.6	6.89	1.17	4.45	2.47	4.4	41.7	Clear	None
10:52	5	20	150	2.07	0.79	6.91	1.16	4.58	2.8	4.4	46.5	Clear	None
10:57	5	25	150	2.07	0.99	6.94	1.16	4	2.8	4.4	49	Clear	None
11:02	5	30	150	2.07	1.19	6.95	1.15	4.25	2.8	4.4	49.9	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-09	Date	03/09/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	36.0 degrees F and Mostly Cloudy. The wind is blowing N/NE at 9.2 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	986.61	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	9.87	Total Depth (ft-bmp)	12.96	Water Column (ft)	3.09
		Gallons in Well			0.5
Purge Start	11:52	Pump Intake (ft-bmp)	11.3	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	12:27	Volumes Purged	1.98	Sample ID	JS-MW-09_GW-030923
				Sampled by	Leticia Ferreira
Sample Time	12:24	Gallons Purged	0.99	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:53	0	0	300	9.87	0	6.86	1.02	18.1	0.56	9.3	-51.1	Clear	Mild to medium
11:58	5	5	150	9.87	0.2	6.85	1.02	6.24	0.35	9.5	-51.5	Clear	Mild to medium
12:03	5	10	120	9.87	0.32	6.65	1.01	23	0.3	9.6	-58.2	Clear	Mild to medium
12:08	5	15	120	9.87	0.48	6.67	1.02	12.5	0.29	9.3	-60.9	Clear	Mild to medium
12:13	5	20	100	9.87	0.53	6.69	1.04	9.45	0.29	9.5	-63	Clear	Mild to medium
12:18	5	25	100	9.87	0.66	6.69	1.04	10	0.3	9.5	-66.1	Clear	Mild to medium
12:23	5	30	100	9.87	0.79	6.69	1.04	9.9	0.29	9.4	-70.9	Clear	Mild to medium

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-10	Date	03/09/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	39.9 degrees F and Cloudy. The wind is blowing E/NE at 10.3 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	986.72	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	11.05	Total Depth (ft-bmp)	15.71	Water Column (ft)	4.66
		Gallons in Well			0.76
Purge Start	15:35	Pump Intake (ft-bmp)	13.3	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	16:31	Volumes Purged	6.53	Sample ID	JS-MW-10_GW-031323
				Sampled by	Leticia Ferreira
Sample Time	10:04	Gallons Purged	4.96	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:36	0	0	300	11.05	0	6.87	2.29	107	1.57	10	-14.4	Clear	None
15:41	5	5	150	11.05	0.2	6.85	2.08	70.3	0.54	9.9	-32.9	Clear	None
15:46	5	10	150	11.05	0.4	6.86	1.65	44.1	0.36	9.7	-33.4	Clear	None
15:51	5	15	150	11.05	0.6	6.85	1.59	68.7	0.31	9.7	-29.5	Clear	None
15:56	5	20	150	11.05	0.79	6.81	1.83	69	0.3	9.8	-27.3	Clear	None
16:01	5	25	150	11.05	0.99	6.81	1.83	69	0.3	9.8	-27.3	Clear	None
16:06	5	30	150	11.05	1.19	6.87	1.86	70.9	0.29	9.8	-36.3	Clear	None
16:11	5	35	150	11.05	1.39	6.87	1.84	100	0.3	9.9	-33	Clear	None
16:16	5	40	150	11.05	1.59	6.87	1.84	1050	0.3	9.8	NR	Clear	None
16:21	5	45	150	11.05	1.78	6.89	1.84	67.6	0.3	9.8	1020	Clear	None
16:26	5	50	300	11.05	3.96	7.89	2.28	67.6	0.3	9.8	-35.6	Clear	None
16:31	5	55	300	11.05	4.36	6.89	2.33	1050	0.33	9.8	-51.8	Clear	None
09:58	1047	1102	300	11.05	4.76	6.75	2.02	275	1.27	8.6	22	Clear	None
10:03	5	1107	150	11.05	4.96	6.99	1.5	21.4	0.55	8.2	-15.4	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments: The well went dry; stopped purging. Planned to resume sampling the next day after one parameters taking. Resumed sampling on Monday, March 13th, 2023. NR: not recorded

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-16	Date	03/09/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	33.1 degrees F and Mostly Cloudy. The wind is blowing N at 6.9 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	985.34	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	13.07	Total Depth (ft-bmp)	15.65	Water Column (ft)	2.58
		Gallons in Well			0.42
Purge Start	09:38	Pump Intake (ft-bmp)	14.25	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	10:30	Volumes Purged	3.96	Sample ID	JS-MW-16_GW-030923
				Sampled by	Leticia Ferreira
Sample Time	10:20	Gallons Purged	1.66	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
09:39	0	0	300	13.07	0	6.97	0.83	35.1	1.06	9.6	-62.8	Clear	None
09:44	5	5	150	13.07	0.2	7.06	0.85	17.2	0.48	9.5	-76.8	Clear	None
09:49	5	10	150	13.07	0.4	7.04	0.85	16.1	0.14	9.6	-77.8	Clear	None
09:54	5	15	150	13.07	0.59	6.97	0.85	64.4	0.29	9.2	-75.2	Clear	None
09:59	5	20	150	13.07	0.79	6.95	0.85	50.1	0.29	9	-74.5	Clear	None
10:04	5	25	150	13.07	0.99	6.92	0.85	26.1	0.27	9	-73.5	Clear	None
10:09	5	30	150	13.07	1.19	6.91	0.85	9.57	0.26	9	-73.5	Clear	None
10:14	5	35	150	13.07	1.39	6.9	0.85	8.9	0.27	8.9	-73.6	Clear	None
10:19	5	40	150	13.07	1.59	6.91	0.85	9.2	0.27	9	-73.7	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	9	HCL

Comments: _____

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-19	Date	03/09/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	33.1 degrees F and Mostly Cloudy. The wind is blowing N at 6.9 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.05	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	13.5	Total Depth (ft-bmp)	16.35	Water Column (ft)	2.85
		Gallons in Well			0.46
Purge Start	10:47	Pump Intake (ft-bmp)	14.9	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	11:21	Volumes Purged	3.62	Sample ID	JS-MW-19
		Sampled by			Leticia Ferreira
Sample Time	11:19	Gallons Purged	1.66	Replicate/ Code No.	NA
		Sample Type			Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:48	0	0	300	13.5	0	8.71	1.43	235	0.62	9.7	3.3	Clear	None
10:53	5	5	300	13.5	0.4	6.71	1.42	77	0.44	9.7	9.8	Clear	None
10:58	5	10	150	13.5	0.6	6.7	1.43	44.1	0.36	9.4	14	Clear	None
11:03	5	15	150	13.5	0.8	8.7	1.43	12.3	0.32	9.5	12.9	Clear	None
11:08	5	20	150	13.5	1	6.73	1.44	4.84	0.31	9.6	3.9	Clear	None
11:13	1440	25	150	13.5	1.2	6.7	1.43	4.55	0.32	9.8	3.8	Clear	None
11:18	5	30	150	13.5	1.4	6.75	1.44	3.9	0.34	9.8	3.9	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-20	Date	03/13/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	28.9 degrees F and Light Snow. The wind is blowing N at 6.9 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	985.64	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	10.9	Total Depth (ft-bmp)	17.82	Water Column (ft)	6.92
		Gallons in Well			1.12
Purge Start	14:15	Pump Intake (ft-bmp)	13.5	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	14:38	Volumes Purged	1.06	Sample ID	JS-MW-20_GW-031323
				Sampled by	Leticia Ferreira
Sample Time	14:45	Gallons Purged	1.19	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:16	0	0	300	10.9	0	6.86	7.35	5.34	0.39	6	102.4	Clear	None
14:19	3	3	150	10.9	0.12	6.88	7.36	6.76	0.32	5.9	100.5	Clear	None
14:24	5	8	150	10.9	0.32	6.93	7.37	8.36	0.21	5.8	97.4	Clear	None
14:29	5	13	150	10.9	0.52	6.95	7.39	8.97	0.13	5.4	96.4	Clear	None
14:34	5	18	150	10.9	0.71	6.94	7.37	9.23	0.11	5.7	97	Clear	None
14:39	5	23	150	10.9	0.91	6.94	7.34	9.15	0.11	5.8	97.5	Clear	None
14:44	5	28	150	10.9	1.11	6.94	7.37	8.9	0.11	5.7	100.5	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-21	Date	03/13/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	28.9 degrees F and Light Snow. The wind is blowing N/NE at 5.8 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	983.59	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	12	Total Depth (ft-bmp)	16.85	Water Column (ft)	4.85
		Gallons in Well			0.79
Purge Start	13:15	Pump Intake (ft-bmp)	14.4	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	13:54	Volumes Purged	1.84	Sample ID	JS-MW-21_GW-031323
				Sampled by	Leticia Ferreira
Sample Time	13:52	Gallons Purged	1.45	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:16	0	0	300	12	0	6.79	3.05	32	0.85	7.5	79.4	Clear	None
13:21	5	5	150	12	0.2	6.93	3.1	25.9	0.29	7.3	66.9	Clear	None
13:26	5	10	120	12	0.4	7.02	3.08	26.3	0.25	7.7	61.4	Clear	None
13:31	5	15	120	12	0.59	7.01	3.11	20.7	0.28	7.7	59.6	Clear	None
13:36	5	20	120	12	0.79	7.01	3.11	16.3	0.28	7.4	59	Clear	None
13:41	5	25	120	12	0.99	7	3.11	10.8	0.28	7.2	58.5	Clear	None
13:46	5	30	120	12	1.19	7.01	3.11	10.2	0.28	7.4	59	Clear	None
13:51	5	35	120	12	1.39	7.01	3.11	9.8	0.28	7.4	59	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments: _____

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: Joslyn MI	Well Locked at Arrival: yes
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-22	Date	03/13/2023
Project Name/Location	RACER Pontiac North Campus 2023	Weather(°F)	28.0 degrees F and Light Snow and Fog/Mist. The wind is blowing N/NE at 6.9 mph.		
Measuring Pt. Description	Top of Inner Casing	MP Elevation	983.14	Casing Diameter (in)	2
		Well Casing Material	PVC		
Static Water Level (ft-bmp)	11.08	Total Depth (ft-bmp)	17.7	Water Column (ft)	6.62
		Gallons in Well	1.08		
Purge Start	12:01	Pump Intake (ft-bmp)	14	Purge Method	Low-Flow
		Purge Equipment	Peristaltic		
Purge End	12:30	Volumes Purged	1.61	Sample ID	JS-MW-22_GW-031323
		Sampled by	Leticia Ferreira		
Sample Time	12:28	Gallons Purged	1.74	Replicate/Code No.	NA
		Sample Type	Grab		

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:02	0	0	300	11.08	0	6.66	5.96	54.5	5.01	7	34.2	Clear	None
12:07	5	5	150	11.08	0.2	6.94	6.13	48.7	0.36	7	-5.2	Clear	None
12:12	5	10	150	11.08	0.4	7.01	6.12	33.7	0.27	7.8	-18.3	Clear	None
12:17	5	15	150	11.08	0.59	7.04	6.11	25	0.19	7.1	-26.8	Clear	None
12:22	5	20	150	11.08	0.79	7.04	6.08	10.8	0.15	7.1	-28.4	Clear	None
12:27	5	25	150	11.08	0.99	7.04	6.08	10.9	0.14	7	-29.6	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: Joslyn MI	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: NA	Key Number To Well: NA

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-23	Date	03/14/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	21.9 degrees F and Mostly Cloudy. The wind is blowing NW at 17.2 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.3	Casing Diameter (in)	2	Well Casing Material	PVC
Static Water Level (ft-bmp)	0.8	Total Depth (ft-bmp)	10.15	Water Column (ft)	9.35	Gallons in Well	1.52
Purge Start	12:09	Pump Intake (ft-bmp)	6	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	12:52	Volumes Purged	0.83	Sample ID	JS-MW-23_GW-031423	Sampled by	Leticia Ferreira
Sample Time	12:51	Gallons Purged	1.27	Replicate/Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:10	0	0	300	0.8	0	7.05	2.16	31.4	3.41	5.3	116.8	Clear	None
12:15	5	5	120	0.8	0.16	7.01	2.17	27.6	2.85	4.6	108.1	Clear	None
12:20	5	10	120	0.8	0.32	7.04	1.79	34.3	3.67	4.2	101.6	Clear	None
12:25	5	15	120	0.8	0.48	7.01	1.85	26.6	3.26	4.8	101.7	Clear	None
12:30	5	20	120	0.8	0.63	7.02	1.87	22.7	3.73	4.2	101.4	Clear	None
12:35	5	25	120	0.8	0.79	7	1.95	18.1	3.36	4.6	103.3	Clear	None
12:40	5	30	120	0.8	0.95	7.03	2.15	10.8	2.69	5.1	100.9	Clear	None
12:45	5	35	120	0.8	1.11	7.05	2.15	10.1	2.56	5.1	99.4	Clear	None
12:50	5	40	120	0.8	1.27	7.03	2.18	9.8	2.63	5.2	91.5	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-24	Date	03/13/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	19.0 degrees F and Mostly Clear.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	983.32	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	0.7	Total Depth (ft-bmp)	7.25	Water Column (ft)	6.55
		Gallons in Well			1.06
Purge Start	10:25	Pump Intake (ft-bmp)	4	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	11:04	Volumes Purged	1.37	Sample ID	JS-MW-24_GW-031423
				Sampled by	Leticia Ferreira
Sample Time	11:02	Gallons Purged	1.45	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:26	0	0	300	0.7	0	7.15	1.03	23.3	4.27	3	89.2	Clear	None
10:31	5	5	150	0.7	0.2	7.22	1	20.9	4.32	2.7	87.5	Clear	None
10:36	5	10	150	0.7	0.4	7.16	1.06	90.3	2	3	83.4	Clear	None
10:41	5	15	150	0.7	0.59	7.2	1.01	37.2	3.21	2.8	89.3	Clear	None
10:46	5	20	150	0.7	0.79	7.17	0.99	31.1	4	2.8	91.8	Clear	None
10:51	5	25	150	0.7	0.99	7.14	0.95	10.9	5.44	2.8	94.5	Clear	None
10:56	5	30	150	0.7	1.19	7.14	0.96	10.5	5.36	2.8	94.5	Clear	None
11:01	5	35	150	0.7	1.39	7.14	0.95	9.9	5.2	2.8	94.6	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: Joslyn MI	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-27	Date	03/09/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	37.9 degrees F and Partly Cloudy. The wind is blowing at 5.8 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	987.55	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	11.29	Total Depth (ft-bmp)	15.62	Water Column (ft)	4.33
		Gallons in Well			0.7
Purge Start	13:04	Pump Intake (ft-bmp)	13.5	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	13:47	Volumes Purged	1.70	Sample ID	JS-MW-27_GW-030923
				Sampled by	Leticia Ferreira
Sample Time	13:41	Gallons Purged	1.19	Replicate/ Code No.	DUP-01_GW-030923
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:05	0	0	300	11.29	0	6.73	5.91	73.9	2.1	10.6	15.5	Clear	None
13:10	5	5	120	11.29	0.16	6.84	5.48	32.2	0.35	10.4	1.2	Clear	None
13:15	5	10	120	11.29	0.32	6.86	5.33	24.9	0.35	10.1	2	Clear	None
13:20	5	15	120	11.29	0.48	6.88	5.09	18.5	0.38	10.2	4.5	Clear	None
13:25	5	20	120	11.29	0.63	6.89	4.84	17.2	0.4	10.5	7.7	Clear	None
13:30	5	25	120	11.29	0.79	6.88	4.8	6.79	0.37	10.5	11.8	Clear	None
13:35	5	30	120	11.29	0.95	6.88	4.9	6	0.38	10.4	13.4	Clear	None
13:40	5	35	120	11.29	1.11	6.88	4.9	5.8	0.4	10.5	19	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	6	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-30	Date	03/14/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	21.9 degrees F and Mostly Cloudy. The wind is blowing NW at 17.2 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.07	Casing Diameter (in)	2
		Well Casing Material	PVC		
Static Water Level (ft-bmp)	0.7	Total Depth (ft-bmp)	8.19	Water Column (ft)	7.49
		Gallons in Well	1.22		
Purge Start	11:25	Pump Intake (ft-bmp)	6	Purge Method	Low-Flow
		Purge Equipment	Peristaltic		
Purge End	11:59	Volumes Purged	0.88	Sample ID	JS-MW-30_GW-031423
		Sampled by	Leticia Ferreira		
Sample Time	11:59	Gallons Purged	1.07	Replicate/ Code No.	NA
		Sample Type	Grab		

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:26	0	0	300	0.7	0	7.18	0.828	10.3	2.83	2.4	105.5	Clear	None
11:31	5	5	150	0.7	0.2	6.99	0.817	14.3	2.43	2.1	113	Clear	None
11:36	5	10	120	0.7	0.36	6.98	0.823	13.7	2.38	2	112.6	Clear	None
11:41	5	15	120	0.7	0.52	7	0.824	11	2.09	2.6	2.3	Clear	None
11:46	5	20	120	0.7	0.68	7.02	0.833	7.61	2.12	2.3	107.5	Clear	None
11:51	5	25	120	0.7	0.84	7.04	0.836	7	2.1	2.3	106	Clear	None
11:56	5	30	120	0.7	1	7.04	0.834	6.9	2.11	2.3	105.2	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: Joslyn MI	Well Locked at Arrival: yes
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-04	Date	03/09/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	39.0 degrees F and Mostly Cloudy. The wind is blowing E at 10.3 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	987.49	Casing Diameter (in)	2
		Well Casing Material	PVC		
Static Water Level (ft-bmp)	3.14	Total Depth (ft-bmp)	13.66	Water Column (ft)	10.52
		Gallons in Well	1.71		
Purge Start	14:44	Pump Intake (ft-bmp)	8.3	Purge Method	Low-Flow
		Purge Equipment	Peristaltic		
Purge End	15:19	Volumes Purged	0.74	Sample ID	JS-MW-04_GW-030923
		Sampled by	Leticia Ferreira		
Sample Time	15:16	Gallons Purged	1.27	Replicate/Code No.	DUP-02_GW-030923
		Sample Type	Grab		

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:45	0	0	300	3.14	0	7.16	2	1.23	3.85	8.6	94	Clear	None
14:50	5	5	150	3.14	0.2	6.97	1.78	0.69	4.65	8.1	65	Clear	None
14:55	5	10	150	3.14	0.4	6.96	1.24	0.91	9.05	7	83.3	Clear	None
15:00	5	15	150	3.14	0.6	7	1.2	2.29	9.82	7.1	85.1	Clear	None
15:05	5	20	150	3.14	0.79	7.09	2.04	4.54	3.22	8.9	101	Clear	None
15:10	5	25	150	3.14	0.99	7.1	2.04	4	3.19	9	97	Clear	None
15:15	5	30	150	3.14	1.19	7.15	2.1	3.9	3.22	9	97.6	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	6	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-05	Date	03/13/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	27.0 degrees F and Light Snow and Fog/Mist. The wind is blowing N/NE at 4.7 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	985.94	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	2.07	Total Depth (ft-bmp)	10.25	Water Column (ft)	8.18
		Gallons in Well			1.33
Purge Start	10:31	Pump Intake (ft-bmp)	6.1	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	11:05	Volumes Purged	0.89	Sample ID	JS-MW-05_GW-031323
				Sampled by	Leticia Ferreira
Sample Time	11:09	Gallons Purged	1.19	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:32	0	0	300	2.07	0	6.93	1.19	22.8	2.87	4.7	9	Clear	None
10:37	5	5	150	2.07	0.2	6.85	1.18	8.06	2.46	4.4	29.2	Clear	None
10:42	5	10	150	2.07	0.4	6.86	1.18	6.18	2.49	4.5	36.5	Clear	None
10:47	5	15	150	2.07	0.6	6.89	1.17	4.45	2.47	4.4	41.7	Clear	None
10:52	5	20	150	2.07	0.79	6.91	1.16	4.58	2.8	4.4	46.5	Clear	None
10:57	5	25	150	2.07	0.99	6.94	1.16	4	2.8	4.4	49	Clear	None
11:02	5	30	150	2.07	1.19	6.95	1.15	4.25	2.8	4.4	49.9	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-06	Date	6/19/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	77.0 degrees F and Cloudy. The wind is blowing E/NE at 10.3 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.71	Casing Diameter (in)	2
Static Water Level (ft-bmp)	12.20	Total Depth (ft-bmp)	13.81	Water Column (ft)	1.61
Purge Start	13:12	Pump Intake (ft-bmp)	12.81	Purge Method	Low-Flow
Purge End	13:55	Volumes Purged	1.92	Sample ID	JS-MW-06_GW-061923
Sample Time	13:58	Gallons Purged	0.5	Replicate/Code No.	NA
				Well Casing Material	PVC
				Gallons in Well	0.26
				Purge Equipment	Peristaltic
				Sampled by	Garrett Link
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:12	0	0	100	12.29	0.00	7.2	1.2	35.7	1.4	18.3	73.4	Clear	None
13:21	9	9	145	12.59	0.34	7.18	1.25	7.39	0.75	13.7	59.4	Clear	None
13:26	5	14	145	13.26	0.54	7.19	1.2	11.2	0.16	12.8	40.4	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: Well went dry. Insufficient well volume to collect set of parameters before sampling. Collected sample once well recharged on 6/19/23 at 13:55

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: Joslyn	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-09	Date	03/09/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	36.0 degrees F and Mostly Cloudy. The wind is blowing N/NE at 9.2 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	986.61	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	9.87	Total Depth (ft-bmp)	12.96	Water Column (ft)	3.09
		Gallons in Well			0.5
Purge Start	11:52	Pump Intake (ft-bmp)	11.3	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	12:27	Volumes Purged	1.98	Sample ID	JS-MW-09_GW-030923
				Sampled by	Leticia Ferreira
Sample Time	12:24	Gallons Purged	0.99	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:53	0	0	300	9.87	0	6.86	1.02	18.1	0.56	9.3	-51.1	Clear	Mild to medium
11:58	5	5	150	9.87	0.2	6.85	1.02	6.24	0.35	9.5	-51.5	Clear	Mild to medium
12:03	5	10	120	9.87	0.32	6.65	1.01	23	0.3	9.6	-58.2	Clear	Mild to medium
12:08	5	15	120	9.87	0.48	6.67	1.02	12.5	0.29	9.3	-60.9	Clear	Mild to medium
12:13	5	20	100	9.87	0.53	6.69	1.04	9.45	0.29	9.5	-63	Clear	Mild to medium
12:18	5	25	100	9.87	0.66	6.69	1.04	10	0.3	9.5	-66.1	Clear	Mild to medium
12:23	5	30	100	9.87	0.79	6.69	1.04	9.9	0.29	9.4	-70.9	Clear	Mild to medium

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: Joslyn MI	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: NA	Key Number To Well: NA

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter
 mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-10	Date	03/09/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	39.9 degrees F and Cloudy. The wind is blowing E/NE at 10.3 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	986.72	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	11.05	Total Depth (ft-bmp)	15.71	Water Column (ft)	4.66
		Gallons in Well			0.76
Purge Start	15:35	Pump Intake (ft-bmp)	13.3	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	16:31	Volumes Purged	6.53	Sample ID	JS-MW-10_GW-031323
				Sampled by	Leticia Ferreira
Sample Time	10:04	Gallons Purged	4.96	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:36	0	0	300	11.05	0	6.87	2.29	107	1.57	10	-14.4	Clear	None
15:41	5	5	150	11.05	0.2	6.85	2.08	70.3	0.54	9.9	-32.9	Clear	None
15:46	5	10	150	11.05	0.4	6.86	1.65	44.1	0.36	9.7	-33.4	Clear	None
15:51	5	15	150	11.05	0.6	6.85	1.59	68.7	0.31	9.7	-29.5	Clear	None
15:56	5	20	150	11.05	0.79	6.81	1.83	69	0.3	9.8	-27.3	Clear	None
16:01	5	25	150	11.05	0.99	6.81	1.83	69	0.3	9.8	-27.3	Clear	None
16:06	5	30	150	11.05	1.19	6.87	1.86	70.9	0.29	9.8	-36.3	Clear	None
16:11	5	35	150	11.05	1.39	6.87	1.84	100	0.3	9.9	-33	Clear	None
16:16	5	40	150	11.05	1.59	6.87	1.84	1050	0.3	9.8	NR	Clear	None
16:21	5	45	150	11.05	1.78	6.89	1.84	67.6	0.3	9.8	1020	Clear	None
16:26	5	50	300	11.05	3.96	7.89	2.28	67.6	0.3	9.8	-35.6	Clear	None
16:31	5	55	300	11.05	4.36	6.89	2.33	1050	0.33	9.8	-51.8	Clear	None
09:58	1047	1102	300	11.05	4.76	6.75	2.02	275	1.27	8.6	22	Clear	None
10:03	5	1107	150	11.05	4.96	6.99	1.5	21.4	0.55	8.2	-15.4	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments: The well went dry; stopped purging. Planned to resume sampling the next day after one parameters taking. Resumed sampling on Monday, March 13th, 2023. NR: not recorded

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-11	Date	6/19/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	78.8 degrees F and Cloudy. The wind is blowing E at 10.3 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	985.4	Casing Diameter (in)	2	Well Casing Material	PVC
Static Water Level (ft-bmp)	11.91	Total Depth (ft-bmp)	13.75	Water Column (ft)	1.84	Gallons in Well	0.30
Purge Start	14:05	Pump Intake (ft-bmp)	11.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	14:13	Volumes Purged	1.33	Sample ID	JS-MW-11_GW-061923	Sampled by	Garrett Link
Sample Time	14:25	Gallons Purged	0.4	Replicate/Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:05	0	0	145	12.16	0.00	7.21	0.74	71	6.4	13.9	83.5	Clear	None
14:10	5	5	145	12.91	0.19	7.21	0.74	NR	6.1	15	85.8	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: Well went dry. Insufficient well volume to collect set of parameters before sampling. Collected sample once well recharged on 6/19/2023 at 14:25.
NR: not recorded

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flush mount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-16	Date	03/09/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	33.1 degrees F and Mostly Cloudy. The wind is blowing N at 6.9 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	985.34	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	13.07	Total Depth (ft-bmp)	15.65	Water Column (ft)	2.58
		Gallons in Well			0.42
Purge Start	09:38	Pump Intake (ft-bmp)	14.25	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	10:30	Volumes Purged	3.96	Sample ID	JS-MW-16_GW-030923
				Sampled by	Leticia Ferreira
Sample Time	10:20	Gallons Purged	1.66	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
09:39	0	0	300	13.07	0	6.97	0.83	35.1	1.06	9.6	-62.8	Clear	None
09:44	5	5	150	13.07	0.2	7.06	0.85	17.2	0.48	9.5	-76.8	Clear	None
09:49	5	10	150	13.07	0.4	7.04	0.85	16.1	0.14	9.6	-77.8	Clear	None
09:54	5	15	150	13.07	0.59	6.97	0.85	64.4	0.29	9.2	-75.2	Clear	None
09:59	5	20	150	13.07	0.79	6.95	0.85	50.1	0.29	9	-74.5	Clear	None
10:04	5	25	150	13.07	0.99	6.92	0.85	26.1	0.27	9	-73.5	Clear	None
10:09	5	30	150	13.07	1.19	6.91	0.85	9.57	0.26	9	-73.5	Clear	None
10:14	5	35	150	13.07	1.39	6.9	0.85	8.9	0.27	8.9	-73.6	Clear	None
10:19	5	40	150	13.07	1.59	6.91	0.85	9.2	0.27	9	-73.7	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	9	HCL

Comments: _____

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-19	Date	03/09/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	33.1 degrees F and Mostly Cloudy. The wind is blowing N at 6.9 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.05	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	13.5	Total Depth (ft-bmp)	16.35	Water Column (ft)	2.85
		Gallons in Well			0.46
Purge Start	10:47	Pump Intake (ft-bmp)	14.9	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	11:21	Volumes Purged	3.62	Sample ID	JS-MW-19
		Sampled by			Leticia Ferreira
Sample Time	11:19	Gallons Purged	1.66	Replicate/ Code No.	NA
		Sample Type			Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:48	0	0	300	13.5	0	8.71	1.43	235	0.62	9.7	3.3	Clear	None
10:53	5	5	300	13.5	0.4	6.71	1.42	77	0.44	9.7	9.8	Clear	None
10:58	5	10	150	13.5	0.6	6.7	1.43	44.1	0.36	9.4	14	Clear	None
11:03	5	15	150	13.5	0.8	8.7	1.43	12.3	0.32	9.5	12.9	Clear	None
11:08	5	20	150	13.5	1	6.73	1.44	4.84	0.31	9.6	3.9	Clear	None
11:13	1440	25	150	13.5	1.2	6.7	1.43	4.55	0.32	9.8	3.8	Clear	None
11:18	5	30	150	13.5	1.4	6.75	1.44	3.9	0.34	9.8	3.9	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-20	Date	03/13/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	28.9 degrees F and Light Snow. The wind is blowing N at 6.9 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	985.64	Casing Diameter (in)	2
		Well Casing Material	PVC		
Static Water Level (ft-bmp)	10.9	Total Depth (ft-bmp)	17.82	Water Column (ft)	6.92
		Gallons in Well	1.12		
Purge Start	14:15	Pump Intake (ft-bmp)	13.5	Purge Method	Low-Flow
		Purge Equipment	Peristaltic		
Purge End	14:38	Volumes Purged	1.06	Sample ID	JS-MW-20_GW-031323
		Sampled by	Leticia Ferreira		
Sample Time	14:45	Gallons Purged	1.19	Replicate/Code No.	NA
		Sample Type	Grab		

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:16	0	0	300	10.9	0	6.86	7.35	5.34	0.39	6	102.4	Clear	None
14:19	3	3	150	10.9	0.12	6.88	7.36	6.76	0.32	5.9	100.5	Clear	None
14:24	5	8	150	10.9	0.32	6.93	7.37	8.36	0.21	5.8	97.4	Clear	None
14:29	5	13	150	10.9	0.52	6.95	7.39	8.97	0.13	5.4	96.4	Clear	None
14:34	5	18	150	10.9	0.71	6.94	7.37	9.23	0.11	5.7	97	Clear	None
14:39	5	23	150	10.9	0.91	6.94	7.34	9.15	0.11	5.8	97.5	Clear	None
14:44	5	28	150	10.9	1.11	6.94	7.37	8.9	0.11	5.7	100.5	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments: _____

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot	1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65
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Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-21	Date	03/13/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	28.9 degrees F and Light Snow. The wind is blowing N/NE at 5.8 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	983.59	Casing Diameter (in)	2
		Well Casing Material	PVC		
Static Water Level (ft-bmp)	12	Total Depth (ft-bmp)	16.85	Water Column (ft)	4.85
		Gallons in Well	0.79		
Purge Start	13:15	Pump Intake (ft-bmp)	14.4	Purge Method	Low-Flow
		Purge Equipment	Peristaltic		
Purge End	13:54	Volumes Purged	1.84	Sample ID	JS-MW-21_GW-031323
		Sampled by	Leticia Ferreira		
Sample Time	13:52	Gallons Purged	1.45	Replicate/Code No.	NA
		Sample Type	Grab		

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:16	0	0	300	12	0	6.79	3.05	32	0.85	7.5	79.4	Clear	None
13:21	5	5	150	12	0.2	6.93	3.1	25.9	0.29	7.3	66.9	Clear	None
13:26	5	10	120	12	0.4	7.02	3.08	26.3	0.25	7.7	61.4	Clear	None
13:31	5	15	120	12	0.59	7.01	3.11	20.7	0.28	7.7	59.6	Clear	None
13:36	5	20	120	12	0.79	7.01	3.11	16.3	0.28	7.4	59	Clear	None
13:41	5	25	120	12	0.99	7	3.11	10.8	0.28	7.2	58.5	Clear	None
13:46	5	30	120	12	1.19	7.01	3.11	10.2	0.28	7.4	59	Clear	None
13:51	5	35	120	12	1.39	7.01	3.11	9.8	0.28	7.4	59	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: Joslyn MI	Well Locked at Arrival: yes
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-22	Date	03/13/2023
Project Name/Location	RACER Pontiac North Campus 2023	Weather(°F)	28.0 degrees F and Light Snow and Fog/Mist. The wind is blowing N/NE at 6.9 mph.		
Measuring Pt. Description	Top of Inner Casing	MP Elevation	983.14	Casing Diameter (in)	2
		Well Casing Material	PVC		
Static Water Level (ft-bmp)	11.08	Total Depth (ft-bmp)	17.7	Water Column (ft)	6.62
		Gallons in Well	1.08		
Purge Start	12:01	Pump Intake (ft-bmp)	14	Purge Method	Low-Flow
		Purge Equipment	Peristaltic		
Purge End	12:30	Volumes Purged	1.61	Sample ID	JS-MW-22_GW-031323
		Sampled by	Leticia Ferreira		
Sample Time	12:28	Gallons Purged	1.74	Replicate/Code No.	NA
		Sample Type	Grab		

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:02	0	0	300	11.08	0	6.66	5.96	54.5	5.01	7	34.2	Clear	None
12:07	5	5	150	11.08	0.2	6.94	6.13	48.7	0.36	7	-5.2	Clear	None
12:12	5	10	150	11.08	0.4	7.01	6.12	33.7	0.27	7.8	-18.3	Clear	None
12:17	5	15	150	11.08	0.59	7.04	6.11	25	0.19	7.1	-26.8	Clear	None
12:22	5	20	150	11.08	0.79	7.04	6.08	10.8	0.15	7.1	-28.4	Clear	None
12:27	5	25	150	11.08	0.99	7.04	6.08	10.9	0.14	7	-29.6	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: Joslyn MI	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: NA	Key Number To Well: NA

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-23	Date	03/14/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	21.9 degrees F and Mostly Cloudy. The wind is blowing NW at 17.2 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.3	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	0.8	Total Depth (ft-bmp)	10.15	Water Column (ft)	9.35
		Gallons in Well			1.52
Purge Start	12:09	Pump Intake (ft-bmp)	6	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	12:52	Volumes Purged	0.83	Sample ID	JS-MW-23_GW-031423
				Sampled by	Leticia Ferreira
Sample Time	12:51	Gallons Purged	1.27	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:10	0	0	300	0.8	0	7.05	2.16	31.4	3.41	5.3	116.8	Clear	None
12:15	5	5	120	0.8	0.16	7.01	2.17	27.6	2.85	4.6	108.1	Clear	None
12:20	5	10	120	0.8	0.32	7.04	1.79	34.3	3.67	4.2	101.6	Clear	None
12:25	5	15	120	0.8	0.48	7.01	1.85	26.6	3.26	4.8	101.7	Clear	None
12:30	5	20	120	0.8	0.63	7.02	1.87	22.7	3.73	4.2	101.4	Clear	None
12:35	5	25	120	0.8	0.79	7	1.95	18.1	3.36	4.6	103.3	Clear	None
12:40	5	30	120	0.8	0.95	7.03	2.15	10.8	2.69	5.1	100.9	Clear	None
12:45	5	35	120	0.8	1.11	7.05	2.15	10.1	2.56	5.1	99.4	Clear	None
12:50	5	40	120	0.8	1.27	7.03	2.18	9.8	2.63	5.2	91.5	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-24	Date	03/13/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	19.0 degrees F and Mostly Clear.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	983.32	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	0.7	Total Depth (ft-bmp)	7.25	Water Column (ft)	6.55
		Gallons in Well			1.06
Purge Start	10:25	Pump Intake (ft-bmp)	4	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	11:04	Volumes Purged	1.37	Sample ID	JS-MW-24_GW-031423
				Sampled by	Leticia Ferreira
Sample Time	11:02	Gallons Purged	1.45	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:26	0	0	300	0.7	0	7.15	1.03	23.3	4.27	3	89.2	Clear	None
10:31	5	5	150	0.7	0.2	7.22	1	20.9	4.32	2.7	87.5	Clear	None
10:36	5	10	150	0.7	0.4	7.16	1.06	90.3	2	3	83.4	Clear	None
10:41	5	15	150	0.7	0.59	7.2	1.01	37.2	3.21	2.8	89.3	Clear	None
10:46	5	20	150	0.7	0.79	7.17	0.99	31.1	4	2.8	91.8	Clear	None
10:51	5	25	150	0.7	0.99	7.14	0.95	10.9	5.44	2.8	94.5	Clear	None
10:56	5	30	150	0.7	1.19	7.14	0.96	10.5	5.36	2.8	94.5	Clear	None
11:01	5	35	150	0.7	1.39	7.14	0.95	9.9	5.2	2.8	94.6	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: Joslyn MI	Well Locked at Arrival: yes
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-26	Date	6/21/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	80.1 degrees F and Partly Cloudy. The wind is blowing at 5.8 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.22	Casing Diameter (in)	2	Well Casing Material	PVC
Static Water Level (ft-bmp)	9.11	Total Depth (ft-bmp)	18.05	Water Column (ft)	8.94	Gallons in Well	1.45
Purge Start	12:48	Pump Intake (ft-bmp)	16	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	14:05	Volumes Purged	1.72	Sample ID	JS-MW-26_GW-062123	Sampled by	Garrett Link
Sample Time	14:00	Gallons Purged	2.5	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:55	0	0	115	10.05	0.00	7.09	4.36	18.7	0.39	17.7	92.6	Clear	None
13:00	5	5	115	10.31	0.15	7.02	4.24	11.5	0.3	16.3	68.7	Clear	None
13:05	5	10	115	10.54	0.30	7.02	4.16	6.18	0.24	16.7	51.4	Clear	None
13:10	5	15	115	10.75	0.46	7.03	4.17	4.32	0.16	15.9	35.4	Clear	None
13:15	5	20	115	10.84	0.61	7.04	4.19	1.53	0.1	16	24.6	Clear	None
13:20	5	25	115	11.00	0.76	7.03	4.18	3.51	0.08	16.1	15	Clear	None
13:25	5	30	115	11.05	0.91	7.04	4.17	2.82	0.07	16.4	7.9	Clear	None
13:30	5	35	115	11.07	1.06	7.06	4.21	1.24	0.09	16.5	0.6	Clear	None
13:35	5	40	115	11.14	1.22	7.06	4.24	1.21	0.1	15.8	-6.1	Clear	None
13:40	5	45	115	11.21	1.37	7.06	4.22	1.56	0.08	15.9	-11.3	Clear	None
13:45	5	50	115	11.29	1.52	7.07	4.21	2.09	0.09	15.5	-16.1	Clear	None
13:50	5	55	115	11.36	1.67	7.07	4.18	1.04	0.06	15.6	-19.6	Clear	None
13:55	5	60	115	11.41	1.82	7.07	4.18	0.83	0.35	16.1	-22.5	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: Temperature readings would not stabilize after 1 hour of purging.

