Memo

SUBJECT
2023 Fiero Temporary Monitoring Plan
Third Quarter Results

TO
Jennifer Stanhope, USEPA

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This memorandum summarizes the results of the third quarter (3Q) 2023 monitoring event completed as part of the revised 2023 Fiero Temporary Monitoring Plan (FTMP) at the Revitalizing Auto Communities Environmental Response Trust (RACER) Pontiac North Campus Site (Site) located in Pontiac, Michigan. The quarterly event consisted of gauging and sampling select monitoring wells and sampling soil vapor monitoring points (SVMPs) at the former Fiero property. The monitoring locations included in the 3Q quarterly event are shown on **Figure 1**.

On August 28th, 2023, Arcadis began monitoring activities by gauging Site monitoring wells. MWOS-08 and MWF16-16 were covered or inaccessible at the time of gauging and were gauged at a later date, August 29th and August 31st, 2023, respectively. Following the gauging event, monitoring wells were sampled for volatile organic compounds (VOCs) over a 4-day period from August 28th-31st. Soil vapor monitoring points (SVMP) were sampled on August 28th, 2023. Due to a transportation issue, samples from MW-09-22, MW-16-22, MWF16-05, MWF16-16, MWF16-18 were lost and could not be recovered. MW-09-22, MW-16-22, MWF16-05, MWF16-16, MWF16-18 were resampled on September 7th, 2023. All groundwater samples were submitted to Merit Laboratories and analyzed for VOCs in accordance with United States Environmental Protection Agency (USEPA) Method 8260 and all soil vapor samples were submitted to Eurofins Air Toxics and analyzed for VOCs in accordance with USEPA Method TO-15. The analytical reports from Merit and Eurofins are provided as **Attachment 1**. The results of the gauging and sampling are provided in the attached tables:

- **Table 1** – Summary of Groundwater Elevations
- **Table 2** – Summary of Monitoring Well Analytical Results
- **Table 3** – Summary of Soil Vapor Monitoring Point Results

Groundwater Gauging

A range of monitoring wells were gauged for depth to water and total depth during the 3Q event using an electronic water level meter accurate to 0.01-feet. The groundwater elevation data was used to create the groundwater elevation contour map included as **Figure 2**. As shown on **Figure 2**, groundwater gradient is to the southwest consistent with previous gauging events.

Groundwater Analytical Summary

Groundwater samples were collected from 14 monitoring wells and submitted for analysis of VOCs. A summary of the monitoring wells sampled and exceedances of the residential Site-Specific Volatilization to Indoor Air Criteria (SSVIAC) for groundwater is shown on **Figure 3**. Groundwater sampling logs can be found in **Attachment 2**. The following is based on the analytical results from the groundwater sampling:

- Groundwater samples collected from the 14 monitoring wells did not exceed the non-residential SSVIAC.
- Elevated TCE, PCE, and cis-1,2-DCE VOC detections remain near the identified VOC source areas in the central portion of the Site and decrease steadily as they approach the southwest property boundary.
- One off-site location, Monitoring Well MWOS-10, exceeded the residential SSVIAC for TCE during the first, second, and third quarter sampling events. TCE at this location has ranged from (7 – 12 µg/L) from November 2021 through August 2023.

Groundwater Stability Analysis

Mann-Kendall trend tests were conducted at wells with sufficient data for constituents present at concentrations higher than the residential SSVIAC, and coefficient of variation values were calculated. In addition, the magnitude of the trend was evaluated using Sen's slope estimator (SSE). The SSE is a non-parametric method for estimating the slope of time-series data. The approach involves computing slopes for each point compared to every successive point, and then using the median of these slopes as an estimate of overall slope. The SSE is robust to outliers, data sets with a limited number of non-detects (i.e., values less than sample reporting limits), and datasets with missing values. The Mann-Kendall trend analysis included data from 2017 through 2023, to coincide with the more frequent sampling events, and only included wells with at least 5 data points collected since 2017 with at least 50 percent detections. The Mann-Kendall approach is further outlined in Arcadis' April 4, 2023 Fiero Temporary Groundwater Monitoring Program approved by USEPA. The methodology, preliminary results summary, figures, and trend graphs associated with the Mann-Kendall trend tests, as well as concentration over time trend graphs for wells that did not meet the criteria for Mann-Kendall analysis, are included in **Attachment 3**.

Key findings of the trend analysis include the following:

- PCE in groundwater is primarily stable with two wells indicating a statistically significant increasing trend: downgradient well MW-14-22 and a source area well MWF16-16. MW-14-22 has had an overall increasing trend for PCE since monitoring began; however, it saw an approximate 100 µg/L spike in concentration in second quarter 2023. Concentrations of PCE at MWF16-16 have continued to fluctuate over the past few years with an overall increasing trend beginning in second quarter 2023. MWF16-05, located near the source area northern boundary, previously showed an increasing trend but has since changed to no significant trend beginning first quarter 2023. Stability analysis results for PCE in groundwater are summarized in **Attachment 3 (Figure 1A).**
- TCE in groundwater at MW-06-20, located near the southwest property boundary, continues to show an overall increasing trend. Concentrations in monitoring well MW-08-21, located near the southwest property boundary, have been increasing since second quarter 2022. Monitoring well MW-14-22, located downgradient of the source area has also shown an overall increasing trend. Monitoring well MWF16-18, located near a source area, had previously had no significant trend, but as of third quarter 2023 concentrations have increased resulting in an overall increasing trend. MWOS-10 located offsite and downgradient from MW-06-20 and MW-08-21 continues to fluctuate above and below criteria and has no significant trend. MWOS-09R previously had a decreasing trend, but now shows no significant trend beginning first quarter 2023. Stability analysis results for TCE in groundwater are summarized in **Attachment 3 (Figure 1B).**
- Cis-1,2-DCE in groundwater continues to show an increasing trend at MWF16-18 near a source area. Concentrations have been increasing since first quarter 2021. MWF16-23, previously showing no significant trend is now a decreasing trend with concentrations dropping since fourth quarter 2019. All

other sampled locations continue to be stable or decreasing. Stability analysis results for cis-1,2-DCE in groundwater are summarized in **Attachment 3 (Figure 1C).**

Soil Vapor Analytical Summary

Soil vapor samples were collected from all six SVMP locations on-site and off-site. An analytical summary of the SVMPs sampled is shown on **Figure 3**. Soil vapor collection logs can be found in **Attachment 4**. Analytical results for all SVMP locations, both on-site and off-site, were below the residential SSVIAC.

Soil Vapor Stability Analysis

Mann-Kendall trend tests were conducted at all SVMP with sufficient data for constituents present at concentrations higher than the residential SSVIAC, and coefficient of variation values were calculated. The Mann-Kendall trend analysis included all data collected from the SVMP's since installation in 2021 through August 2023. The methodology, preliminary results summary, figures, and trend graphs associated with the Mann-Kendall trend tests are included in **Attachment 3**.

Key findings of the trend analysis include the following:

- PCE in soil vapor is stable at all on-site and off-site locations. Stability analysis results for PCE in soil vapor are summarized in **Attachment 3 (Figure 2A).**
- TCE in soil vapor is stable or decreasing at all on-site and off-site locations. Stability analysis results for TCE in soil vapor are summarized in **Attachment 3 (Figure 2B).**

ZVI Summary

ZVI Injections were completed in Q1 2023 accompanied by quarterly sampling for four quarters. Currently three quarterly sampling events have been completed and ZVI performance data has been tracked. This ZVI injection event is being completed as a pilot test to collect installation and performance data for consideration of any potential needed future ZVI remedies at the Site. Concentrations in Monitoring Wells MW-13-22, MW-15-22, and MWF16-16 remain unchanged while MW-14-22 and MW-16-22 increased and decreased respectively. Results are shown in **Table 2** and on **Figure 4**. The results will be discussed further in the 2023 Fiero Summary Report that will be forthcoming.