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flush mount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-27	Date	03/09/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	37.9 degrees F and Partly Cloudy. The wind is blowing at 5.8 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	987.55	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	11.29	Total Depth (ft-bmp)	15.62	Water Column (ft)	4.33
		Gallons in Well			0.7
Purge Start	13:04	Pump Intake (ft-bmp)	13.5	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	13:47	Volumes Purged	1.70	Sample ID	JS-MW-27_GW-030923
				Sampled by	Leticia Ferreira
Sample Time	13:41	Gallons Purged	1.19	Replicate/ Code No.	DUP-01_GW-030923
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:05	0	0	300	11.29	0	6.73	5.91	73.9	2.1	10.6	15.5	Clear	None
13:10	5	5	120	11.29	0.16	6.84	5.48	32.2	0.35	10.4	1.2	Clear	None
13:15	5	10	120	11.29	0.32	6.86	5.33	24.9	0.35	10.1	2	Clear	None
13:20	5	15	120	11.29	0.48	6.88	5.09	18.5	0.38	10.2	4.5	Clear	None
13:25	5	20	120	11.29	0.63	6.89	4.84	17.2	0.4	10.5	7.7	Clear	None
13:30	5	25	120	11.29	0.79	6.88	4.8	6.79	0.37	10.5	11.8	Clear	None
13:35	5	30	120	11.29	0.95	6.88	4.9	6	0.38	10.4	13.4	Clear	None
13:40	5	35	120	11.29	1.11	6.88	4.9	5.8	0.4	10.5	19	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	6	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn MI</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>NA</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-29	Date	6/22/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	70.0 degrees F and Partly Cloudy. The wind is blowing SE at 5.8 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.93	Casing Diameter (in)	2
		Well Casing Material	PVC		
Static Water Level (ft-bmp)	3.86	Total Depth (ft-bmp)	10.2	Water Column (ft)	6.34
		Gallons in Well	1.03		
Purge Start	09:39	Pump Intake (ft-bmp)	8	Purge Method	Low-Flow
		Purge Equipment	Peristaltic		
Purge End	10:49	Volumes Purged	1.94	Sample ID	JS-MW-29_GW-062223
		Sampled by	Garrett Link		
Sample Time	10:43	Gallons Purged	2	Replicate/Code No.	NA
		Sample Type	Grab		

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
09:40	0	0	120	4.89	0.00	7.16	2.79	4.89	0.24	15.8	22.1	Clear	Mild
09:46	6	6	120	5.26	0.16	7.24	2.73	5.39	0.15	15.9	-14.9	Clear	Mild
09:50	4	10	120	NR	0.32	7.27	2.65	5.91	0.12	15.9	-51	Clear	Mild
09:55	5	15	120	5.44	0.48	7.3	2.57	4.11	0.12	16.1	-80.9	Clear	Mild
10:00	5	20	120	5.44	0.63	7.28	2.48	3.2	0.16	16.1	-91.1	Clear	Mild
10:05	5	25	120	5.45	0.79	7.27	2.34	2	0.34	16.2	-90.8	Clear	Mild
10:10	5	30	120	5.45	0.95	7.26	2.3	1.91	0.65	16.2	-88.9	Clear	Mild
10:15	5	35	120	5.45	1.11	7.26	2.34	2.18	0.74	16.2	-89.5	Clear	Mild
10:20	5	40	120	5.46	1.27	7.26	2.35	1.33	0.65	16.2	-90.3	Clear	Mild
10:25	5	45	120	5.67	1.43	7.26	2.4	0.77	0.65	16.1	-91.2	Clear	Mild
10:30	5	50	120	5.80	1.59	7.26	2.42	1.14	0.49	16.3	-92.1	Clear	Mild
10:35	5	55	120	5.90	1.74	7.27	2.54	0.97	0.6	16.3	-93.1	Clear	Mild
10:40	5	60	120	5.90	1.90	7.26	2.47	0.92	0.76	16.2	-94.3	Clear	Mild

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: NR: not recorded.

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: <u>Joslyn</u>	Well Locked at Arrival: <u>no</u>
Condition of Well: <u>Missing lock</u>	Well Locked at Departure: <u>no</u>
Well Completion: <u>Flush mount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-30	Date	03/14/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	21.9 degrees F and Mostly Cloudy. The wind is blowing NW at 17.2 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.07	Casing Diameter (in)	2
		Well Casing Material	PVC		
Static Water Level (ft-bmp)	0.7	Total Depth (ft-bmp)	8.19	Water Column (ft)	7.49
		Gallons in Well	1.22		
Purge Start	11:25	Pump Intake (ft-bmp)	6	Purge Method	Low-Flow
		Purge Equipment	Peristaltic		
Purge End	11:59	Volumes Purged	0.88	Sample ID	JS-MW-30_GW-031423
		Sampled by	Leticia Ferreira		
Sample Time	11:59	Gallons Purged	1.07	Replicate/ Code No.	NA
		Sample Type	Grab		

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:26	0	0	300	0.7	0	7.18	0.828	10.3	2.83	2.4	105.5	Clear	None
11:31	5	5	150	0.7	0.2	6.99	0.817	14.3	2.43	2.1	113	Clear	None
11:36	5	10	120	0.7	0.36	6.98	0.823	13.7	2.38	2	112.6	Clear	None
11:41	5	15	120	0.7	0.52	7	0.824	11	2.09	2.6	2.3	Clear	None
11:46	5	20	120	0.7	0.68	7.02	0.833	7.61	2.12	2.3	107.5	Clear	None
11:51	5	25	120	0.7	0.84	7.04	0.836	7	2.1	2.3	106	Clear	None
11:56	5	30	120	0.7	1	7.04	0.834	6.9	2.11	2.3	105.2	Clear	None

Constituent Sampled	Container	Number	Preservative
Full 8260 VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: Joslyn MI	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: NA	Key Number To Well: NA

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-05	Date	9/25/2023		
Project Name/Location	RACER Pontiac North Campus 2023	Weather(°F)	67 °F, Cloudy, winds at mph.				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	985.94	Casing Diameter (in)	2	Well Casing Material	PVC
Static Water Level (ft-bmp)	4.35	Total Depth (ft-bmp)	10.3	Water Column (ft)	5.95	Gallons in Well	0.97
Purge Start	13:30	Pump Intake (ft-bmp)	9	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	14:37	Volumes Purged	1.7	Sample ID	JS-MW-05_GW-092523	Sampled by	Lottie Jay
Sample Time	14:35	Gallons Purged	1.65	Replicate/Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:35	0	0	130	4.46	0.00	7.02	1.12	111	0.22	17.1	-66	Clear	Medium
13:40	5	5	130	4.50	0.17	7.04	1.11	67.2	0.17	17.3	-64.8	Clear	Medium
13:45	5	10	130	4.51	0.34	7.04	1.11	46.2	0.12	17.4	-63.1	Clear	Medium
13:50	5	15	130	4.51	0.52	7.04	1.11	20.1	0.13	17.6	-60.3	Clear	Medium
13:55	5	20	110	4.51	0.66	7.04	1.11	12.8	0.17	17.6	-56.1	Clear	Medium
14:00	5	25	110	4.52	0.80	7.04	1.11	11.7	0.18	17.6	-53	Clear	Medium
14:05	5	30	110	4.52	0.87	7.04	1.11	17.7	0.16	17.6	-49.2	Clear	Medium
14:10	5	35	100	4.52	1.00	7.04	1.11	13.6	0.15	17.8	-48.7	Clear	Medium
14:15	5	40	100	4.52	1.13	7.04	1.11	14.1	0.16	17.8	-48	Clear	Medium
14:20	5	45	100	4.52	1.26	7.04	1.11	12.9	0.16	17.7	-46.8	Clear	Medium
14:25	5	50	100	4.52	1.39	7.04	1.11	10.67	0.15	17.7	-45.6	Clear	Medium
14:30	5	55	100	4.52	1.52	7.04	1.11	9.93	0.13	17.7	-44.9	Clear	Medium
14:35	5	60	100	4.52	1.65	7.04	1.11	9.7	0.17	17.6	-45.4	Clear	Medium

Constituent Sampled	Container	Number	Preservative
VOCs SW-846 8260C	40 mL Glass	3	HCL

Comments: _____

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flushmount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-09	Date	9/26/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	62 °F, Light Rain, winds at mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	8.78	Total Depth (ft-bmp)	13.02	Water Column (ft)	4.24	Gallons in Well	0.69
Purge Start	10:25	Pump Intake (ft-bmp)	12	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	10:57	Volumes Purged	0.96	Sample ID	JS-MW-09	Sampled by	Lottie Jay
Sample Time	10:55	Gallons Purged	0.66	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:30	0	0	100	9.19	0.00	6.82	1.04	12.8	0.46	15.6	-58	Clear	Medium
10:35	5	5	100	9.82	0.13	6.85	1.04	11	0.18	15.7	-74.2	Clear	Medium
10:40	5	10	100	10.10	0.26	6.85	1.04	9.43	0.16	15.8	-80.1	Clear	Medium
10:45	5	15	100	10.55	0.40	6.85	1.05	9.75	0.09	15.9	-83.4	Clear	Medium
10:50	5	20	100	10.85	0.53	6.85	1.05	9.94	0.09	15.9	-83.7	Clear	Medium
10:55	5	25	100	11.25	0.66	6.85	1.05	9.81	0.09	15.9	-83.9	Clear	Medium

Constituent Sampled	Container	Number	Preservative
VOCs SW-846 8260C	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: Good	Well Locked at Departure: yes
Well Completion: Flushmount	Key Number To Well: NA

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-10	Date	9/26/2023		
Project Name/Location	RACER Pontiac North Campus 2023	Weather(°F)	66 °F, Cloudy , winds at mph.				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	986.72	Casing Diameter (in)	2	Well Casing Material	PVC
Static Water Level (ft-bmp)	9.97	Total Depth (ft-bmp)	15.72	Water Column (ft)	5.75	Gallons in Well	0.94
Purge Start	15:15	Pump Intake (ft-bmp)	14	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	16:05	Volumes Purged	1.52	Sample ID	JS-MW-10_GW-092623	Sampled by	Lottie Jay
Sample Time	16:00	Gallons Purged	1.43	Replicate/ Code No.	DUP-01_GW-092623	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:20	0	0	120	10.44	0.00	6.92	2.68	557	0.43	15.7	9	Yellow	Medium
15:25	5	5	120	10.98	0.16	6.97	2.61	238	0.21	15.6	-58.6	Yellow	Medium
15:30	5	10	120	11.21	0.32	7.07	1.67	84.3	0.04	15.8	NR	Yellow	Medium
15:35	5	15	120	11.50	0.48	7.06	1.66	27.3	0.07	15.8	-71.9	Yellow	Medium
15:40	5	20	120	11.82	0.63	7.06	1.67	13.4	0.07	185.8	-72	Yellow	Medium
15:45	5	25	120	12.02	0.79	7.05	1.7	8.94	0.08	15.9	-72.5	Yellow	Medium
15:50	5	30	120	12.22	0.95	7.04	1.74	9.72	0.08	16	-74.3	Yellow	Medium
15:55	5	35	120	12.39	1.11	7.04	1.77	9.02	0.08	15.9	-74.3	Yellow	Medium
16:00	5	40	120	12.57	1.27	7.04	1.78	8.73	0.08	15.9	-74.2	Yellow	Medium

Constituent Sampled	Container	Number	Preservative
VOCs SW-846 8260C	40 mL Glass	6	HCL

Comments: NR: not recorded

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: <u>Good</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flushmount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-16	Date	9/25/2023
Project Name/Location	RACER Pontiac North Campus 2023	Weather(°F)	64 °F, Cloudy, winds at mph.		
Measuring Pt. Description	Top of Inner Casing	MP Elevation	985.34	Casing Diameter (in)	2
				Well Casing Material	PVC
Static Water Level (ft-bmp)	10.48	Total Depth (ft-bmp)	15.67	Water Column (ft)	5.19
				Gallons in Well	0.85
Purge Start	11:10	Pump Intake (ft-bmp)	14	Purge Method	Low-Flow
				Purge Equipment	Peristaltic
Purge End	12:20	Volumes Purged	2.05	Sample ID	JS-MW-16-GW_092523
				Sampled by	Lottie Jay
Sample Time	12:15	Gallons Purged	1.74	Replicate/Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:15	0	0	140	10.68	0.00	6.61	0.67	809	1.02	14.9	59.4	Yellow	Medium
11:20	5	5	130	10.79	0.17	6.76	0.85	864	0.59	14.7	18.8	Yellow	Medium
11:25	5	10	110	11.10	0.29	6.79	0.84	782	0.98	14.7	-10.1	Yellow	Medium
11:30	5	15	110	11.19	0.44	6.99	0.81	457	0.58	15	-39.7	Yellow	Medium
11:35	5	20	110	11.32	0.58	7.01	0.81	216	0.61	15	-59.4	Yellow	Medium
11:40	5	25	110	11.40	0.73	7.02	0.8	110	0.65	15.1	-65.6	Yellow	Medium
11:45	5	30	110	11.50	0.87	7.04	0.8	54.8	0.48	15.2	-72.7	Yellow	Medium
11:50	5	35	110	11.58	1.02	7.05	0.79	21	0.21	15.2	-81.4	Yellow	Medium
11:55	5	40	110	11.66	1.16	7.06	0.79	12.3	0.15	15.2	-86.3	Yellow	Medium
12:00	5	45	110	11.72	1.31	7.06	0.79	9.67	0.1	15.2	-91.4	Yellow	Medium
12:05	5	50	110	11.82	1.45	7.07	0.79	7.72	0.1	15.2	-95.8	Yellow	Medium
12:10	5	55	110	11.88	1.60	7.07	0.79	8.62	0.09	15.3	-97.9	Yellow	Medium
12:15	5	60	110	11.95	1.74	7.07	0.79	6.67	0.09	15.4	-99.9	Yellow	Medium

Constituent Sampled	Container	Number	Preservative
VOCs SW-846 8260C	40 mL Glass	9	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn Well Locked at Arrival: yes

Condition of Well: Good Well Locked at Departure: yes

Well Completion: Flushmount Key Number To Well: NA

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-19	Date	9/25/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	66 °F, Cloudy, winds at mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.05	Casing Diameter (in)	2	Well Casing Material	PVC
Static Water Level (ft-bmp)	10.81	Total Depth (ft-bmp)	16.69	Water Column (ft)	5.88	Gallons in Well	0.96
Purge Start	12:30	Pump Intake (ft-bmp)	15	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	13:17	Volumes Purged	1.32	Sample ID	JS-MW-19_GW-092523	Sampled by	Lottie Jay
Sample Time	13:15	Gallons Purged	1.27	Replicate/Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:35	0	0	120	10.95	0.00	7.13	1.25	292	0.25	14.9	-71.6	Clear	Mild
12:40	5	5	120	10.99	0.16	7.12	1.25	735	0.27	14.8	-79.5	Clear	Mild
12:45	5	10	120	11.02	0.32	7.13	1.25	216	0.22	14.8	-74.1	Clear	Mild
12:50	5	15	120	11.03	0.46	7.14	1.25	44.9	0.13	14.8	-72.3	Clear	Mild
12:55	5	20	120	11.04	0.63	7.14	1.24	44.4	0.13	14.8	-73.8	Clear	Mild
13:00	5	25	120	11.05	0.79	7.13	1.23	11.8	0.13	14.8	-77	Clear	Mild
13:05	5	30	120	11.06	0.95	7.13	1.23	9.32	0.13	14.8	-79.2	Clear	Mild
13:10	5	35	120	11.07	1.11	7.13	1.23	8.43	0.13	14.8	-81.7	Clear	Mild
13:15	5	40	120	11.07	1.27	7.12	1.22	8.48	0.13	14.8	-83.8	Clear	Mild

Constituent Sampled	Container	Number	Preservative
VOCs SW-846 8260C	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: Good	Well Locked at Departure: yes
Well Completion: Flushmount	Key Number To Well: NA

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-23	Date	9/26/2023
Project Name/Location	RACER Pontiac North Campus 2023	Weather(°F)	64 °F, Cloudy, winds at mph.		
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.3	Casing Diameter (in)	2
				Well Casing Material	PVC
Static Water Level (ft-bmp)	0.80	Total Depth (ft-bmp)	10.34	Water Column (ft)	9.54
				Gallons in Well	1.56
Purge Start	11:30	Pump Intake (ft-bmp)	9	Purge Method	Low-Flow
				Purge Equipment	Peristaltic
Purge End	12:27	Volumes Purged	0.93	Sample ID	JS-MW-23
				Sampled by	Lottie Jay
Sample Time	12:25	Gallons Purged	1.45	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:35	0	0	110	0.98	0.00	7.1	0.7	86.5	0.39	18.2	-47.2	Clear	Mild
11:40	5	5	110	1.13	0.16	7.03	0.7	77.7	0.25	18.2	-52.4	Clear	Mild
11:45	5	10	120	1.35	0.32	7.05	0.68	67	0.16	18.2	-59	Clear	Mild
11:50	5	15	110	1.37	0.44	7.04	0.67	34.7	0.14	18.3	-56.3	Clear	Mild
11:55	5	20	110	1.39	0.58	7.04	0.64	20.3	0.11	18.4	-52.4	Clear	Mild
12:00	5	25	110	1.40	0.73	7.04	0.67	15.3	0.1	18.4	-51	Clear	Mild
12:05	5	30	110	1.43	0.87	7.05	0.67	12.2	0.1	18.4	-49.7	Clear	Mild
12:10	5	35	110	1.45	1.02	7.04	0.67	12.4	0.07	18.4	-48.2	Clear	Mild
12:15	5	40	110	1.52	1.16	7.02	0.68	7.93	0.07	18.4	-47.5	Clear	Mild
12:20	5	45	110	1.50	1.31	7.02	0.68	7.69	0.07	18.4	-47.6	Clear	Mild
12:25	5	50	110	1.50	1.45	7.02	0.68	7.49	0.07	18.4	-48.3	Clear	Mild

Constituent Sampled	Container	Number	Preservative
VOCs SW-846 8260C	40 mL Glass	3	HCL

Comments: _____

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flushmount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = millivolt

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-27	Date	9/26/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	65 °F, Cloudy, winds at mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	987.55	Casing Diameter (in)	2
Static Water Level (ft-bmp)	10.44	Total Depth (ft-bmp)	15.74	Water Column (ft)	5.30
Purge Start	13:55	Pump Intake (ft-bmp)	14	Purge Method	Low-Flow
Purge End	15:03	Volumes Purged	1.83	Sample ID	JS-MW-27
Sample Time	15:00	Gallons Purged	1.59	Replicate/ Code No.	NA
				Well Casing Material	PVC
				Gallons in Well	0.87
				Purge Equipment	Peristaltic
				Sampled by	Lottie Jay
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:00	0	0	110	10.55	0.00	6.86	5.27	299	0.37	15.9	-16.3	Yellow	Mild
14:05	5	5	110	10.59	0.16	6.93	5.07	198	0.23	15.7	-46.8	Yellow	Mild
14:10	5	10	110	10.63	0.29	7	4.18	262	0.17	15.9	-50.4	Yellow	Mild
14:15	5	15	100	10.66	0.40	7.08	3.23	149	0.14	16	-51	Yellow	Mild
14:20	5	20	100	10.67	0.53	7.09	2.96	167	0.14	16	-49.9	Yellow	Mild
14:25	5	25	100	10.67	0.66	7.09	2.76	65.5	0.15	16.2	-47.9	Yellow	Mild
14:30	5	30	100	10.67	0.79	7.08	2.79	86.3	0.14	16.2	-45.8	Yellow	Mild
14:35	5	35	100	10.67	0.92	7.07	2.85	131	0.14	16.3	-45.2	Yellow	Mild
14:40	5	40	100	10.67	1.06	7.07	2.86	101	0.15	16.3	-44.5	Yellow	Mild
14:45	5	45	100	10.67	1.19	7.07	2.91	40.6	0.16	16.1	-43.1	Yellow	Mild
14:50	5	50	100	10.68	1.32	7.06	2.93	22.2	0.16	16.1	-41.6	Yellow	Mild
14:55	5	55	100	10.68	1.45	7.06	2.97	12.5	0.15	16	-40.7	Yellow	Mild
15:00	5	60	100	10.68	1.59	7.05	3.01	9.34	0.15	16	-39.3	Yellow	Mild

Constituent Sampled	Container	Number	Preservative
VOCs SW-846 8260C	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flushmount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-29	Date	9/25/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	67 °F, , winds at mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.93	Casing Diameter (in)	2
Static Water Level (ft-bmp)	3.44	Total Depth (ft-bmp)	10.2	Water Column (ft)	6.76
Purge Start	14:45	Pump Intake (ft-bmp)	9	Purge Method	Low-Flow
Purge End	15:32	Volumes Purged	0.95	Sample ID	JS-MW-29_GW-092523
Sample Time	15:30	Gallons Purged	1.06	Replicate/Code No.	NA
				Well Casing Material	PVC
				Gallons in Well	1.1
				Purge Equipment	Peristaltic
				Sampled by	Lottie Jay
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:50	0	0	120	3.78	0.00	7.04	3.12	284	0.53	18.6	-42.5	Clear	Medium
14:55	5	5	120	4.21	0.16	7.06	3.08	81.5	0.34	18.6	-82.7	Clear	Medium
15:00	5	10	120	4.94	0.32	7.14	2.92	27.2	0.13	18.7	-98.8	Clear	Medium
15:05	5	15	100	4.42	0.40	7.21	2.83	14.2	0.11	18.8	-112.1	Clear	Medium
15:10	5	20	100	5.42	0.53	7.25	2.75	12.1	0.36	18.9	-118.3	Clear	Medium
15:15	5	25	100	5.42	0.66	7.25	2.74	11.6	0.38	18.9	-114.4	Clear	Medium
15:20	5	30	100	5.42	0.79	7.25	2.73	9.39	0.72	18.9	-108.9	Clear	Medium
15:25	5	35	100	5.42	0.92	7.25	2.73	8.42	0.72	18.9	-104.4	Clear	Medium
15:30	5	40	100	5.42	1.06	7.25	2.73	8.68	0.73	19	-103.5	Clear	Medium

Constituent Sampled	Container	Number	Preservative
VOCs SW-846 8260C	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: Good	Well Locked at Departure: yes
Well Completion: Flushmount	Key Number To Well: NA

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-30	Date	9/26/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	64 °F, Cloudy , winds at mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.07	Casing Diameter (in)	2
		Well Casing Material			PVC
Static Water Level (ft-bmp)	0.35	Total Depth (ft-bmp)	8.18	Water Column (ft)	7.83
		Gallons in Well			1.28
Purge Start	12:35	Pump Intake (ft-bmp)	7	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	13:43	Volumes Purged	1.25	Sample ID	JS-MW-30_GW-092623
		Sampled by			Lottie Jay
Sample Time	13:40	Gallons Purged	1.6	Replicate/ Code No.	NA
		Sample Type			Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:40	0	0	120	0.50	0.00	7.01	1.27	113	0.52	17	-44.6	Yellow	Mild
12:45	5	5	120	0.53	0.16	7.06	1.17	47.5	0.32	17.1	-54.6	Yellow	Mild
12:50	5	10	120	0.55	0.32	7.06	1.13	29.1	0.48	17.1	-49.2	Yellow	Mild
12:55	5	15	120	0.57	0.48	7.06	1.12	20.4	0.27	17.2	-47.1	Yellow	Mild
13:00	5	20	110	0.57	0.58	7.06	1.1	18	0.19	17.2	-46.8	Yellow	Mild
13:05	5	25	110	0.57	0.73	7.05	1.09	15.6	0.14	17.2	-46.9	Yellow	Mild
13:10	5	30	110	0.58	0.87	7.05	1.09	15.1	0.1	17.2	-47	Yellow	Mild
13:15	5	35	110	0.58	1.02	7.04	1.08	12.9	0.07	17.2	-46.7	Yellow	Mild
13:20	5	40	110	0.58	1.16	7.04	1.09	12.1	0.06	17.3	-46.4	Yellow	Mild
13:25	5	45	110	0.59	1.31	7.04	1.09	11.3	0.07	17.4	-45.7	Yellow	Mild
13:30	5	50	110	0.59	1.45	7.04	7.09	10.6	0.06	17.4	-45.5	Yellow	Mild
13:35	5	55	110	0.60	1.60	7.04	1.09		0.06	17.4	-45.4	Yellow	Mild

Constituent Sampled	Container	Number	Preservative
VOCs SW-846 8260C	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: <u>Good</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flushmount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-04	Date	12/15/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	46.9 degrees F and Mostly Clear. The wind is blowing W at 11.4 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	987.49	Casing Diameter (in)	2.375	Well Casing Material	PVC
Static Water Level (ft-bmp)	5.65	Total Depth (ft-bmp)	13.47	Water Column (ft)	7.82	Gallons in Well	1.79
Purge Start	11:35	Pump Intake (ft-bmp)	12.45	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	12:12	Volumes Purged	0.62	Sample ID	JS-MW-04_GW-121523	Sampled by	Lottie Jay
Sample Time	12:10	Gallons Purged	1.11	Replicate/Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:40	0	0	150	6.51	0.00	7.54	2.05	1.69	5.63	12.6	21.9	Clear	Mild
11:45	5	5	140	7.68	0.18	7.29	1.98	1.67	5.23	12.5	24.3	Clear	Mild
11:50	5	10	140	8.72	0.37	7.29	1.98	2.31	4.91	12.5	27.6	Clear	Mild
11:55	5	15	140	9.14	0.55	7.28	1.98	1.67	4.47	12.5	30.8	Clear	Mild
12:00	5	20	140	9.50	0.74	7.27	1.99	2.38	4.21	12.6	32.6	Clear	Mild
12:05	5	25	140	10.13	0.92	7.27	1.99	2.9	4.23	12.7	34.9	Clear	Mild
12:10	5	30	140	10.60	1.11	7.26	2	3.22	4.22	12.7	36.5	Clear	Mild

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: _____

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: <u>Good</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flushmount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-05	Date	12/14/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	44.1 degrees F and Mostly Cloudy. The wind is blowing W at 12.8 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	985.94	Casing Diameter (in)	2.375
		Well Casing Material			PVC
Static Water Level (ft-bmp)	3.40	Total Depth (ft-bmp)	10.29	Water Column (ft)	6.89
		Gallons in Well			1.22
Purge Start	15:05	Pump Intake (ft-bmp)	9.3	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	15:54	Volumes Purged	1.04	Sample ID	JS-MW-05_GW-121423
				Sampled by	Lottie Jay
Sample Time	15:50	Gallons Purged	1.27	Replicate/ Code No.	DUP-02_GW-121423
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:10	0	0	120	3.49	0.00	7.21	1.23	26.3	3.81	10.9	33.3	Clear	None
15:15	5	5	120	3.49	0.16	7.09	1.12	13.8	2.2	10.8	27.1	Clear	None
15:20	5	10	120	3.49	0.32	7.08	1.11	9.47	0.82	10.7	26.9	Clear	None
15:25	5	15	120	3.49	0.48	7.08	1.11	7.27	0.58	10.6	27.5	Clear	None
15:30	5	20	120	3.50	0.63	7.09	1.11	7.99	0.67	10.4	28.5	Clear	None
15:35	5	25	120	3.50	0.79	7.09	1.1	7.16	0.87	10.3	30	Clear	None
15:40	5	30	120	3.51	0.95	7.09	1.1	5.03	1.07	10.3	30.8	Clear	None
15:45	5	35	120	3.52	1.11	7.09	1.09	4.32	1.11	10.3	32.2	Clear	None
15:50	5	40	120	3.52	1.27	7.09	1.09	4.1	1.14	10.2	32.9	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	6	HCL

Comments: _____

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flushmount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-06	Date	12/14/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	43.0 degrees F and Mostly Cloudy. The wind is blowing W at 11.4 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.71	Casing Diameter (in)	2.375
		Well Casing Material			PVC
Static Water Level (ft-bmp)	10.53	Total Depth (ft-bmp)	13.9	Water Column (ft)	3.37
		Gallons in Well			0.55
Purge Start	13:05	Pump Intake (ft-bmp)	13.6	Purge Method	Low-Flow
		Purge Equipment			Peristaltic
Purge End	13:57	Volumes Purged	2.16	Sample ID	JS-MW-06_GW-121423
		Sampled by			Lottie Jay
Sample Time	13:55	Gallons Purged	1.19	Replicate/Code No.	NA
		Sample Type			Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:10	0	0	100	10.95	0.00	7.16	1.15	9.89	3.36	12.7	279.5	Clear	None
13:15	5	5	100	11.29	0.13	7.19	1.14	6.3	3.13	12.7	263.6	Clear	None
13:20	5	10	100	11.55	0.26	7.19	1.14	7.87	2.81	12.8	253.3	Clear	None
13:25	5	15	100	11.70	0.40	7.18	1.14	5.76	2.42	12.7	231	Clear	None
13:30	5	20	100	11.96	0.53	7.18	1.14	6.98	1.76	12.8	207.2	Clear	None
13:35	5	25	100	12.12	0.66	7.19	1.13	3.17	1.34	12.9	199.4	Clear	None
13:40	5	30	100	12.28	0.79	7.2	1.13	2.13	0.92	13	190.8	Clear	None
13:45	5	35	100	12.43	0.92	7.2	1.13	2.23	0.76	12.9	185.7	Clear	None
13:50	5	40	100	12.72	1.06	7.21	1.13	1.58	0.7	13	179.7	Clear	None
13:55	5	45	100	12.60	1.19	7.21	1.13	1.92	0.68	13	175.4	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flushmount	Key Number To Well: NA

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-09	Date	12/14/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	43.0 degrees F and Mostly Cloudy. The wind is blowing W at 11.4 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	986.61	Casing Diameter (in)	2.375	Well Casing Material	PVC
Static Water Level (ft-bmp)	7.67	Total Depth (ft-bmp)	13	Water Column (ft)	5.33	Gallons in Well	0.87
Purge Start	14:10	Pump Intake (ft-bmp)	12	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	14:53	Volumes Purged	1.06	Sample ID	JS-MW-09_GW-121423	Sampled by	Lottie Jay
Sample Time	14:50	Gallons Purged	0.92	Replicate/Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:15	0	0	100	8.36	0.00	6.86	1.08	6.83	0.34	12.1	-26.4	Clear	None
14:20	5	5	100	8.60	0.13	6.86	1.07	6.06	0.25	12.1	-43.7	Clear	None
14:25	5	10	100	9.03	0.26	6.85	1.06	4.52	0.68	12	-58.5	Clear	None
14:30	5	15	100	9.18	0.40	6.87	1.09	14.4	0.89	11.7	-53.3	Clear	None
14:35	5	20	100	9.35	0.53	6.84	1.05	11.7	0.69	12.1	-50.1	Clear	None
14:40	5	25	100	9.60	0.66	6.85	1.05	7.02	0.51	12	-43.4	Clear	None
14:45	5	30	100	9.97	0.79	6.86	1.06	6.65	0.44	11.9	-44.2	Clear	None
14:50	5	35	100	10.16	0.92	6.86	1.06	6.21	0.41	11.9	-44.9	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: _____

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: Good	Well Locked at Departure: yes
Well Completion: Flushmount	Key Number To Well: NA

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter
 mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-10	Date	12/15/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	50.0 degrees F and Partly Cloudy. The wind is blowing W at 12.8 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	986.72	Casing Diameter (in)	2.375	Well Casing Material	PVC
Static Water Level (ft-bmp)	9.65	Total Depth (ft-bmp)	15.71	Water Column (ft)	6.06	Gallons in Well	0.99
Purge Start	12:30	Pump Intake (ft-bmp)	14.7	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	13:19	Volumes Purged	1.49	Sample ID	JS-MW-10_GW-121523	Sampled by	Lottie Jay
Sample Time	13:15	Gallons Purged	1.48	Replicate/ Code No.	DUP-01_GW-121523	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:35	0	0	140	10.02	0.00	7.03	1.62	9.57	1.88	13.4	23.1	Clear	Strong
12:40	5	5	140	10.02	0.18	7.05	1.68	7.6	0.98	13.4	9.2	Clear	Strong
12:45	5	10	140	10.87	0.37	7.01	1.75	6.62	0.26	13.4	-8.4	Clear	Strong
12:50	5	15	140	11.00	0.55	7	1.8	6.29	0.15	13.3	-13.9	Clear	Strong
12:55	5	20	140	11.25	0.74	7	1.85	4.98	0.12	13.4	-20.1	Clear	Strong
13:00	5	25	140	11.43	0.92	7	1.88	6.36	0.15	13.3	-24	Clear	Strong
13:05	5	30	140	11.65	1.11	7	1.9	6.84	0.16	13.3	-28.3	Clear	Strong
13:10	5	35	140	11.77	1.29	7	1.92	6.66	0.13	13.4	-30.7	Clear	Strong
13:15	5	40	140	11.90	1.48	6.99	1.99	6.8	0.15	13.5	-33.6	Clear	Strong

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	6	HCL

Comments: _____

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: <u>Good</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flushmount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-11	Date	12/15/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	54.0 degrees F and Mostly Cloudy. The wind is blowing W at 11.4 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	985.4	Casing Diameter (in)	2.375	Well Casing Material	PVC
Static Water Level (ft-bmp)	8.53	Total Depth (ft-bmp)	13.76	Water Column (ft)	5.23	Gallons in Well	0.85
Purge Start	14:30	Pump Intake (ft-bmp)	12.75	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:23	Volumes Purged	1.95	Sample ID	JS-MW-11_GW-121523	Sampled by	Lottie Jay
Sample Time	15:20	Gallons Purged	1.66	Replicate/Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:35	0	0	140	9.16	0.00	7.48	0.9	3.84	7.33	13.1	-20.1	Clear	Medium
14:40	5	5	140	9.61	0.18	7.32	0.84	2.87	6.95	13	-18	Clear	Medium
14:45	5	10	140	10.02	0.37	7.3	0.86	3.02	6.64	13	-14.5	Clear	Medium
14:50	5	15	140	10.38	0.55	7.29	0.86	4.55	6.3	13	-10.6	Clear	Medium
14:55	5	20	140	10.38	0.74	7.31	0.85	2.93	6.4	13.2	-6.7	Clear	Medium
15:00	5	25	140	10.56	0.92	7.34	0.85	21.4	6.65	12.8	-3.4	Clear	Medium
15:05	5	30	140	10.72	1.11	7.3	0.83	12.3	6.69	13.2	-2	Clear	Medium
15:10	5	35	140	11.12	1.29	7.3	0.84	8.44	6.44	13.1	4.6	Clear	Medium
15:15	5	40	140	11.43	1.48	7.3	0.84	7.91	6.38	13	8.5	Clear	Medium
15:20	5	45	140	11.62	1.66	7.3	0.83	7.14	6.35	13.1	10.2	Clear	Medium

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flushmount	Key Number To Well: NA

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-16	Date	12/18/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	33.1 degrees F and Light Snow.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	985.34	Casing Diameter (in)	2.375	Well Casing Material	PVC
Static Water Level (ft-bmp)	9.06	Total Depth (ft-bmp)	15.66	Water Column (ft)	6.60	Gallons in Well	1.08
Purge Start	14:30	Pump Intake (ft-bmp)	14.7	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:20	Volumes Purged	1.56	Sample ID	JS-MW-16_GW-121823	Sampled by	Lottie Jay
Sample Time	15:15	Gallons Purged	1.69	Replicate/Code No.	JS-MW-16_GW-121823	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:35	0	0	160	9.58	0.00	7.13	0.91	0.02	2.43	11.4	1.3	Clear	Medium
14:40	5	5	160	9.96	0.21	7.05	0.87	4.2	1.55	11.7	-11.5	Clear	Medium
14:45	5	10	160	10.35	0.42	7.1	0.78	9.16	1.46	11.4	-23.1	Clear	Medium
14:50	5	15	160	10.66	0.63	7.1	0.78	7.77	0.55	11.5	-27	Clear	Medium
14:55	5	20	160	10.90	0.85	7.1	0.79	5.43	0.96	11.6	-29	Clear	Medium
15:00	5	25	160	11.02	1.06	7.1	0.79	2.58	0.7	11.6	-32.1	Clear	Medium
15:05	5	30	160	11.13	1.27	7.1	0.79	0.02	0.65	11.6	-34.7	Clear	Medium
15:10	5	35	160	11.25	1.48	7.1	0.76	0.15	0.6	11.8	-38.5	Clear	Medium
15:15	5	40	160	11.32	1.69	7.1	0.77	0.02	0.58	11.6	-39	Clear	Medium

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	9	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flushmount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-19	Date	12/15/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	54.0 degrees F and Mostly Cloudy. The wind is blowing W at 11.4 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.05	Casing Diameter (in)	2.375	Well Casing Material	PVC
Static Water Level (ft-bmp)	10.25	Total Depth (ft-bmp)	16.69	Water Column (ft)	6.44	Gallons in Well	1.48
Purge Start	15:35	Pump Intake (ft-bmp)	15.7	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	16:12	Volumes Purged	0.65	Sample ID	JS-MW-19_GW-121523	Sampled by	Lottie Jay
Sample Time	16:10	Gallons Purged	0.96	Replicate/Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:40	0	0	140	10.50	0.00	7.37	1.22	42.7	0.88	12.9	41.5	Clear	Mild
15:45	5	5	140	10.51	0.18	7.29	1.21	38.4	0.66	13	38.3	Clear	Mild
15:50	5	10	140	10.52	0.37	7.28	1.21	18.4	0.56	13	35.6	Clear	Mild
15:55	5	15	140	10.52	0.55	7.28	1.21	14.9	0.51	12.9	33.5	Clear	Mild
16:00	5	20	140	10.52	0.74	7.28	1.2	9.97	0.55	12.9	31	Clear	Mild
16:05	5	25	140	10.52	0.92	7.27	1.2	9.14	0.54	12.9	28.4	Clear	Mild
16:06	1	26	140	10.52	0.96	7.2	1.19	8.77	0.52	12.8	26.7	Clear	Mild

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: Good	Well Locked at Departure: yes
Well Completion: Flushmount	Key Number To Well: NA

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-20	Date	12/18/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	33.1 degrees F and Light Rain and Light Snow and Fog/Mist. The wind is blowing W/NW at 13.9 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	985.64	Casing Diameter (in)	2.375	Well Casing Material	PVC
Static Water Level (ft-bmp)	9.26	Total Depth (ft-bmp)	17.84	Water Column (ft)	8.58	Gallons in Well	1.4
Purge Start	11:30	Pump Intake (ft-bmp)	16.8	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	12:17	Volumes Purged	1.21	Sample ID	JS-MW-20_GW-121823	Sampled by	Lottie Jay
Sample Time	12:15	Gallons Purged	1.69	Replicate/Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:35	0	0	160	9.73	0.00	7.5	6.12	1.98	4.12	12.6	192.6	Clear	Mild
11:40	5	5	160	10.07	0.21	7.14	6.8	1.44	4.13	12.7	165.5	Clear	Mild
11:45	5	10	160	10.44	0.42	7.09	6.71	2.72	3.67	12.8	156.8	Clear	Mild
11:50	5	15	160	11.12	0.63	7.07	6.02	1.91	3.21	13	146	Clear	Mild
11:55	5	20	160	12.02	0.85	7.09	5.26	0.02	3.5	13	140.7	Clear	Mild
12:00	5	25	160	12.71	1.06	7.12	4.27	1.03	3.39	13	137.8	Clear	Mild
12:05	5	30	160	13.17	1.27	7.15	3.54	3.42	3.29	12.9	137.8	Clear	Mild
12:10	5	35	160	13.45	1.48	7.13	3.52	3.98	3.25	12.8	139	Clear	Mild
12:15	5	40	160	13.75	1.69	7.12	3.52	3.87	3.2	12.9	139.8	Clear	Mild

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: _____

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flushmount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-21	Date	12/18/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	33.1 degrees F and Light Rain and Light Snow and Fog/Mist.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	983.59	Casing Diameter (in)	2.375	Well Casing Material	PVC
Static Water Level (ft-bmp)	9.16	Total Depth (ft-bmp)	16.87	Water Column (ft)	7.71	Gallons in Well	1.26
Purge Start	13:45	Pump Intake (ft-bmp)	15.9	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	14:22	Volumes Purged	0.82	Sample ID	JS-MW-21_GW-121823	Sampled by	Lottie Jay
Sample Time	14:20	Gallons Purged	1.03	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:50	0	0	120	9.18	0.00	7.5	3.25	73.5	1.26	11.6	79.1	Clear	Medium
13:55	5	5	130	9.20	0.17	7.13	3.23	40	0.77	12.7	70.8	Clear	Medium
14:00	5	10	130	9.22	0.34	7.11	3.19	21.6	0.59	12.9	70.2	Clear	Medium
14:05	5	15	130	9.23	0.52	7.1	3.17	8.3	0.49	12.9	70	Clear	Medium
14:10	5	20	130	9.24	0.69	7.1	3.17	5.21	0.41	12.9	69.5	Clear	Medium
14:15	5	25	130	9.25	0.86	7.09	3.17	4.7	0.37	12.9	69.5	Clear	Medium
14:20	5	30	130	9.26	1.03	7.09	3.17	4.34	0.35	13	69.5	Clear	Medium

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: _____

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flushmount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-23	Date	12/19/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	26.1 degrees F and Mostly Cloudy.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.3	Casing Diameter (in)	2.375
		Well Casing Material	PVC		
Static Water Level (ft-bmp)	2.14	Total Depth (ft-bmp)	10.33	Water Column (ft)	8.19
		Gallons in Well	1.34		
Purge Start	12:10	Pump Intake (ft-bmp)	9.5	Purge Method	Low-Flow
		Purge Equipment	Peristaltic		
Purge End	12:47	Volumes Purged	0.95	Sample ID	JS-MW-23_GW-121923
		Sampled by	Lottie Jay		
Sample Time	12:45	Gallons Purged	1.27	Replicate/Code No.	NA
		Sample Type	Grab		

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:15	0	0	160	2.62	0.00	7.59	0.85	58.2	2.43	9.2	-6.3	Clear with brown particles	Mild
12:20	5	5	160	2.82	0.21	7.23	0.8	55.4	1.7	9.6	-2.2	Clear with brown particles	Mild
12:25	5	10	160	3.22	0.42	7.11	0.8	23.9	1.03	9.5	1.5	Clear with brown particles	Mild
12:30	5	15	160	3.45	0.63	7.08	0.81	10.6	0.71	9.5	3.4	Clear with brown particles	Mild
12:35	5	20	160	3.57	0.85	7.08	0.82	8.29	0.45	9.5	3.9	Clear with brown particles	Mild
12:40	5	25	160	3.62	1.06	7.08	0.82	7.93	0.42	9.5	3.8	Clear with brown particles	Mild
12:45	5	30	160	3.70	1.27	7.08	0.82	7.16	0.43	9.5	3.9	Clear with brown particles	Mild

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flushmount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-24	Date	12/19/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	26.1 degrees F and Mostly Cloudy. The wind is blowing W/NW at 8.1 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	983.32	Casing Diameter (in)	2.375	Well Casing Material	PVC
Static Water Level (ft-bmp)	1.18	Total Depth (ft-bmp)	7.25	Water Column (ft)	6.07	Gallons in Well	0.99
Purge Start	09:55	Pump Intake (ft-bmp)	6.3	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	10:37	Volumes Purged	1.46	Sample ID	JS-MW-24_GW-121934	Sampled by	Lottie Jay
Sample Time	10:35	Gallons Purged	1.45	Replicate/Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:00	0	0	140	1.52	0.00	6.98	1.31	98.7	3.31	7.6	121.4	Clear	None
10:05	5	5	160	1.99	0.21	7.04	1.29	46.4	2.58	7.2	89.8	Clear	None
10:10	5	10	160	2.29	0.42	7.05	1.27	36.9	2.4	7.3	77.9	Clear	None
10:15	5	15	160	2.42	0.63	7.05	1.24	23	1.81	7.5	70.5	Clear	None
10:20	5	20	160	2.43	0.85	7.04	1.24	9.3	1.3	7.6	65.6	Clear	None
10:25	5	25	160	2.52	1.06	7.04	1.24	8.42	0.76	7.6	61.8	Clear	None
10:30	5	30	160	2.62	1.27	7.04	1.24	7.65	0.72	7.6	57.6	Clear	None
10:35	5	35	160	2.67	1.45	7.04	1.24	7.14	0.69	7.6	55.5	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flushmount	Key Number To Well: NA

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-26	Date	12/19/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	26.1 degrees F and Mostly Cloudy.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.22	Casing Diameter (in)	2.375	Well Casing Material	PVC
Static Water Level (ft-bmp)	8.14	Total Depth (ft-bmp)	18.05	Water Column (ft)	9.91	Gallons in Well	1.62
Purge Start	11:30	Pump Intake (ft-bmp)	17.1	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	12:06	Volumes Purged	0.78	Sample ID	JS-MW-26_GW-121923	Sampled by	Lottie Jay
Sample Time	12:05	Gallons Purged	1.27	Replicate/Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:35	0	0	160	8.92	0.00	7.33	4.46	19.8	3.64	12	73.5	Clear	Mild
11:40	5	5	160	9.56	0.21	7.01	4.24	12.3	1.74	11.9	54.3	Clear	Mild
11:45	5	10	160	10.26	0.42	6.94	3.61	7.3	1.49	12	52.8	Clear	Mild
11:50	5	15	160	10.75	0.63	6.96	3.64	2.31	1.21	12.4	51.9	Clear	Mild
11:55	5	20	160	11.13	0.85	6.99	3.67	3.86	1.12	12.4	50	Clear	Mild
12:00	5	25	160	11.48	1.06	7.01	3.7	3.11	1.13	12.3	47.3	Clear	Mild
12:05	5	30	160	11.13	1.27	7.01	3.72	3.48	1.13	12.4	45.6	Clear	Mild

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flushmount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-27	Date	12/15/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	42.1 degrees F and Mostly Clear. The wind is blowing W at 8.1 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	987.55	Casing Diameter (in)	2.375	Well Casing Material	PVC
Static Water Level (ft-bmp)	10.20	Total Depth (ft-bmp)	15.63	Water Column (ft)	5.43	Gallons in Well	0.87
Purge Start	10:45	Pump Intake (ft-bmp)	14.6	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	11:26	Volumes Purged	1.38	Sample ID	JS-MW-27_GW-121523	Sampled by	Lottie Jay
Sample Time	11:25	Gallons Purged	1.2	Replicate/Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:50	0	0	130	10.30	0.00	6.93	4.86	45.7	1.7	13.3	47.2	Clear	Medium
10:55	5	5	130	10.33	0.17	6.91	4.65	38.3	0.38	13.5	22	Clear	Medium
11:00	5	10	130	10.36	0.34	6.99	4.12	29	1.09	13.4	14.6	Clear	Medium
11:05	5	15	130	10.40	0.52	7.06	3.3	16.1	1.71	13.5	12.5	Clear	Medium
11:10	5	20	130	10.43	0.69	7.08	2.98	7.25	1.48	13.5	11.3	Clear	Medium
11:15	5	25	130	10.45	0.86	7.07	2.86	4.47	1.17	13.5	11.1	Clear	Medium
11:20	5	30	130	10.46	1.03	7.07	2.87	4.71	1.19	13.5	12.1	Clear	Medium
11:25	5	35	130	10.47	1.20	7.06	2.88	4.06	1.21	13.5	13.1	Clear	Medium

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: Good	Well Locked at Departure: yes
Well Completion: Flushmount	Key Number To Well: NA

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter
 mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-29	Date	12/18/2023
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	33.1 degrees F and Light Rain and Light Snow and Fog/Mist.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.93	Casing Diameter (in)	2.375
				Well Casing Material	PVC
Static Water Level (ft-bmp)	2.71	Total Depth (ft-bmp)	10.2	Water Column (ft)	7.49
				Gallons in Well	1.22
Purge Start	12:30	Pump Intake (ft-bmp)	9.2	Purge Method	Low-Flow
				Purge Equipment	Peristaltic
Purge End	13:22	Volumes Purged	1.46	Sample ID	JS-MW-29_GW-121823
				Sampled by	Lottie Jay
Sample Time	13:20	Gallons Purged	1.78	Replicate/Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:35	0	0	150	3.28	0.00	7.32	2.94	42.4	1.51	9.9	142.6	Clear with small orange particles	Strong
12:40	5	5	150	4.12	0.20	7.22	2.91	37.3	1.03	9.8	136.4	Clear with small orange particles	Strong
12:45	5	10	150	4.64	0.40	7.22	2.9	28.4	0.94	9.8	130.2	Clear with small orange particles	Strong
12:50	5	15	150	5.21	0.59	7.21	2.9	28.3	0.79	10.1	123	Clear with small orange particles	Strong
12:55	5	20	150	5.46	0.79	7.21	2.9	19.3	0.68	10.1	111.5	Clear with small orange particles	Strong
13:00	5	25	150	5.48	0.99	7.21	2.9	15.5	0.62	10.1	103.1	Clear with small orange particles	Strong
13:05	5	30	150	5.48	1.19	7.24	2.88	6.37	0.34	10.1	84.2	Clear with small orange particles	Strong
13:10	5	35	150	5.48	1.39	7.24	2.86	5.24	0.35	10.2	75.9	Clear with small orange particles	Strong
13:15	5	40	150	5.48	1.56	7.24	2.87	4.87	0.33	10.3	67.7	Clear with small orange particles	Strong
13:20	5	45	150	5.48	1.78	7.24	2.87	4.33	0.31	10.4	62.4	Clear with small orange particles	Strong

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flushmount	Key Number To Well: NA

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter
 mV = milliv

Groundwater Sampling Form



Project Number	30167840	Well ID	JS-MW-30	Date	12/19/2023		
Project Name/Location	RACER Pontiac North Campus 2023		Weather(°F)	26.1 degrees F and Mostly Cloudy.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	984.07	Casing Diameter (in)	2.375	Well Casing Material	PVC
Static Water Level (ft-bmp)	1.92	Total Depth (ft-bmp)	8.18	Water Column (ft)	6.26	Gallons in Well	1.02
Purge Start	10:45	Pump Intake (ft-bmp)	7.2	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	11:26	Volumes Purged	1.45	Sample ID	JS-MW-30_GW-121923	Sampled by	Lottie Jay
Sample Time	11:25	Gallons Purged	1.48	Replicate/Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:50	0	0	160	2.20	0.00	7.21	1.07	239	2.29	8.7	49.8	Clear	Mild
10:55	5	5	160	2.30	0.21	7.12	1.07	171	1.62	8.9	48.6	Clear	Mild
11:00	5	10	160	2.32	0.42	7.11	1.07	80.4	1.93	8.5	46.6	Clear	Mild
11:05	5	15	160	2.42	0.63	7.09	1.06	24	0.74	8.7	44.3	Clear	Mild
11:10	5	20	160	2.46	0.85	7.09	1.06	8.54	0.5	8.6	42.2	Clear	Mild
11:15	5	25	160	2.51	1.06	7.08	1.05	6.58	0.43	8.6	41.3	Clear	Mild
11:20	5	30	160	2.55	1.27	7.08	1.05	5.87	0.43	8.6	25.3	Clear	Mild
11:25	5	35	160	2.57	1.48	7.08	1.05	6.25	0.44	8.6	26	Clear	Mild

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: _____

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: RACER PNC Joslyn	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flushmount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point
 in = inches
 ft = feet
 mL/min = milliliters per minute
 mS/cm = milliSiemens per centimeter
 NTU = Nephelometric Turbidity Unit
 mg/L = milligrams per liter

mV = milliv

Appendix B

Laboratory Analytical Reports



Analytical Laboratory Report

Report ID: S46107.01(01)
Generated on 03/15/2023

Report to

Attention: Alexis Crisp
Arcadis US, Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:
Email: Alexis.Crisp@arcadis.com

Additional Contacts: Tiffany Linder, Ian Drost

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S46107.01-S46107.08
Project: Monitoring
Collected Date(s): 03/09/2023
Submitted Date/Time: 03/09/2023 15:20
Sampled by: Leticia Ferreria
P.O. #: 30167840.00005

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003



Analytical Laboratory Report

Sample Summary (8 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S46107.01	JS-MW-16_GW-030923	Groundwater	03/09/23 10:20
S46107.02	JS-MW-16_GW-030923 MS	Groundwater	03/09/23 10:20
S46107.03	JS-MW-16_GW-030923 MSD	Groundwater	03/09/23 10:20
S46107.04	JS-MW-19_GW-030923	Groundwater	03/09/23 11:19
S46107.05	JS-MW-09_GW-030923	Groundwater	03/09/23 12:24
S46107.06	JS-MW-27_GW-030923	Groundwater	03/09/23 13:41
S46107.07	Trip Blank	Water	03/09/23 00:01
S46107.08	DUP-01_GW-030923	Groundwater	03/09/23 00:01



Analytical Laboratory Report

Lab Sample ID: S46107.01

Sample Tag: JS-MW-16_GW-030923

Collected Date/Time: 03/09/2023 10:20

Matrix: Groundwater

COC Reference: 138071

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/13/23 10:58	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/13/23 14:53, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	4	1		ug/L	1	71-43-2	
1,2-Dichloroethane	12	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46107.01 (continued)

Sample Tag: JS-MW-16_GW-030923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/13/23 14:53, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	5	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	2	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	2	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S46107.02

Sample Tag: JS-MW-16_GW-030923 MS

Collected Date/Time: 03/09/2023 10:20

Matrix: Groundwater

COC Reference: 138071

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/13/23 10:58	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/13/23 20:02, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	57	10		ug/L	1	60-29-7	1
Acetone	57	50		ug/L	1	67-64-1	1
Methyl iodide	56	1		ug/L	1	74-88-4	1
Carbon disulfide	45	5		ug/L	1	75-15-0	1
tert-Methyl butyl ether (MTBE)	57	5		ug/L	1	1634-04-4	1
Acrylonitrile	48	2		ug/L	1	107-13-1	1
2-Butanone (MEK)	52	25		ug/L	1	78-93-3	1
Dichlorodifluoromethane	42	5		ug/L	1	75-71-8	1
Chloromethane	57	5		ug/L	1	74-87-3	1
Vinyl chloride	49	1		ug/L	1	75-01-4	1
Bromomethane	52	5		ug/L	1	74-83-9	1
Chloroethane	50	5		ug/L	1	75-00-3	1
Trichlorofluoromethane	48	1		ug/L	1	75-69-4	1
1,1-Dichloroethene	47	1		ug/L	1	75-35-4	1
Methylene chloride	52	5		ug/L	1	75-09-2	1
trans-1,2-Dichloroethene	49	1		ug/L	1	156-60-5	1
1,1-Dichloroethane	52	1		ug/L	1	75-34-3	1
cis-1,2-Dichloroethene	54	1		ug/L	1	156-59-2	1
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	1
Chloroform	54	1		ug/L	1	67-66-3	1
Bromochloromethane	56	1		ug/L	1	74-97-5	1
1,1,1-Trichloroethane	49	1		ug/L	1	71-55-6	1
4-Methyl-2-pentanone (MIBK)	51	50		ug/L	1	108-10-1	1
2-Hexanone	52	50		ug/L	1	591-78-6	1
Carbon tetrachloride	47	1		ug/L	1	56-23-5	1
Benzene	54	1		ug/L	1	71-43-2	1
1,2-Dichloroethane	63	1		ug/L	1	107-06-2	1
Trichloroethene	50	1		ug/L	1	79-01-6	1
1,2-Dichloropropane	54	1		ug/L	1	78-87-5	1
Bromodichloromethane	54	1		ug/L	1	75-27-4	1
Dibromomethane	54	5		ug/L	1	74-95-3	1
cis-1,3-Dichloropropene	54	1		ug/L	1	10061-01-5	1
Toluene	52	1		ug/L	1	108-88-3	1
trans-1,3-Dichloropropene	54	1		ug/L	1	10061-02-6	1
1,1,2-Trichloroethane	56	1		ug/L	1	79-00-5	1
Tetrachloroethene	49	1		ug/L	1	127-18-4	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S46107.02 (continued)

Sample Tag: JS-MW-16_GW-030923 MS

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/13/23 20:02, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	45	1		ug/L	1	110-57-6	1
Dibromochloromethane	52	5		ug/L	1	124-48-1	1
1,2-Dibromoethane	52	1		ug/L	1	106-93-4	1
Chlorobenzene	50	1		ug/L	1	108-90-7	1
1,1,1,2-Tetrachloroethane	50	1		ug/L	1	630-20-6	1
Ethylbenzene	49	1		ug/L	1	100-41-4	1
p,m-Xylene*	105	2		ug/L	1		1
o-Xylene	49	1		ug/L	1	95-47-6	1
Styrene	53	1		ug/L	1	100-42-5	1
Isopropylbenzene	48	5		ug/L	1	98-82-8	1
Bromoform	52	1		ug/L	1	75-25-2	1
1,1,2,2-Tetrachloroethane	50	1		ug/L	1	79-34-5	1
1,2,3-Trichloropropane	49	1		ug/L	1	96-18-4	1
n-Propylbenzene	48	1		ug/L	1	103-65-1	1
Bromobenzene	51	1		ug/L	1	108-86-1	1
1,3,5-Trimethylbenzene	48	1		ug/L	1	108-67-8	1
tert-Butylbenzene	45	1		ug/L	1	98-06-6	1
1,2,4-Trimethylbenzene	51	1		ug/L	1	95-63-6	1
sec-Butylbenzene	44	1		ug/L	1	135-98-8	1
p-Isopropyltoluene	45	5		ug/L	1	99-87-6	1
1,3-Dichlorobenzene	48	1		ug/L	1	541-73-1	1
1,4-Dichlorobenzene	48	1		ug/L	1	106-46-7	1
1,2-Dichlorobenzene	49	1		ug/L	1	95-50-1	1
1,2,3-Trimethylbenzene	49	1		ug/L	1	526-73-8	1
n-Butylbenzene	42	1		ug/L	1	104-51-8	1
Hexachloroethane	44	5		ug/L	1	67-72-1	1
1,2-Dibromo-3-chloropropane	45	5		ug/L	1	96-12-8	1
1,2,4-Trichlorobenzene	46	5		ug/L	1	120-82-1	1
1,2,3-Trichlorobenzene	45	5		ug/L	1	87-61-6	1
Naphthalene	45	5		ug/L	1	91-20-3	1
2-Methylnaphthalene	36	5		ug/L	1	91-57-6	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S46107.03

Sample Tag: JS-MW-16_GW-030923 MSD

Collected Date/Time: 03/09/2023 10:20

Matrix: Groundwater

COC Reference: 138071

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/13/23 10:58	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/13/23 20:21, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	54	10		ug/L	1	60-29-7	1
Acetone	50	50		ug/L	1	67-64-1	1
Methyl iodide	45	1		ug/L	1	74-88-4	1
Carbon disulfide	41	5		ug/L	1	75-15-0	1
tert-Methyl butyl ether (MTBE)	55	5		ug/L	1	1634-04-4	1
Acrylonitrile	47	2		ug/L	1	107-13-1	1
2-Butanone (MEK)	48	25		ug/L	1	78-93-3	1
Dichlorodifluoromethane	35	5		ug/L	1	75-71-8	1
Chloromethane	54	5		ug/L	1	74-87-3	1
Vinyl chloride	39	1		ug/L	1	75-01-4	1
Bromomethane	50	5		ug/L	1	74-83-9	1
Chloroethane	44	5		ug/L	1	75-00-3	1
Trichlorofluoromethane	44	1		ug/L	1	75-69-4	1
1,1-Dichloroethene	43	1		ug/L	1	75-35-4	1
Methylene chloride	48	5		ug/L	1	75-09-2	1
trans-1,2-Dichloroethene	46	1		ug/L	1	156-60-5	1
1,1-Dichloroethane	50	1		ug/L	1	75-34-3	1
cis-1,2-Dichloroethene	52	1		ug/L	1	156-59-2	1
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	1
Chloroform	52	1		ug/L	1	67-66-3	1
Bromochloromethane	55	1		ug/L	1	74-97-5	1
1,1,1-Trichloroethane	46	1		ug/L	1	71-55-6	1
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	1
2-Hexanone	Not detected	50		ug/L	1	591-78-6	1
Carbon tetrachloride	45	1		ug/L	1	56-23-5	1
Benzene	52	1		ug/L	1	71-43-2	1
1,2-Dichloroethane	60	1		ug/L	1	107-06-2	1
Trichloroethene	48	1		ug/L	1	79-01-6	1
1,2-Dichloropropane	52	1		ug/L	1	78-87-5	1
Bromodichloromethane	52	1		ug/L	1	75-27-4	1
Dibromomethane	52	5		ug/L	1	74-95-3	1
cis-1,3-Dichloropropene	53	1		ug/L	1	10061-01-5	1
Toluene	50	1		ug/L	1	108-88-3	1
trans-1,3-Dichloropropene	52	1		ug/L	1	10061-02-6	1
1,1,2-Trichloroethane	54	1		ug/L	1	79-00-5	1
Tetrachloroethene	48	1		ug/L	1	127-18-4	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S46107.03 (continued)
 Sample Tag: JS-MW-16_GW-030923 MSD

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/13/23 20:21, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	44	1		ug/L	1	110-57-6	1
Dibromochloromethane	51	5		ug/L	1	124-48-1	1
1,2-Dibromoethane	51	1		ug/L	1	106-93-4	1
Chlorobenzene	49	1		ug/L	1	108-90-7	1
1,1,1,2-Tetrachloroethane	49	1		ug/L	1	630-20-6	1
Ethylbenzene	48	1		ug/L	1	100-41-4	1
p,m-Xylene*	102	2		ug/L	1		1
o-Xylene	48	1		ug/L	1	95-47-6	1
Styrene	51	1		ug/L	1	100-42-5	1
Isopropylbenzene	48	5		ug/L	1	98-82-8	1
Bromoform	50	1		ug/L	1	75-25-2	1
1,1,2,2-Tetrachloroethane	50	1		ug/L	1	79-34-5	1
1,2,3-Trichloropropane	49	1		ug/L	1	96-18-4	1
n-Propylbenzene	47	1		ug/L	1	103-65-1	1
Bromobenzene	50	1		ug/L	1	108-86-1	1
1,3,5-Trimethylbenzene	48	1		ug/L	1	108-67-8	1
tert-Butylbenzene	45	1		ug/L	1	98-06-6	1
1,2,4-Trimethylbenzene	50	1		ug/L	1	95-63-6	1
sec-Butylbenzene	43	1		ug/L	1	135-98-8	1
p-Isopropyltoluene	44	5		ug/L	1	99-87-6	1
1,3-Dichlorobenzene	46	1		ug/L	1	541-73-1	1
1,4-Dichlorobenzene	46	1		ug/L	1	106-46-7	1
1,2-Dichlorobenzene	47	1		ug/L	1	95-50-1	1
1,2,3-Trimethylbenzene	47	1		ug/L	1	526-73-8	1
n-Butylbenzene	41	1		ug/L	1	104-51-8	1
Hexachloroethane	43	5		ug/L	1	67-72-1	1
1,2-Dibromo-3-chloropropane	43	5		ug/L	1	96-12-8	1
1,2,4-Trichlorobenzene	46	5		ug/L	1	120-82-1	1
1,2,3-Trichlorobenzene	44	5		ug/L	1	87-61-6	1
Naphthalene	45	5		ug/L	1	91-20-3	1
2-Methylnaphthalene	40	5		ug/L	1	91-57-6	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S46107.04

Sample Tag: JS-MW-19_GW-030923

Collected Date/Time: 03/09/2023 11:19

Matrix: Groundwater

COC Reference: 138071

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/13/23 10:58	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/10/23 16:41, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46107.04 (continued)

Sample Tag: JS-MW-19_GW-030923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/10/23 16:41, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	2	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S46107.05

Sample Tag: JS-MW-09_GW-030923

Collected Date/Time: 03/09/2023 12:24

Matrix: Groundwater

COC Reference: 138071

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/13/23 10:58	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/10/23 22:34, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	500		ug/L	50	60-29-7	Y
Acetone	Not detected	2,500		ug/L	50	67-64-1	Y
Methyl iodide	Not detected	50		ug/L	50	74-88-4	Y
Carbon disulfide	Not detected	300		ug/L	50	75-15-0	Y
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/L	50	1634-04-4	Y
Acrylonitrile	Not detected	100		ug/L	50	107-13-1	Y
2-Butanone (MEK)	Not detected	1,300		ug/L	50	78-93-3	Y
Dichlorodifluoromethane	Not detected	300		ug/L	50	75-71-8	Y
Chloromethane	Not detected	300		ug/L	50	74-87-3	Y
Vinyl chloride	Not detected	50		ug/L	50	75-01-4	Y
Bromomethane	Not detected	300		ug/L	50	74-83-9	Y
Chloroethane	Not detected	300		ug/L	50	75-00-3	Y
Trichlorofluoromethane	Not detected	50		ug/L	50	75-69-4	Y
1,1-Dichloroethene	Not detected	50		ug/L	50	75-35-4	Y
Methylene chloride	Not detected	300		ug/L	50	75-09-2	Y
trans-1,2-Dichloroethene	Not detected	50		ug/L	50	156-60-5	Y
1,1-Dichloroethane	Not detected	50		ug/L	50	75-34-3	Y
cis-1,2-Dichloroethene	Not detected	50		ug/L	50	156-59-2	Y
Tetrahydrofuran*	Not detected	4,500		ug/L	50	109-99-9	Y
Chloroform	Not detected	50		ug/L	50	67-66-3	Y
Bromochloromethane	Not detected	50		ug/L	50	74-97-5	Y
1,1,1-Trichloroethane	Not detected	50		ug/L	50	71-55-6	Y
4-Methyl-2-pentanone (MIBK)	Not detected	2,500		ug/L	50	108-10-1	Y
2-Hexanone	Not detected	2,500		ug/L	50	591-78-6	Y
Carbon tetrachloride	Not detected	50		ug/L	50	56-23-5	Y
Benzene	520	50		ug/L	50	71-43-2	Y
1,2-Dichloroethane	Not detected	50		ug/L	50	107-06-2	Y
Trichloroethene	Not detected	50		ug/L	50	79-01-6	Y
1,2-Dichloropropane	Not detected	50		ug/L	50	78-87-5	Y
Bromodichloromethane	Not detected	50		ug/L	50	75-27-4	Y
Dibromomethane	Not detected	300		ug/L	50	74-95-3	Y
cis-1,3-Dichloropropene	Not detected	50		ug/L	50	10061-01-5	Y
Toluene	130	50		ug/L	50	108-88-3	Y
trans-1,3-Dichloropropene	Not detected	50		ug/L	50	10061-02-6	Y
1,1,2-Trichloroethane	Not detected	50		ug/L	50	79-00-5	Y
Tetrachloroethene	Not detected	50		ug/L	50	127-18-4	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S46107.05 (continued)

Sample Tag: JS-MW-09_GW-030923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/10/23 22:34, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	Not detected	50		ug/L	50	110-57-6	Y
Dibromochloromethane	Not detected	300		ug/L	50	124-48-1	Y
1,2-Dibromoethane	Not detected	50		ug/L	50	106-93-4	Y
Chlorobenzene	Not detected	50		ug/L	50	108-90-7	Y
1,1,1,2-Tetrachloroethane	Not detected	50		ug/L	50	630-20-6	Y
Ethylbenzene	1,610	50		ug/L	50	100-41-4	Y
p,m-Xylene*	5,000	100		ug/L	50		Y
o-Xylene	100	50		ug/L	50	95-47-6	Y
Styrene	Not detected	50		ug/L	50	100-42-5	Y
Isopropylbenzene	Not detected	300		ug/L	50	98-82-8	Y
Bromoform	Not detected	50		ug/L	50	75-25-2	Y
1,1,2,2-Tetrachloroethane	Not detected	50		ug/L	50	79-34-5	Y
1,2,3-Trichloropropane	Not detected	50		ug/L	50	96-18-4	Y
n-Propylbenzene	170	50		ug/L	50	103-65-1	Y
Bromobenzene	Not detected	50		ug/L	50	108-86-1	Y
1,3,5-Trimethylbenzene	390	50		ug/L	50	108-67-8	Y
tert-Butylbenzene	Not detected	50		ug/L	50	98-06-6	Y
1,2,4-Trimethylbenzene	1,350	50		ug/L	50	95-63-6	Y
sec-Butylbenzene	Not detected	50		ug/L	50	135-98-8	Y
p-Isopropyltoluene	Not detected	300		ug/L	50	99-87-6	Y
1,3-Dichlorobenzene	Not detected	50		ug/L	50	541-73-1	Y
1,4-Dichlorobenzene	Not detected	50		ug/L	50	106-46-7	Y
1,2-Dichlorobenzene	Not detected	50		ug/L	50	95-50-1	Y
1,2,3-Trimethylbenzene	380	50		ug/L	50	526-73-8	Y
n-Butylbenzene	Not detected	50		ug/L	50	104-51-8	Y
Hexachloroethane	Not detected	300		ug/L	50	67-72-1	Y
1,2-Dibromo-3-chloropropane	Not detected	300		ug/L	50	96-12-8	Y
1,2,4-Trichlorobenzene	Not detected	300		ug/L	50	120-82-1	Y
1,2,3-Trichlorobenzene	Not detected	300		ug/L	50	87-61-6	Y
Naphthalene	Not detected	300		ug/L	50	91-20-3	Y
2-Methylnaphthalene	Not detected	300		ug/L	50	91-57-6	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S46107.06

Sample Tag: JS-MW-27_GW-030923

Collected Date/Time: 03/09/2023 13:41

Matrix: Groundwater

COC Reference: 138071

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/13/23 10:58	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/10/23 17:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	1	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46107.06 (continued)

Sample Tag: JS-MW-27_GW-030923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/10/23 17:04, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S46107.07

Sample Tag: Trip Blank

Collected Date/Time: 03/09/2023 00:01

Matrix: Water

COC Reference: 138071

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	3.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/13/23 10:58	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/10/23 15:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46107.07 (continued)

Sample Tag: Trip Blank

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/10/23 15:30, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S46107.08

Sample Tag: DUP-01_GW-030923

Collected Date/Time: 03/09/2023 00:01

Matrix: Groundwater

COC Reference: 138071

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/13/23 10:58	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/10/23 17:28, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	1	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46107.08 (continued)

Sample Tag: DUP-01_GW-030923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/10/23 17:28, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Merit Laboratories Login Checklist

Lab Set ID:S46107

Client:ARCADIS_NOVI (ARCADIS U.S., Inc.)

Project: Monitoring

Submitted:03/09/2023 15:20 Login User: MMC

Attention: Alexis Crisp

Address: Arcadis US, Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:

Email: Alexis.Crisp@arcadis.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 3.3 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|--|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



Analytical Laboratory Report

Report ID: S46206.01(01)
Generated on 03/20/2023

Report to

Attention: Alexis Crisp
Arcadis US, Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:
Email: Alexis.Crisp@arcadis.com

Additional Contacts: Tiffany Linder, Ian Drost

Report produced by

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John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S46206.01-S46206.06
Project: RACER PNC
Collected Date(s): 03/09/2023 - 03/13/2023
Submitted Date/Time: 03/13/2023 15:30
Sampled by: Leticia Ferreria
P.O. #: 30167840.00005

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

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Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003



Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S46206.01	JS-MW-04_GW-030923	Groundwater	03/09/23 15:16
S46206.02	JS-MW-10_GW-031323	Groundwater	03/13/23 10:04
S46206.03	JS-MW-05_GW-031323	Groundwater	03/13/23 11:03
S46206.04	JS-MW-22_GW-031323	Groundwater	03/13/23 12:28
S46206.05	DUP-02_GW-030923	Groundwater	03/09/23 00:01
S46206.06	Trip Blank	Water	03/13/23 00:01



Analytical Laboratory Report

Lab Sample ID: S46206.01

Sample Tag: JS-MW-04_GW-030923

Collected Date/Time: 03/09/2023 15:16

Matrix: Groundwater

COC Reference: 160084

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/17/23 12:22	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/17/23 22:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46206.01 (continued)

Sample Tag: JS-MW-04_GW-030923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/17/23 22:31, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S46206.02

Sample Tag: JS-MW-10_GW-031323

Collected Date/Time: 03/13/2023 10:04

Matrix: Groundwater

COC Reference: 160084

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/17/23 12:22	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/17/23 00:21, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	102	1		ug/L	1	71-43-2	
1,2-Dichloroethane	8	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46206.02 (continued)

Sample Tag: JS-MW-10_GW-031323

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/17/23 00:21, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S46206.03

Sample Tag: JS-MW-05_GW-031323

Collected Date/Time: 03/13/2023 11:03

Matrix: Groundwater

COC Reference: 160084

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/17/23 12:22	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/17/23 22:50, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46206.03 (continued)

Sample Tag: JS-MW-05_GW-031323

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/17/23 22:50, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S46206.04

Sample Tag: JS-MW-22_GW-031323

Collected Date/Time: 03/13/2023 12:28

Matrix: Groundwater

COC Reference: 160084

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/17/23 12:22	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/17/23 23:10, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46206.04 (continued)

Sample Tag: JS-MW-22_GW-031323

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/17/23 23:10, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S46206.05

Sample Tag: DUP-02_GW-030923

Collected Date/Time: 03/09/2023 00:01

Matrix: Groundwater

COC Reference: 160084

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/20/23 12:05	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/17/23 23:29, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46206.05 (continued)

Sample Tag: DUP-02_GW-030923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/17/23 23:29, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S46206.06

Sample Tag: Trip Blank

Collected Date/Time: 03/13/2023 00:01

Matrix: Water

COC Reference: 160084

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/17/23 12:22	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/16/23 19:38, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46206.06 (continued)

Sample Tag: Trip Blank

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/16/23 19:38, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Merit Laboratories Login Checklist

Lab Set ID:S46206

Client:ARCADIS_NOVI (ARCADIS U.S., Inc.)

Project: RACER PNC

Submitted:03/13/2023 15:30 Login User: MMC

Attention: Alexis Crisp

Address: Arcadis US, Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:

Email: Alexis.Crisp@arcadis.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 5.3 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|--|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



Analytical Laboratory Report

Report ID: S46237.01(01)
Generated on 03/20/2023

Report to

Attention: Alexis Crisp
Arcadis US, Inc.
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Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:
Email: Alexis.Crisp@arcadis.com

Additional Contacts: Tiffany Linder, Ian Drost

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Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S46237.01-S46237.06
Project: RACER PNC / 30167840
Collected Date(s): 03/13/2023 - 03/14/2023
Submitted Date/Time: 03/14/2023 15:10
Sampled by: Leticia Ferreria
P.O. #: 30167840.00005

Table of Contents

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003



Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S46237.01	JS-MW-24_GW-031423	Groundwater	03/14/23 11:02
S46237.02	JS-MW-30_GW-031423	Groundwater	03/14/23 11:57
S46237.03	JS-MW-23_GW-031423	Groundwater	03/14/23 12:51
S46237.04	JS-MW-21_GW-031323	Groundwater	03/13/23 13:52
S46237.05	JS-MW-20_GW-031323	Groundwater	03/13/23 14:45
S46237.06	Trip Blank	Water	03/13/23 00:01



Analytical Laboratory Report

Lab Sample ID: S46237.01

Sample Tag: JS-MW-24_GW-031423

Collected Date/Time: 03/14/2023 11:02

Matrix: Groundwater

COC Reference: 160086

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/17/23 12:22	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/16/23 21:12, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46237.01 (continued)

Sample Tag: JS-MW-24_GW-031423

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/16/23 21:12, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S46237.02

Sample Tag: JS-MW-30_GW-031423

Collected Date/Time: 03/14/2023 11:57

Matrix: Groundwater

COC Reference: 160086

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/17/23 12:22	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/18/23 01:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46237.02 (continued)

Sample Tag: JS-MW-30_GW-031423

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/18/23 01:06, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S46237.03

Sample Tag: JS-MW-23_GW-031423

Collected Date/Time: 03/14/2023 12:51

Matrix: Groundwater

COC Reference: 160086

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/17/23 12:22	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/16/23 22:00, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46237.03 (continued)

Sample Tag: JS-MW-23_GW-031423

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/16/23 22:00, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	1	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S46237.04

Sample Tag: JS-MW-21_GW-031323

Collected Date/Time: 03/13/2023 13:52

Matrix: Groundwater

COC Reference: 160086

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/17/23 12:22	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/16/23 22:23, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46237.04 (continued)

Sample Tag: JS-MW-21_GW-031323

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/16/23 22:23, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S46237.05

Sample Tag: JS-MW-20_GW-031323

Collected Date/Time: 03/13/2023 14:45

Matrix: Groundwater

COC Reference: 160086

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/17/23 12:22	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/16/23 22:47, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46237.05 (continued)

Sample Tag: JS-MW-20_GW-031323

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/16/23 22:47, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S46237.06

Sample Tag: Trip Blank

Collected Date/Time: 03/13/2023 00:01

Matrix: Water

COC Reference: 160086

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/17/23 12:22	ASW	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/16/23 20:01, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S46237.06 (continued)

Sample Tag: Trip Blank

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 03/16/23 20:01, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Merit Laboratories Login Checklist

Lab Set ID:S46237

Client:ARCADIS_NOVI (ARCADIS U.S., Inc.)