Monitoring Well Status and Recommendations

There are no new additions to the monitoring well recommendations at this time.

Closing

No modifications to the approved FTMP are recommended at this time. The 4th quarter 2023 FTMP monitoring event was completed November 27th through December 5th, 2023, and a 2023 Fiero Summary Report, including the 2024 Temporary Monitoring Plan, will be forthcoming. For any questions or concerns related to the 3Q FTMP results contact Tiffany Linder by phone at 810-225-1928 or by email at Tiffany.Linder@arcadis.com.

Jennifer Stanhope
USEPA
January 18, 2024

Enclosures:

Tables:

Table 1 – 2023 Groundwater Elevation Summary

Table 2 – 2023 Summary of Groundwater Analytical Results

Table 3 – 2023 Summary of Soil Gas Analytical Results

Figures:

Figure 1 – 2023 Fiero Temporary Monitoring Plan 3Q Monitoring Locations

Figure 2 – Fiero Groundwater Contour Map August 28, 2023

Figure 3 – Summary of Groundwater and Soil Gas Results Q3 2023

Figure 4 – ZVI Performance Monitoring Summary

Attachments:

Attachment 1 – Analytical Reports

Attachment 2 – Groundwater Sampling Logs

Attachment 3 – Groundwater and Soil Vapor Stability Analysis

Attachment 4 – Soil Vapor Collection Logs

TABLES

Table 1
2023 Groundwater Elevation Summary
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

ARCADIS

Well ID	Ground Elevation	Well Elevation [1]	Total Depth (ft)[2]	1st Quarter			2nd Quarter			3rd Quarter		
				Date	Depth to Water (ft)[2]	Groundwater Elevation	Date	Depth to Water (ft)[2]	Groundwater Elevation	Date	Depth to Water (ft)[2]	Groundwater Elevation
Former Fiero Powerhouse												
MW-02-17	973.53	972.52	29.71	--	--	--	6/5/2023	25.82	946.70	--	--	--
MW-05-18	976.03	975.21	33.58	--	--	--	6/5/2023	27.22	947.99	--	--	--
MW-06-20	975.54	974.97	29.55	3/6/2023	29.22	945.75	6/5/2023	26.06	948.91	8/28/2023	26.03	948.94
MW-07-20	975.48	975.06	30.15	--	--	--	6/5/2023	26.62	948.44	--	--	--
MW-08-21	976.04	975.50	30.70	3/6/2023	27.58	947.92	6/5/2023	26.83	948.67	8/28/2023	26.81	948.69
MW-13-22	973.17	972.62	27.10	3/6/2023	22.88	949.74	6/5/2023	21.98	950.64	8/28/2023	21.45	951.17
MW-14-22	973.21	972.71	35.20	3/6/2023	23.25	949.46	6/5/2023	22.51	950.20	8/28/2023	22.36	950.35
MW-15-22	972.97	972.66	36.50	3/6/2023	23.37	949.29	6/5/2023	22.64	950.02	8/28/2023	22.50	950.16
MW-16-22	972.84	972.50	34.76	3/7/2023	23.45	949.05	6/5/2023	26.59	945.91	8/28/2023	26.48	946.02
MWF7-02	NA	970.58	22.62	--	--	--	6/5/2023	19.39	951.19	--	--	--
MWF7-03	973.63	973.31	32.52	--	--	--	6/5/2023	21.51	951.80	--	--	--
MWF12-01R	964.97	967.99	23.24	--	--	--	6/5/2023	20.27	947.72	--	--	--
MWF12-02R	962.38	961.91	22.49	--	--	--	6/5/2023	13.45	948.46	--	--	--
MWF15-01	NA	969.35	28.78	--	--	--	6/7/2023	18.73	950.62	--	--	--
MWF16-07	973.36	972.65	17.48	--	--	--	6/5/2023	4.66	967.99	--	--	--
MWF16-15	973.30	972.71	35.48	--	--	--	6/5/2023	22.98	949.73	--	--	--
MWF16-23	973.82	973.39	30.75	3/6/2023	24.76	948.63	6/5/2023	24.01	949.38	8/28/2023	23.94	949.45
Unknown-01	969.51	969.16	24.06	--	--	--	6/5/2023	18.55	950.61	--	--	--
Former Fiero Assembly												
MW-09-22	973.83	973.46	33.37	3/6/2023	21.84	951.62	6/5/2023	21.19	952.27	8/28/2023	21.06	952.40
MW-11-22	977.42	976.75	34.69	--	--	--	6/5/2023	27.60	949.15	--	--	--
MWF2	NA	971.74	84.88	--	--	--	6/5/2023	45.43	926.31	--	--	--
MWF8-01	NA	972.94	27.18	--	--	--	6/5/2023	18.68	954.26	--	--	--
TW-12-22	973.52	973.39	32.68	--	--	--	6/5/2023	22.93	950.46	--	--	--
MWF16-05	973.95	973.68	23.00	3/6/2023	21.22	952.46	6/5/2023	20.53	953.15	8/28/2023	20.40	953.28
MWF16-06	974.02	973.77	28.85	--	--	--	6/5/2023	14.48	959.29	--	--	--
MWF16-12	973.60	973.20	18.89	--	--	--	6/5/2023	14.13	959.07	--	--	--
MWF16-16	973.44	973.22	31.65	3/6/2023	23.32	949.90	6/5/2023	22.57	950.65	8/31/2023	22.35	950.87
MWF16-17	973.70	973.32	31.81	--	--	--	6/5/2023	20.14	953.18	--	--	--
MWF16-18	973.60	973.22	32.00	3/6/2023	21.69	951.53	6/5/2023	20.97	952.25	8/28/2023	20.70	952.52
MWF16-22	973.50	973.18	33.92	--	--	--	6/5/2023	23.38	949.80	--	--	--
MWF16-24	973.64	973.38	NM	--	--	--	NM	NM	NM	--	--	--
MWF16-25	NA	975.24	37.19	--	--	--	6/5/2023	26.08	949.16	--	--	--
MWF16-26	NA	974.14	36.25	--	--	--	6/5/2023	24.56	949.58	--	--	--
Offsite												
MWOS-08	975.55	975.09	29.15	3/6/2023	26.82	948.27	6/5/2023	26.07	949.02	8/29/2023	26.01	949.08
MWOS-09R	976.68	976.18	29.80	3/6/2023	28.05	948.13	6/5/2023	27.33	948.85	8/28/2023	27.30	948.88
MWOS-10	977.01	976.55	33.15	3/6/2023	29.19	947.36	6/5/2023	28.51	948.04	8/28/2023	27.53	949.02
Fiero Parking Lot												
PZF17-02	977.70	977.43	31.01	--	--	--	6/5/2023	24.11	953.32	--	--	--
PZF17-04	972.90	972.47	28.87	--	--	--	6/5/2023	20.16	952.31	--	--	--
PZF17-05	976.43	975.97	34.00	--	--	--	6/5/2023	26.05	949.92	--	--	--

Abbreviations:
ft - feet
NA - Not Available
NM - Not Measured
-- Not gauged during quarterly events

Notes:
1. MWF15-01 was covered at the time of Q2 gauging and was gauged at a later date
2. MWF16-24 was covered by a roll-off and could not be uncovered before the end of the Q2 event
3. MWF16-16 and MWOS-08 were covered at the time of Q3 gauging and were gauged at a later date

Footnotes:
[1] Top of Temporary Well Casing/Stickup Elevation is in feet National Vertical Geodetic Datum (1988).
[2] Measurements collected from top of temporary well casing/stickup.