Project: RACER PNC / 30167840

Submitted:03/14/2023 15:10 Login User: MAM

Attention: Alexis Crisp

Address: Arcadis US, Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:

Email: Alexis.Crisp@arcadis.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 2.9
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Do water VOC or TOX bottles contain headspace

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



Analytical Laboratory Report

Report ID: S50028.01(01)
Generated on 06/27/2023

Report to

Attention: Alexis Crisp
Arcadis US, Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:
Email: Alexis.Crisp@arcadis.com

Additional Contacts: Tiffany Linder, Ian Drost

Report produced by

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John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S50028.01-S50028.08
Project: RACER PNC
Collected Date(s): 06/19/2023 - 06/20/2023
Submitted Date/Time: 06/20/2023 13:50
Sampled by: Unknown
P.O. #: 30167840.00005

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003



Analytical Laboratory Report

Sample Summary (8 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S50028.01	JS-MW-10_GW061923	Groundwater	06/19/23 12:30
S50028.02	TRIP BLANK	Liquid	06/19/23 00:01
S50028.03	DUP-01_GW-061923	Groundwater	06/19/23 00:01
S50028.04	JS-MW-06_GW-061923	Groundwater	06/19/23 13:45
S50028.05	JS-MW-11_GW-061923	Groundwater	06/19/23 14:25
S50028.06	JS-MW-09_GW-062023	Groundwater	06/20/23 08:12
S50028.07	JS-MW-04_GW-062023	Groundwater	06/20/23 09:40
S50028.08	JS-MW-05_GW-062023	Groundwater	06/20/23 11:25



Analytical Laboratory Report

Lab Sample ID: S50028.01

Sample Tag: JS-MW-10_GW061923

Collected Date/Time: 06/19/2023 12:30

Matrix: Groundwater

COC Reference: 163448

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	2.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	>2	N/A	06/22/23 11:53	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/22/23 07:40, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	44	1		ug/L	1	71-43-2	
1,2-Dichloroethane	4	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50028.01 (continued)

Sample Tag: JS-MW-10_GW061923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/22/23 07:40, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50028.02

Sample Tag: TRIP BLANK

Collected Date/Time: 06/19/2023 00:01

Matrix: Liquid

COC Reference: 163448

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	2.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/22/23 11:53	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/22/23 05:18, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50028.02 (continued)

Sample Tag: TRIP BLANK

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/22/23 05:18, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50028.03

Sample Tag: DUP-01_GW-061923

Collected Date/Time: 06/19/2023 00:01

Matrix: Groundwater

COC Reference: 163448

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	2.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/22/23 11:53	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/22/23 08:03, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	47	1		ug/L	1	71-43-2	
1,2-Dichloroethane	4	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50028.03 (continued)

Sample Tag: DUP-01_GW-061923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/22/23 08:03, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50028.04

Sample Tag: JS-MW-06_GW-061923

Collected Date/Time: 06/19/2023 13:45

Matrix: Groundwater

COC Reference: 163448

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	2.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/22/23 11:53	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/22/23 08:27, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50028.04 (continued)

Sample Tag: JS-MW-06_GW-061923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/22/23 08:27, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	16	1		ug/L	1	100-41-4	
p,m-Xylene*	26	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	3	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	20	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	2	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50028.05

Sample Tag: JS-MW-11_GW-061923

Collected Date/Time: 06/19/2023 14:25

Matrix: Groundwater

COC Reference: 163448

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	2.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/22/23 11:53	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/22/23 08:50, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50028.05 (continued)

Sample Tag: JS-MW-11_GW-061923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/22/23 08:50, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	1	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50028.06

Sample Tag: JS-MW-09_GW-062023

Collected Date/Time: 06/20/2023 08:12

Matrix: Groundwater

COC Reference: 163448

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	2.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/22/23 11:53	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/22/23 11:35, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	500		ug/L	50	60-29-7	Y
Acetone	Not detected	2,500		ug/L	50	67-64-1	Y
Methyl iodide	Not detected	50		ug/L	50	74-88-4	Y
Carbon disulfide	Not detected	300		ug/L	50	75-15-0	Y
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/L	50	1634-04-4	Y
Acrylonitrile	Not detected	100		ug/L	50	107-13-1	Y
2-Butanone (MEK)	Not detected	1,300		ug/L	50	78-93-3	Y
Dichlorodifluoromethane	Not detected	300		ug/L	50	75-71-8	Y
Chloromethane	Not detected	300		ug/L	50	74-87-3	Y
Vinyl chloride	Not detected	50		ug/L	50	75-01-4	Y
Bromomethane	Not detected	300		ug/L	50	74-83-9	Y
Chloroethane	Not detected	300		ug/L	50	75-00-3	Y
Trichlorofluoromethane	Not detected	50		ug/L	50	75-69-4	Y
1,1-Dichloroethene	Not detected	50		ug/L	50	75-35-4	Y
Methylene chloride	Not detected	300		ug/L	50	75-09-2	Y
trans-1,2-Dichloroethene	Not detected	50		ug/L	50	156-60-5	Y
1,1-Dichloroethane	Not detected	50		ug/L	50	75-34-3	Y
cis-1,2-Dichloroethene	Not detected	50		ug/L	50	156-59-2	Y
Tetrahydrofuran*	Not detected	4,500		ug/L	50	109-99-9	Y
Chloroform	Not detected	50		ug/L	50	67-66-3	Y
Bromochloromethane	Not detected	50		ug/L	50	74-97-5	Y
1,1,1-Trichloroethane	Not detected	50		ug/L	50	71-55-6	Y
4-Methyl-2-pentanone (MIBK)	Not detected	2,500		ug/L	50	108-10-1	Y
2-Hexanone	Not detected	2,500		ug/L	50	591-78-6	Y
Carbon tetrachloride	Not detected	50		ug/L	50	56-23-5	Y
Benzene	410	50		ug/L	50	71-43-2	Y
1,2-Dichloroethane	Not detected	50		ug/L	50	107-06-2	Y
Trichloroethene	Not detected	50		ug/L	50	79-01-6	Y
1,2-Dichloropropane	Not detected	50		ug/L	50	78-87-5	Y
Bromodichloromethane	Not detected	50		ug/L	50	75-27-4	Y
Dibromomethane	Not detected	300		ug/L	50	74-95-3	Y
cis-1,3-Dichloropropene	Not detected	50		ug/L	50	10061-01-5	Y
Toluene	100	50		ug/L	50	108-88-3	Y
trans-1,3-Dichloropropene	Not detected	50		ug/L	50	10061-02-6	Y
1,1,2-Trichloroethane	Not detected	50		ug/L	50	79-00-5	Y
Tetrachloroethene	Not detected	50		ug/L	50	127-18-4	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S50028.06 (continued)

Sample Tag: JS-MW-09_GW-062023

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/22/23 11:35, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	Not detected	50		ug/L	50	110-57-6	Y
Dibromochloromethane	Not detected	300		ug/L	50	124-48-1	Y
1,2-Dibromoethane	Not detected	50		ug/L	50	106-93-4	Y
Chlorobenzene	Not detected	50		ug/L	50	108-90-7	Y
1,1,1,2-Tetrachloroethane	Not detected	50		ug/L	50	630-20-6	Y
Ethylbenzene	1,500	50		ug/L	50	100-41-4	Y
p,m-Xylene*	4,800	100		ug/L	50		Y
o-Xylene	90	50		ug/L	50	95-47-6	Y
Styrene	Not detected	50		ug/L	50	100-42-5	Y
Isopropylbenzene	Not detected	300		ug/L	50	98-82-8	Y
Bromoform	Not detected	50		ug/L	50	75-25-2	Y
1,1,2,2-Tetrachloroethane	Not detected	50		ug/L	50	79-34-5	Y
1,2,3-Trichloropropane	Not detected	50		ug/L	50	96-18-4	Y
n-Propylbenzene	170	50		ug/L	50	103-65-1	Y
Bromobenzene	Not detected	50		ug/L	50	108-86-1	Y
1,3,5-Trimethylbenzene	520	50		ug/L	50	108-67-8	Y
tert-Butylbenzene	Not detected	50		ug/L	50	98-06-6	Y
1,2,4-Trimethylbenzene	1,740	50		ug/L	50	95-63-6	Y
sec-Butylbenzene	Not detected	50		ug/L	50	135-98-8	Y
p-Isopropyltoluene	Not detected	300		ug/L	50	99-87-6	Y
1,3-Dichlorobenzene	Not detected	50		ug/L	50	541-73-1	Y
1,4-Dichlorobenzene	Not detected	50		ug/L	50	106-46-7	Y
1,2-Dichlorobenzene	Not detected	50		ug/L	50	95-50-1	Y
1,2,3-Trimethylbenzene	470	50		ug/L	50	526-73-8	Y
n-Butylbenzene	Not detected	50		ug/L	50	104-51-8	Y
Hexachloroethane	Not detected	300		ug/L	50	67-72-1	Y
1,2-Dibromo-3-chloropropane	Not detected	300		ug/L	50	96-12-8	Y
1,2,4-Trichlorobenzene	Not detected	300		ug/L	50	120-82-1	Y
1,2,3-Trichlorobenzene	Not detected	300		ug/L	50	87-61-6	Y
Naphthalene	300	300		ug/L	50	91-20-3	Y
2-Methylnaphthalene	Not detected	300		ug/L	50	91-57-6	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S50028.07

Sample Tag: JS-MW-04_GW-062023

Collected Date/Time: 06/20/2023 09:40

Matrix: Groundwater

COC Reference: 163448

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	2.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/22/23 11:53	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/22/23 09:13, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50028.07 (continued)

Sample Tag: JS-MW-04_GW-062023

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/22/23 09:13, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	2	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50028.08

Sample Tag: JS-MW-05_GW-062023

Collected Date/Time: 06/20/2023 11:25

Matrix: Groundwater

COC Reference: 163448

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	2.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/26/23 11:05	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/23/23 18:22, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	105		ug/L	1	67-64-1	X
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	46	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	828	1		ug/L	1	71-43-2	E
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	65	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	

X-Elevated reporting limit due to matrix interference

E-Concentration exceeds calibration range



Analytical Laboratory Report

Lab Sample ID: S50028.08 (continued)

Sample Tag: JS-MW-05_GW-062023

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/23/23 18:22, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	447	1		ug/L	1	100-41-4	E
p,m-Xylene*	1,285	2		ug/L	1		E
o-Xylene	25	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	12	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	41	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	147	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	376	1		ug/L	1	95-63-6	E
sec-Butylbenzene	1	1		ug/L	1	135-98-8	
p-Isopropyltoluene	5	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	159	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	14		ug/L	1	104-51-8	X
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	204	5		ug/L	1	91-20-3	E
2-Methylnaphthalene	40	5		ug/L	1	91-57-6	

Volatile Organics - DEQ List (Replicate 01), Method: SW5030C/8260C, Run Date: 06/26/23 23:33, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	200		ug/L	20	60-29-7	Y
Acetone	Not detected	1,000		ug/L	20	67-64-1	Y
Methyl iodide	Not detected	20		ug/L	20	74-88-4	Y
Carbon disulfide	Not detected	100		ug/L	20	75-15-0	Y
tert-Methyl butyl ether (MTBE)	Not detected	100		ug/L	20	1634-04-4	Y
Acrylonitrile	Not detected	40		ug/L	20	107-13-1	Y
2-Butanone (MEK)	Not detected	500		ug/L	20	78-93-3	Y
Dichlorodifluoromethane	Not detected	100		ug/L	20	75-71-8	Y
Chloromethane	Not detected	100		ug/L	20	74-87-3	Y
Vinyl chloride	Not detected	20		ug/L	20	75-01-4	Y
Bromomethane	Not detected	100		ug/L	20	74-83-9	Y
Chloroethane	Not detected	100		ug/L	20	75-00-3	Y

E-Concentration exceeds calibration range

X-Elevated reporting limit due to matrix interference

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S50028.08 (continued)

Sample Tag: JS-MW-05_GW-062023

Volatile Organics - DEQ List (Replicate 01), Method: SW5030C/8260C, Run Date: 06/26/23 23:33, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	20		ug/L	20	75-69-4	Y
1,1-Dichloroethene	Not detected	20		ug/L	20	75-35-4	Y
Methylene chloride	Not detected	100		ug/L	20	75-09-2	Y
trans-1,2-Dichloroethene	Not detected	20		ug/L	20	156-60-5	Y
1,1-Dichloroethane	Not detected	20		ug/L	20	75-34-3	Y
cis-1,2-Dichloroethene	Not detected	20		ug/L	20	156-59-2	Y
Tetrahydrofuran*	Not detected	1,800		ug/L	20	109-99-9	Y
Chloroform	Not detected	20		ug/L	20	67-66-3	Y
Bromochloromethane	Not detected	20		ug/L	20	74-97-5	Y
1,1,1-Trichloroethane	Not detected	20		ug/L	20	71-55-6	Y
4-Methyl-2-pentanone (MIBK)	Not detected	1,000		ug/L	20	108-10-1	Y
2-Hexanone	Not detected	1,000		ug/L	20	591-78-6	Y
Carbon tetrachloride	Not detected	20		ug/L	20	56-23-5	Y
Benzene	590	20		ug/L	20	71-43-2	Y
1,2-Dichloroethane	Not detected	20		ug/L	20	107-06-2	Y
Trichloroethene	Not detected	20		ug/L	20	79-01-6	Y
1,2-Dichloropropane	Not detected	20		ug/L	20	78-87-5	Y
Bromodichloromethane	Not detected	20		ug/L	20	75-27-4	Y
Dibromomethane	Not detected	100		ug/L	20	74-95-3	Y
cis-1,3-Dichloropropene	Not detected	20		ug/L	20	10061-01-5	Y
Toluene	50	20		ug/L	20	108-88-3	Y
trans-1,3-Dichloropropene	Not detected	20		ug/L	20	10061-02-6	Y
1,1,2-Trichloroethane	Not detected	20		ug/L	20	79-00-5	Y
Tetrachloroethene	Not detected	20		ug/L	20	127-18-4	Y
trans-1,4-Dichloro-2-butene	Not detected	20		ug/L	20	110-57-6	Y
Dibromochloromethane	Not detected	100		ug/L	20	124-48-1	Y
1,2-Dibromoethane	Not detected	20		ug/L	20	106-93-4	Y
Chlorobenzene	Not detected	20		ug/L	20	108-90-7	Y
1,1,1,2-Tetrachloroethane	Not detected	20		ug/L	20	630-20-6	Y
Ethylbenzene	300	20		ug/L	20	100-41-4	Y
p,m-Xylene*	1,020	40		ug/L	20		Y
o-Xylene	20	20		ug/L	20	95-47-6	Y
Styrene	Not detected	20		ug/L	20	100-42-5	Y
Isopropylbenzene	Not detected	100		ug/L	20	98-82-8	Y
Bromoform	Not detected	20		ug/L	20	75-25-2	Y
1,1,2,2-Tetrachloroethane	Not detected	20		ug/L	20	79-34-5	Y
1,2,3-Trichloropropane	Not detected	20		ug/L	20	96-18-4	Y
n-Propylbenzene	30	20		ug/L	20	103-65-1	Y
Bromobenzene	Not detected	20		ug/L	20	108-86-1	Y
1,3,5-Trimethylbenzene	100	20		ug/L	20	108-67-8	Y
tert-Butylbenzene	Not detected	20		ug/L	20	98-06-6	Y
1,2,4-Trimethylbenzene	220	20		ug/L	20	95-63-6	Y
sec-Butylbenzene	Not detected	20		ug/L	20	135-98-8	Y
p-Isopropyltoluene	Not detected	100		ug/L	20	99-87-6	Y
1,3-Dichlorobenzene	Not detected	20		ug/L	20	541-73-1	Y
1,4-Dichlorobenzene	Not detected	20		ug/L	20	106-46-7	Y
1,2-Dichlorobenzene	Not detected	20		ug/L	20	95-50-1	Y
1,2,3-Trimethylbenzene	110	20		ug/L	20	526-73-8	Y
n-Butylbenzene	Not detected	20		ug/L	20	104-51-8	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S50028.08 (continued)

Sample Tag: JS-MW-05_GW-062023

Volatile Organics - DEQ List (Replicate 01), Method: SW5030C/8260C, Run Date: 06/26/23 23:33, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hexachloroethane	Not detected	100		ug/L	20	67-72-1	Y
1,2-Dibromo-3-chloropropane	Not detected	100		ug/L	20	96-12-8	Y
1,2,4-Trichlorobenzene	Not detected	100		ug/L	20	120-82-1	Y
1,2,3-Trichlorobenzene	Not detected	100		ug/L	20	87-61-6	Y
Naphthalene	100	100		ug/L	20	91-20-3	Y
2-Methylnaphthalene	Not detected	100		ug/L	20	91-57-6	Y

Y-Elevated reporting limit due to high target concentration

Merit Laboratories Login Checklist

Lab Set ID:S50028

Client:ARCADIS_NOVI (ARCADIS U.S., Inc.)

Project: RACER PNC

Submitted:06/20/2023 13:50 Login User: PFD

Attention: Alexis Crisp

Address: Arcadis US, Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:

Email: Alexis.Crisp@arcadis.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 4.5 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|--|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



Analytical Laboratory Report

Report ID: S50191.01(01)
Generated on 06/28/2023

Report to

Attention: Alexis Crisp
Arcadis US, Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:
Email: Alexis.Crisp@arcadis.com

Additional Contacts: Tiffany Linder, Ian Drost

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S50191.01-S50191.14
Project: RACER PNC
Collected Date(s): 06/20/2023 - 06/22/2023
Submitted Date/Time: 06/22/2023 15:40
Sampled by: Unknown
P.O. #: 30167840.00005

Table of Contents

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003



Analytical Laboratory Report

Sample Summary (14 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S50191.01	JS-MW-19_GW-062023	Groundwater	06/20/23 14:00
S50191.02	JS-MW-20_GW-062023	Groundwater	06/20/23 15:35
S50191.03	JS-MW-21_GW-062123	Groundwater	06/21/23 09:05
S50191.04	JS-MW-23_GW-062123	Groundwater	06/21/23 10:45
S50191.05	JS-MW-30_GW-062123	Groundwater	06/21/23 12:08
S50191.06	TRIP BLANK	Water	06/20/23 00:01
S50191.07	JS-MW-26_GW-062123	Groundwater	06/21/23 14:00
S50191.08	JS-MW-24_GW-062223	Groundwater	06/22/23 09:17
S50191.09	JS-MW-29_GW-062223	Groundwater	06/22/23 10:43
S50191.10	JS-MW-16_GW-062223	Groundwater	06/22/23 12:45
S50191.11	JS-MW-16_GW-062223 MS	Groundwater	06/22/23 12:45
S50191.12	JS-MW-16_GW-062223 MSD	Groundwater	06/22/23 12:45
S50191.13	JS-MW-27_GW-062223	Groundwater	06/22/23 14:05
S50191.14	DUP-02_GW-062223	Groundwater	06/22/23 00:01



Analytical Laboratory Report

Lab Sample ID: S50191.01

Sample Tag: JS-MW-19_GW-062023

Collected Date/Time: 06/20/2023 14:00

Matrix: Groundwater

COC Reference: 140911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/28/23 11:20	BDO	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 13:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	4	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.01 (continued)

Sample Tag: JS-MW-19_GW-062023

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 13:31, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.02

Sample Tag: JS-MW-20_GW-062023

Collected Date/Time: 06/20/2023 15:35

Matrix: Groundwater

COC Reference: 140911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/28/23 11:20	BDO	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 14:11, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.02 (continued)

Sample Tag: JS-MW-20_GW-062023

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 14:11, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.03

Sample Tag: JS-MW-21_GW-062123

Collected Date/Time: 06/21/2023 09:05

Matrix: Groundwater

COC Reference: 140911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/28/23 11:20	BDO	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 14:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.03 (continued)

Sample Tag: JS-MW-21_GW-062123

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 14:30, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.04

Sample Tag: JS-MW-23_GW-062123

Collected Date/Time: 06/21/2023 10:45

Matrix: Groundwater

COC Reference: 140911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/28/23 11:20	BDO	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 14:50, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	1	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.04 (continued)

Sample Tag: JS-MW-23_GW-062123

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 14:50, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.05

Sample Tag: JS-MW-30_GW-062123

Collected Date/Time: 06/21/2023 12:08

Matrix: Groundwater

COC Reference: 140911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/28/23 11:20	BDO	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 15:10, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.05 (continued)

Sample Tag: JS-MW-30_GW-062123

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 15:10, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.06

Sample Tag: TRIP BLANK

Collected Date/Time: 06/20/2023 00:01

Matrix: Water

COC Reference: 140911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	3.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/28/23 11:20	BDO	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 12:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.06 (continued)

Sample Tag: TRIP BLANK

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 12:52, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.07

Sample Tag: JS-MW-26_GW-062123

Collected Date/Time: 06/21/2023 14:00

Matrix: Groundwater

COC Reference: 140911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/28/23 11:20	BDO	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 15:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.07 (continued)

Sample Tag: JS-MW-26_GW-062123

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 15:30, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.08

Sample Tag: JS-MW-24_GW-062223

Collected Date/Time: 06/22/2023 09:17

Matrix: Groundwater

COC Reference: 140911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/28/23 11:20	BDO	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 15:49, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.08 (continued)

Sample Tag: JS-MW-24_GW-062223

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 15:49, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.09

Sample Tag: JS-MW-29_GW-062223

Collected Date/Time: 06/22/2023 10:43

Matrix: Groundwater

COC Reference: 140911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/28/23 11:20	BDO	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 16:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.09 (continued)

Sample Tag: JS-MW-29_GW-062223

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 16:08, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	3	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	17	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	2	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	4	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.10

Sample Tag: JS-MW-16_GW-062223

Collected Date/Time: 06/22/2023 12:45

Matrix: Groundwater

COC Reference: 140911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/28/23 12:00	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 16:28, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	3	1		ug/L	1	71-43-2	
1,2-Dichloroethane	3	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.10 (continued)

Sample Tag: JS-MW-16_GW-062223

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 16:28, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	15	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	5	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	13	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	3	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.11

Sample Tag: JS-MW-16_GW-062223 MS

Collected Date/Time: 06/22/2023 12:45

Matrix: Groundwater

COC Reference: 140911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/28/23 11:20	BDO	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 11:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	44	10		ug/L	1	60-29-7	1
Acetone	61	50		ug/L	1	67-64-1	1
Methyl iodide	49	1		ug/L	1	74-88-4	1
Carbon disulfide	50	5		ug/L	1	75-15-0	1
tert-Methyl butyl ether (MTBE)	45	5		ug/L	1	1634-04-4	1
Acrylonitrile	48	2		ug/L	1	107-13-1	1
2-Butanone (MEK)	46	25		ug/L	1	78-93-3	1
Dichlorodifluoromethane	63	5		ug/L	1	75-71-8	1
Chloromethane	47	5		ug/L	1	74-87-3	1
Vinyl chloride	50	1		ug/L	1	75-01-4	1
Bromomethane	47	5		ug/L	1	74-83-9	1
Chloroethane	47	5		ug/L	1	75-00-3	1
Trichlorofluoromethane	57	1		ug/L	1	75-69-4	1
1,1-Dichloroethene	50	1		ug/L	1	75-35-4	1
Methylene chloride	48	5		ug/L	1	75-09-2	1
trans-1,2-Dichloroethene	48	1		ug/L	1	156-60-5	1
1,1-Dichloroethane	47	1		ug/L	1	75-34-3	1
cis-1,2-Dichloroethene	48	1		ug/L	1	156-59-2	1
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	1
Chloroform	48	1		ug/L	1	67-66-3	1
Bromochloromethane	46	1		ug/L	1	74-97-5	1
1,1,1-Trichloroethane	48	1		ug/L	1	71-55-6	1
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	1
2-Hexanone	Not detected	50		ug/L	1	591-78-6	1
Carbon tetrachloride	52	1		ug/L	1	56-23-5	1
Benzene	51	1		ug/L	1	71-43-2	1
1,2-Dichloroethane	46	1		ug/L	1	107-06-2	1
Trichloroethene	49	1		ug/L	1	79-01-6	1
1,2-Dichloropropane	47	1		ug/L	1	78-87-5	1
Bromodichloromethane	47	1		ug/L	1	75-27-4	1
Dibromomethane	48	5		ug/L	1	74-95-3	1
cis-1,3-Dichloropropene	47	1		ug/L	1	10061-01-5	1
Toluene	48	1		ug/L	1	108-88-3	1
trans-1,3-Dichloropropene	47	1		ug/L	1	10061-02-6	1
1,1,2-Trichloroethane	46	1		ug/L	1	79-00-5	1
Tetrachloroethene	51	1		ug/L	1	127-18-4	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S50191.11 (continued)

Sample Tag: JS-MW-16_GW-062223 MS

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 11:15, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	50	1		ug/L	1	110-57-6	1
Dibromochloromethane	47	5		ug/L	1	124-48-1	1
1,2-Dibromoethane	47	1		ug/L	1	106-93-4	1
Chlorobenzene	47	1		ug/L	1	108-90-7	1
1,1,1,2-Tetrachloroethane	48	1		ug/L	1	630-20-6	1
Ethylbenzene	50	1		ug/L	1	100-41-4	1
p,m-Xylene*	113	2		ug/L	1		1
o-Xylene	48	1		ug/L	1	95-47-6	1
Styrene	49	1		ug/L	1	100-42-5	1
Isopropylbenzene	54	5		ug/L	1	98-82-8	1
Bromoform	47	1		ug/L	1	75-25-2	1
1,1,2,2-Tetrachloroethane	45	1		ug/L	1	79-34-5	1
1,2,3-Trichloropropane	46	1		ug/L	1	96-18-4	1
n-Propylbenzene	55	1		ug/L	1	103-65-1	1
Bromobenzene	48	1		ug/L	1	108-86-1	1
1,3,5-Trimethylbenzene	53	1		ug/L	1	108-67-8	1
tert-Butylbenzene	52	1		ug/L	1	98-06-6	1
1,2,4-Trimethylbenzene	64	1		ug/L	1	95-63-6	1
sec-Butylbenzene	50	1		ug/L	1	135-98-8	1
p-Isopropyltoluene	50	5		ug/L	1	99-87-6	1
1,3-Dichlorobenzene	47	1		ug/L	1	541-73-1	1
1,4-Dichlorobenzene	46	1		ug/L	1	106-46-7	1
1,2-Dichlorobenzene	46	1		ug/L	1	95-50-1	1
1,2,3-Trimethylbenzene	51	1		ug/L	1	526-73-8	1
n-Butylbenzene	49	1		ug/L	1	104-51-8	1
Hexachloroethane	50	5		ug/L	1	67-72-1	1
1,2-Dibromo-3-chloropropane	45	5		ug/L	1	96-12-8	1
1,2,4-Trichlorobenzene	49	5		ug/L	1	120-82-1	1
1,2,3-Trichlorobenzene	48	5		ug/L	1	87-61-6	1
Naphthalene	50	5		ug/L	1	91-20-3	1
2-Methylnaphthalene	48	5		ug/L	1	91-57-6	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S50191.12

Sample Tag: JS-MW-16_GW-062223 MSD

Collected Date/Time: 06/22/2023 12:45

Matrix: Groundwater

COC Reference: 140911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/28/23 11:20	BDO	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 11:34, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	49	10		ug/L	1	60-29-7	1
Acetone	61	50		ug/L	1	67-64-1	1
Methyl iodide	50	1		ug/L	1	74-88-4	1
Carbon disulfide	49	5		ug/L	1	75-15-0	1
tert-Methyl butyl ether (MTBE)	50	5		ug/L	1	1634-04-4	1
Acrylonitrile	50	2		ug/L	1	107-13-1	1
2-Butanone (MEK)	48	25		ug/L	1	78-93-3	1
Dichlorodifluoromethane	52	5		ug/L	1	75-71-8	1
Chloromethane	46	5		ug/L	1	74-87-3	1
Vinyl chloride	48	1		ug/L	1	75-01-4	1
Bromomethane	48	5		ug/L	1	74-83-9	1
Chloroethane	47	5		ug/L	1	75-00-3	1
Trichlorofluoromethane	51	1		ug/L	1	75-69-4	1
1,1-Dichloroethene	48	1		ug/L	1	75-35-4	1
Methylene chloride	49	5		ug/L	1	75-09-2	1
trans-1,2-Dichloroethene	48	1		ug/L	1	156-60-5	1
1,1-Dichloroethane	48	1		ug/L	1	75-34-3	1
cis-1,2-Dichloroethene	49	1		ug/L	1	156-59-2	1
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	1
Chloroform	49	1		ug/L	1	67-66-3	1
Bromochloromethane	50	1		ug/L	1	74-97-5	1
1,1,1-Trichloroethane	47	1		ug/L	1	71-55-6	1
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	1
2-Hexanone	Not detected	50		ug/L	1	591-78-6	1
Carbon tetrachloride	49	1		ug/L	1	56-23-5	1
Benzene	52	1		ug/L	1	71-43-2	1
1,2-Dichloroethane	49	1		ug/L	1	107-06-2	1
Trichloroethene	49	1		ug/L	1	79-01-6	1
1,2-Dichloropropane	49	1		ug/L	1	78-87-5	1
Bromodichloromethane	49	1		ug/L	1	75-27-4	1
Dibromomethane	52	5		ug/L	1	74-95-3	1
cis-1,3-Dichloropropene	51	1		ug/L	1	10061-01-5	1
Toluene	50	1		ug/L	1	108-88-3	1
trans-1,3-Dichloropropene	50	1		ug/L	1	10061-02-6	1
1,1,2-Trichloroethane	49	1		ug/L	1	79-00-5	1
Tetrachloroethene	51	1		ug/L	1	127-18-4	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S50191.12 (continued)
Sample Tag: JS-MW-16_GW-062223 MSD

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 11:34, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	52	1		ug/L	1	110-57-6	1
Dibromochloromethane	50	5		ug/L	1	124-48-1	1
1,2-Dibromoethane	49	1		ug/L	1	106-93-4	1
Chlorobenzene	49	1		ug/L	1	108-90-7	1
1,1,1,2-Tetrachloroethane	50	1		ug/L	1	630-20-6	1
Ethylbenzene	49	1		ug/L	1	100-41-4	1
p,m-Xylene*	113	2		ug/L	1		1
o-Xylene	49	1		ug/L	1	95-47-6	1
Styrene	50	1		ug/L	1	100-42-5	1
Isopropylbenzene	52	5		ug/L	1	98-82-8	1
Bromoform	50	1		ug/L	1	75-25-2	1
1,1,2,2-Tetrachloroethane	48	1		ug/L	1	79-34-5	1
1,2,3-Trichloropropane	48	1		ug/L	1	96-18-4	1
n-Propylbenzene	54	1		ug/L	1	103-65-1	1
Bromobenzene	50	1		ug/L	1	108-86-1	1
1,3,5-Trimethylbenzene	52	1		ug/L	1	108-67-8	1
tert-Butylbenzene	51	1		ug/L	1	98-06-6	1
1,2,4-Trimethylbenzene	64	1		ug/L	1	95-63-6	1
sec-Butylbenzene	47	1		ug/L	1	135-98-8	1
p-Isopropyltoluene	48	5		ug/L	1	99-87-6	1
1,3-Dichlorobenzene	47	1		ug/L	1	541-73-1	1
1,4-Dichlorobenzene	47	1		ug/L	1	106-46-7	1
1,2-Dichlorobenzene	47	1		ug/L	1	95-50-1	1
1,2,3-Trimethylbenzene	51	1		ug/L	1	526-73-8	1
n-Butylbenzene	47	1		ug/L	1	104-51-8	1
Hexachloroethane	48	5		ug/L	1	67-72-1	1
1,2-Dibromo-3-chloropropane	46	5		ug/L	1	96-12-8	1
1,2,4-Trichlorobenzene	50	5		ug/L	1	120-82-1	1
1,2,3-Trichlorobenzene	50	5		ug/L	1	87-61-6	1
Naphthalene	52	5		ug/L	1	91-20-3	1
2-Methylnaphthalene	49	5		ug/L	1	91-57-6	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S50191.13

Sample Tag: JS-MW-27_GW-062223

Collected Date/Time: 06/22/2023 14:05

Matrix: Groundwater

COC Reference: 140911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/28/23 11:20	BDO	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 16:47, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	1	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.13 (continued)

Sample Tag: JS-MW-27_GW-062223

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 16:47, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.14

Sample Tag: DUP-02_GW-062223

Collected Date/Time: 06/22/2023 00:01

Matrix: Groundwater

COC Reference: 140911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	06/28/23 11:20	BDO	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 17:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	1	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S50191.14 (continued)

Sample Tag: DUP-02_GW-062223

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 06/27/23 17:07, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Merit Laboratories Login Checklist

Lab Set ID:S50191

Client:ARCADIS_NOVI (ARCADIS U.S., Inc.)

Project: RACER PNC

Submitted:06/22/2023 15:40 Login User: MMC

Attention: Alexis Crisp

Address: Arcadis US, Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:

Email: Alexis.Crisp@arcadis.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 3.1 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|--|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # _____ OF _____ 140911

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME **LEXI CRISP**
 COMPANY **ARCADIS**
 ADDRESS **28550 Cabot Dr #500**
 CITY **Novi** STATE **MI** ZIP CODE **48377**
 PHONE NO. _____ FAX NO. _____ P.O. NO. **30167840 00005**
 E-MAIL ADDRESS **Lexi.Crisp@arcadis.com** QUOTE NO. _____

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS **accounts.payable@Arcadis.com**

PROJECT NO./NAME **RACER PNC** SAMPLER(S) - PLEASE PRINT/SIGN NAME _____
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

Containers & Preservatives

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives										Special Instructions			
	DATE	TIME				NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	Certifications		Project Locations				
50191.01	06/20/23	14:00	JS-MW-19-GW-062023	GW	3	X													
.02	6/20/23	15:35	JS-MW-20-GW-062023	GW	3	X													
.03	6/21/23	9:05	JS-MW-21-GW-062123	GW	3	X													
.04	6/21/23	10:45	JS-MW-23-GW-062123	GW	3	X													
.05	6/21/23	12:08	JS-MW-30-GW-062123	GW	3	X													
.06	6/20/23	—	TRIP BLANK	—	1	X													Trip Blank
.07	6/21/23	14:00	JS-MW-26-GW-062123	GW	3	X													
.08	6/22/23	9:17	JS-MW-24-GW-062223	GW	3	X													
.09	6/22/23	10:43	JS-MW-29-GW-062223	GW	3	X													
.10	6/22/23	12:45	JS-MW-16-GW-062223	GW	9	X													MS/MSD
.13	6/27/23	14:05	JS-MW-27-GW-062223	GW	3	X													
.14	6/22/23	—	DUP-02-GW-062223	GW	3	X													

VOCs (87.60)

RELINQUISHED BY: _____ DATE **6/22/23** TIME **14:18**
 SIGNATURE/ORGANIZATION _____
 RECEIVED BY: _____ DATE **6/22/23** TIME **14:18**
 SIGNATURE/ORGANIZATION _____
 RELINQUISHED BY: _____ DATE **6/22/23** TIME **15:40**
 SIGNATURE/ORGANIZATION _____
 RECEIVED BY: _____ DATE **6/22/23** TIME **15:40**
 SIGNATURE/ORGANIZATION _____

RELINQUISHED BY: _____ DATE _____ TIME _____
 SIGNATURE/ORGANIZATION _____
 RECEIVED BY: _____ DATE _____ TIME _____
 SIGNATURE/ORGANIZATION _____
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____
 NOTES: _____ TEMP. ON ARRIVAL **3.1**

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



Analytical Laboratory Report

Report ID: S53820.01(01)
Generated on 10/05/2023

Report to

Attention: Alexis Crisp
Arcadis US, Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:
Email: Alexis.Crisp@arcadis.com

Additional Contacts: Tiffany Linder, Ian Drost

Report produced by

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Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S53820.01-S53820.13
Project: 30112891.00005 / Racer PNC
Collected Date(s): 09/25/2023 - 09/26/2023
Submitted Date/Time: 09/27/2023 11:20
Sampled by: Lottie Jay
P.O. #: 30112891.00005

Table of Contents

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- General Report Notes (Page 2)
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- Method Summary (Page 4)
- Sample Summary (Page 5)

Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

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Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

All accreditations/certifications held by this laboratory are listed on page 3. Not all accreditations/certifications are applicable to this report.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Accreditations

Authority	Accreditation ID
Michigan DEQ	#9956
DOD ELAP & ISO/IEC 17025:2017	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003



Analytical Laboratory Report

Sample Summary (13 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S53820.01	JS-MW-16_GW-092523	Groundwater	09/25/23 12:15
S53820.02	JS-MW-16_GW-092523 MS	Groundwater	09/25/23 12:15
S53820.03	JS-MW-16_GW-092523 MSD	Groundwater	09/25/23 12:15
S53820.04	JS-MW-19_GW-092523	Groundwater	09/25/23 13:15
S53820.05	JS-MW-05_GW-092523	Groundwater	09/25/23 14:35
S53820.06	JS-MW-29_GW-092523	Groundwater	09/25/23 15:30
S53820.07	JS-MW-09_GW-092623	Groundwater	09/26/23 10:55
S53820.08	JS-MW-23_GW-092623	Groundwater	09/26/23 12:25
S53820.09	JS-MW-30_GW-092623	Groundwater	09/26/23 13:40
S53820.10	JS-MW-27_GW-092623	Groundwater	09/26/23 15:00
S53820.11	JS-MW-10_GW-092623	Groundwater	09/26/23 16:00
S53820.12	DUP-01_GW-092623	Groundwater	09/26/23 00:01
S53820.13	tripblank	Liquid	09/26/23 00:01



Analytical Laboratory Report

Lab Sample ID: S53820.01

Sample Tag: JS-MW-16_GW-092523

Collected Date/Time: 09/25/2023 12:15

Matrix: Groundwater

COC Reference: 164825

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	10/02/23 12:06	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 10/02/23 16:47, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	2	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	2	1		ug/L	1	71-43-2	
1,2-Dichloroethane	1	1		ug/L	1	107-06-2	
Trichloroethene	1	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.01 (continued)

Sample Tag: JS-MW-16_GW-092523

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 10/02/23 16:47, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	10	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	9	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	22	1		ug/L	1	95-63-6	
sec-Butylbenzene	1	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	3	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.02

Sample Tag: JS-MW-16_GW-092523 MS

Collected Date/Time: 09/25/2023 12:15

Matrix: Groundwater

COC Reference: 164825

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	10/02/23 12:06	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 10/02/23 21:04, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	48	10		ug/L	1	60-29-7	1
Acetone	56	50		ug/L	1	67-64-1	1
Methyl iodide	53	1		ug/L	1	74-88-4	1
Carbon disulfide	51	5		ug/L	1	75-15-0	1
tert-Methyl butyl ether (MTBE)	53	5		ug/L	1	1634-04-4	1
Acrylonitrile	57	2		ug/L	1	107-13-1	1
2-Butanone (MEK)	52	25		ug/L	1	78-93-3	1
Dichlorodifluoromethane	40	5		ug/L	1	75-71-8	1
Chloromethane	43	5		ug/L	1	74-87-3	1
Vinyl chloride	43	1		ug/L	1	75-01-4	1
Bromomethane	42	5		ug/L	1	74-83-9	1
Chloroethane	44	5		ug/L	1	75-00-3	1
Trichlorofluoromethane	44	1		ug/L	1	75-69-4	1
1,1-Dichloroethene	52	1		ug/L	1	75-35-4	1
Methylene chloride	50	5		ug/L	1	75-09-2	1
trans-1,2-Dichloroethene	50	1		ug/L	1	156-60-5	1
1,1-Dichloroethane	50	1		ug/L	1	75-34-3	1
cis-1,2-Dichloroethene	51	1		ug/L	1	156-59-2	1
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	1
Chloroform	49	1		ug/L	1	67-66-3	1
Bromochloromethane	49	1		ug/L	1	74-97-5	1
1,1,1-Trichloroethane	48	1		ug/L	1	71-55-6	1
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	1
2-Hexanone	51	50		ug/L	1	591-78-6	1
Carbon tetrachloride	50	1		ug/L	1	56-23-5	1
Benzene	52	1		ug/L	1	71-43-2	1
1,2-Dichloroethane	47	1		ug/L	1	107-06-2	1
Trichloroethene	50	1		ug/L	1	79-01-6	1
1,2-Dichloropropane	49	1		ug/L	1	78-87-5	1
Bromodichloromethane	47	1		ug/L	1	75-27-4	1
Dibromomethane	52	5		ug/L	1	74-95-3	1
cis-1,3-Dichloropropene	47	1		ug/L	1	10061-01-5	1
Toluene	49	1		ug/L	1	108-88-3	1
trans-1,3-Dichloropropene	45	1		ug/L	1	10061-02-6	1
1,1,2-Trichloroethane	50	1		ug/L	1	79-00-5	1
Tetrachloroethene	52	1		ug/L	1	127-18-4	1

1-Spiked at 50 ug/L



Analytical Laboratory Report

Lab Sample ID: S53820.02 (continued)

Sample Tag: JS-MW-16_GW-092523 MS

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 10/02/23 21:04, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	52	1		ug/L	1	110-57-6	1
Dibromochloromethane	51	5		ug/L	1	124-48-1	1
1,2-Dibromoethane	51	1		ug/L	1	106-93-4	1
Chlorobenzene	51	1		ug/L	1	108-90-7	1
1,1,1,2-Tetrachloroethane	50	1		ug/L	1	630-20-6	1
Ethylbenzene	51	1		ug/L	1	100-41-4	1
p,m-Xylene*	112	2		ug/L	1		1
o-Xylene	49	1		ug/L	1	95-47-6	1
Styrene	51	1		ug/L	1	100-42-5	1
Isopropylbenzene	54	5		ug/L	1	98-82-8	1
Bromoform	50	1		ug/L	1	75-25-2	1
1,1,2,2-Tetrachloroethane	53	1		ug/L	1	79-34-5	1
1,2,3-Trichloropropane	53	1		ug/L	1	96-18-4	1
n-Propylbenzene	60	1		ug/L	1	103-65-1	1
Bromobenzene	52	1		ug/L	1	108-86-1	1
1,3,5-Trimethylbenzene	55	1		ug/L	1	108-67-8	1
tert-Butylbenzene	53	1		ug/L	1	98-06-6	1
1,2,4-Trimethylbenzene	74	1		ug/L	1	95-63-6	1
sec-Butylbenzene	50	1		ug/L	1	135-98-8	1
p-Isopropyltoluene	49	5		ug/L	1	99-87-6	1
1,3-Dichlorobenzene	49	1		ug/L	1	541-73-1	1
1,4-Dichlorobenzene	50	1		ug/L	1	106-46-7	1
1,2-Dichlorobenzene	50	1		ug/L	1	95-50-1	1
1,2,3-Trimethylbenzene	52	1		ug/L	1	526-73-8	1
n-Butylbenzene	50	1		ug/L	1	104-51-8	1
Hexachloroethane	51	5		ug/L	1	67-72-1	1
1,2-Dibromo-3-chloropropane	53	5		ug/L	1	96-12-8	1
1,2,4-Trichlorobenzene	51	5		ug/L	1	120-82-1	1
1,2,3-Trichlorobenzene	51	5		ug/L	1	87-61-6	1
Naphthalene	56	5		ug/L	1	91-20-3	1
2-Methylnaphthalene	48	5		ug/L	1	91-57-6	1

1-Spiked at 50 ug/L



Analytical Laboratory Report

Lab Sample ID: S53820.03

Sample Tag: JS-MW-16_GW-092523 MSD

Collected Date/Time: 09/25/2023 12:15

Matrix: Groundwater

COC Reference: 164825

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	10/02/23 12:06	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 10/02/23 21:29, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	50	10		ug/L	1	60-29-7	1
Acetone	59	50		ug/L	1	67-64-1	1
Methyl iodide	53	1		ug/L	1	74-88-4	1
Carbon disulfide	50	5		ug/L	1	75-15-0	1
tert-Methyl butyl ether (MTBE)	57	5		ug/L	1	1634-04-4	1
Acrylonitrile	60	2		ug/L	1	107-13-1	1
2-Butanone (MEK)	56	25		ug/L	1	78-93-3	1
Dichlorodifluoromethane	38	5		ug/L	1	75-71-8	1
Chloromethane	41	5		ug/L	1	74-87-3	1
Vinyl chloride	41	1		ug/L	1	75-01-4	1
Bromomethane	42	5		ug/L	1	74-83-9	1
Chloroethane	43	5		ug/L	1	75-00-3	1
Trichlorofluoromethane	44	1		ug/L	1	75-69-4	1
1,1-Dichloroethene	51	1		ug/L	1	75-35-4	1
Methylene chloride	50	5		ug/L	1	75-09-2	1
trans-1,2-Dichloroethene	50	1		ug/L	1	156-60-5	1
1,1-Dichloroethane	49	1		ug/L	1	75-34-3	1
cis-1,2-Dichloroethene	50	1		ug/L	1	156-59-2	1
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	1
Chloroform	48	1		ug/L	1	67-66-3	1
Bromochloromethane	49	1		ug/L	1	74-97-5	1
1,1,1-Trichloroethane	48	1		ug/L	1	71-55-6	1
4-Methyl-2-pentanone (MIBK)	52	50		ug/L	1	108-10-1	1
2-Hexanone	55	50		ug/L	1	591-78-6	1
Carbon tetrachloride	49	1		ug/L	1	56-23-5	1
Benzene	51	1		ug/L	1	71-43-2	1
1,2-Dichloroethane	47	1		ug/L	1	107-06-2	1
Trichloroethene	49	1		ug/L	1	79-01-6	1
1,2-Dichloropropane	49	1		ug/L	1	78-87-5	1
Bromodichloromethane	47	1		ug/L	1	75-27-4	1
Dibromomethane	53	5		ug/L	1	74-95-3	1
cis-1,3-Dichloropropene	48	1		ug/L	1	10061-01-5	1
Toluene	49	1		ug/L	1	108-88-3	1
trans-1,3-Dichloropropene	47	1		ug/L	1	10061-02-6	1
1,1,2-Trichloroethane	51	1		ug/L	1	79-00-5	1
Tetrachloroethene	52	1		ug/L	1	127-18-4	1

1-Spiked at 50 ug/L



Analytical Laboratory Report

Lab Sample ID: S53820.03 (continued)
Sample Tag: JS-MW-16_GW-092523 MSD

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 10/02/23 21:29, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	53	1		ug/L	1	110-57-6	1
Dibromochloromethane	51	5		ug/L	1	124-48-1	1
1,2-Dibromoethane	53	1		ug/L	1	106-93-4	1
Chlorobenzene	49	1		ug/L	1	108-90-7	1
1,1,1,2-Tetrachloroethane	49	1		ug/L	1	630-20-6	1
Ethylbenzene	50	1		ug/L	1	100-41-4	1
p,m-Xylene*	109	2		ug/L	1		1
o-Xylene	48	1		ug/L	1	95-47-6	1
Styrene	50	1		ug/L	1	100-42-5	1
Isopropylbenzene	52	5		ug/L	1	98-82-8	1
Bromoform	51	1		ug/L	1	75-25-2	1
1,1,2,2-Tetrachloroethane	54	1		ug/L	1	79-34-5	1
1,2,3-Trichloropropane	55	1		ug/L	1	96-18-4	1
n-Propylbenzene	58	1		ug/L	1	103-65-1	1
Bromobenzene	51	1		ug/L	1	108-86-1	1
1,3,5-Trimethylbenzene	54	1		ug/L	1	108-67-8	1
tert-Butylbenzene	52	1		ug/L	1	98-06-6	1
1,2,4-Trimethylbenzene	73	1		ug/L	1	95-63-6	1
sec-Butylbenzene	50	1		ug/L	1	135-98-8	1
p-Isopropyltoluene	49	5		ug/L	1	99-87-6	1
1,3-Dichlorobenzene	49	1		ug/L	1	541-73-1	1
1,4-Dichlorobenzene	50	1		ug/L	1	106-46-7	1
1,2-Dichlorobenzene	50	1		ug/L	1	95-50-1	1
1,2,3-Trimethylbenzene	52	1		ug/L	1	526-73-8	1
n-Butylbenzene	51	1		ug/L	1	104-51-8	1
Hexachloroethane	52	5		ug/L	1	67-72-1	1
1,2-Dibromo-3-chloropropane	59	5		ug/L	1	96-12-8	1
1,2,4-Trichlorobenzene	54	5		ug/L	1	120-82-1	1
1,2,3-Trichlorobenzene	56	5		ug/L	1	87-61-6	1
Naphthalene	61	5		ug/L	1	91-20-3	1
2-Methylnaphthalene	59	5		ug/L	1	91-57-6	1

1-Spiked at 50 ug/L



Analytical Laboratory Report

Lab Sample ID: S53820.04

Sample Tag: JS-MW-19_GW-092523

Collected Date/Time: 09/25/2023 13:15

Matrix: Groundwater

COC Reference: 164825

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	10/02/23 12:06	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/29/23 15:51, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	3	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.04 (continued)

Sample Tag: JS-MW-19_GW-092523

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/29/23 15:51, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.05

Sample Tag: JS-MW-05_GW-092523

Collected Date/Time: 09/25/2023 14:35

Matrix: Groundwater

COC Reference: 164825

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	10/02/23 12:06	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 10/02/23 17:13, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	1	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	5	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.05 (continued)

Sample Tag: JS-MW-05_GW-092523

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 10/02/23 17:13, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	7	1		ug/L	1	100-41-4	
p,m-Xylene*	17	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	1	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	1	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	8	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	3	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.06

Sample Tag: JS-MW-29_GW-092523

Collected Date/Time: 09/25/2023 15:30

Matrix: Groundwater

COC Reference: 164825

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	10/02/23 12:06	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/29/23 16:11, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.06 (continued)

Sample Tag: JS-MW-29_GW-092523

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/29/23 16:11, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	2	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	17	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	2	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	3	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.07

Sample Tag: JS-MW-09_GW-092623

Collected Date/Time: 09/26/2023 10:55

Matrix: Groundwater

COC Reference: 164825

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	10/02/23 12:06	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/29/23 21:25, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	500		ug/L	50	60-29-7	Y
Acetone	Not detected	2,500		ug/L	50	67-64-1	Y
Methyl iodide	Not detected	50		ug/L	50	74-88-4	Y
Carbon disulfide	Not detected	300		ug/L	50	75-15-0	Y
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/L	50	1634-04-4	Y
Acrylonitrile	Not detected	100		ug/L	50	107-13-1	Y
2-Butanone (MEK)	Not detected	1,300		ug/L	50	78-93-3	Y
Dichlorodifluoromethane	Not detected	300		ug/L	50	75-71-8	Y
Chloromethane	Not detected	300		ug/L	50	74-87-3	Y
Vinyl chloride	Not detected	50		ug/L	50	75-01-4	Y
Bromomethane	Not detected	300		ug/L	50	74-83-9	Y
Chloroethane	Not detected	300		ug/L	50	75-00-3	Y
Trichlorofluoromethane	Not detected	50		ug/L	50	75-69-4	Y
1,1-Dichloroethene	Not detected	50		ug/L	50	75-35-4	Y
Methylene chloride	Not detected	300		ug/L	50	75-09-2	Y
trans-1,2-Dichloroethene	Not detected	50		ug/L	50	156-60-5	Y
1,1-Dichloroethane	Not detected	50		ug/L	50	75-34-3	Y
cis-1,2-Dichloroethene	Not detected	50		ug/L	50	156-59-2	Y
Tetrahydrofuran*	Not detected	4,500		ug/L	50	109-99-9	Y
Chloroform	Not detected	50		ug/L	50	67-66-3	Y
Bromochloromethane	Not detected	50		ug/L	50	74-97-5	Y
1,1,1-Trichloroethane	Not detected	50		ug/L	50	71-55-6	Y
4-Methyl-2-pentanone (MIBK)	Not detected	2,500		ug/L	50	108-10-1	Y
2-Hexanone	Not detected	2,500		ug/L	50	591-78-6	Y
Carbon tetrachloride	Not detected	50		ug/L	50	56-23-5	Y
Benzene	430	50		ug/L	50	71-43-2	Y
1,2-Dichloroethane	Not detected	50		ug/L	50	107-06-2	Y
Trichloroethene	Not detected	50		ug/L	50	79-01-6	Y
1,2-Dichloropropane	Not detected	50		ug/L	50	78-87-5	Y
Bromodichloromethane	Not detected	50		ug/L	50	75-27-4	Y
Dibromomethane	Not detected	300		ug/L	50	74-95-3	Y
cis-1,3-Dichloropropene	Not detected	50		ug/L	50	10061-01-5	Y
Toluene	80	50		ug/L	50	108-88-3	Y
trans-1,3-Dichloropropene	Not detected	50		ug/L	50	10061-02-6	Y
1,1,2-Trichloroethane	Not detected	50		ug/L	50	79-00-5	Y
Tetrachloroethene	Not detected	50		ug/L	50	127-18-4	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S53820.07 (continued)

Sample Tag: JS-MW-09_GW-092623

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/29/23 21:25, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	Not detected	50		ug/L	50	110-57-6	Y
Dibromochloromethane	Not detected	300		ug/L	50	124-48-1	Y
1,2-Dibromoethane	Not detected	50		ug/L	50	106-93-4	Y
Chlorobenzene	Not detected	50		ug/L	50	108-90-7	Y
1,1,1,2-Tetrachloroethane	Not detected	50		ug/L	50	630-20-6	Y
Ethylbenzene	1,200	50		ug/L	50	100-41-4	Y
p,m-Xylene*	3,500	100		ug/L	50		Y
o-Xylene	70	50		ug/L	50	95-47-6	Y
Styrene	Not detected	50		ug/L	50	100-42-5	Y
Isopropylbenzene	Not detected	300		ug/L	50	98-82-8	Y
Bromoform	Not detected	50		ug/L	50	75-25-2	Y
1,1,2,2-Tetrachloroethane	Not detected	50		ug/L	50	79-34-5	Y
1,2,3-Trichloropropane	Not detected	50		ug/L	50	96-18-4	Y
n-Propylbenzene	150	50		ug/L	50	103-65-1	Y
Bromobenzene	Not detected	50		ug/L	50	108-86-1	Y
1,3,5-Trimethylbenzene	330	50		ug/L	50	108-67-8	Y
tert-Butylbenzene	Not detected	50		ug/L	50	98-06-6	Y
1,2,4-Trimethylbenzene	1,220	50		ug/L	50	95-63-6	Y
sec-Butylbenzene	Not detected	50		ug/L	50	135-98-8	Y
p-Isopropyltoluene	Not detected	300		ug/L	50	99-87-6	Y
1,3-Dichlorobenzene	Not detected	50		ug/L	50	541-73-1	Y
1,4-Dichlorobenzene	Not detected	50		ug/L	50	106-46-7	Y
1,2-Dichlorobenzene	Not detected	50		ug/L	50	95-50-1	Y
1,2,3-Trimethylbenzene	380	50		ug/L	50	526-73-8	Y
n-Butylbenzene	Not detected	150		ug/L	50	104-51-8	Y
Hexachloroethane	Not detected	300		ug/L	50	67-72-1	Y
1,2-Dibromo-3-chloropropane	Not detected	300		ug/L	50	96-12-8	Y
1,2,4-Trichlorobenzene	Not detected	300		ug/L	50	120-82-1	Y
1,2,3-Trichlorobenzene	Not detected	300		ug/L	50	87-61-6	Y
Naphthalene	Not detected	300		ug/L	50	91-20-3	Y
2-Methylnaphthalene	Not detected	300		ug/L	50	91-57-6	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S53820.08

Sample Tag: JS-MW-23_GW-092623

Collected Date/Time: 09/26/2023 12:25

Matrix: Groundwater

COC Reference: 164825

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	10/02/23 12:06	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/29/23 16:30, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.08 (continued)

Sample Tag: JS-MW-23_GW-092623

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/29/23 16:30, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.09

Sample Tag: JS-MW-30_GW-092623

Collected Date/Time: 09/26/2023 13:40

Matrix: Groundwater

COC Reference: 164825

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	10/02/23 12:06	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/29/23 16:50, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.09 (continued)

Sample Tag: JS-MW-30_GW-092623

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/29/23 16:50, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.10

Sample Tag: JS-MW-27_GW-092623

Collected Date/Time: 09/26/2023 15:00

Matrix: Groundwater

COC Reference: 164825

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	10/02/23 12:06	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/29/23 17:09, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	2	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.10 (continued)

Sample Tag: JS-MW-27_GW-092623

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/29/23 17:09, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.11

Sample Tag: JS-MW-10_GW-092623

Collected Date/Time: 09/26/2023 16:00

Matrix: Groundwater

COC Reference: 164825

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	10/02/23 12:06	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/29/23 17:29, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	204	1		ug/L	1	71-43-2	E
1,2-Dichloroethane	13	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	

E-Concentration exceeds calibration range



Analytical Laboratory Report

Lab Sample ID: S53820.11 (continued)

Sample Tag: JS-MW-10_GW-092623

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/29/23 17:29, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Volatile Organics - DEQ List (Replicate 01), Method: SW5030C/8260C, Run Date: 10/02/23 19:47, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	100		ug/L	10	60-29-7	Y
Acetone	Not detected	500		ug/L	10	67-64-1	Y
Methyl iodide	Not detected	10		ug/L	10	74-88-4	Y
Carbon disulfide	Not detected	50		ug/L	10	75-15-0	Y
tert-Methyl butyl ether (MTBE)	Not detected	50		ug/L	10	1634-04-4	Y
Acrylonitrile	Not detected	20		ug/L	10	107-13-1	Y
2-Butanone (MEK)	Not detected	250		ug/L	10	78-93-3	Y
Dichlorodifluoromethane	Not detected	50		ug/L	10	75-71-8	Y
Chloromethane	Not detected	50		ug/L	10	74-87-3	Y
Vinyl chloride	Not detected	10		ug/L	10	75-01-4	Y
Bromomethane	Not detected	50		ug/L	10	74-83-9	Y
Chloroethane	Not detected	50		ug/L	10	75-00-3	Y
Trichlorofluoromethane	Not detected	10		ug/L	10	75-69-4	Y
1,1-Dichloroethene	Not detected	10		ug/L	10	75-35-4	Y
Methylene chloride	Not detected	50		ug/L	10	75-09-2	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S53820.11 (continued)

Sample Tag: JS-MW-10_GW-092623

Volatile Organics - DEQ List (Replicate 01), Method: SW5030C/8260C, Run Date: 10/02/23 19:47, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,2-Dichloroethene	Not detected	10		ug/L	10	156-60-5	Y
1,1-Dichloroethane	Not detected	10		ug/L	10	75-34-3	Y
cis-1,2-Dichloroethene	10	10		ug/L	10	156-59-2	Y
Tetrahydrofuran*	Not detected	900		ug/L	10	109-99-9	Y
Chloroform	Not detected	10		ug/L	10	67-66-3	Y
Bromochloromethane	Not detected	10		ug/L	10	74-97-5	Y
1,1,1-Trichloroethane	Not detected	10		ug/L	10	71-55-6	Y
4-Methyl-2-pentanone (MIBK)	Not detected	500		ug/L	10	108-10-1	Y
2-Hexanone	Not detected	500		ug/L	10	591-78-6	Y
Carbon tetrachloride	Not detected	10		ug/L	10	56-23-5	Y
Benzene	150	10		ug/L	10	71-43-2	Y
1,2-Dichloroethane	10	10		ug/L	10	107-06-2	Y
Trichloroethene	Not detected	10		ug/L	10	79-01-6	Y
1,2-Dichloropropane	Not detected	10		ug/L	10	78-87-5	Y
Bromodichloromethane	Not detected	10		ug/L	10	75-27-4	Y
Dibromomethane	Not detected	50		ug/L	10	74-95-3	Y
cis-1,3-Dichloropropene	Not detected	10		ug/L	10	10061-01-5	Y
Toluene	Not detected	10		ug/L	10	108-88-3	Y
trans-1,3-Dichloropropene	Not detected	10		ug/L	10	10061-02-6	Y
1,1,2-Trichloroethane	Not detected	10		ug/L	10	79-00-5	Y
Tetrachloroethene	Not detected	10		ug/L	10	127-18-4	Y
trans-1,4-Dichloro-2-butene	Not detected	10		ug/L	10	110-57-6	Y
Dibromochloromethane	Not detected	50		ug/L	10	124-48-1	Y
1,2-Dibromoethane	Not detected	10		ug/L	10	106-93-4	Y
Chlorobenzene	Not detected	10		ug/L	10	108-90-7	Y
1,1,1,2-Tetrachloroethane	Not detected	10		ug/L	10	630-20-6	Y
Ethylbenzene	Not detected	10		ug/L	10	100-41-4	Y
p,m-Xylene*	Not detected	20		ug/L	10		Y
o-Xylene	Not detected	10		ug/L	10	95-47-6	Y
Styrene	Not detected	10		ug/L	10	100-42-5	Y
Isopropylbenzene	Not detected	50		ug/L	10	98-82-8	Y
Bromoform	Not detected	10		ug/L	10	75-25-2	Y
1,1,2,2-Tetrachloroethane	Not detected	10		ug/L	10	79-34-5	Y
1,2,3-Trichloropropane	Not detected	10		ug/L	10	96-18-4	Y
n-Propylbenzene	Not detected	10		ug/L	10	103-65-1	Y
Bromobenzene	Not detected	10		ug/L	10	108-86-1	Y
1,3,5-Trimethylbenzene	Not detected	10		ug/L	10	108-67-8	Y
tert-Butylbenzene	Not detected	10		ug/L	10	98-06-6	Y
1,2,4-Trimethylbenzene	Not detected	10		ug/L	10	95-63-6	Y
sec-Butylbenzene	Not detected	10		ug/L	10	135-98-8	Y
p-Isopropyltoluene	Not detected	50		ug/L	10	99-87-6	Y
1,3-Dichlorobenzene	Not detected	10		ug/L	10	541-73-1	Y
1,4-Dichlorobenzene	Not detected	10		ug/L	10	106-46-7	Y
1,2-Dichlorobenzene	Not detected	10		ug/L	10	95-50-1	Y
1,2,3-Trimethylbenzene	Not detected	10		ug/L	10	526-73-8	Y
n-Butylbenzene	Not detected	10		ug/L	10	104-51-8	Y
Hexachloroethane	Not detected	50		ug/L	10	67-72-1	Y
1,2-Dibromo-3-chloropropane	Not detected	50		ug/L	10	96-12-8	Y
1,2,4-Trichlorobenzene	Not detected	50		ug/L	10	120-82-1	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S53820.11 (continued)

Sample Tag: JS-MW-10_GW-092623

Volatile Organics - DEQ List (Replicate 01), Method: SW5030C/8260C, Run Date: 10/02/23 19:47, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2,3-Trichlorobenzene	Not detected	50		ug/L	10	87-61-6	Y
Naphthalene	Not detected	50		ug/L	10	91-20-3	Y
2-Methylnaphthalene	Not detected	50		ug/L	10	91-57-6	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S53820.12

Sample Tag: DUP-01_GW-092623

Collected Date/Time: 09/26/2023 00:01

Matrix: Groundwater

COC Reference: 164825

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	10/02/23 12:06	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 10/02/23 17:39, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	2	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	177	1		ug/L	1	71-43-2	
1,2-Dichloroethane	11	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.12 (continued)

Sample Tag: DUP-01_GW-092623

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 10/02/23 17:39, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.13

Sample Tag: tripblank

Collected Date/Time: 09/26/2023 00:01

Matrix: Liquid

COC Reference: 164825

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	3.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	10/02/23 12:06	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/29/23 15:31, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S53820.13 (continued)

Sample Tag: tripblank

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/29/23 15:31, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Merit Laboratories Login Checklist

Lab Set ID:S53820

Attention: Alexis Crisp
Address: Arcadis US, Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Client:ARCADIS_NOVI (Arcadis US, Inc. - Novi)

Project: 30112891.00005 / Racer PNC

Submitted:09/27/2023 11:20 Login User: PFD

Phone: 810-225-1909 FAX:
Email: Alexis.Crisp@arcadis.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 3.4 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|--|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



Analytical Laboratory Report

Report ID: S57016.01(01)
Generated on 12/22/2023

Report to

Attention: Alexis Crisp
Arcadis US, Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:
Email: Alexis.Crisp@arcadis.com

Additional Contacts: Tiffany Linder, Ian Drost

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
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Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57016.01-S57016.21
Project: RACER PNC / 30167840.00005
Collected Date(s): 10/31/2023 - 12/19/2023
Submitted Date/Time: 12/19/2023 14:30
Sampled by: Lottie Jay
P.O. #: 30167840.00005

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Starred (*) analytes are not NY NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

All accreditations/certifications held by this laboratory are listed on page 3. Not all accreditations/certifications are applicable to this report.

For a specific list of accredited analytes, please feel free to contact the laboratory or visit <https://www.meritlabs.com/certifications>.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Accreditations (For Reference Only)

Authority	Accreditation ID
Michigan DEQ	#9956
DOD ELAP & ISO/IEC 17025:2017	#69699 PJLA Testing
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003



Analytical Laboratory Report

Sample Summary (21 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57016.01	JS-MW-06_GW-121423	Groundwater	12/14/23 13:55
S57016.02	JS-MW-09_GW-121423	Groundwater	12/14/23 14:50
S57016.03	JS-MW-05_GW-121423	Groundwater	12/14/23 15:50
S57016.04	DUP-02_GW-121423	Groundwater	12/14/23 00:01
S57016.05	JS-MW-27_GW-121523	Groundwater	12/15/23 11:25
S57016.06	JS-MW-04_GW-121523	Groundwater	12/15/23 12:10
S57016.07	JS-MW-10_GW-121523	Groundwater	12/15/23 13:15
S57016.08	JS-MW-11_GW-121523	Groundwater	12/15/23 15:20
S57016.09	JS-MW-19_GW-121523	Groundwater	12/15/23 16:10
S57016.10	DUP-01_GW-121523	Groundwater	12/15/23 00:01
S57016.11	JS-MW-20_GW-121823	Groundwater	12/18/23 12:15
S57016.12	JS-MW-29_GW-121823	Groundwater	12/18/23 13:20
S57016.13	JS-MW-21_GW-121823	Groundwater	12/18/23 14:20
S57016.14	JS-MW-16_GW-121823	Groundwater	12/18/23 15:15
S57016.15	JS-MW-16_GW-121823 MS	Groundwater	12/18/23 15:15
S57016.16	JS-MW-16_GW-121823 MSD	Groundwater	12/18/23 15:15
S57016.17	JS-MW-24_GW-121923	Groundwater	12/19/23 10:35
S57016.18	JS-MW-30_GW-121923	Groundwater	12/19/23 11:25
S57016.19	JS-MW-26_GW-121923	Groundwater	12/19/23 12:05
S57016.20	JS-MW-23_GW-121923	Groundwater	12/19/23 12:45
S57016.21	TRIPBLANK	Water	10/31/23 00:01



Analytical Laboratory Report

Lab Sample ID: S57016.01

Sample Tag: JS-MW-06_GW-121423

Collected Date/Time: 12/14/2023 13:55

Matrix: Groundwater

COC Reference: 169911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/20/23 19:00, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.01 (continued)

Sample Tag: JS-MW-06_GW-121423

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/20/23 19:00, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	14	1		ug/L	1	100-41-4	
p,m-Xylene*	17	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	3	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	17	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.02

Sample Tag: JS-MW-09_GW-121423

Collected Date/Time: 12/14/2023 14:50

Matrix: Groundwater

COC Reference: 169911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/20/23 21:45, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	500		ug/L	50	60-29-7	Y
Acetone	Not detected	2,500		ug/L	50	67-64-1	Y
Methyl iodide	Not detected	50		ug/L	50	74-88-4	Y
Carbon disulfide	Not detected	300		ug/L	50	75-15-0	Y
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/L	50	1634-04-4	Y
Acrylonitrile	Not detected	100		ug/L	50	107-13-1	Y
2-Butanone (MEK)	Not detected	1,300		ug/L	50	78-93-3	Y
Dichlorodifluoromethane	Not detected	300		ug/L	50	75-71-8	Y
Chloromethane	Not detected	300		ug/L	50	74-87-3	Y
Vinyl chloride	Not detected	50		ug/L	50	75-01-4	Y
Bromomethane	Not detected	300		ug/L	50	74-83-9	Y
Chloroethane	Not detected	300		ug/L	50	75-00-3	Y
Trichlorofluoromethane	Not detected	50		ug/L	50	75-69-4	Y
1,1-Dichloroethene	Not detected	50		ug/L	50	75-35-4	Y
Methylene chloride	Not detected	300		ug/L	50	75-09-2	Y
trans-1,2-Dichloroethene	Not detected	50		ug/L	50	156-60-5	Y
1,1-Dichloroethane	Not detected	50		ug/L	50	75-34-3	Y
cis-1,2-Dichloroethene	Not detected	50		ug/L	50	156-59-2	Y
Tetrahydrofuran*	Not detected	4,500		ug/L	50	109-99-9	Y
Chloroform	Not detected	50		ug/L	50	67-66-3	Y
Bromochloromethane	Not detected	50		ug/L	50	74-97-5	Y
1,1,1-Trichloroethane	Not detected	50		ug/L	50	71-55-6	Y
4-Methyl-2-pentanone (MIBK)	Not detected	2,500		ug/L	50	108-10-1	Y
2-Hexanone	Not detected	2,500		ug/L	50	591-78-6	Y
Carbon tetrachloride	Not detected	50		ug/L	50	56-23-5	Y
Benzene	470	50		ug/L	50	71-43-2	Y
1,2-Dichloroethane	Not detected	50		ug/L	50	107-06-2	Y
Trichloroethene	Not detected	50		ug/L	50	79-01-6	Y
1,2-Dichloropropane	Not detected	50		ug/L	50	78-87-5	Y
Bromodichloromethane	Not detected	50		ug/L	50	75-27-4	Y
Dibromomethane	Not detected	300		ug/L	50	74-95-3	Y
cis-1,3-Dichloropropene	Not detected	50		ug/L	50	10061-01-5	Y
Toluene	100	50		ug/L	50	108-88-3	Y
trans-1,3-Dichloropropene	Not detected	50		ug/L	50	10061-02-6	Y
1,1,2-Trichloroethane	Not detected	50		ug/L	50	79-00-5	Y
Tetrachloroethene	Not detected	50		ug/L	50	127-18-4	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S57016.02 (continued)

Sample Tag: JS-MW-09_GW-121423

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/20/23 21:45, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	Not detected	50		ug/L	50	110-57-6	Y
Dibromochloromethane	Not detected	300		ug/L	50	124-48-1	Y
1,2-Dibromoethane	Not detected	50		ug/L	50	106-93-4	Y
Chlorobenzene	Not detected	50		ug/L	50	108-90-7	Y
1,1,1,2-Tetrachloroethane	Not detected	50		ug/L	50	630-20-6	Y
Ethylbenzene	1,560	50		ug/L	50	100-41-4	Y
p,m-Xylene*	4,600	100		ug/L	50		Y
o-Xylene	100	50		ug/L	50	95-47-6	Y
Styrene	Not detected	50		ug/L	50	100-42-5	Y
Isopropylbenzene	Not detected	300		ug/L	50	98-82-8	Y
Bromoform	Not detected	50		ug/L	50	75-25-2	Y
1,1,2,2-Tetrachloroethane	Not detected	50		ug/L	50	79-34-5	Y
1,2,3-Trichloropropane	Not detected	50		ug/L	50	96-18-4	Y
n-Propylbenzene	270	50		ug/L	50	103-65-1	Y
Bromobenzene	Not detected	50		ug/L	50	108-86-1	Y
1,3,5-Trimethylbenzene	700	50		ug/L	50	108-67-8	Y
tert-Butylbenzene	Not detected	50		ug/L	50	98-06-6	Y
1,2,4-Trimethylbenzene	2,350	50		ug/L	50	95-63-6	Y
sec-Butylbenzene	Not detected	50		ug/L	50	135-98-8	Y
p-Isopropyltoluene	Not detected	300		ug/L	50	99-87-6	Y
1,3-Dichlorobenzene	Not detected	50		ug/L	50	541-73-1	Y
1,4-Dichlorobenzene	Not detected	50		ug/L	50	106-46-7	Y
1,2-Dichlorobenzene	Not detected	50		ug/L	50	95-50-1	Y
1,2,3-Trimethylbenzene	690	50		ug/L	50	526-73-8	Y
n-Butylbenzene	Not detected	50		ug/L	50	104-51-8	Y
Hexachloroethane	Not detected	300		ug/L	50	67-72-1	Y
1,2-Dibromo-3-chloropropane	Not detected	300		ug/L	50	96-12-8	Y
1,2,4-Trichlorobenzene	Not detected	300		ug/L	50	120-82-1	Y
1,2,3-Trichlorobenzene	Not detected	300		ug/L	50	87-61-6	Y
Naphthalene	400	300		ug/L	50	91-20-3	Y
2-Methylnaphthalene	Not detected	300		ug/L	50	91-57-6	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S57016.03

Sample Tag: JS-MW-05_GW-121423

Collected Date/Time: 12/14/2023 15:50

Matrix: Groundwater

COC Reference: 169911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 14:29, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.03 (continued)

Sample Tag: JS-MW-05_GW-121423

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 14:29, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	1	1		ug/L	1	100-41-4	
p,m-Xylene*	3	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	4	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	1	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.04

Sample Tag: DUP-02_GW-121423

Collected Date/Time: 12/14/2023 00:01

Matrix: Groundwater

COC Reference: 169911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/20/23 19:24, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.04 (continued)

Sample Tag: DUP-02_GW-121423

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/20/23 19:24, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	1	1		ug/L	1	100-41-4	
p,m-Xylene*	3	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	4	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	1	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.05

Sample Tag: JS-MW-27_GW-121523

Collected Date/Time: 12/15/2023 11:25

Matrix: Groundwater

COC Reference: 169911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/20/23 19:47, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	1	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.05 (continued)

Sample Tag: JS-MW-27_GW-121523

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/20/23 19:47, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.06

Sample Tag: JS-MW-04_GW-121523

Collected Date/Time: 12/15/2023 12:10

Matrix: Groundwater

COC Reference: 169911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/20/23 20:11, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.06 (continued)

Sample Tag: JS-MW-04_GW-121523

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/20/23 20:11, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.07

Sample Tag: JS-MW-10_GW-121523

Collected Date/Time: 12/15/2023 13:15

Matrix: Groundwater

COC Reference: 169911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 14:49, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	67	1		ug/L	1	71-43-2	
1,2-Dichloroethane	6	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.07 (continued)

Sample Tag: JS-MW-10_GW-121523

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 14:49, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.08

Sample Tag: JS-MW-11_GW-121523

Collected Date/Time: 12/15/2023 15:20

Matrix: Groundwater

COC Reference: 169911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 01:24, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.08 (continued)

Sample Tag: JS-MW-11_GW-121523

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 01:24, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.09

Sample Tag: JS-MW-19_GW-121523

Collected Date/Time: 12/15/2023 16:10

Matrix: Groundwater

COC Reference: 169911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 01:44, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.09 (continued)

Sample Tag: JS-MW-19_GW-121523

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 01:44, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.10

Sample Tag: DUP-01_GW-121523

Collected Date/Time: 12/15/2023 00:01

Matrix: Groundwater

COC Reference: 169911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 02:04, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	66	1		ug/L	1	71-43-2	
1,2-Dichloroethane	6	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.10 (continued)

Sample Tag: DUP-01_GW-121523

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 02:04, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.11

Sample Tag: JS-MW-20_GW-121823

Collected Date/Time: 12/18/2023 12:15

Matrix: Groundwater

COC Reference: 169911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 02:24, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.11 (continued)

Sample Tag: JS-MW-20_GW-121823

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 02:24, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.12

Sample Tag: JS-MW-29_GW-121823

Collected Date/Time: 12/18/2023 13:20

Matrix: Groundwater

COC Reference: 169911

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 02:44, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.12 (continued)

Sample Tag: JS-MW-29_GW-121823

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 02:44, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	3	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	17	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	2	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	4	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.13

Sample Tag: JS-MW-21_GW-121823

Collected Date/Time: 12/18/2023 14:20

Matrix: Groundwater

COC Reference: 169913

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 03:04, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.13 (continued)

Sample Tag: JS-MW-21_GW-121823

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 03:04, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.14

Sample Tag: JS-MW-16_GW-121823

Collected Date/Time: 12/18/2023 15:15

Matrix: Groundwater

COC Reference: 169913

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 03:24, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	3	1		ug/L	1	71-43-2	
1,2-Dichloroethane	1	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.14 (continued)

Sample Tag: JS-MW-16_GW-121823

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 03:24, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	10	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	9	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	21	1		ug/L	1	95-63-6	
sec-Butylbenzene	1	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	4	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.15

Sample Tag: JS-MW-16_GW-121823 MS

Collected Date/Time: 12/18/2023 15:15

Matrix: Groundwater

COC Reference: 169913

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/20/23 22:28, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	50	10		ug/L	1	60-29-7	1
Acetone	62	50		ug/L	1	67-64-1	1
Methyl iodide	49	1		ug/L	1	74-88-4	1
Carbon disulfide	47	5		ug/L	1	75-15-0	1
tert-Methyl butyl ether (MTBE)	50	5		ug/L	1	1634-04-4	1
Acrylonitrile	51	2		ug/L	1	107-13-1	1
2-Butanone (MEK)	48	25		ug/L	1	78-93-3	1
Dichlorodifluoromethane	60	5		ug/L	1	75-71-8	1
Chloromethane	54	5		ug/L	1	74-87-3	1
Vinyl chloride	53	1		ug/L	1	75-01-4	1
Bromomethane	48	5		ug/L	1	74-83-9	1
Chloroethane	50	5		ug/L	1	75-00-3	1
Trichlorofluoromethane	49	1		ug/L	1	75-69-4	1
1,1-Dichloroethene	50	1		ug/L	1	75-35-4	1
Methylene chloride	52	5		ug/L	1	75-09-2	1
trans-1,2-Dichloroethene	50	1		ug/L	1	156-60-5	1
1,1-Dichloroethane	51	1		ug/L	1	75-34-3	1
cis-1,2-Dichloroethene	49	1		ug/L	1	156-59-2	1
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	1
Chloroform	50	1		ug/L	1	67-66-3	1
Bromochloromethane	49	1		ug/L	1	74-97-5	1
1,1,1-Trichloroethane	49	1		ug/L	1	71-55-6	1
4-Methyl-2-pentanone (MIBK)	51	50		ug/L	1	108-10-1	1
2-Hexanone	51	50		ug/L	1	591-78-6	1
Carbon tetrachloride	47	1		ug/L	1	56-23-5	1
Benzene	53	1		ug/L	1	71-43-2	1
1,2-Dichloroethane	52	1		ug/L	1	107-06-2	1
Trichloroethene	50	1		ug/L	1	79-01-6	1
1,2-Dichloropropane	51	1		ug/L	1	78-87-5	1
Bromodichloromethane	50	1		ug/L	1	75-27-4	1
Dibromomethane	49	5		ug/L	1	74-95-3	1
cis-1,3-Dichloropropene	51	1		ug/L	1	10061-01-5	1
Toluene	50	1		ug/L	1	108-88-3	1
trans-1,3-Dichloropropene	50	1		ug/L	1	10061-02-6	1
1,1,2-Trichloroethane	50	1		ug/L	1	79-00-5	1
Tetrachloroethene	47	1		ug/L	1	127-18-4	1

1-Spiked at 50 ug/L



Analytical Laboratory Report

Lab Sample ID: S57016.15 (continued)

Sample Tag: JS-MW-16_GW-121823 MS

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/20/23 22:28, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	33	1		ug/L	1	110-57-6	1
Dibromochloromethane	46	5		ug/L	1	124-48-1	1
1,2-Dibromoethane	47	1		ug/L	1	106-93-4	1
Chlorobenzene	46	1		ug/L	1	108-90-7	1
1,1,1,2-Tetrachloroethane	46	1		ug/L	1	630-20-6	1
Ethylbenzene	48	1		ug/L	1	100-41-4	1
p,m-Xylene*	108	2		ug/L	1		1
o-Xylene	48	1		ug/L	1	95-47-6	1
Styrene	48	1		ug/L	1	100-42-5	1
Isopropylbenzene	51	5		ug/L	1	98-82-8	1
Bromoform	45	1		ug/L	1	75-25-2	1
1,1,2,2-Tetrachloroethane	44	1		ug/L	1	79-34-5	1
1,2,3-Trichloropropane	46	1		ug/L	1	96-18-4	1
n-Propylbenzene	56	1		ug/L	1	103-65-1	1
Bromobenzene	46	1		ug/L	1	108-86-1	1
1,3,5-Trimethylbenzene	48	1		ug/L	1	108-67-8	1
tert-Butylbenzene	54	1		ug/L	1	98-06-6	1
1,2,4-Trimethylbenzene	69	1		ug/L	1	95-63-6	1
sec-Butylbenzene	49	1		ug/L	1	135-98-8	1
p-Isopropyltoluene	49	5		ug/L	1	99-87-6	1
1,3-Dichlorobenzene	47	1		ug/L	1	541-73-1	1
1,4-Dichlorobenzene	46	1		ug/L	1	106-46-7	1
1,2-Dichlorobenzene	47	1		ug/L	1	95-50-1	1
1,2,3-Trimethylbenzene	52	1		ug/L	1	526-73-8	1
n-Butylbenzene	50	1		ug/L	1	104-51-8	1
Hexachloroethane	43	5		ug/L	1	67-72-1	1
1,2-Dibromo-3-chloropropane	44	5		ug/L	1	96-12-8	1
1,2,4-Trichlorobenzene	50	5		ug/L	1	120-82-1	1
1,2,3-Trichlorobenzene	47	5		ug/L	1	87-61-6	1
Naphthalene	52	5		ug/L	1	91-20-3	1
2-Methylnaphthalene	38	5		ug/L	1	91-57-6	1