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MW-02-17 6/6/2023 MW-02-17_GW-060623	MW-05-18 6/6/2023 MW-05-18_GW-060623	MW-06-20 3/7/2023 MW-06-20_GW-030723	MW-06-20 6/6/2023 MW-06-20_GW-060623
Volatile Organics								
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	2	8	5 [5]	3 [3]
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	1	6	7 [7]	5 [5]
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U [< 5 U]
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U [< 5 U]
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U [< 5 U]
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 25 U	< 25 U	< 25 U [< 25 U]	< 25 U [< 25 U]
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U [< 5 U]
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 50 U	< 50 U	< 50 U [<50 U]	< 50 U [< 50 U]
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 50 U	< 50 U	< 50 U [<50 U]	< 50 U [< 50 U]
Acrylonitrile	***120***	***67***	4,100	ug/L	< 2 U	< 2 U	< 2 U [<2 U]	< 2 U [< 2 U]
Benzene	***34***	***18***	1,100	ug/L	< 1 U	< 1 U	< 1 U [<1 U]	< 1 U [< 1 U]
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 1 U	< 1 U	< 1 U [<1 U]	< 1 U [< 1 U]
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 1 U	< 1 U	< 1 U [<1 U]	< 1 U [< 1 U]
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 1 U	< 1 U	< 1 U [<1 U]	< 1 U [< 1 U]
Bromomethane	***59***	***33***	1,200	ug/L	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U [< 5 U]
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U [< 5 U]
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MW-02-17 6/6/2023 MW-02-17_GW-060623	MW-05-18 6/6/2023 MW-05-18_GW-060623	MW-06-20 3/7/2023 MW-06-20_GW-030723	MW-06-20 6/6/2023 MW-06-20_GW-060623
CFC-11	***300***	***160***	6,000	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
CFC-12	***71***	***38***	1,400	ug/L	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U [< 5 U]
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U [< 5 U]
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U [< 5 U]
Chloroform	***19***	***10***	610	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
Chloromethane	***340***	***200***	7,400	ug/L	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U [< 5 U]
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	1	11	7 [7]	6 [6]
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
Dibromomethane	***450***	***230***	9,000	ug/L	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U [< 5 U]
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 10 U	< 10 U	< 10 U [<10 U]	< 10 U [< 10 U]
Ethylbenzene	***110***	***60***	3,600	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
Hexachloroethane	***130***	***64***	3,900	ug/L	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U [< 5 U]
Iodomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
Isopropyl benzene	***26***	***13***	810	ug/L	< 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]
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 50 U	< 50 U	< 50 U [<50 U]	< 50 U [< 50 U]
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U [< 5 U]
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U [< 5 U]
Naphthalene	***190***	***100***	6,200	ug/L	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U [< 5 U]
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 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]
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 5 U	< 5 U	< 5 U [<5 U]	< 5 U [< 5 U]
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
Styrene	***1,400***	***740***	45,000	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
Tetrachloroethene	***250***	***130***	3,400	ug/L	5	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 90 U	< 90 U	< 90 U [<90 U]	< 90 U [< 90 U]
Toluene	***56,000***	***30,000***	530,000	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	1	< 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]
trans-1,4-Dichloro-2-butene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]
Trichloroethene	***15***	***8.1***	210	ug/L	5	2	***14 [14]***	***12 [12]***
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 1 U	< 1 U	< 1 U [< 1 U]	< 1 U [< 1 U]

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MW-06-20 8/29/2023 MW-06-20_GW-082923	MW-07-20 6/6/2023 MW-07-20_GW-060623	MW-08-21 3/7/2023 MW-08-21_GW-030723	MW-08-21 6/8/2023 MW-08-21_GW-060823
Volatile Organics								
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	3 [3]	4	3	3
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	4 [4]	6	9	4
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 25 U [< 25 U]	< 25 U	< 25 U	< 25 U
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 50 U [< 50 U]	< 50 U	< 50 U	< 50 U
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 50 U [< 50 U]	< 50 U	< 50 U	< 50 U
Acrylonitrile	***120***	***67***	4,100	ug/L	< 2 U [< 2 U]	< 2 U	< 2 U	< 2 U
Benzene	***34***	***18***	1,100	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Bromomethane	***59***	***33***	1,200	ug/L	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: / Date Collected: / Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MW-06-20 8/29/2023 MW-06-20_GW-082923	MW-07-20 6/6/2023 MW-07-20_GW-060623	MW-08-21 3/7/2023 MW-08-21_GW-030723	MW-08-21 6/8/2023 MW-08-21_GW-060823
CFC-11	***300***	***160***	6,000	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
CFC-12	***71***	***38***	1,400	ug/L	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
Chloroform	***19***	***10***	610	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Chloromethane	***340***	***200***	7,400	ug/L	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	7 [7]	7	11	4
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Dibromomethane	***450***	***230***	9,000	ug/L	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 10 U [< 10 U]	< 10 U	< 10 U	< 10 U
Ethylbenzene	***110***	***60***	3,600	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Hexachloroethane	***130***	***64***	3,900	ug/L	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
Iodomethane	***- -***	***- -***	- -	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Isopropyl benzene	***26***	***13***	810	ug/L	< 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
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 50 U [< 50 U]	< 50 U	< 50 U	< 50 U
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
Naphthalene	***190***	***100***	6,200	ug/L	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
o-Xylene	***- -***	***- -***	- -	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Styrene	***1,400***	***740***	45,000	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Tetrachloroethene	***250***	***130***	3,400	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 90 U [< 90 U]	< 90 U	< 90 U	< 90 U
Toluene	***56,000***	***30,000***	530,000	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	< 1 U [< 1 U]	< 1 U	1	< 1 U
trans-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 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
Trichloroethene	***15***	***8.1***	210	ug/L	***9 [9]***	2	***11***	***11***
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MW-08-21 8/28/2023 MW-08-21_GW-082823	MW-09-22 3/6/2023 MW-09-22_GW-030623	MW-09-22 6/8/2023 MW-09-22_GW-060823
Volatile Organics							
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 1 U	< 1 U	< 1 U
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	2	< 1 U	< 1 U
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 1 U	< 1 U	< 1 U
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	6	< 1 U	< 1 U
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 1 U	< 1 U	< 1 U
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 5 U	< 5 U	< 5 U
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 1 U	< 1 U	< 1 U
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 1 U	< 1 U	< 1 U
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 5 U	< 5 U	< 5 U
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 1 U	< 1 U	< 1 U
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 1 U	< 1 U	< 1 U
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 1 U	< 1 U	< 1 U
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 1 U	< 1 U	< 1 U
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 1 U	< 1 U	< 1 U
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 1 U	< 1 U	< 1 U
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 1 U	< 1 U	< 1 U
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 25 U	< 25 U	< 25 U
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 5 U	< 5 U	< 5 U
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 50 U	< 50 U	< 50 U
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 50 U	< 50 U	< 50 U
Acrylonitrile	***120***	***67***	4,100	ug/L	< 2 U	< 2 U	< 2 U
Benzene	***34***	***18***	1,100	ug/L	< 1 U	< 1 U	< 1 U
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 1 U	< 1 U	< 1 U
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 1 U	< 1 U	< 1 U
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 1 U	< 1 U	< 1 U
Bromomethane	***59***	***33***	1,200	ug/L	< 5 U	< 5 U	< 5 U
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 5 U	< 5 U	< 5 U
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 1 U	1	1