1-Spiked at 50 ug/L



Analytical Laboratory Report

Lab Sample ID: S57016.16

Sample Tag: JS-MW-16_GW-121823 MSD

Collected Date/Time: 12/18/2023 15:15

Matrix: Groundwater

COC Reference: 169913

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/20/23 22:47, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	53	10		ug/L	1	60-29-7	1
Acetone	65	50		ug/L	1	67-64-1	1
Methyl iodide	47	1		ug/L	1	74-88-4	1
Carbon disulfide	46	5		ug/L	1	75-15-0	1
tert-Methyl butyl ether (MTBE)	52	5		ug/L	1	1634-04-4	1
Acrylonitrile	53	2		ug/L	1	107-13-1	1
2-Butanone (MEK)	51	25		ug/L	1	78-93-3	1
Dichlorodifluoromethane	58	5		ug/L	1	75-71-8	1
Chloromethane	52	5		ug/L	1	74-87-3	1
Vinyl chloride	50	1		ug/L	1	75-01-4	1
Bromomethane	47	5		ug/L	1	74-83-9	1
Chloroethane	48	5		ug/L	1	75-00-3	1
Trichlorofluoromethane	47	1		ug/L	1	75-69-4	1
1,1-Dichloroethene	48	1		ug/L	1	75-35-4	1
Methylene chloride	51	5		ug/L	1	75-09-2	1
trans-1,2-Dichloroethene	48	1		ug/L	1	156-60-5	1
1,1-Dichloroethane	50	1		ug/L	1	75-34-3	1
cis-1,2-Dichloroethene	48	1		ug/L	1	156-59-2	1
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	1
Chloroform	50	1		ug/L	1	67-66-3	1
Bromochloromethane	49	1		ug/L	1	74-97-5	1
1,1,1-Trichloroethane	47	1		ug/L	1	71-55-6	1
4-Methyl-2-pentanone (MIBK)	54	50		ug/L	1	108-10-1	1
2-Hexanone	54	50		ug/L	1	591-78-6	1
Carbon tetrachloride	45	1		ug/L	1	56-23-5	1
Benzene	51	1		ug/L	1	71-43-2	1
1,2-Dichloroethane	51	1		ug/L	1	107-06-2	1
Trichloroethene	48	1		ug/L	1	79-01-6	1
1,2-Dichloropropane	49	1		ug/L	1	78-87-5	1
Bromodichloromethane	49	1		ug/L	1	75-27-4	1
Dibromomethane	49	5		ug/L	1	74-95-3	1
cis-1,3-Dichloropropene	51	1		ug/L	1	10061-01-5	1
Toluene	48	1		ug/L	1	108-88-3	1
trans-1,3-Dichloropropene	51	1		ug/L	1	10061-02-6	1
1,1,2-Trichloroethane	51	1		ug/L	1	79-00-5	1
Tetrachloroethene	45	1		ug/L	1	127-18-4	1

1-Spiked at 50 ug/L



Analytical Laboratory Report

Lab Sample ID: S57016.16 (continued)
Sample Tag: JS-MW-16_GW-121823 MSD

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/20/23 22:47, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	33	1		ug/L	1	110-57-6	1
Dibromochloromethane	46	5		ug/L	1	124-48-1	1
1,2-Dibromoethane	47	1		ug/L	1	106-93-4	1
Chlorobenzene	45	1		ug/L	1	108-90-7	1
1,1,1,2-Tetrachloroethane	45	1		ug/L	1	630-20-6	1
Ethylbenzene	47	1		ug/L	1	100-41-4	1
p,m-Xylene*	104	2		ug/L	1		1
o-Xylene	47	1		ug/L	1	95-47-6	1
Styrene	47	1		ug/L	1	100-42-5	1
Isopropylbenzene	49	5		ug/L	1	98-82-8	1
Bromoform	45	1		ug/L	1	75-25-2	1
1,1,2,2-Tetrachloroethane	46	1		ug/L	1	79-34-5	1
1,2,3-Trichloropropane	45	1		ug/L	1	96-18-4	1
n-Propylbenzene	54	1		ug/L	1	103-65-1	1
Bromobenzene	45	1		ug/L	1	108-86-1	1
1,3,5-Trimethylbenzene	47	1		ug/L	1	108-67-8	1
tert-Butylbenzene	51	1		ug/L	1	98-06-6	1
1,2,4-Trimethylbenzene	67	1		ug/L	1	95-63-6	1
sec-Butylbenzene	45	1		ug/L	1	135-98-8	1
p-Isopropyltoluene	45	5		ug/L	1	99-87-6	1
1,3-Dichlorobenzene	44	1		ug/L	1	541-73-1	1
1,4-Dichlorobenzene	44	1		ug/L	1	106-46-7	1
1,2-Dichlorobenzene	45	1		ug/L	1	95-50-1	1
1,2,3-Trimethylbenzene	49	1		ug/L	1	526-73-8	1
n-Butylbenzene	45	1		ug/L	1	104-51-8	1
Hexachloroethane	40	5		ug/L	1	67-72-1	1
1,2-Dibromo-3-chloropropane	44	5		ug/L	1	96-12-8	1
1,2,4-Trichlorobenzene	48	5		ug/L	1	120-82-1	1
1,2,3-Trichlorobenzene	45	5		ug/L	1	87-61-6	1
Naphthalene	51	5		ug/L	1	91-20-3	1
2-Methylnaphthalene	38	5		ug/L	1	91-57-6	1

1-Spiked at 50 ug/L



Analytical Laboratory Report

Lab Sample ID: S57016.17

Sample Tag: JS-MW-24_GW-121923

Collected Date/Time: 12/19/2023 10:35

Matrix: Groundwater

COC Reference: 169913

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 03:44, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.17 (continued)

Sample Tag: JS-MW-24_GW-121923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 03:44, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.18

Sample Tag: JS-MW-30_GW-121923

Collected Date/Time: 12/19/2023 11:25

Matrix: Groundwater

COC Reference: 169913

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 04:03, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.18 (continued)

Sample Tag: JS-MW-30_GW-121923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 04:03, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.19

Sample Tag: JS-MW-26_GW-121923

Collected Date/Time: 12/19/2023 12:05

Matrix: Groundwater

COC Reference: 169913

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 04:23, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.19 (continued)

Sample Tag: JS-MW-26_GW-121923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 04:23, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.20

Sample Tag: JS-MW-23_GW-121923

Collected Date/Time: 12/19/2023 12:45

Matrix: Groundwater

COC Reference: 169913

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 04:43, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.20 (continued)

Sample Tag: JS-MW-23_GW-121923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 04:43, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S57016.21

Sample Tag: TRIPBLANK

Collected Date/Time: 10/31/2023 00:01

Matrix: Water

COC Reference: 169913

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/23 11:30	NDK	H

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 00:45, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	H
Acetone	Not detected	50		ug/L	1	67-64-1	H
Methyl iodide	Not detected	1		ug/L	1	74-88-4	H
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	H
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	H
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	H
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	H
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	H
Chloromethane	Not detected	5		ug/L	1	74-87-3	H
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	H
Bromomethane	Not detected	5		ug/L	1	74-83-9	H
Chloroethane	Not detected	5		ug/L	1	75-00-3	H
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	H
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	H
Methylene chloride	Not detected	5		ug/L	1	75-09-2	H
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	H
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	H
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	H
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	H
Chloroform	Not detected	1		ug/L	1	67-66-3	H
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	H
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	H
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	H
2-Hexanone	Not detected	50		ug/L	1	591-78-6	H
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	H
Benzene	Not detected	1		ug/L	1	71-43-2	H
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	H
Trichloroethene	Not detected	1		ug/L	1	79-01-6	H
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	H
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	H
Dibromomethane	Not detected	5		ug/L	1	74-95-3	H
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	H
Toluene	Not detected	1		ug/L	1	108-88-3	H
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	H
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	H
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	H

H-Sample submitted and run outside of holding time



Analytical Laboratory Report

Lab Sample ID: S57016.21 (continued)

Sample Tag: TRIPBLANK

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 12/21/23 00:45, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	H
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	H
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	H
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	H
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	H
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	H
p,m-Xylene*	Not detected	2		ug/L	1		H
o-Xylene	Not detected	1		ug/L	1	95-47-6	H
Styrene	Not detected	1		ug/L	1	100-42-5	H
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	H
Bromoform	Not detected	1		ug/L	1	75-25-2	H
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	H
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	H
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	H
Bromobenzene	Not detected	1		ug/L	1	108-86-1	H
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	H
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	H
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	H
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	H
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	H
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	H
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	H
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	H
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	H
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	H
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	H
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	H
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	H
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	H
Naphthalene	Not detected	5		ug/L	1	91-20-3	H
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	H

H-Sample submitted and run outside of holding time

Merit Laboratories Login Checklist

Lab Set ID:S57016

Client:ARCADIS_NOVI (Arcadis US, Inc. - Novi)

Project: RACER PNC / 30167840.00005

Submitted: 12/19/2023 14:30 Login User: MMC

Attention: Alexis Crisp

Address: Arcadis US, Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:

Email: Alexis.Crisp@arcadis.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 4.7
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Do water VOC or TOX bottles contain headspace

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # 2 OF _____ 169913

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Lexi Crisp
 COMPANY ARCADIS
 ADDRESS 28550 Cabot Dr. #500
 CITY NOVI STATE MI ZIP CODE 48377
 PHONE NO. _____ CELL NO. _____ P.O. NO. 30167846.0005
 E-MAIL ADDRESS tiffany.linder@arcadis.com Alexis.Crisp@arcadis.com QUOTE NO. _____

CONTACT NAME Accounts Payable SAME
 COMPANY ARCADIS
 ADDRESS 630 Plaza Dr. #600
 CITY Highlands Ranch STATE CO ZIP CODE 80129
 PHONE NO. _____ E-MAIL ADDRESS accounts.payable.administration@arcadis.com

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME RACER PNC / 30167846.0005 SAMPLER(S) - PLEASE PRINT/SIGN NAME Lettie Jay / Zoltan
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER _____
 MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIFE A=AIR WS=WASTE

VOCs (8260)

Certifications
 OHIO VAP Drinking Water
 DoD NPDES
 Project Locations
 Detroit New York
 Other _____
 Special Instructions

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives												
	DATE	TIME				NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER						
57016.13	12/18/23	1420	JS-MW-21-GW-121823	GW	3		3											
14.15.16	12/19/23	1515	JS-MW-16-GW-121823	GW	9		9											
17	12/19/23	1035	JS-MW-24-GW-121923	GW	3		3											
.18	12/19/23	1125	JS-MW-30-GW-121923	GW	3		3											
.19	12/19/23	1205	JS-MW-26-GW-121923	GW	3		3											
.20	12/19/23	1245	JS-MW-23-GW-121923	GW	3		3											
.21	10/31/23	-	TRIP BLANK	W	1		1											

RELINQUISHED BY: Lettie Jay / ARCADIS Sampler DATE 12/19/23 TIME 12:55
 RECEIVED BY: [Signature] DATE 12/19/23 TIME 12:55
 RELINQUISHED BY: [Signature] DATE 12/19/23 TIME 14:20
 RECEIVED BY: M. Calabro DATE 12/19/23 TIME 14:30

RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: _____ DATE _____ TIME _____
 SEAL NO. SEAL INTACT INITIALS NOTES: TEMP. ON ARRIVAL 4.7
 YES NO
 SEAL NO. SEAL INTACT INITIALS
 YES NO

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Appendix C

Mann-Kendall Calculations and Trend Graphs

TABLE C-1
Summary Statistics and Trend Results
RACER PNC (Joslyn)
Pontiac, MI
 July, 2024

Well ID	Analyte	Date Range	Figure	FOD	Detected Results Summary ¹					Mann-Kendall Test ²			
					Range	Mean	Median	SD	CV	Result ⁴	MK Result Note	P-Value	S Value
JS-MW-05	Benzene	05/21 - 12/23	C-1	6 / 8	5 - 1880	859	905	781	0.91	NST	--	0.072	-13
JS-MW-05	Ethylbenzene	05/21 - 12/23	C-2	7 / 8	1 - 894	311	280	357	1.15	NST	--	0.089	-12
JS-MW-06	Benzene	05/21 - 12/23	C-3	3 / 5	3 - 19	13.3	18	9	0.68	NST	5a	0.080	-7
JS-MW-06	Ethylbenzene	05/21 - 12/23	C-4	5 / 5	14 - 488	207	69	239	1.15	DWN	5a	0.042	-8
JS-MW-09	Benzene	05/21 - 12/23	C-5	8 / 8	410 - 690	495	454	97.7	0.20	NST	--	0.138	-10
JS-MW-09	Ethylbenzene	05/21 - 12/23	C-6	8 / 8	463 - 1810	1340	1530	441	0.33	NST	--	0.406	-3
JS-MW-10	1,2-Dichloroethane	05/21 - 12/23	C-7	7 / 9	1 - 13	5.4	4	4.1	0.76	UP	--	0.038	18
JS-MW-10	Benzene	05/21 - 12/23	C-8	6 / 9	16 - 204	84.8	71.5	65.3	0.77	NST	--	0.075	15
JS-MW-16	1,2-Dichloroethane	12/21 - 12/23	C-9	7 / 8	1 - 13	5.4	3	5.3	0.98	NST	--	0.406	-3
JS-MW-16	Benzene	12/21 - 12/23	C-10	7 / 8	2 - 7	3.9	3	2	0.51	NST	--	0.548	0
JS-MW-19	Benzene	12/21 - 12/23	C-11	6 / 8	3 - 18	8	4.5	6.7	0.84	DWN	--	0.016	-18
JS-MW-23	Benzene	01/22 - 12/23	C-12	4 / 8	2 - 7	4	3.5	2.2	0.55	NST	--	0.089	-12
JS-MW-23	Ethylbenzene	01/22 - 12/23	C-13	4 / 8	1 - 16	7.8	7	6.4	0.82	DWN	--	0.016	-18
JS-MW-27	1,2-Dichloroethane	01/22 - 12/23	C-14	8 / 8	1 - 5	2.5	2.5	1.5	0.60	DWN	--	0.031	-16

Abbreviations:

- insufficient data for calculating statistics (n < 4) or not available
- CV = coefficient of variation
- FOD = frequency of detection (# detects / # samples)
- mean = arithmetic mean
- MK = Mann-Kendall
- SD = standard deviation

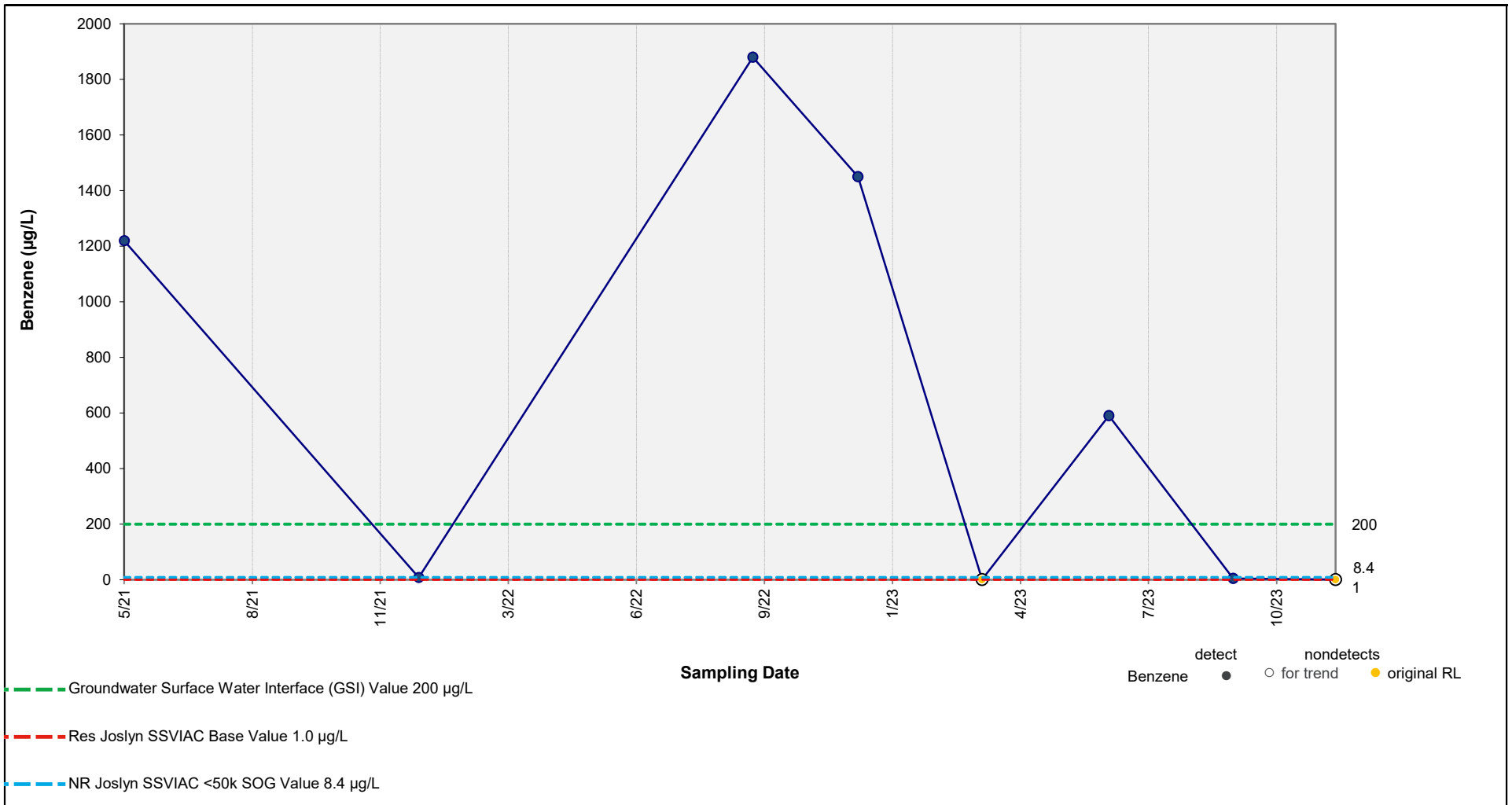
- NST = no significant trend
- NT = no trend
- DWN = downward trend
- UP = upward trend

Notes:

1. All analytical results are in µg/L.
2. Trend results are presented when at least five samples and 50% detected values are available.
3. Non-detects were assigned a common value less than the minimum detected value, equal to half the minimum reporting limit (RL) in the dataset (USEPA, 2009).
 If half the minimum RL was greater than the minimum detected value, then half the minimum detect was assigned.
4. Statistically significant trend defined as having p-value ≤ 0.05, or 95% confidence.
- 5a. MK results for datasets with fewer than 8 samples may not be reliable and should be treated with caution.

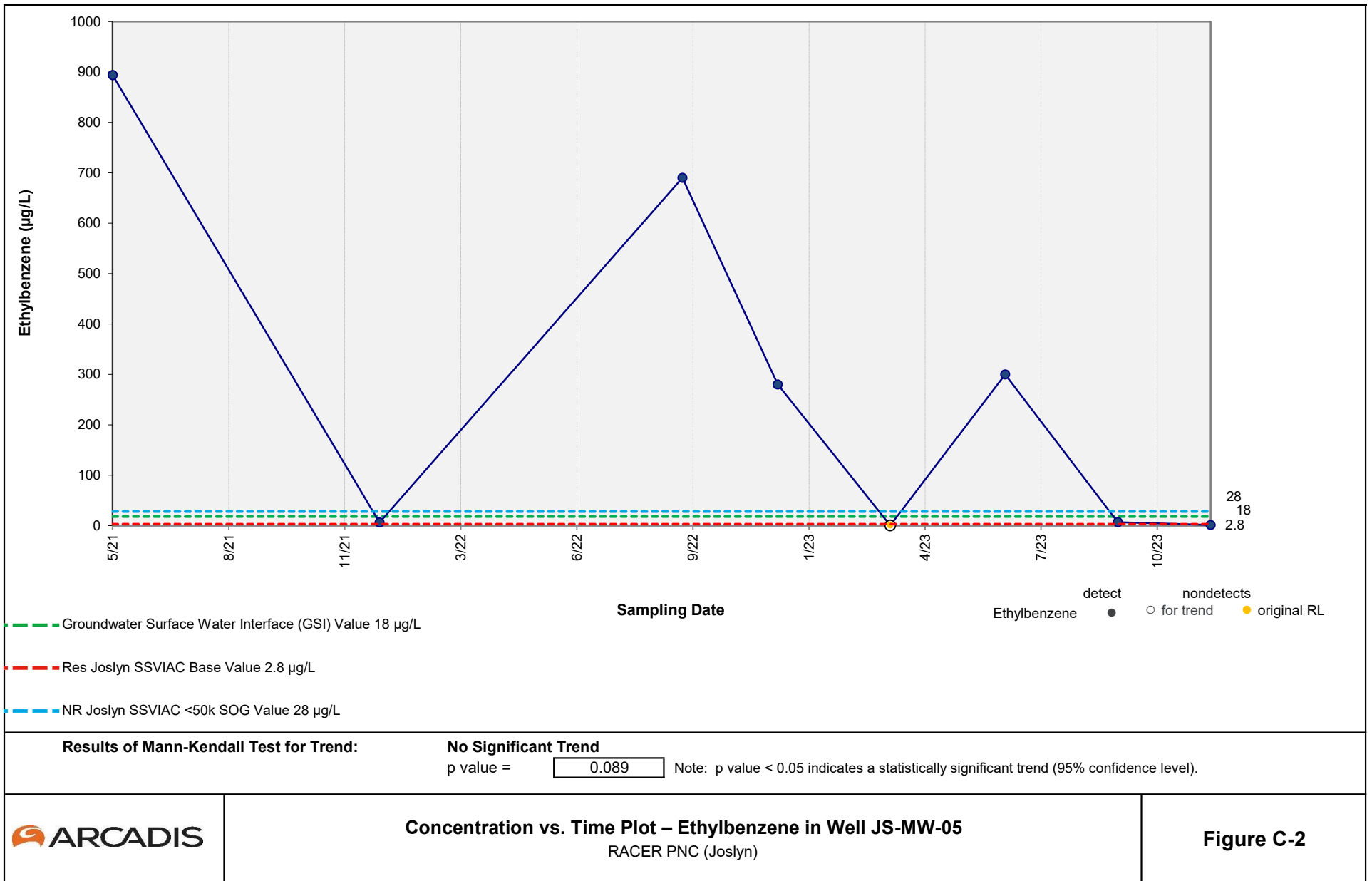
Reference:

USEPA. 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities. Unified Guidance. EPA/530/R-09/007, 2009.



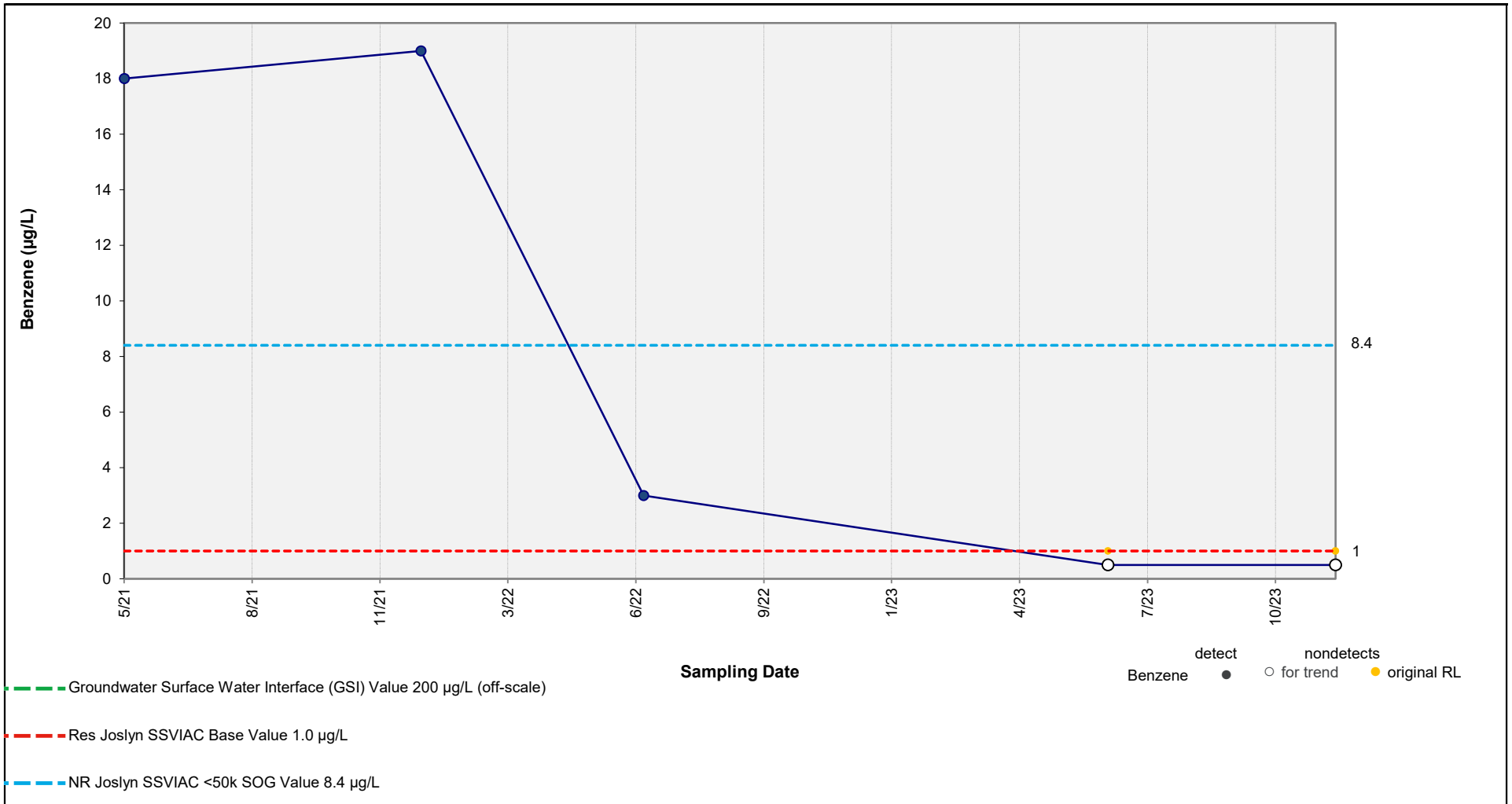
Results of Mann-Kendall Test for Trend: **No Significant Trend**
 p value = Note: p value < 0.05 indicates a statistically significant trend (95% confidence level).

	Concentration vs. Time Plot – Benzene in Well JS-MW-05 RACER PNC (Joslyn)	Figure C-1
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Concentration vs. Time Plot – Ethylbenzene in Well JS-MW-05
 RACER PNC (Joslyn)

Figure C-2



Results of Mann-Kendall Test for Trend:

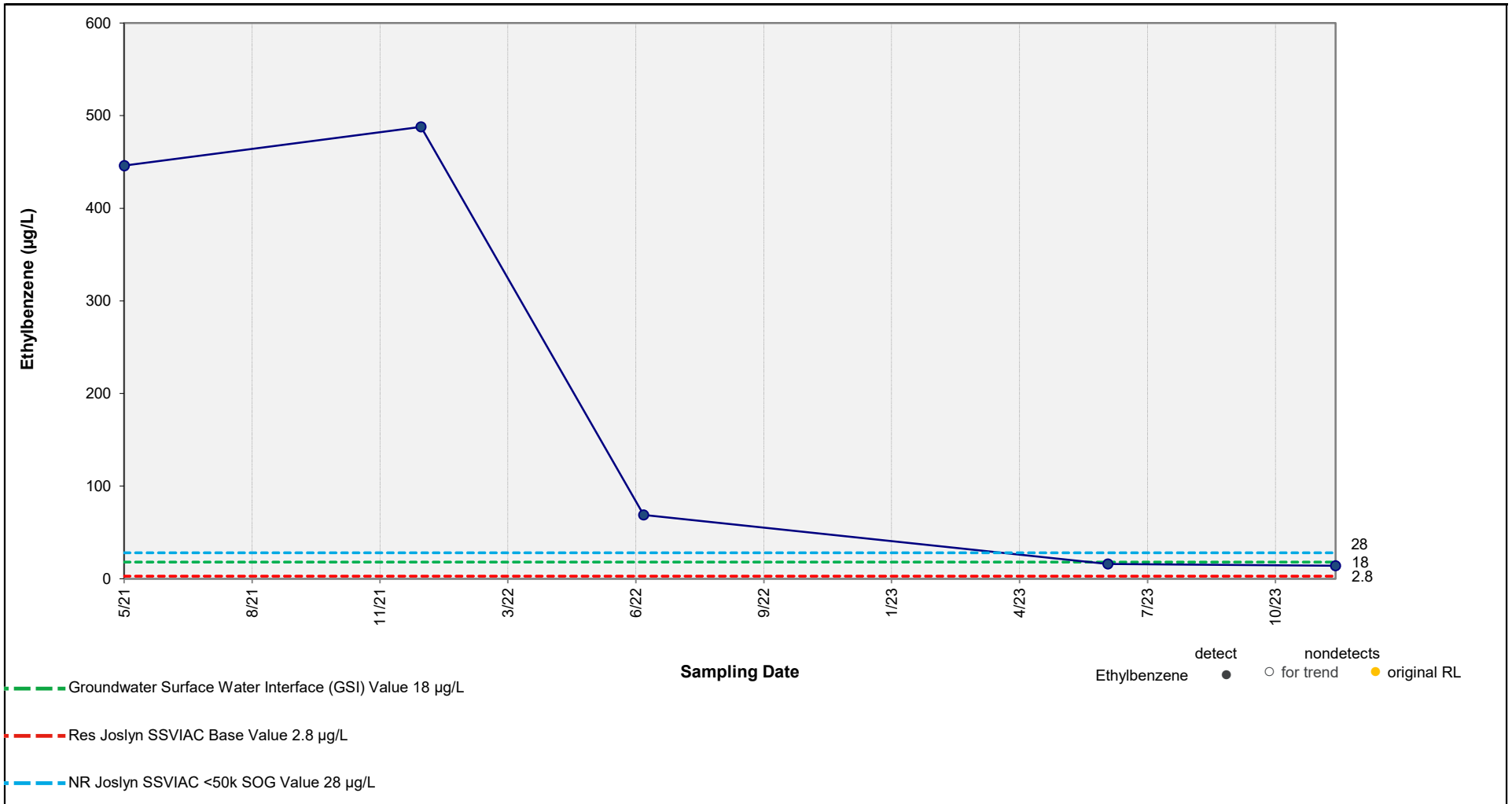
No Significant Trend

p value = Note: p value < 0.05 indicates a statistically significant trend (95% confidence level).




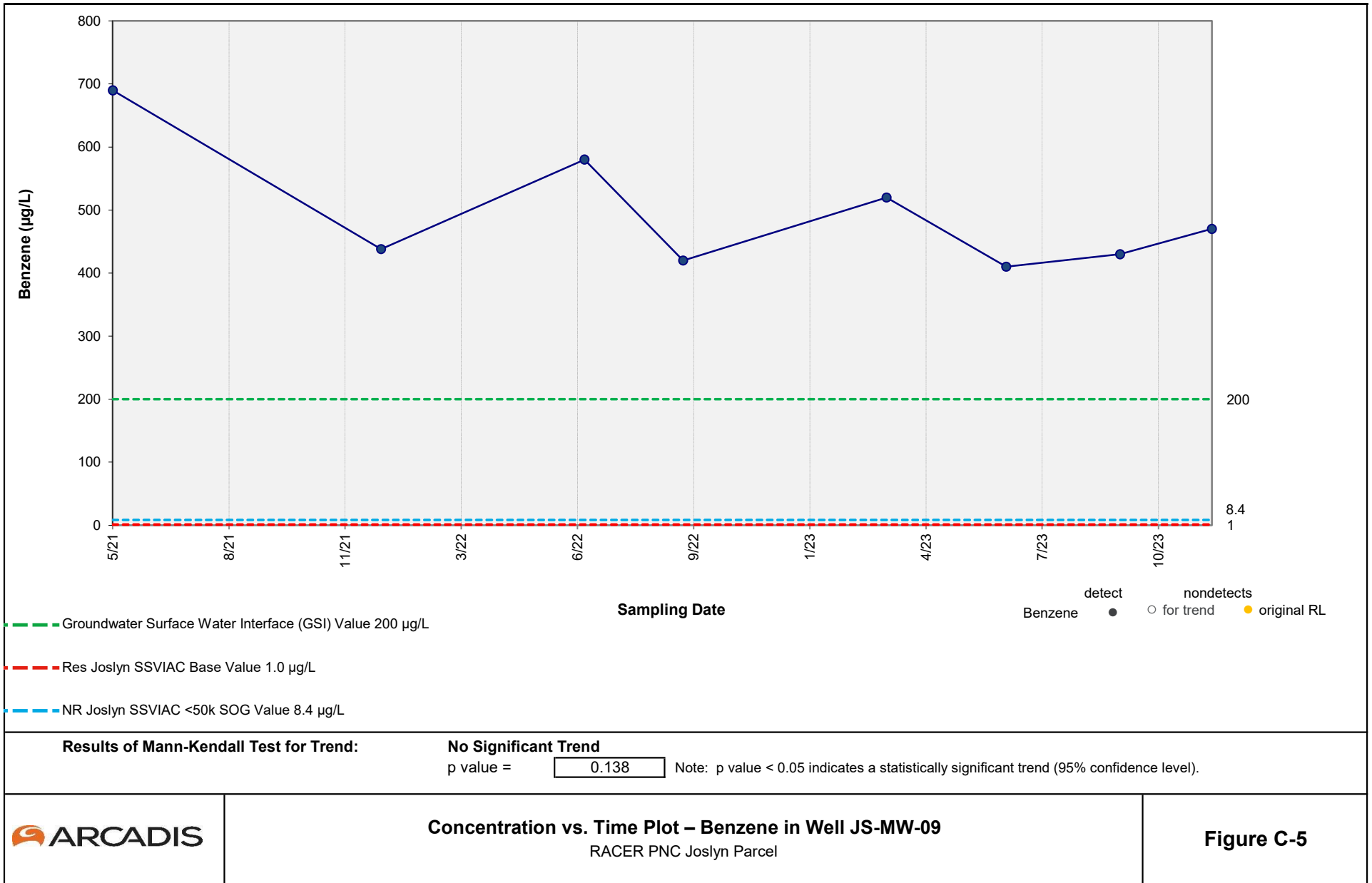
Concentration vs. Time Plot – Benzene in Well JS-MW-06
RACER PNC Joslyn Parcel

Figure C-3



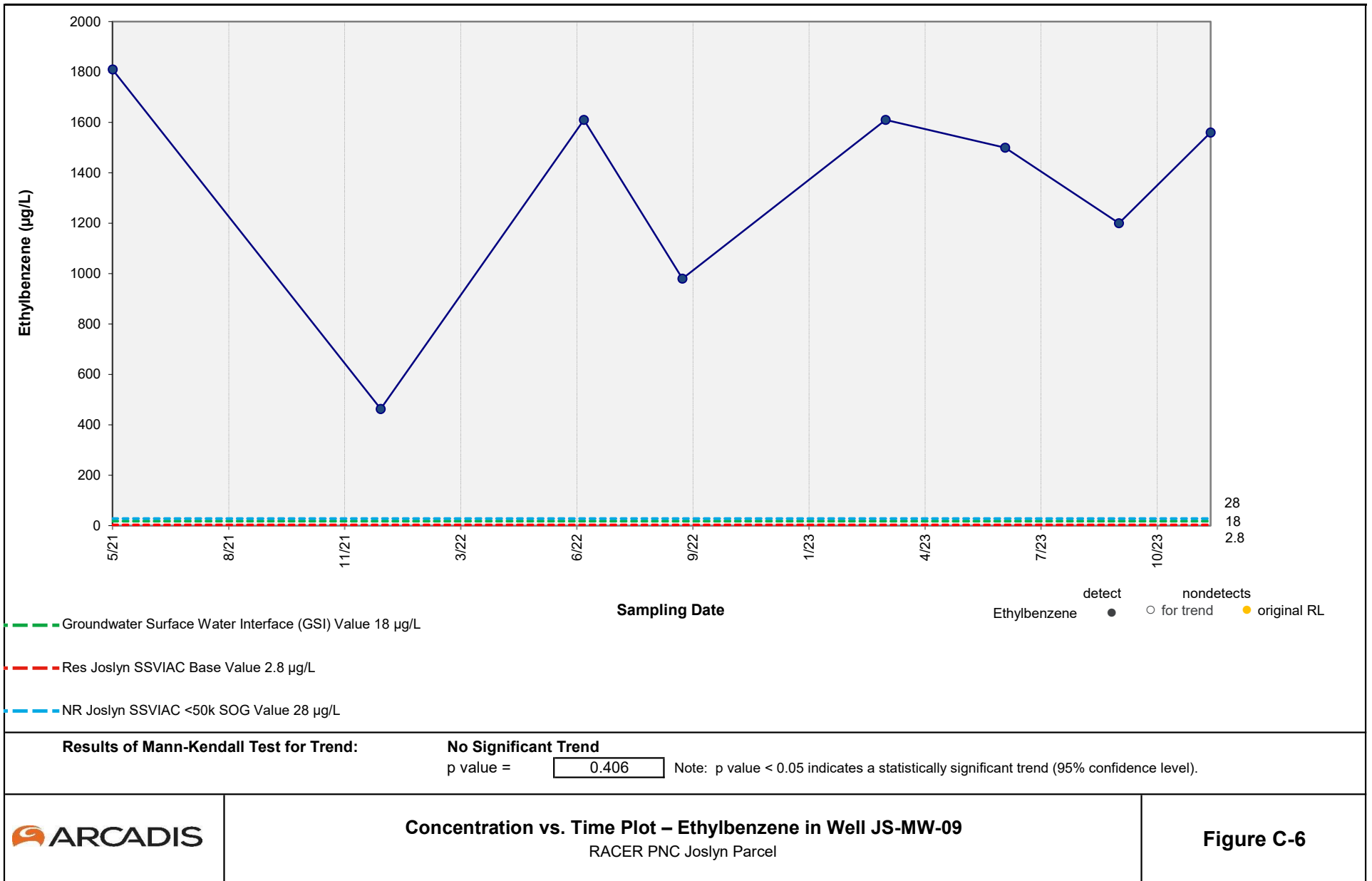
Results of Mann-Kendall Test for Trend: **DECREASING TREND**
 p value = Note: p value < 0.05 indicates a statistically significant trend (95% confidence level).

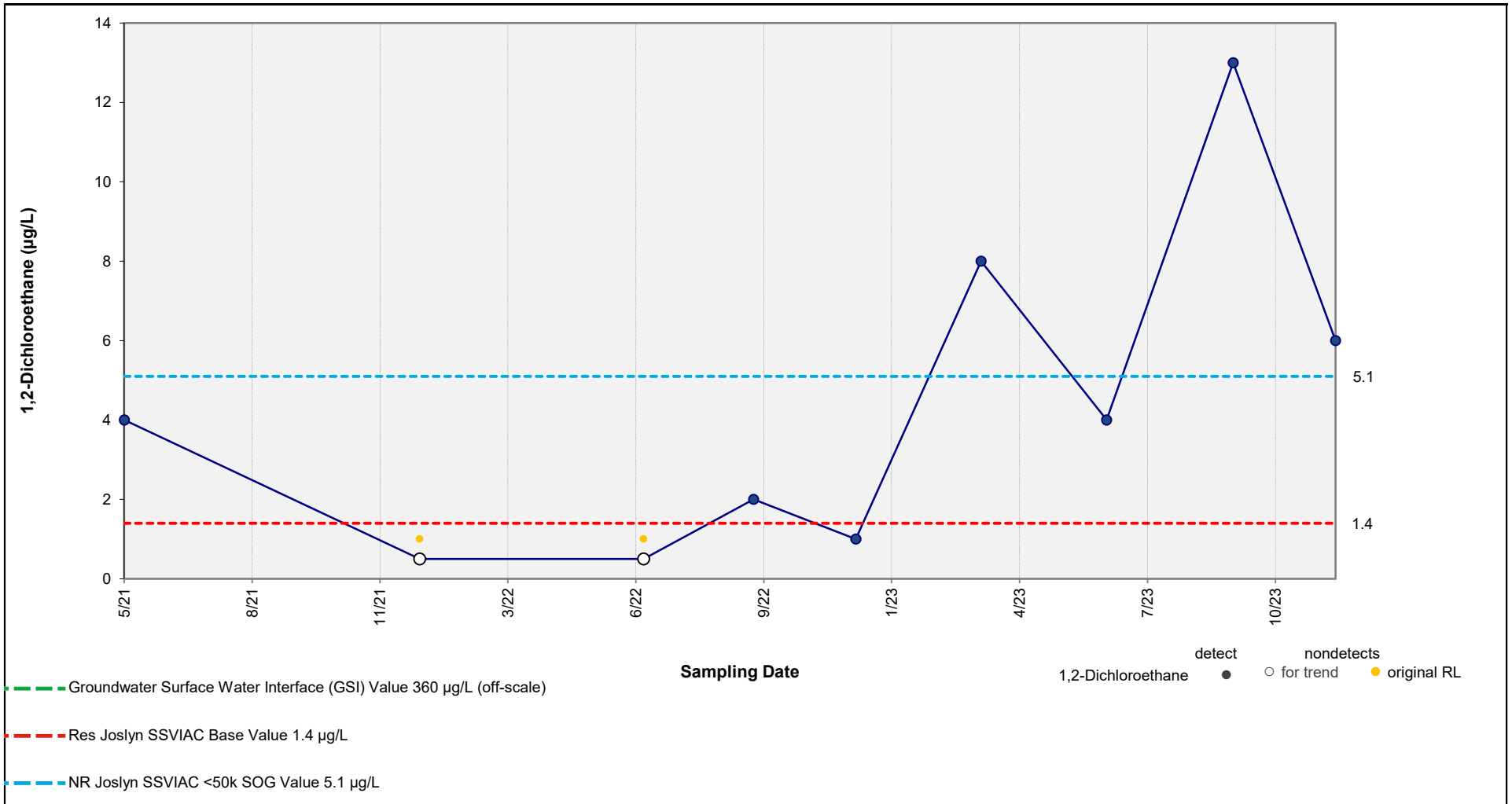
	Concentration vs. Time Plot – Ethylbenzene in Well JS-MW-06 RACER PNC Joslyn Parcel	Figure C-4
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Concentration vs. Time Plot – Benzene in Well JS-MW-09
RACER PNC Joslyn Parcel

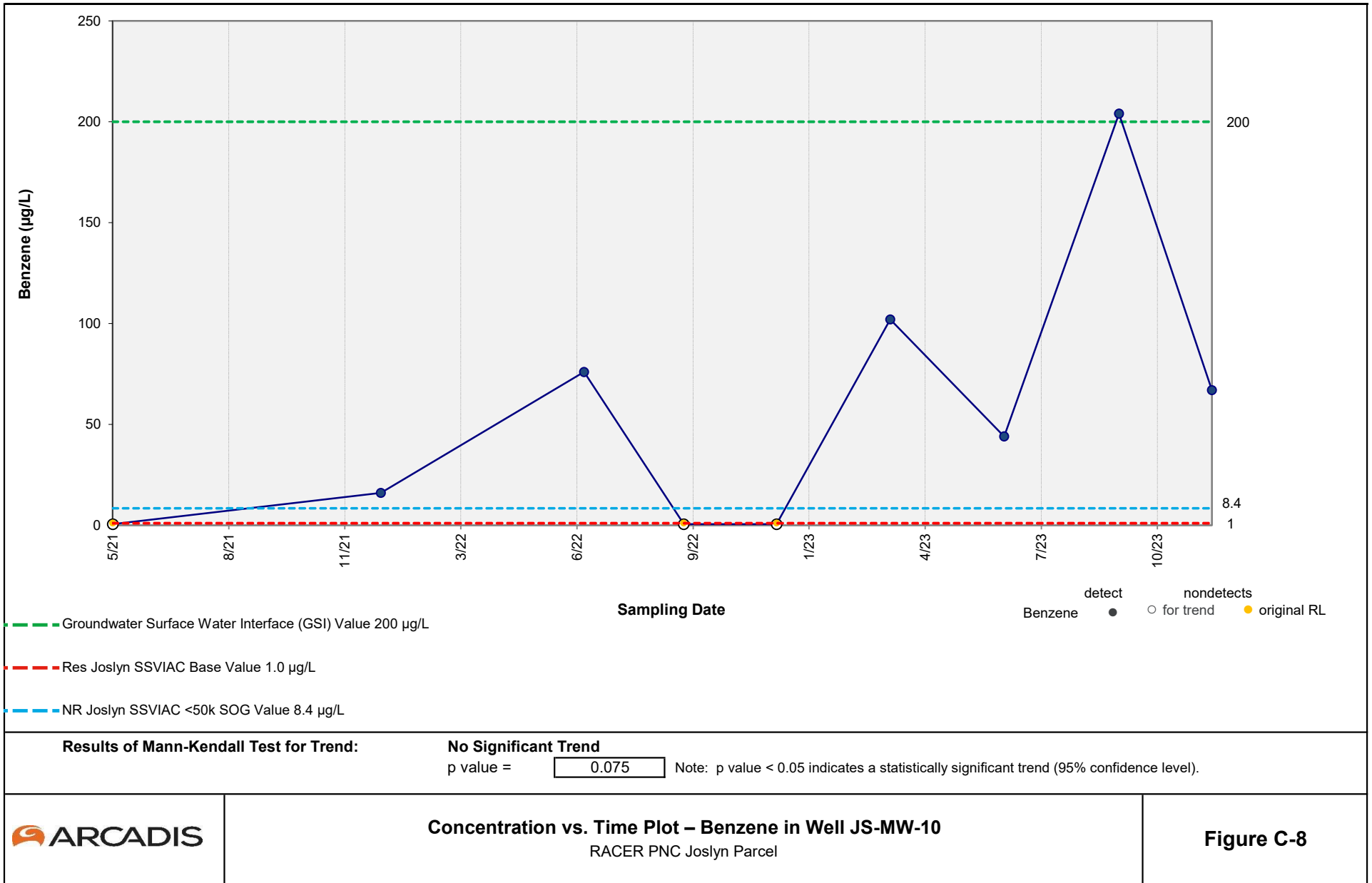
Figure C-5





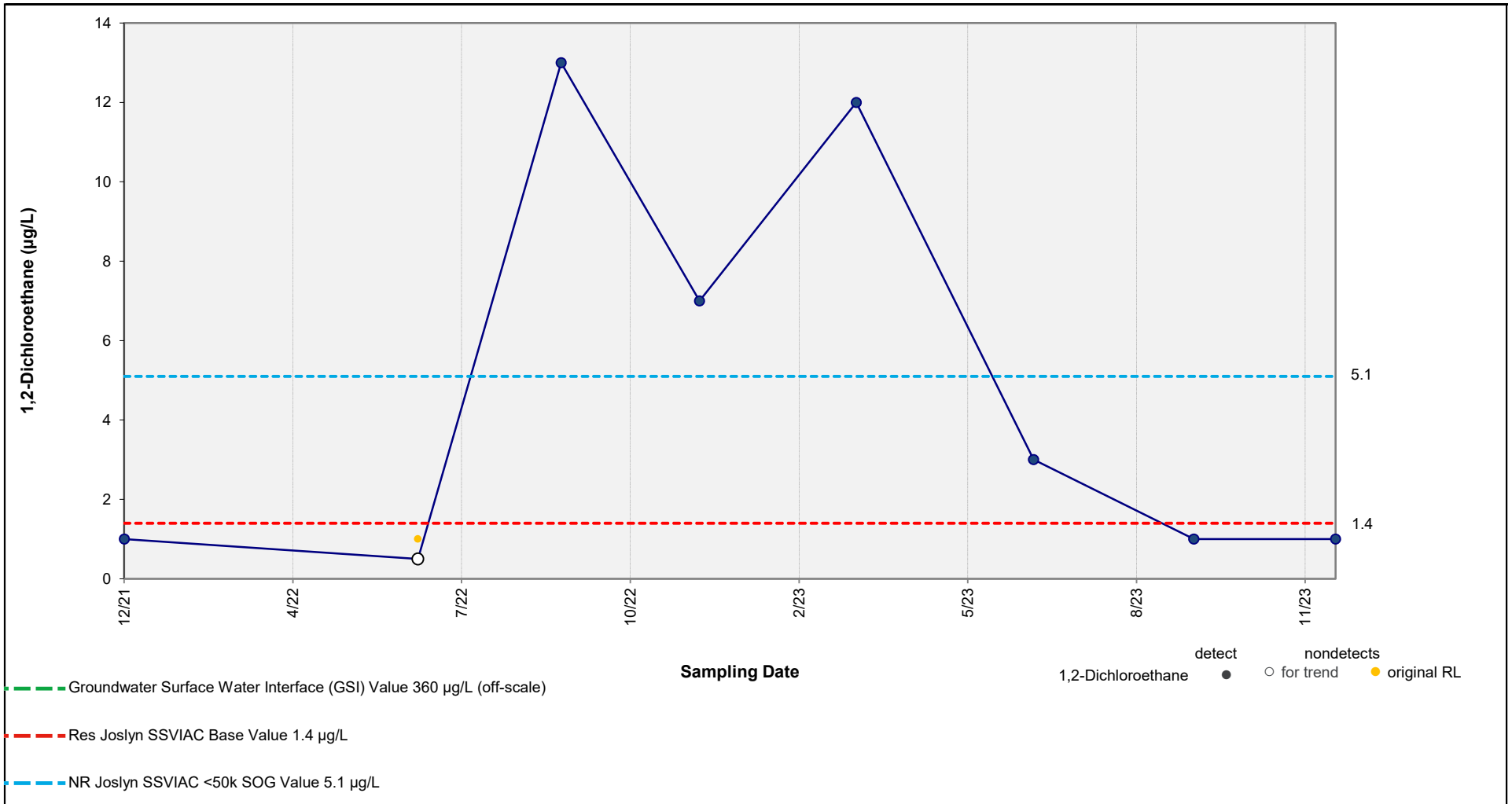
Results of Mann-Kendall Test for Trend: **INCREASING TREND**
 p value = Note: p value < 0.05 indicates a statistically significant trend (95% confidence level).

	Concentration vs. Time Plot – 1,2-Dichloroethane in Well JS-MW-10 RACER PNC Joslyn Parcel	Figure C-7
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Concentration vs. Time Plot – Benzene in Well JS-MW-10
 RACER PNC Joslyn Parcel

Figure C-8



Results of Mann-Kendall Test for Trend:

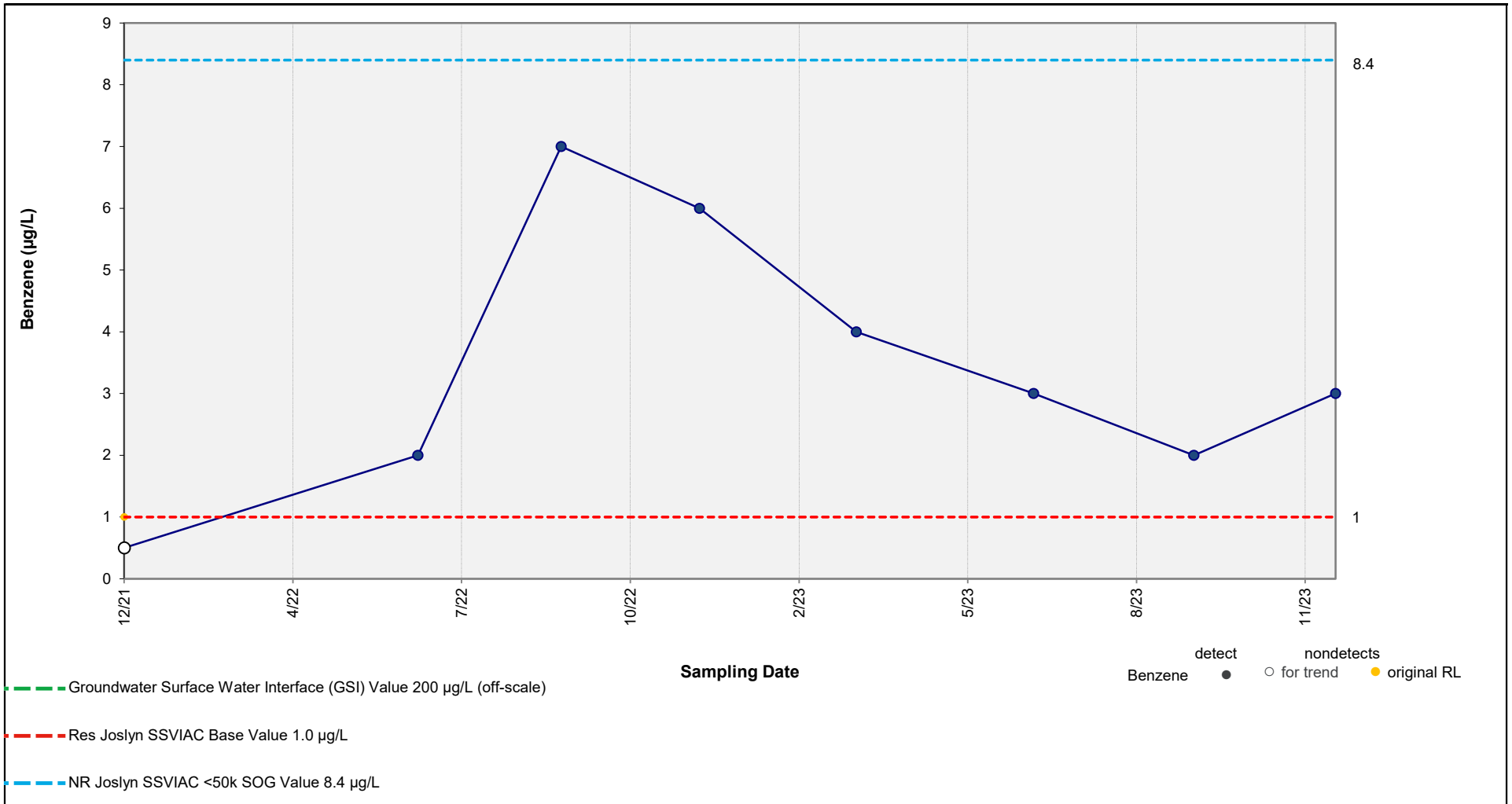
No Significant Trend

p value = Note: p value < 0.05 indicates a statistically significant trend (95% confidence level).




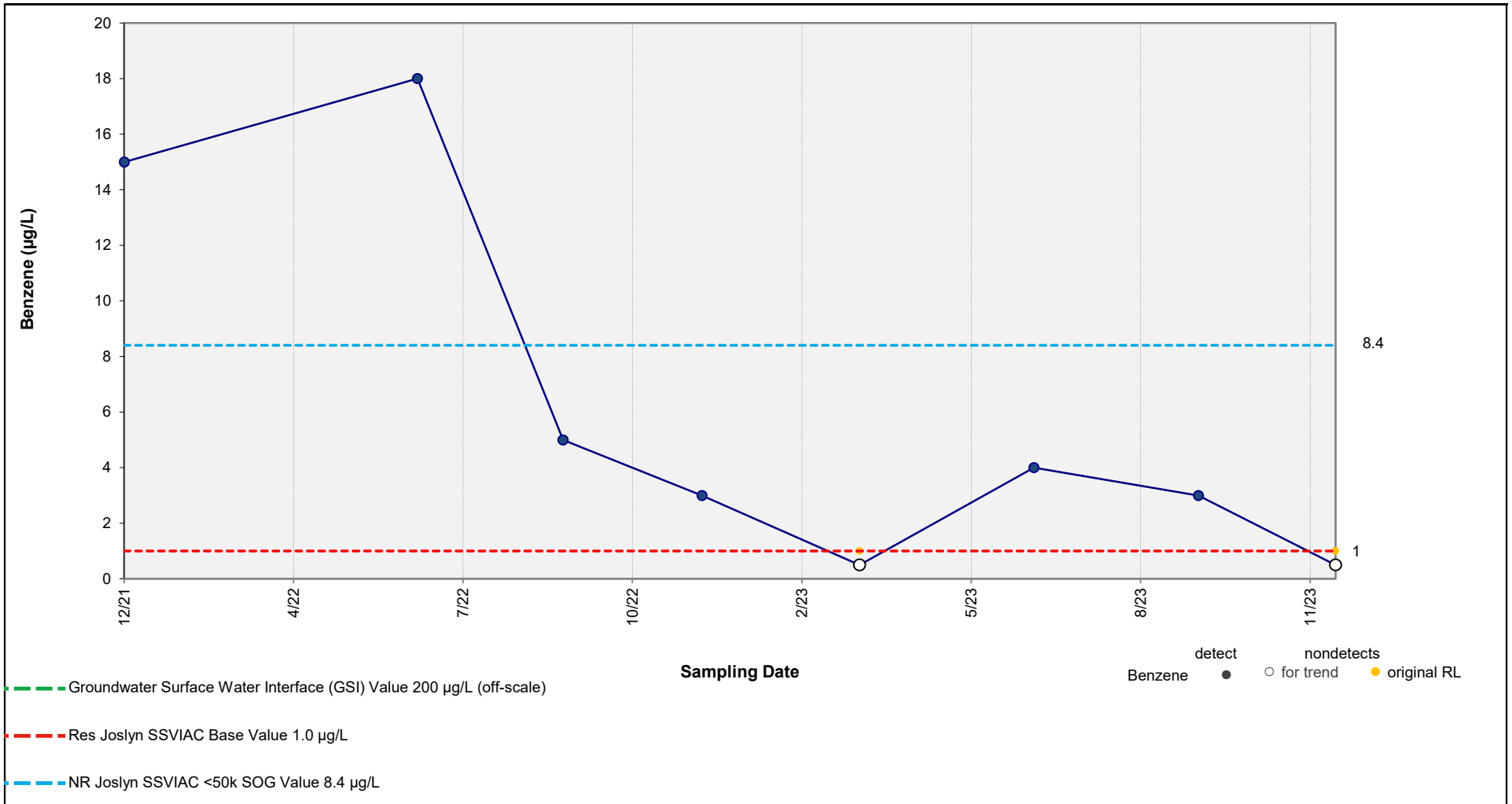
Concentration vs. Time Plot – 1,2-Dichloroethane in Well JS-MW-16
RACER PNC Joslyn Parcel

Figure C-9




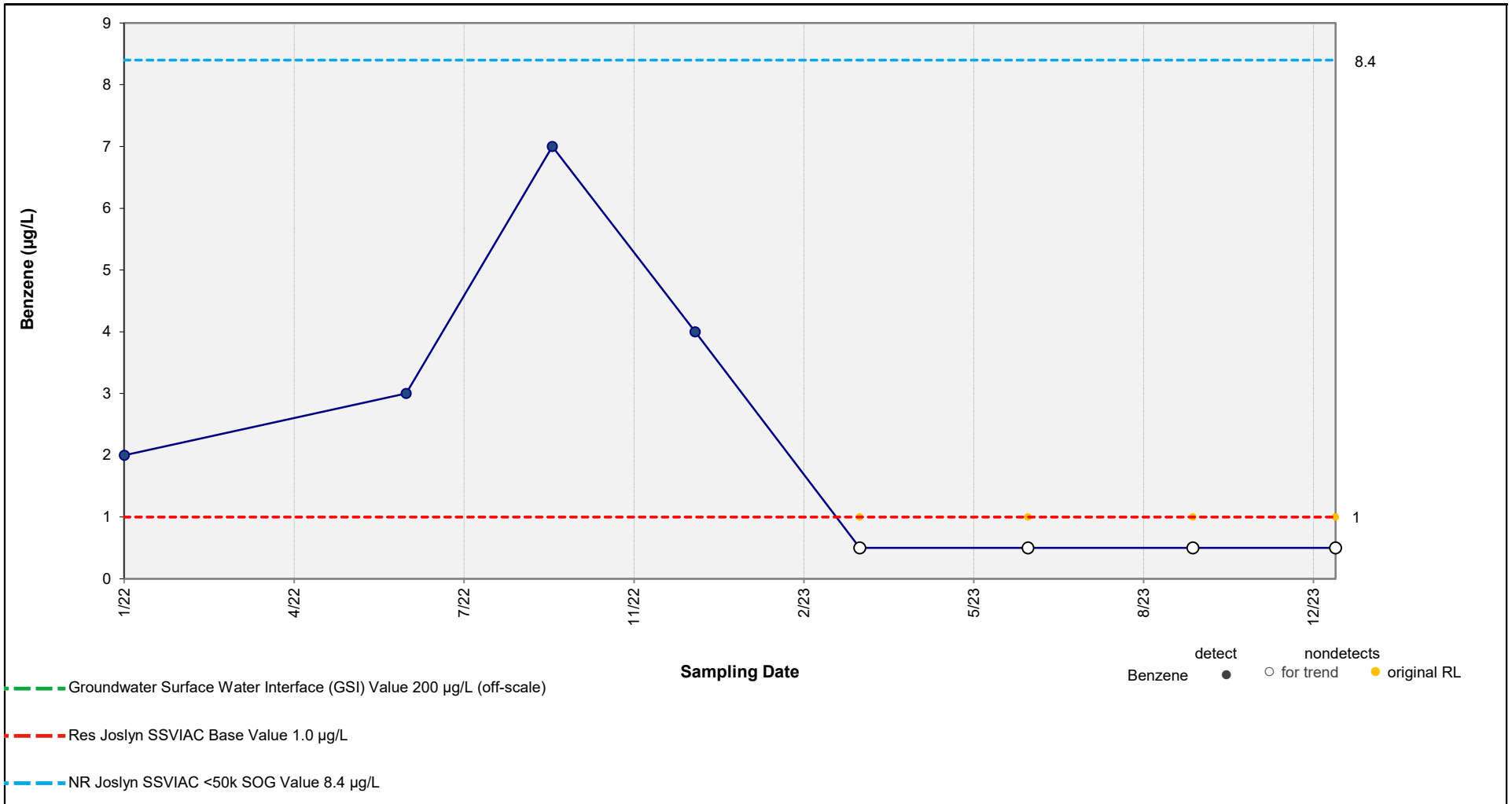
Results of Mann-Kendall Test for Trend: **No Significant Trend**
 p value = Note: p value < 0.05 indicates a statistically significant trend (95% confidence level).

	Concentration vs. Time Plot – Benzene in Well JS-MW-16 RACER PNC Joslyn Parcel	Figure C-10
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Results of Mann-Kendall Test for Trend: **DECREASING TREND**
 p value = Note: p value < 0.05 indicates a statistically significant trend (95% confidence level).

	Concentration vs. Time Plot – Benzene in Well JS-MW-19 RACER PNC Joslyn Parcel	Figure C-11
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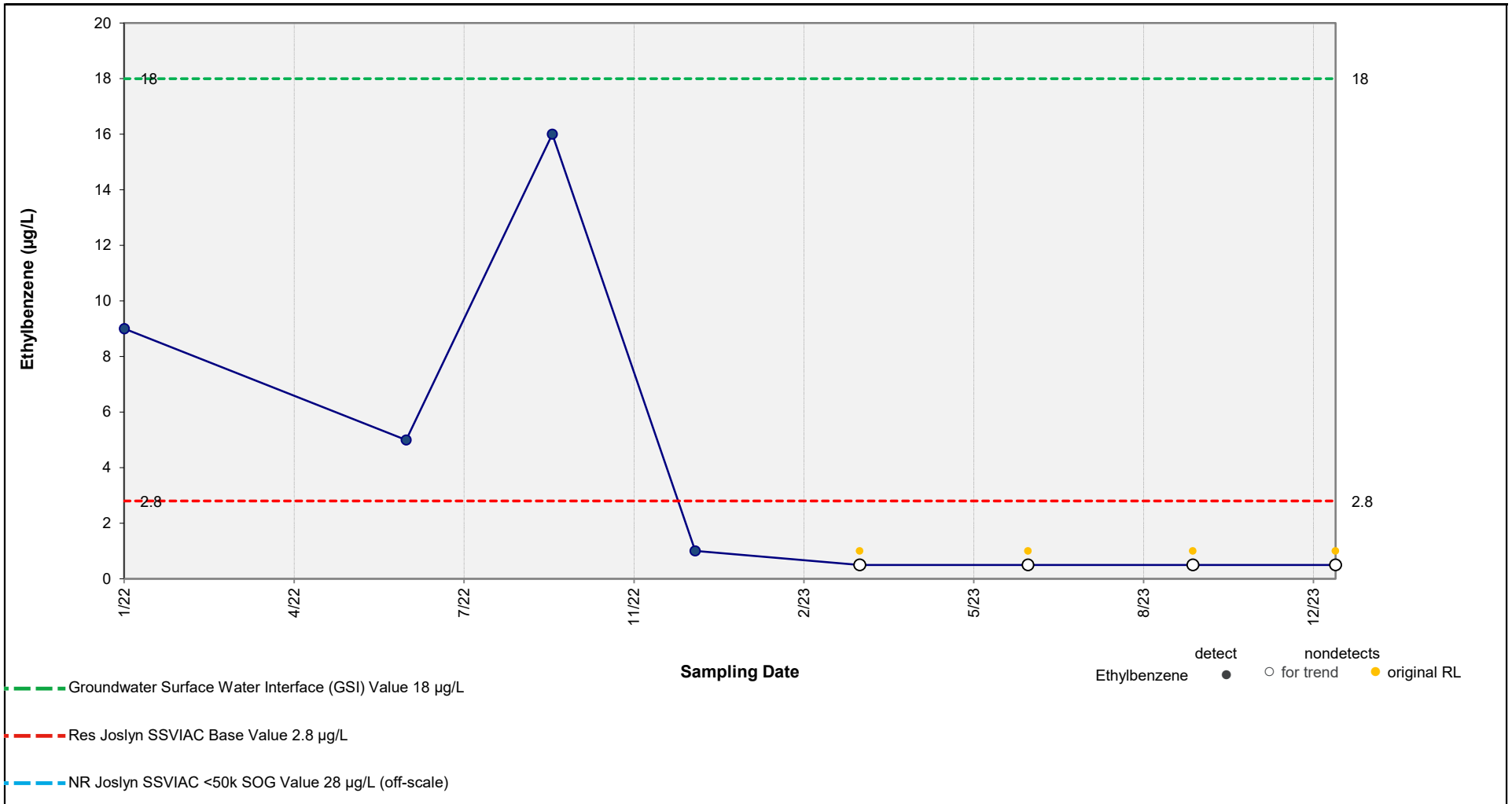


Results of Mann-Kendall Test for Trend: **No Significant Trend**
 p value = Note: p value < 0.05 indicates a statistically significant trend (95% confidence level).



Concentration vs. Time Plot – Benzene in Well JS-MW-23
 RACER PNC Joslyn Parcel

Figure C-12



Results of Mann-Kendall Test for Trend:

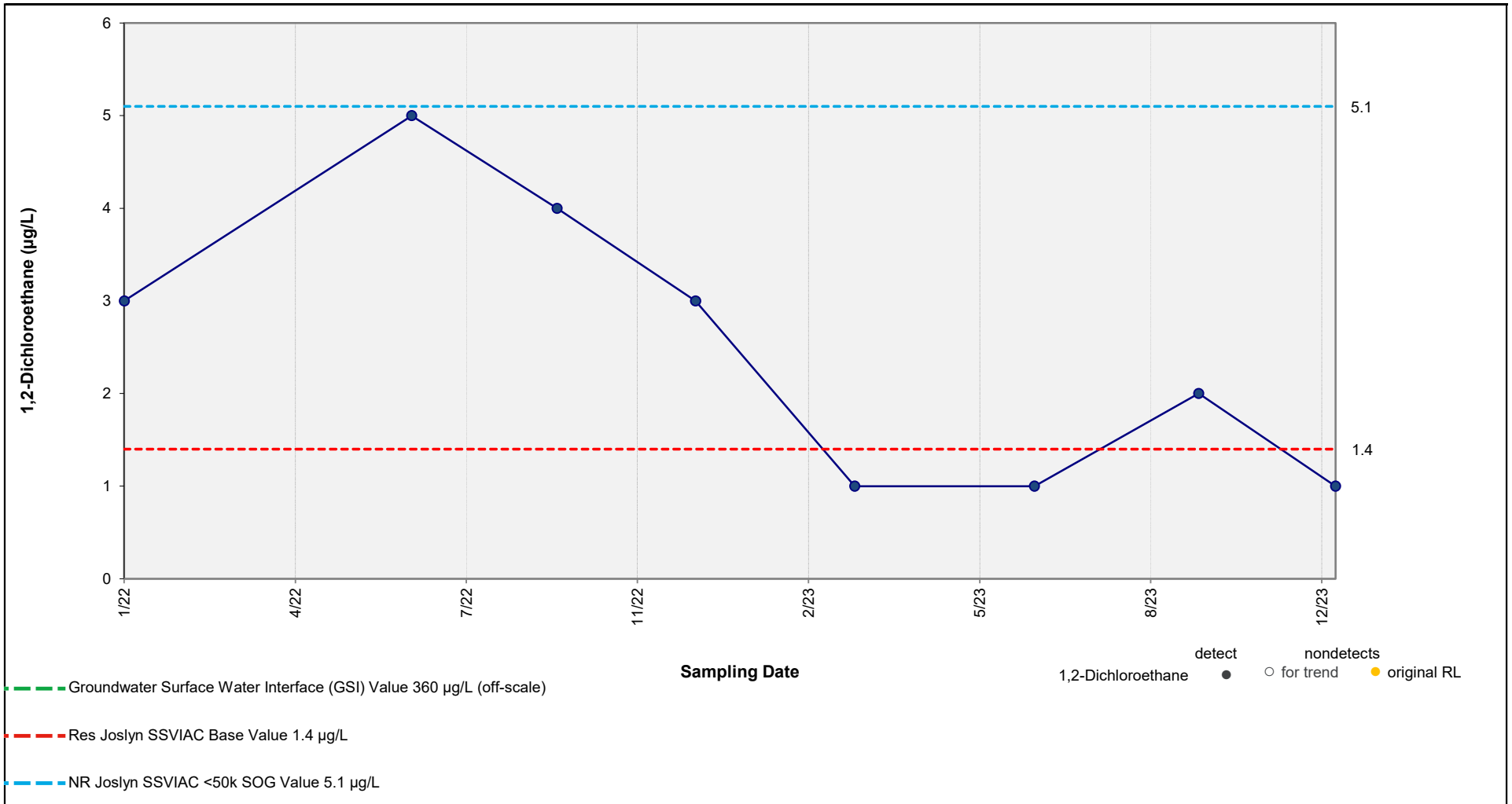
DECREASING TREND

p value = Note: p value < 0.05 indicates a statistically significant trend (95% confidence level).




Concentration vs. Time Plot – Ethylbenzene in Well JS-MW-23
RACER PNC Joslyn Parcel

Figure C-13



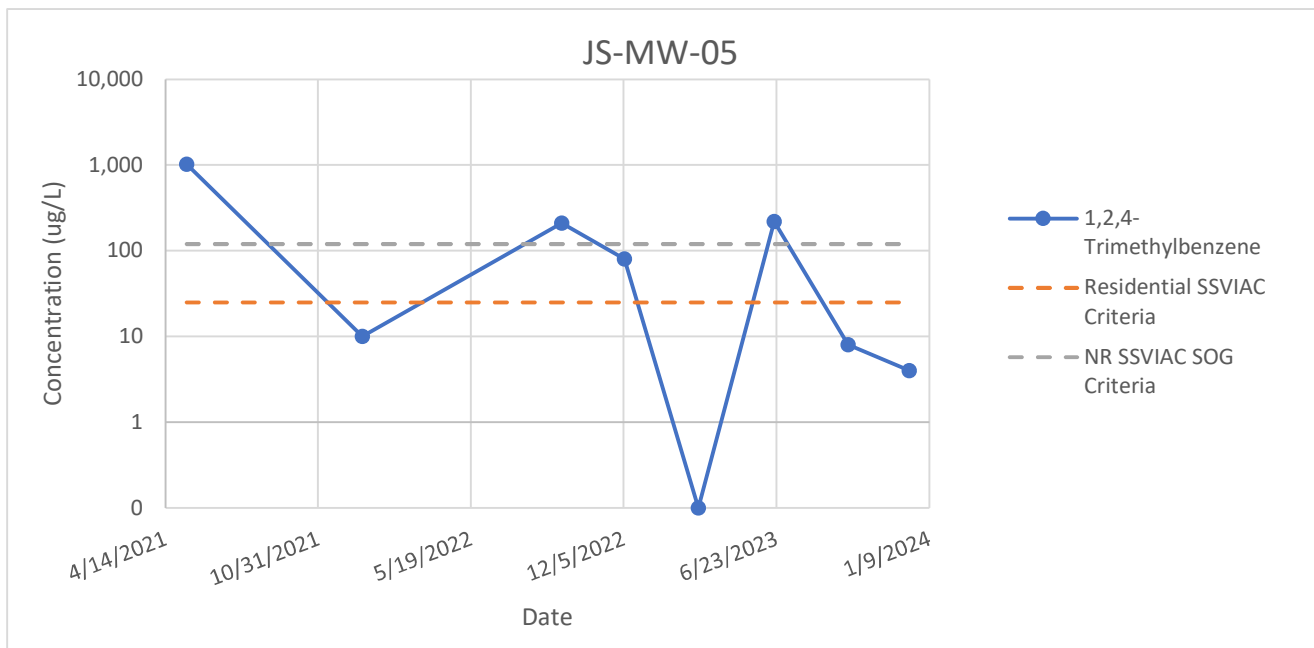
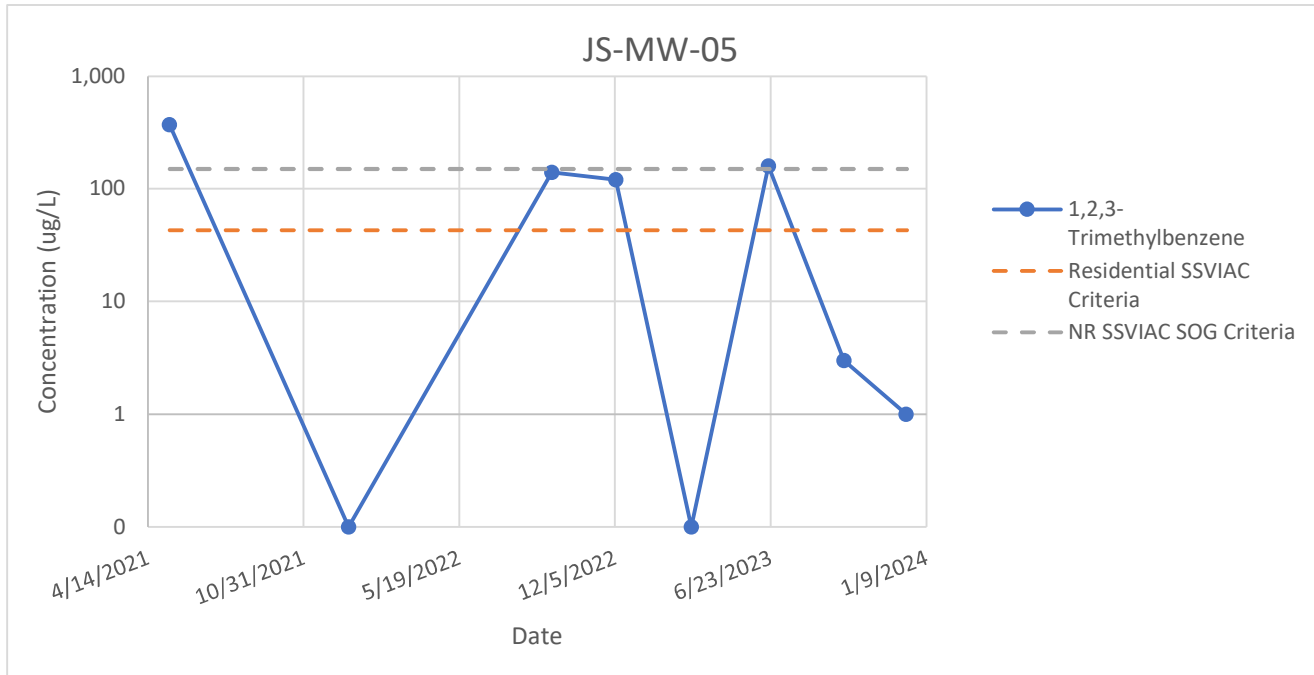
Results of Mann-Kendall Test for Trend: **DECREASING TREND**
 p value = Note: p value < 0.05 indicates a statistically significant trend (95% confidence level).