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MW-08-21 8/28/2023 MW-08-21_GW-082823	MW-09-22 3/6/2023 MW-09-22_GW-030623	MW-09-22 6/8/2023 MW-09-22_GW-060823
CFC-11	***300***	***160***	6,000	ug/L	< 1 U	< 1 U	< 1 U
CFC-12	***71***	***38***	1,400	ug/L	< 5 U	< 5 U	< 5 U
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 1 U	< 1 U	< 1 U
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 5 U	< 5 U	< 5 U
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 5 U	< 5 U	< 5 U
Chloroform	***19***	***10***	610	ug/L	< 1 U	< 1 U	< 1 U
Chloromethane	***340***	***200***	7,400	ug/L	< 5 U	< 5 U	< 5 U
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	9	< 1 U	< 1 U
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
Dibromomethane	***450***	***230***	9,000	ug/L	< 5 U	< 5 U	< 5 U
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 10 U	< 10 U	< 10 U
Ethylbenzene	***110***	***60***	3,600	ug/L	< 1 U	< 1 U	< 1 U
Hexachloroethane	***130***	***64***	3,900	ug/L	< 5 U	< 5 U	< 5 U
Iodomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
Isopropyl benzene	***26***	***13***	810	ug/L	< 5 U	< 5 U	< 5 U
m&p-Xylene	***- -***	***- -***	- -	ug/L	< 2 U	< 2 U	< 2 U
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 50 U	< 50 U	< 50 U
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 5 U	< 5 U	< 5 U
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 5 U	< 5 U	< 5 U
Naphthalene	***190***	***100***	6,200	ug/L	< 5 U	< 5 U	< 5 U
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 1 U	< 1 U	< 1 U
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 1 U	< 1 U	< 1 U
o-Xylene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 5 U	< 5 U	< 5 U
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 1 U	< 1 U	< 1 U
Styrene	***1,400***	***740***	45,000	ug/L	< 1 U	< 1 U	< 1 U
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 1 U	< 1 U	< 1 U
Tetrachloroethene	***250***	***130***	3,400	ug/L	< 1 U	***148***	122
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 90 U	< 90 U	< 90 U
Toluene	***56,000***	***30,000***	530,000	ug/L	< 1 U	< 1 U	< 1 U
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	< 1 U	< 1 U	< 1 U
trans-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
trans-1,4-Dichloro-2-butene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
Trichloroethene	***15***	***8.1***	210	ug/L	***12***	4	4
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 1 U	< 1 U	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MW-09-22 9/7/2023 MW-09-22_GW-090723	MW-13-22 3/7/2023 MW-13-22_GW-030723	MW-13-22 6/6/2023 MW-13-22_GW-060623
Volatile Organics							
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 1 U	< 1 U	< 1 U
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	< 1 U	< 1 U	< 1 U
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 1 U	< 1 U	< 1 U
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	< 1 U	< 1 U	< 1 U
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 1 U	< 1 U	< 1 U
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 5 U	< 5 U	< 5 U
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 1 U	< 1 U	< 1 U
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 1 U	< 1 U	< 1 U
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 5 U	< 5 U	< 5 U
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 1 U	< 1 U	< 1 U
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 1 U	< 1 U	< 1 U
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 1 U	< 1 U	< 1 U
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 1 U	< 1 U	< 1 U
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 1 U	< 1 U	< 1 U
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 1 U	< 1 U	< 1 U
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 1 U	< 1 U	< 1 U
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 25 U	< 25 U	< 25 U
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 5 U	< 5 U	< 5 U
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 50 U	< 50 U	< 50 U
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 50 U	< 50 U	< 50 U
Acrylonitrile	***120***	***67***	4,100	ug/L	< 2 U	< 2 U	< 2 U
Benzene	***34***	***18***	1,100	ug/L	< 1 U	< 1 U	< 1 U
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 1 U	< 1 U	< 1 U
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 1 U	< 1 U	< 1 U
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 1 U	< 1 U	< 1 U
Bromomethane	***59***	***33***	1,200	ug/L	< 5 U	< 5 U	< 5 U
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 5 U	< 5 U	< 5 U
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 1 U	< 1 U	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MW-09-22 9/7/2023 MW-09-22_GW-090723	MW-13-22 3/7/2023 MW-13-22_GW-030723	MW-13-22 6/6/2023 MW-13-22_GW-060623
CFC-11	***300***	***160***	6,000	ug/L	< 1 U	< 1 U	< 1 U
CFC-12	***71***	***38***	1,400	ug/L	< 5 U	< 5 U	< 5 U
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 1 U	< 1 U	< 1 U
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 5 U	< 5 U	< 5 U
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 5 U	< 5 U	< 5 U
Chloroform	***19***	***10***	610	ug/L	< 1 U	< 1 U	< 1 U
Chloromethane	***340***	***200***	7,400	ug/L	< 5 U	< 5 U	< 5 U
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	< 1 U	< 1 U	< 1 U
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
Dibromomethane	***450***	***230***	9,000	ug/L	< 5 U	< 5 U	< 5 U
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 10 U	< 10 U	< 10 U
Ethylbenzene	***110***	***60***	3,600	ug/L	< 1 U	< 1 U	< 1 U
Hexachloroethane	***130***	***64***	3,900	ug/L	< 5 U	< 5 U	< 5 U
Iodomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
Isopropyl benzene	***26***	***13***	810	ug/L	< 5 U	< 5 U	< 5 U
m&p-Xylene	***- -***	***- -***	- -	ug/L	< 2 U	< 2 U	< 2 U
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 50 U	< 50 U	< 50 U
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 5 U	< 5 U	< 5 U
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 5 U	< 5 U	< 5 U
Naphthalene	***190***	***100***	6,200	ug/L	< 5 U	< 5 U	< 5 U
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 1 U	< 1 U	< 1 U
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 1 U	< 1 U	< 1 U
o-Xylene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 5 U	< 5 U	< 5 U
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 1 U	< 1 U	< 1 U
Styrene	***1,400***	***740***	45,000	ug/L	< 1 U	< 1 U	< 1 U
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 1 U	< 1 U	< 1 U
Tetrachloroethene	***250***	***130***	3,400	ug/L	78	< 1 U	< 1 U
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 90 U	< 90 U	< 90 U
Toluene	***56,000***	***30,000***	530,000	ug/L	< 1 U	< 1 U	< 1 U
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	< 1 U	< 1 U	< 1 U
trans-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
trans-1,4-Dichloro-2-butene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
Trichloroethene	***15***	***8.1***	210	ug/L	3	< 1 U	< 1 U
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 1 U	< 1 U	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MW-13-22 8/30/2023 MW-13-22_GW-083023	MW-14-22 3/7/2023 MW-14-22_GW-030723	MW-14-22 6/6/2023 MW-14-22_GW-060623
Volatile Organics							
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 1 U	< 1 U	< 1 U
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	< 1 U	6	13
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 1 U	< 1 U	< 1 U
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	< 1 U	< 1 U	2
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 1 U	< 1 U	< 1 U
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 5 U	< 5 U	< 5 U
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 1 U	< 1 U	< 1 U
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 1 U	< 1 U	< 1 U
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 5 U	< 5 U	< 5 U
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 1 U	< 1 U	< 1 U
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 1 U	< 1 U	< 1 U
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 1 U	< 1 U	< 1 U
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 1 U	< 1 U	< 1 U
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 1 U	< 1 U	< 1 U
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 1 U	< 1 U	< 1 U
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 1 U	< 1 U	< 1 U
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 25 U	< 25 U	< 25 U
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 5 U	< 5 U	< 5 U
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 50 U	< 50 U	< 50 U
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 50 U	< 50 U	< 50 U
Acrylonitrile	***120***	***67***	4,100	ug/L	< 2 U	< 2 U	< 2 U
Benzene	***34***	***18***	1,100	ug/L	< 1 U	< 1 U	< 1 U
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 1 U	< 1 U	< 1 U
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 1 U	< 1 U	< 1 U
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 1 U	< 1 U	< 1 U
Bromomethane	***59***	***33***	1,200	ug/L	< 5 U	< 5 U	< 5 U
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 5 U	< 5 U	< 5 U
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 1 U	3	5

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MW-13-22 8/30/2023 MW-13-22_GW-083023	MW-14-22 3/7/2023 MW-14-22_GW-030723	MW-14-22 6/6/2023 MW-14-22_GW-060623
CFC-11	***300***	***160***	6,000	ug/L	< 1 U	< 1 U	< 1 U
CFC-12	***71***	***38***	1,400	ug/L	< 5 U	< 5 U	< 5 U
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 1 U	< 1 U	< 1 U
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 5 U	< 5 U	< 5 U
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 5 U	< 5 U	< 5 U
Chloroform	***19***	***10***	610	ug/L	< 1 U	1	1
Chloromethane	***340***	***200***	7,400	ug/L	< 5 U	< 5 U	< 5 U
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	< 1 U	8	5
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
Dibromomethane	***450***	***230***	9,000	ug/L	< 5 U	< 5 U	< 5 U
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 10 U	< 10 U	< 10 U
Ethylbenzene	***110***	***60***	3,600	ug/L	< 1 U	< 1 U	< 1 U
Hexachloroethane	***130***	***64***	3,900	ug/L	< 5 U	< 5 U	< 5 U
Iodomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
Isopropyl benzene	***26***	***13***	810	ug/L	< 5 U	< 5 U	< 5 U
m&p-Xylene	***- -***	***- -***	- -	ug/L	< 2 U	< 2 U	< 2 U
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 50 U	< 50 U	< 50 U
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 5 U	< 5 U	< 5 U
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 5 U	< 5 U	< 5 U
Naphthalene	***190***	***100***	6,200	ug/L	< 5 U	< 5 U	< 5 U
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 1 U	< 1 U	< 1 U
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 1 U	< 1 U	< 1 U
o-Xylene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 5 U	< 5 U	< 5 U
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 1 U	< 1 U	< 1 U
Styrene	***1,400***	***740***	45,000	ug/L	< 1 U	< 1 U	< 1 U
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 1 U	< 1 U	< 1 U
Tetrachloroethene	***250***	***130***	3,400	ug/L	< 1 U	100	***212 E***
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 90 U	< 90 U	< 90 U
Toluene	***56,000***	***30,000***	530,000	ug/L	< 1 U	< 1 U	< 1 U
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	< 1 U	< 1 U	< 1 U
trans-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
trans-1,4-Dichloro-2-butene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
Trichloroethene	***15***	***8.1***	210	ug/L	< 1 U	***15***	***22***
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 1 U	< 1 U	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MW-14-22 8/30/2023 MW-14-22_GW-083023	MW-15-22 3/7/2023 MW-15-22_GW-030723	MW-15-22 6/6/2023 MW-15-22_GW-060623
Volatile Organics							
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	10 Y	< 1 U [<1 U]	< 1 U [< 1 U]
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 250 UY	< 25 U [<25 U]	< 25 U [< 25 U]
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 500 UY	< 50 U [<50 U]	< 50 U [< 50 U]
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 500 UY	< 50 U [<50 U]	< 50 U [< 50 U]
Acrylonitrile	***120***	***67***	4,100	ug/L	< 20 UY	< 2 U [<2 U]	< 2 U [< 2 U]
Benzene	***34***	***18***	1,100	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
Bromomethane	***59***	***33***	1,200	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MW-14-22 8/30/2023 MW-14-22_GW-083023	MW-15-22 3/7/2023 MW-15-22_GW-030723	MW-15-22 6/6/2023 MW-15-22_GW-060623
CFC-11	***300***	***160***	6,000	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
CFC-12	***71***	***38***	1,400	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 10 UY	<1 U [<1 U]	< 1 U [< 1 U]
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
Chloroform	***19***	***10***	610	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
Chloromethane	***340***	***200***	7,400	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	20 Y	< 1 U [<1 U]	< 1 U [< 1 U]
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
Dibromomethane	***450***	***230***	9,000	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 100 UY	< 10 U [<10 U]	< 10 U [< 10 U]
Ethylbenzene	***110***	***60***	3,600	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
Hexachloroethane	***130***	***64***	3,900	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
Iodomethane	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
Isopropyl benzene	***26***	***13***	810	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
m&p-Xylene	***- -***	***- -***	- -	ug/L	< 20 UY	< 2 U [<2 U]	< 2 U [< 2 U]
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 500 UY	< 50 U [<50 U]	< 50 U [< 50 U]
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
Naphthalene	***190***	***100***	6,200	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
o-Xylene	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 50 UY	< 5 U [<5 U]	< 5 U [< 5 U]
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
Styrene	***1,400***	***740***	45,000	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
Tetrachloroethene	***250***	***130***	3,400	ug/L	***200 Y***	< 1 U [<1 U]	< 1 U [< 1 U]
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 900 UY	< 90 U [<90 U]	< 90 U [< 90 U]
Toluene	***56,000***	***30,000***	530,000	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
trans-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
trans-1,4-Dichloro-2-butene	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]
Trichloroethene	***15***	***8.1***	210	ug/L	***20 Y***	< 1 U [<1 U]	< 1 U [< 1 U]
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 10 UY	< 1 U [<1 U]	< 1 U [< 1 U]