	Concentration vs. Time Plot – 1,2-Dichloroethane in Well JS-MW-27 RACER PNC Joslyn Parcel	Figure C-14
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Groundwater Trend Graphs



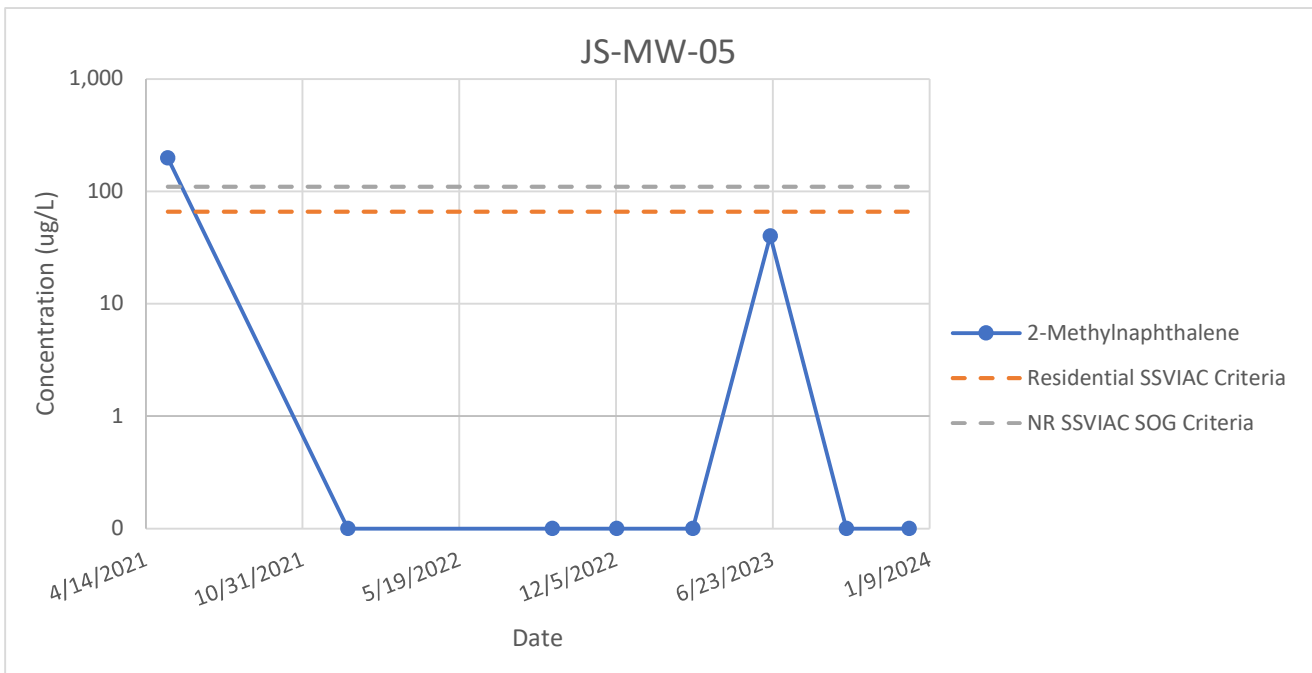
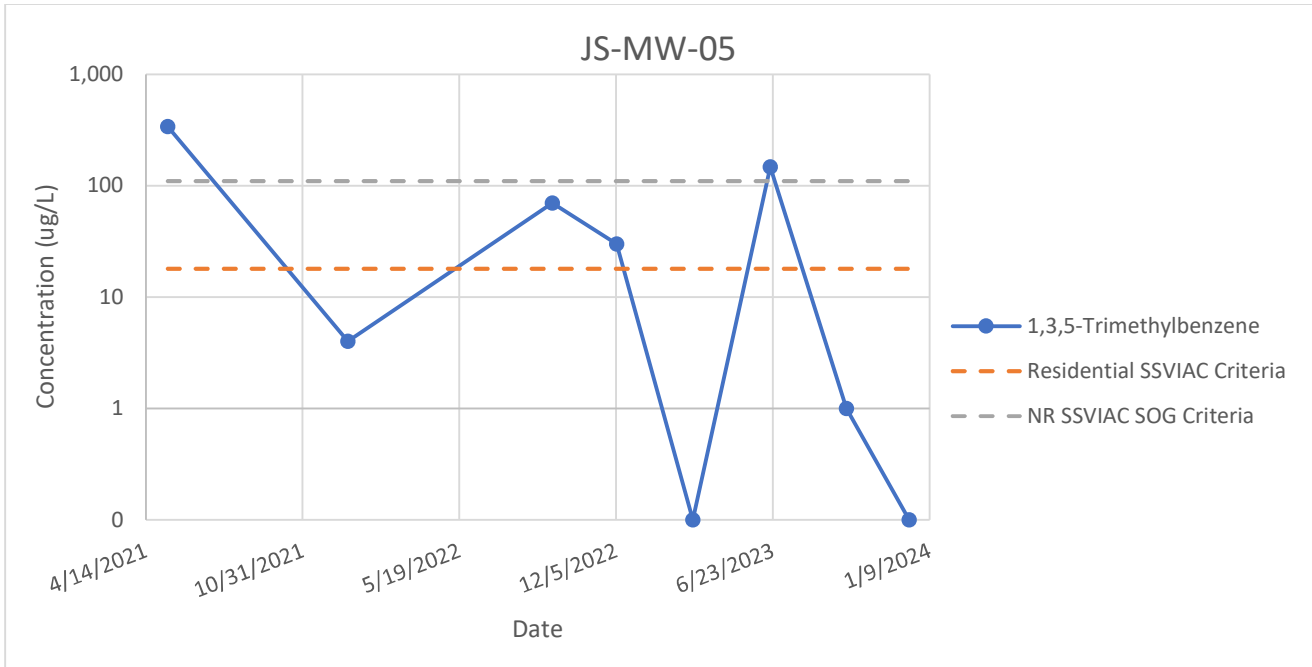
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Groundwater Trend Graphs



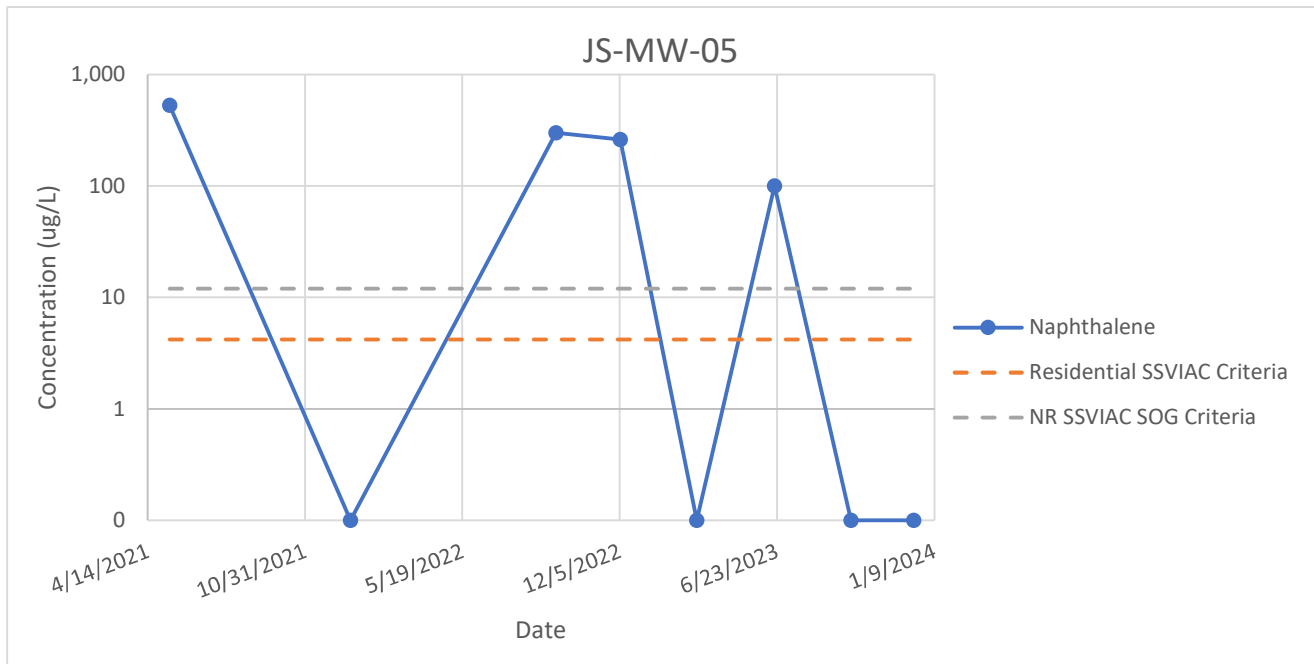
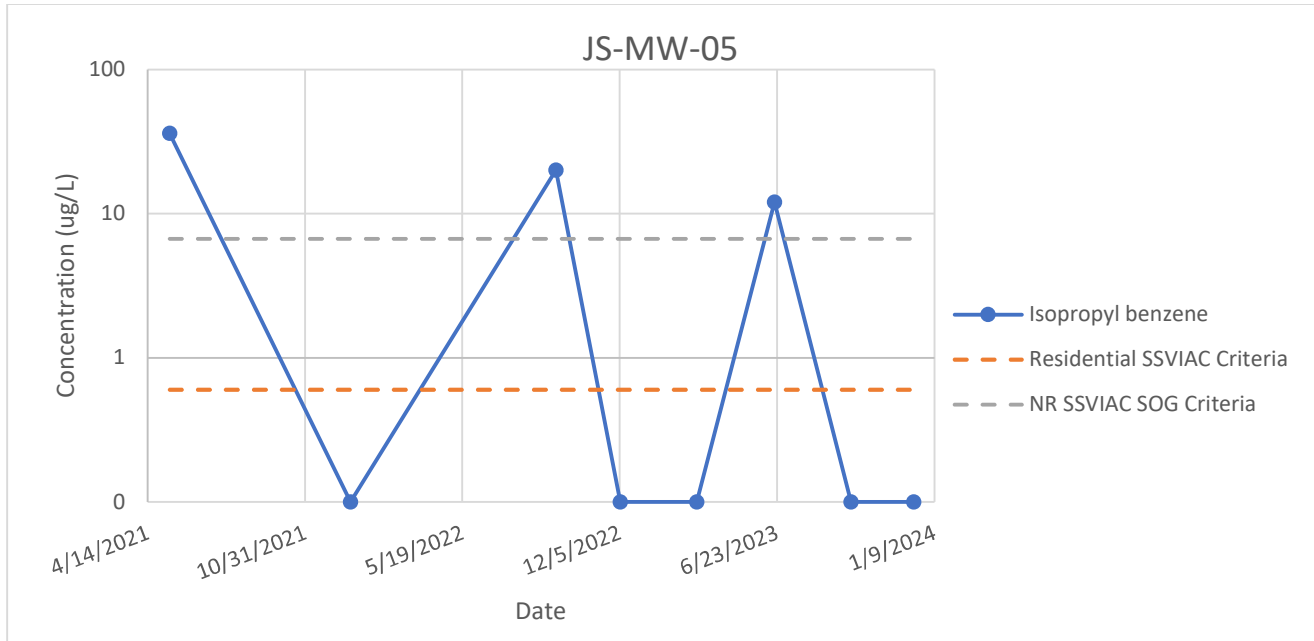
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Groundwater Trend Graphs



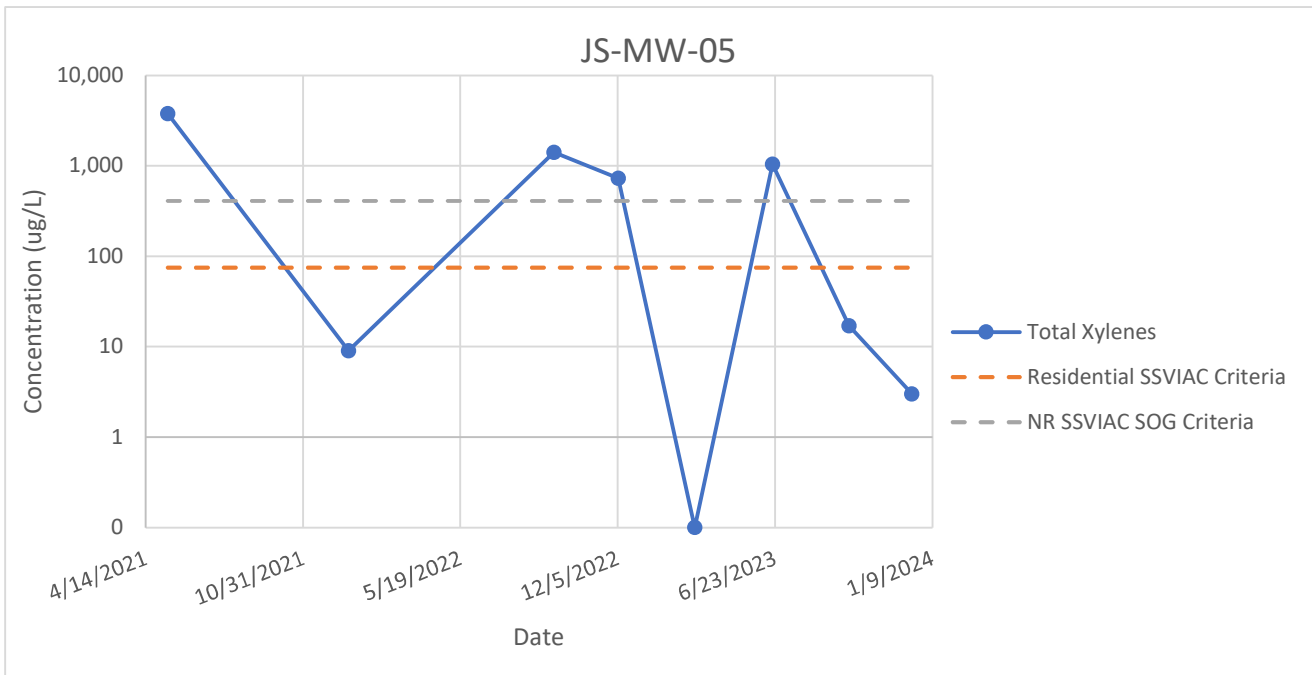
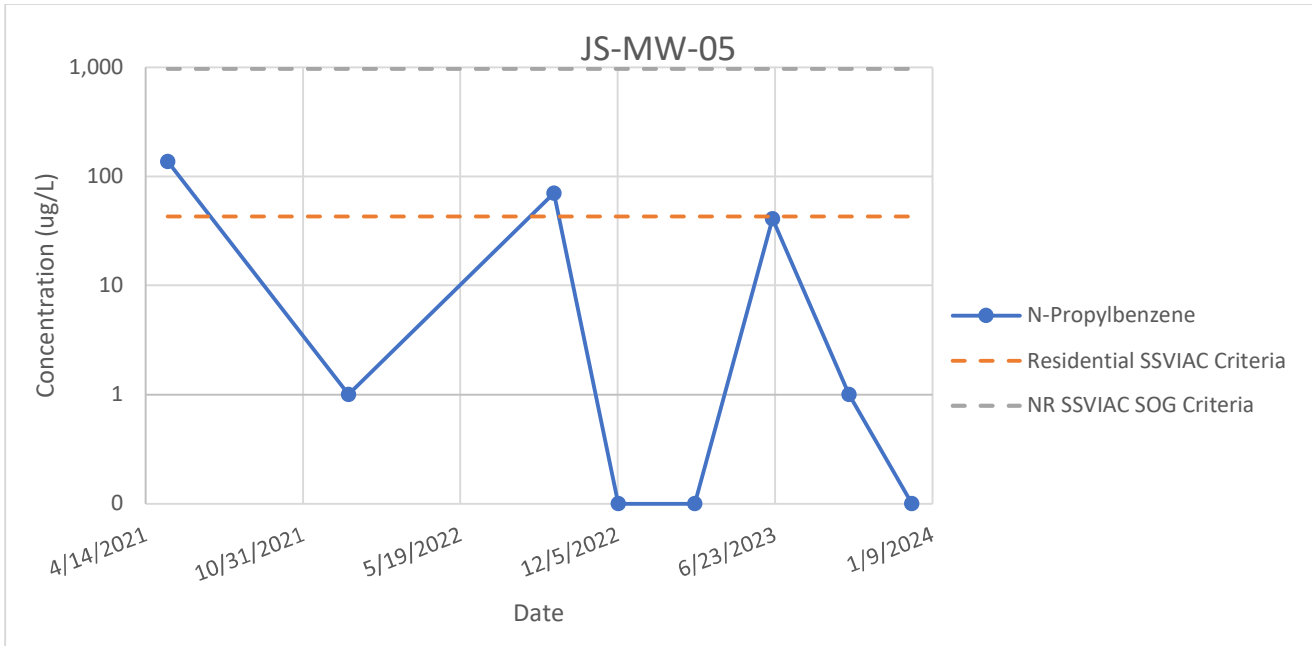
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Groundwater Trend Graphs



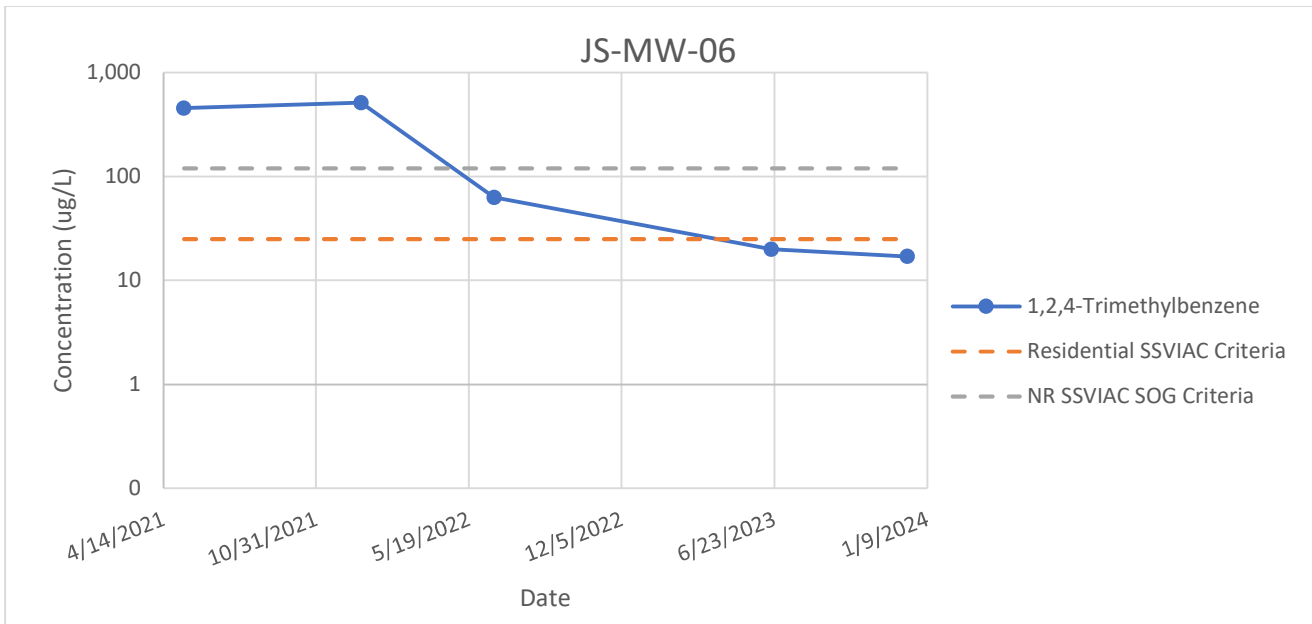
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Groundwater Trend Graphs



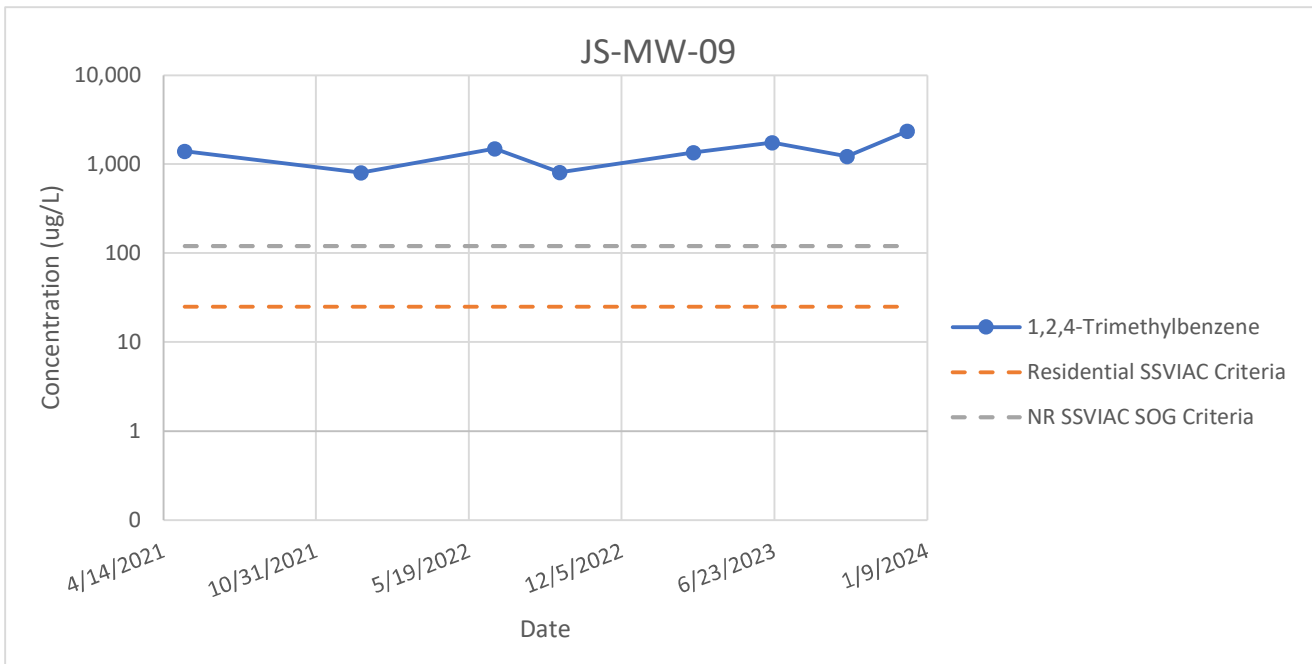
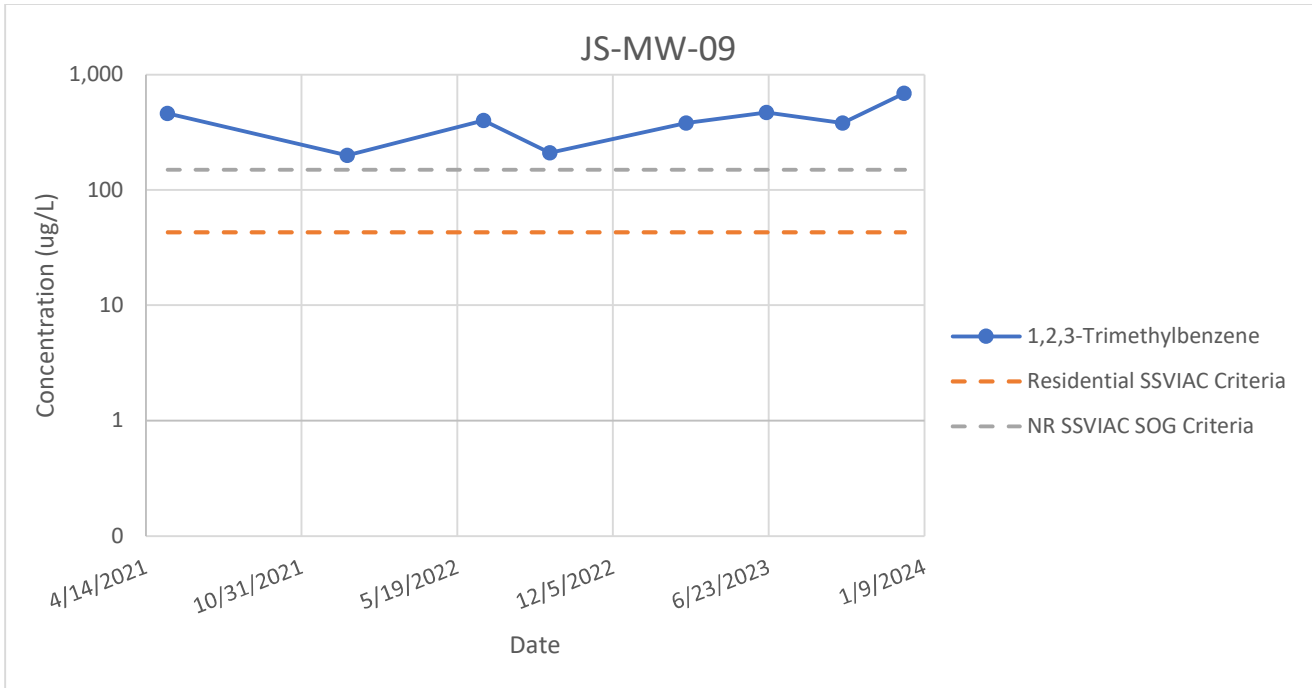
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Groundwater Trend Graphs



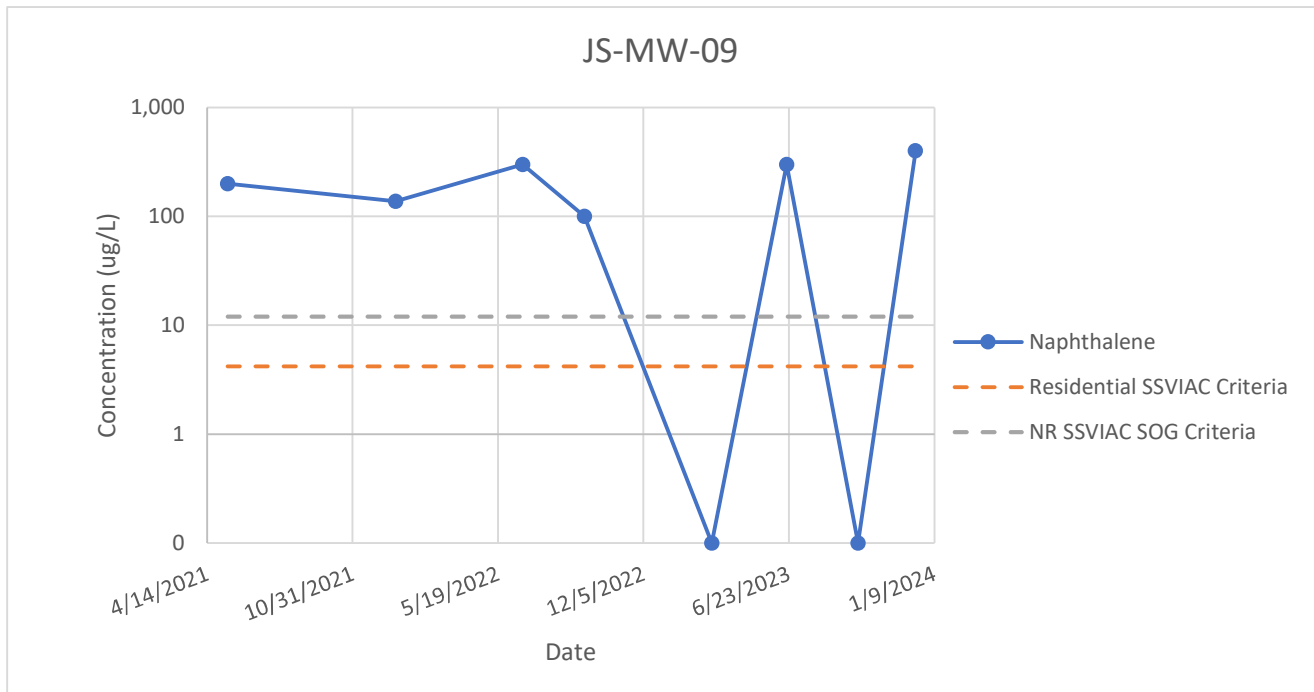
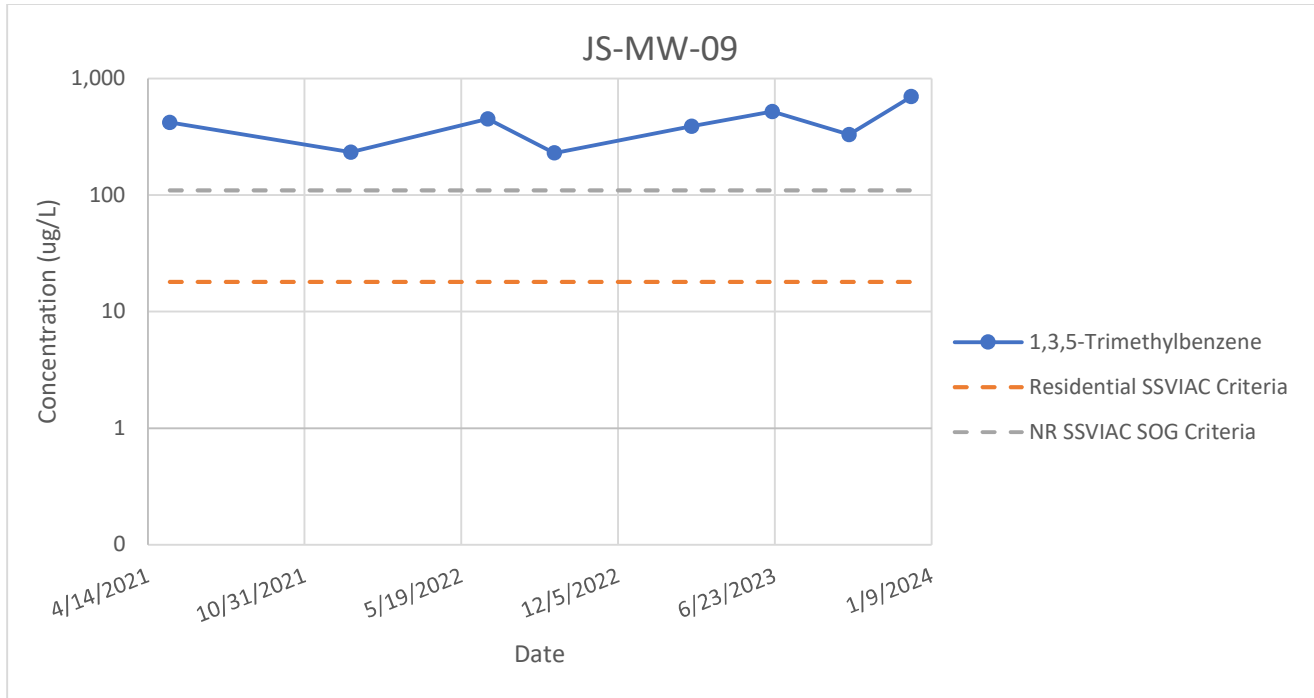
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Groundwater Trend Graphs



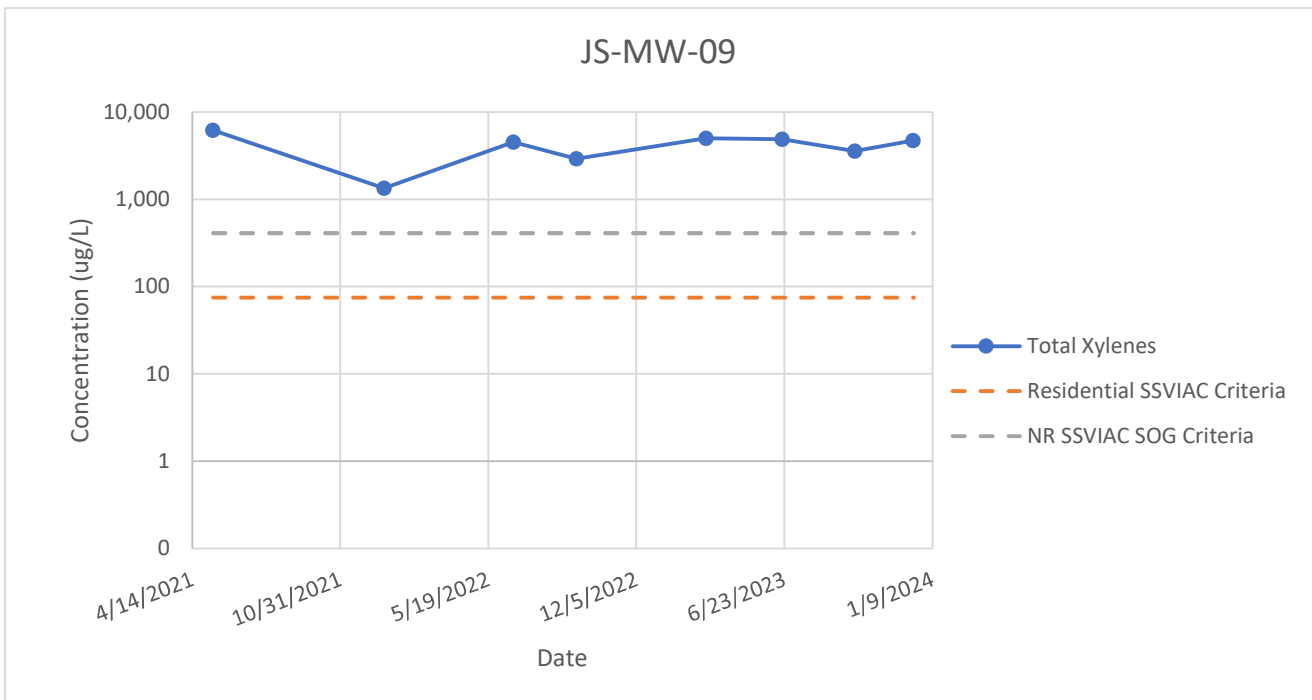
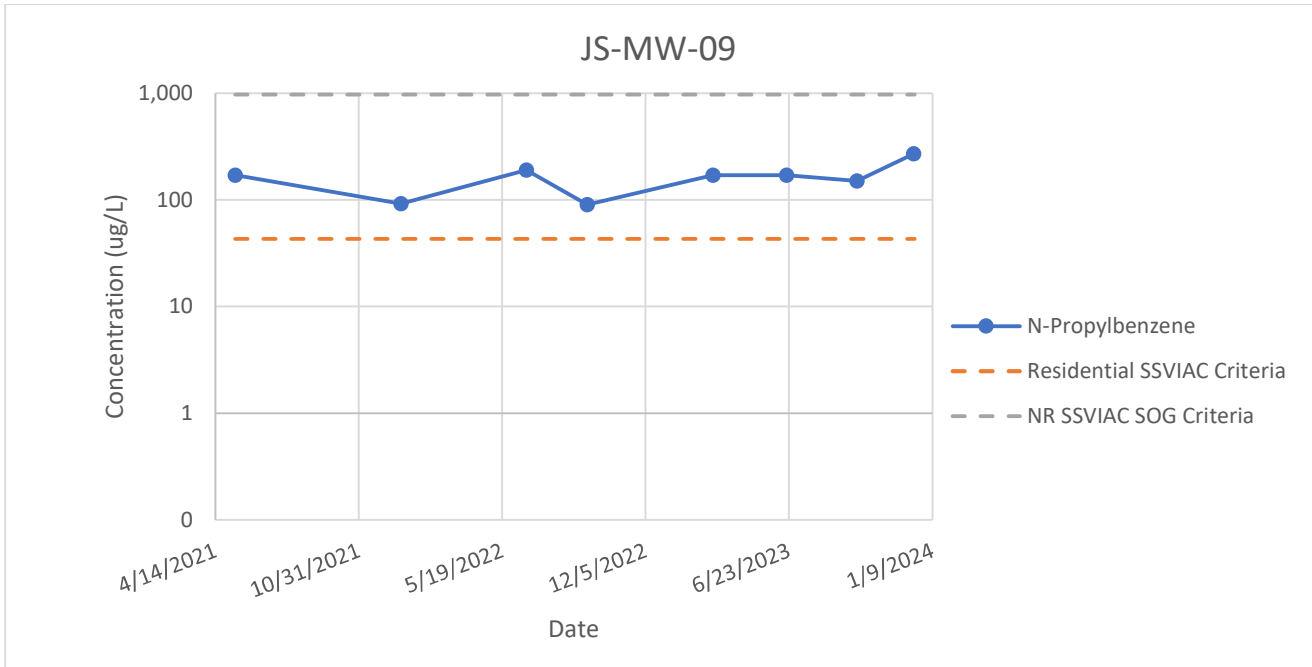
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Groundwater Trend Graphs



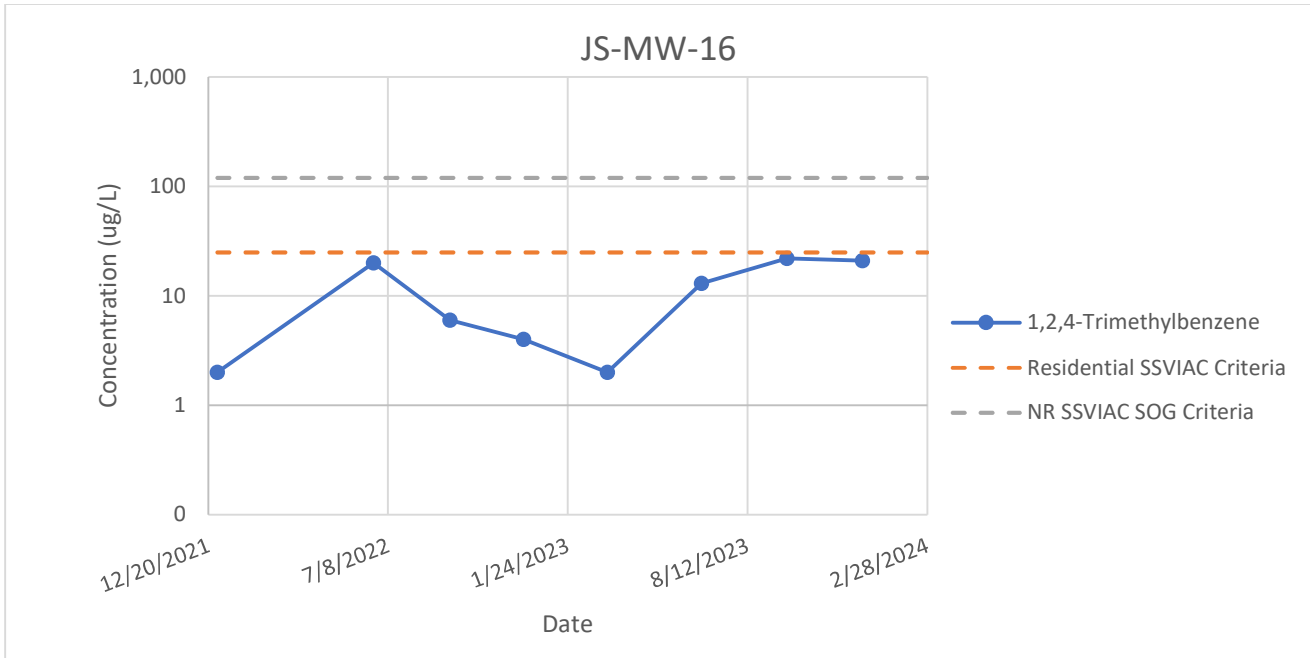
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Groundwater Trend Graphs



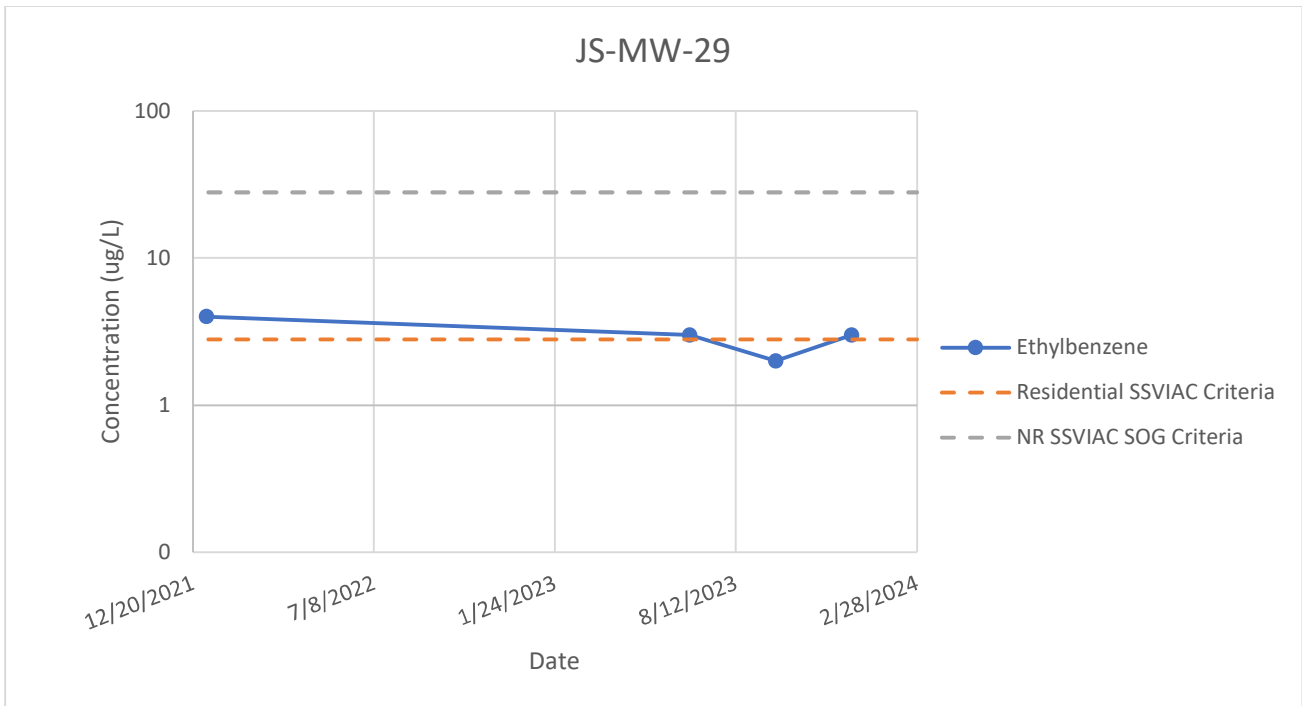
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Groundwater Trend Graphs



Appendix C



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