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MW-15-22 8/29/2023 MW-15-22_GW-082923	MW-16-22 4/7/2023 MW-16-22_GW-040723	MW-16-22 6/6/2023 MW-16-22_GW-060623
Volatile Organics							
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 25 U [< 25 U]	< 250 UY	< 250 UY
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 50 U [< 50 U]	< 500 UY	< 500 UY
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 50 U [< 50 U]	< 500 UY	< 500 UY
Acrylonitrile	***120***	***67***	4,100	ug/L	< 2 U [< 2 U]	< 20 UY	< 20 UY
Benzene	***34***	***18***	1,100	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
Bromomethane	***59***	***33***	1,200	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MW-15-22 8/29/2023 MW-15-22_GW-082923	MW-16-22 4/7/2023 MW-16-22_GW-040723	MW-16-22 6/6/2023 MW-16-22_GW-060623
CFC-11	***300***	***160***	6,000	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
CFC-12	***71***	***38***	1,400	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
Chloroform	***19***	***10***	610	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
Chloromethane	***340***	***200***	7,400	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	< 1 U [< 1 U]	20 Y	10 Y
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
Dibromomethane	***450***	***230***	9,000	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 10 U [< 10 U]	< 100 UY	< 100 UY
Ethylbenzene	***110***	***60***	3,600	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
Hexachloroethane	***130***	***64***	3,900	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
Iodomethane	***- -***	***- -***	- -	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
Isopropyl benzene	***26***	***13***	810	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
m&p-Xylene	***- -***	***- -***	- -	ug/L	< 2 U [< 2 U]	< 20 UY	< 20 UY
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 50 U [< 50 U]	< 500 UY	< 500 UY
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
Naphthalene	***190***	***100***	6,200	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
o-Xylene	***- -***	***- -***	- -	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 5 U [< 5 U]	< 50 UY	< 50 UY
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
Styrene	***1,400***	***740***	45,000	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
Tetrachloroethene	***250***	***130***	3,400	ug/L	< 1 U [< 1 U]	***300 Y***	***180 Y***
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 90 U [< 90 U]	< 900 UY	< 900 UY
Toluene	***56,000***	***30,000***	530,000	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
trans-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
trans-1,4-Dichloro-2-butene	***- -***	***- -***	- -	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY
Trichloroethene	***15***	***8.1***	210	ug/L	< 1 U [< 1 U]	***10 Y***	***10 Y***
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 1 U [< 1 U]	< 10 UY	< 10 UY

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RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MW-16-22 9/7/2023 MW-16-22_GW-090723	MWF15-01 6/7/2023 MWF15-01_GW-060723	MWF16-05 3/8/2023 MWF16-05_GW-030823	MWF16-05 6/8/2023 MWF16-05_GW-060823
Volatile Organics								
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	< 10 UY	4	4	< 20 UY
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 250 UY	< 25 U	< 25 U	< 500 UY
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 500 UY	< 50 U	< 50 U	< 1000 UY
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 500 UY	< 50 U	< 50 U	< 1000 UY
Acrylonitrile	***120***	***67***	4,100	ug/L	< 20 UY	< 2 U	< 2 U	< 40 UY
Benzene	***34***	***18***	1,100	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
Bromomethane	***59***	***33***	1,200	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY

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Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MW-16-22 9/7/2023 MW-16-22_GW-090723	MWF15-01 6/7/2023 MWF15-01_GW-060723	MWF16-05 3/8/2023 MWF16-05_GW-030823	MWF16-05 6/8/2023 MWF16-05_GW-060823
CFC-11	***300***	***160***	6,000	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
CFC-12	***71***	***38***	1,400	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
Chloroform	***19***	***10***	610	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
Chloromethane	***340***	***200***	7,400	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	***120 Y***	< 1 U	< 1 U	< 20 UY
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
Dibromomethane	***450***	***230***	9,000	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 100 UY	< 10 U	< 10 U	< 200 UY
Ethylbenzene	***110***	***60***	3,600	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
Hexachloroethane	***130***	***64***	3,900	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
Iodomethane	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
Isopropyl benzene	***26***	***13***	810	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
m&p-Xylene	***- -***	***- -***	- -	ug/L	< 20 UY	< 2 U	< 2 U	< 40 UY
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 500 UY	< 50 U	< 50 U	< 1000 UY
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
Naphthalene	***190***	***100***	6,200	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
o-Xylene	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 50 UY	< 5 U	< 5 U	< 100 UY
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
Styrene	***1,400***	***740***	45,000	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
Tetrachloroethene	***250***	***130***	3,400	ug/L	***170 Y***	< 1 U	***550 Y***	***500 Y***
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 900 UY	< 90 U	< 90 U	< 1800 UY
Toluene	***56,000***	***30,000***	530,000	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
trans-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
trans-1,4-Dichloro-2-butene	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY
Trichloroethene	***15***	***8.1***	210	ug/L	***20 Y***	< 1 U	***23***	< 20 UY
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 10 UY	< 1 U	< 1 U	< 20 UY

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Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MWF16-05 9/7/2023 MWF16-05_GW-090723	MWF16-06 6/9/2023 MWF16-06_GW-060923	MWF16-07 6/7/2023 MWF16-07_GW-060723	MWF16-12 6/8/2023 MWF16-12_GW-060823
Volatile Organics								
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	< 20 UY	93	< 1 U	< 1 U
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	< 20 UY	52	< 1 U	< 1 U
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 20 UY	5	< 1 U	< 1 U
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 500 UY	< 25 U	< 25 U	< 25 U
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 1000 UY	< 50 U	< 50 U	< 50 U
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 1000 UY	< 50 U	< 50 U	< 50 U
Acrylonitrile	***120***	***67***	4,100	ug/L	< 40 UY	< 2 U	< 2 U	< 2 U
Benzene	***34***	***18***	1,100	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
Bromomethane	***59***	***33***	1,200	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 20 UY	7	< 1 U	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MWF16-05 9/7/2023 MWF16-05_GW-090723	MWF16-06 6/9/2023 MWF16-06_GW-060923	MWF16-07 6/7/2023 MWF16-07_GW-060723	MWF16-12 6/8/2023 MWF16-12_GW-060823
CFC-11	***300***	***160***	6,000	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
CFC-12	***71***	***38***	1,400	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
Chloroform	***19***	***10***	610	ug/L	< 20 UY	9	< 1 U	< 1 U
Chloromethane	***340***	***200***	7,400	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	< 20 UY	18	< 1 U	< 1 U
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
Dibromomethane	***450***	***230***	9,000	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 200 UY	< 10 U	< 10 U	< 10 U
Ethylbenzene	***110***	***60***	3,600	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
Hexachloroethane	***130***	***64***	3,900	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
Iodomethane	***- -***	***- -***	- -	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
Isopropyl benzene	***26***	***13***	810	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
m&p-Xylene	***- -***	***- -***	- -	ug/L	< 40 UY	< 2 U	< 2 U	< 2 U
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 1000 UY	< 50 U	< 50 U	< 50 U
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
Naphthalene	***190***	***100***	6,200	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
o-Xylene	***- -***	***- -***	- -	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 100 UY	< 5 U	< 5 U	< 5 U
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
Styrene	***1,400***	***740***	45,000	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
Tetrachloroethene	***250***	***130***	3,400	ug/L	***490 Y***	36	< 1 U	25
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 1800 UY	< 90 U	< 90 U	< 90 U
Toluene	***56,000***	***30,000***	530,000	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
trans-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
trans-1,4-Dichloro-2-butene	***- -***	***- -***	- -	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U
Trichloroethene	***15***	***8.1***	210	ug/L	< 20 UY	5	< 1 U	< 1 U
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 20 UY	< 1 U	< 1 U	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MWF16-15 6/7/2023 MWF16-15_GW-060723	MWF16-16 3/6/2023 MWF16-16_GW-030623	MWF16-16 6/9/2023 MWF16-16_GW-060923	MWF16-16 9/7/2023 MWF16-16_GW-090723
Volatile Organics								
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	11	5	< 10 UY	< 10 UY
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	2	6	< 10 UY	< 10 UY
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 25 U	< 25 U	< 250 UY	< 250 UY
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 50 U	< 50 U	< 500 UY	< 500 UY
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 50 U	< 50 U	< 500 UY	< 500 UY
Acrylonitrile	***120***	***67***	4,100	ug/L	< 2 U	< 2 U	< 20 UY	< 20 UY
Benzene	***34***	***18***	1,100	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
Bromomethane	***59***	***33***	1,200	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 1 U	1	< 10 UY	< 10 UY

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MWF16-15 6/7/2023 MWF16-15_GW-060723	MWF16-16 3/6/2023 MWF16-16_GW-030623	MWF16-16 6/9/2023 MWF16-16_GW-060923	MWF16-16 9/7/2023 MWF16-16_GW-090723
CFC-11	***300***	***160***	6,000	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
CFC-12	***71***	***38***	1,400	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
Chloroform	***19***	***10***	610	ug/L	< 1 U	1	< 10 UY	< 10 UY
Chloromethane	***340***	***200***	7,400	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	9	8	20 Y	10 Y
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
Dibromomethane	***450***	***230***	9,000	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 10 U	< 10 U	< 100 UY	< 100 UY
Ethylbenzene	***110***	***60***	3,600	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
Hexachloroethane	***130***	***64***	3,900	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
Iodomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
Isopropyl benzene	***26***	***13***	810	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
m&p-Xylene	***- -***	***- -***	- -	ug/L	< 2 U	< 2 U	< 20 UY	< 20 UY
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 50 U	< 50 U	< 500 UY	< 500 UY
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
Naphthalene	***190***	***100***	6,200	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
o-Xylene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 5 U	< 5 U	< 50 UY	< 50 UY
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
Styrene	***1,400***	***740***	45,000	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
Tetrachloroethene	***250***	***130***	3,400	ug/L	< 1 U	***260 Y***	***400 Y***	***410 Y***
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 90 U	< 90 U	< 900 UY	< 900 UY
Toluene	***56,000***	***30,000***	530,000	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
trans-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
trans-1,4-Dichloro-2-butene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY
Trichloroethene	***15***	***8.1***	210	ug/L	4	8	***10 Y***	< 10 UY
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 1 U	< 1 U	< 10 UY	< 10 UY

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MWF16-17 6/8/2023 MWF16-17_GW-060823	MWF16-18 3/7/2023 MWF16-18_GW-030823	MWF16-18 6/8/2023 MWF16-18_GW-060823
Volatile Organics							
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 1 U	< 10 UY	< 10 UY
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	2	< 10 UY	< 10 UY
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 1 U	< 10 UY	< 10 UY
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 1 U	< 10 UY	< 10 UY
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	< 1 U	< 10 UY	< 10 UY
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 1 U	< 10 UY	< 10 UY
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 5 U	< 50 UY	< 50 UY
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 1 U	< 10 UY	< 10 UY
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 1 U	< 10 UY	< 10 UY
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 5 U	< 50 UY	< 50 UY
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 1 U	< 10 UY	< 10 UY
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 5 U	< 50 UY	< 50 UY
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 1 U	< 10 UY	< 10 UY
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 1 U	< 10 UY	< 10 UY
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 1 U	< 10 UY	< 10 UY
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 1 U	< 10 UY	< 10 UY
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 1 U	< 10 UY	< 10 UY
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 1 U	< 10 UY	< 10 UY
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 1 U	< 10 UY	< 10 UY
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 25 U	< 250 UY	< 250 UY
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 5 U	< 50 UY	< 50 UY
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 50 U	< 500 UY	< 500 UY
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 50 U	< 500 UY	< 500 UY
Acrylonitrile	***120***	***67***	4,100	ug/L	< 2 U	< 20 UY	< 20 UY
Benzene	***34***	***18***	1,100	ug/L	< 1 U	< 10 UY	< 10 UY
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 1 U	< 10 UY	< 10 UY
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 1 U	< 10 UY	< 10 UY
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 1 U	< 10 UY	< 10 UY
Bromomethane	***59***	***33***	1,200	ug/L	< 5 U	< 50 UY	< 50 UY
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 5 U	< 50 UY	< 50 UY
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 1 U	< 10 UY	< 10 UY

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MWF16-17 6/8/2023 MWF16-17_GW-060823	MWF16-18 3/7/2023 MWF16-18_GW-030823	MWF16-18 6/8/2023 MWF16-18_GW-060823
CFC-11	***300***	***160***	6,000	ug/L	< 1 U	< 10 UY	< 10 UY
CFC-12	***71***	***38***	1,400	ug/L	< 5 U	< 50 UY	< 50 UY
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 1 U	< 10 UY	< 10 UY
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 5 U	< 50 UY	< 50 UY
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 10 UY	< 10 UY
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 5 U	< 50 UY	< 50 UY
Chloroform	***19***	***10***	610	ug/L	< 1 U	< 10 UY	< 10 UY
Chloromethane	***340***	***200***	7,400	ug/L	< 5 U	< 50 UY	< 50 UY
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	< 1 U	***70 Y***	***110 Y***
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 10 UY	< 10 UY
Dibromomethane	***450***	***230***	9,000	ug/L	< 5 U	< 50 UY	< 50 UY
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 10 U	< 100 UY	< 100 UY
Ethylbenzene	***110***	***60***	3,600	ug/L	< 1 U	< 10 UY	< 10 UY
Hexachloroethane	***130***	***64***	3,900	ug/L	< 5 U	< 50 UY	< 50 UY
Iodomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 10 UY	< 10 UY
Isopropyl benzene	***26***	***13***	810	ug/L	< 5 U	< 50 UY	< 50 UY
m&p-Xylene	***- -***	***- -***	- -	ug/L	< 2 U	< 20 UY	< 20 UY
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 50 U	< 500 UY	< 500 UY
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 5 U	< 50 UY	< 50 UY
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 5 U	< 50 UY	< 50 UY
Naphthalene	***190***	***100***	6,200	ug/L	< 5 U	< 50 UY	< 50 UY
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 1 U	< 10 UY	< 10 UY
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 1 U	< 10 UY	< 10 UY
o-Xylene	***- -***	***- -***	- -	ug/L	< 1 U	< 10 UY	< 10 UY
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 5 U	< 50 UY	< 50 UY
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 1 U	< 10 UY	< 10 UY
Styrene	***1,400***	***740***	45,000	ug/L	< 1 U	< 10 UY	< 10 UY
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 1 U	< 10 UY	< 10 UY
Tetrachloroethene	***250***	***130***	3,400	ug/L	1	***1,070 Y***	***1,040 Y***
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 90 U	< 900 UY	< 900 UY
Toluene	***56,000***	***30,000***	530,000	ug/L	< 1 U	< 10 UY	< 10 UY
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	< 1 U	< 10 UY	< 10 UY
trans-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 10 UY	< 10 UY
trans-1,4-Dichloro-2-butene	***- -***	***- -***	- -	ug/L	< 1 U	< 10 UY	< 10 UY
Trichloroethene	***15***	***8.1***	210	ug/L	< 1 U	***20 Y***	***20 Y***
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 1 U	< 10 UY	< 10 UY

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MWF16-18 9/7/2023 MWF16-18_GW-090723	MWF16-22 6/9/2023 MWF16-22_GW-060923	MWF16-23 3/7/2023 MWF16-23_GW-030723
Volatile Organics							
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 10 UY	< 1 U	< 1 U
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	< 10 UY	1	12
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 10 UY	< 1 U	< 1 U
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 10 UY	< 1 U	< 1 U
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	< 10 UY	2	6
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 10 UY	< 1 U	< 1 U
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 50 UY	< 5 U	< 5 U
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 10 UY	< 1 U	< 1 U
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 10 UY	< 1 U	< 1 U
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 50 UY	< 5 U	< 5 U
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 10 UY	< 1 U	< 1 U
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 50 UY	< 5 U	< 5 U
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 10 UY	< 1 U	< 1 U
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 10 UY	< 1 U	< 1 U
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 10 UY	< 1 U	< 1 U
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 10 UY	< 1 U	< 1 U
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 10 UY	< 1 U	< 1 U
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 10 UY	< 1 U	< 1 U
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 10 UY	< 1 U	< 1 U
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 250 UY	< 25 U	< 25 U
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 50 UY	< 5 U	< 5 U
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 500 UY	< 50 U	< 50 U
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 500 UY	< 50 U	< 50 U
Acrylonitrile	***120***	***67***	4,100	ug/L	< 20 UY	< 2 U	< 2 U
Benzene	***34***	***18***	1,100	ug/L	< 10 UY	< 1 U	< 1 U
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 10 UY	< 1 U	< 1 U
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 10 UY	< 1 U	< 1 U
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 10 UY	< 1 U	< 1 U
Bromomethane	***59***	***33***	1,200	ug/L	< 50 UY	< 5 U	< 5 U
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 50 UY	< 5 U	< 5 U
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 10 UY	< 1 U	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MWF16-18 9/7/2023 MWF16-18_GW-090723	MWF16-22 6/9/2023 MWF16-22_GW-060923	MWF16-23 3/7/2023 MWF16-23_GW-030723
CFC-11	***300***	***160***	6,000	ug/L	< 10 UY	< 1 U	< 1 U
CFC-12	***71***	***38***	1,400	ug/L	< 50 UY	< 5 U	< 5 U
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 10 UY	< 1 U	< 1 U
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 50 UY	< 5 U	< 5 U
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U	< 1 U
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 50 UY	< 5 U	< 5 U
Chloroform	***19***	***10***	610	ug/L	< 10 UY	< 1 U	< 1 U
Chloromethane	***340***	***200***	7,400	ug/L	< 50 UY	< 5 U	< 5 U
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	***130 Y***	14	7
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U	< 1 U
Dibromomethane	***450***	***230***	9,000	ug/L	< 50 UY	< 5 U	< 5 U
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 100 UY	< 10 U	< 10 U
Ethylbenzene	***110***	***60***	3,600	ug/L	< 10 UY	< 1 U	< 1 U
Hexachloroethane	***130***	***64***	3,900	ug/L	< 50 UY	< 5 U	< 5 U
Iodomethane	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U	< 1 U
Isopropyl benzene	***26***	***13***	810	ug/L	< 50 UY	< 5 U	< 5 U
m&p-Xylene	***- -***	***- -***	- -	ug/L	< 20 UY	< 2 U	< 2 U
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 500 UY	< 50 U	< 50 U
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 50 UY	< 5 U	< 5 U
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 50 UY	< 5 U	< 5 U
Naphthalene	***190***	***100***	6,200	ug/L	< 50 UY	< 5 U	< 5 U
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 10 UY	< 1 U	< 1 U
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 10 UY	< 1 U	< 1 U
o-Xylene	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U	< 1 U
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 50 UY	< 5 U	< 5 U
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 10 UY	< 1 U	< 1 U
Styrene	***1,400***	***740***	45,000	ug/L	< 10 UY	< 1 U	< 1 U
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 10 UY	< 1 U	< 1 U
Tetrachloroethene	***250***	***130***	3,400	ug/L	***1,090 Y***	77	< 1 U
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 900 UY	< 90 U	< 90 U
Toluene	***56,000***	***30,000***	530,000	ug/L	< 10 UY	< 1 U	< 1 U
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	< 10 UY	< 1 U	2
trans-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U	< 1 U
trans-1,4-Dichloro-2-butene	***- -***	***- -***	- -	ug/L	< 10 UY	< 1 U	< 1 U
Trichloroethene	***15***	***8.1***	210	ug/L	***30 Y***	3	***16***
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 10 UY	< 1 U	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MWF16-23 6/6/2023 MWF16-23_GW-060623	MWF16-23 8/29/2023 MWF16-23_GW-082923	MWF16-25 6/8/2023 MWF16-25_GW-060823	MWF7-02 6/7/2023 MWF7-02_GW-060723
Volatile Organics								
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	13	8	4	81
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	7	4	3	15
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 1 U	< 1 U	< 1 U	8
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 25 U	< 25 U	< 25 U	< 25 U
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 50 U	< 50 U	< 50 U	< 50 U
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 50 U	< 50 U	< 50 U	< 50 U
Acrylonitrile	***120***	***67***	4,100	ug/L	< 2 U	< 2 U	< 2 U	< 2 U
Benzene	***34***	***18***	1,100	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Bromomethane	***59***	***33***	1,200	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 1 U	< 1 U	1	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MWF16-23 6/6/2023 MWF16-23_GW-060623	MWF16-23 8/29/2023 MWF16-23_GW-082923	MWF16-25 6/8/2023 MWF16-25_GW-060823	MWF7-02 6/7/2023 MWF7-02_GW-060723
CFC-11	***300***	***160***	6,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
CFC-12	***71***	***38***	1,400	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Chloroform	***19***	***10***	610	ug/L	< 1 U	< 1 U	3	< 1 U
Chloromethane	***340***	***200***	7,400	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	8	3	40	2
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Dibromomethane	***450***	***230***	9,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 10 U	< 10 U	< 10 U	< 10 U
Ethylbenzene	***110***	***60***	3,600	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Hexachloroethane	***130***	***64***	3,900	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Iodomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Isopropyl benzene	***26***	***13***	810	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
m&p-Xylene	***- -***	***- -***	- -	ug/L	< 2 U	< 2 U	< 2 U	< 2 U
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 50 U	< 50 U	< 50 U	< 50 U
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Naphthalene	***190***	***100***	6,200	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
o-Xylene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Styrene	***1,400***	***740***	45,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Tetrachloroethene	***250***	***130***	3,400	ug/L	< 1 U	< 1 U	< 1 U	84
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 90 U	< 90 U	< 90 U	< 90 U
Toluene	***56,000***	***30,000***	530,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	3	1	3	< 1 U
trans-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,4-Dichloro-2-butene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Trichloroethene	***15***	***8.1***	210	ug/L	***21***	***16***	< 1 U	4
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 1 U	< 1 U	< 1 U	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MWOS-08 3/8/2023 MWOS-08_GW-030823	MWOS-08 6/8/2023 MWOS-08_GW-060823	MWOS-08 8/29/2023 MWOS-08_GW-082923
Volatile Organics							
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 1 U	< 1 U	< 1 U
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	4	4	4
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 1 U	< 1 U	< 1 U
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	< 1 U	1	1
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 1 U	< 1 U	< 1 U
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 5 U	< 5 U	< 5 U
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 1 U	< 1 U	< 1 U
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 1 U	< 1 U	< 1 U
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 5 U	< 5 U	< 5 U
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 1 U	< 1 U	< 1 U
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 1 U	< 1 U	< 1 U
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 1 U	< 1 U	< 1 U
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 1 U	< 1 U	< 1 U
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 1 U	< 1 U	< 1 U
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 1 U	< 1 U	< 1 U
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 1 U	< 1 U	< 1 U
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 25 U	< 25 U	< 25 U
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 5 U	< 5 U	< 5 U
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 50 U	< 50 U	< 50 U
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 50 U	< 50 U	< 50 U
Acrylonitrile	***120***	***67***	4,100	ug/L	< 2 U	< 2 U	< 2 U
Benzene	***34***	***18***	1,100	ug/L	< 1 U	< 1 U	< 1 U
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 1 U	< 1 U	< 1 U
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 1 U	< 1 U	< 1 U
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 1 U	< 1 U	< 1 U
Bromomethane	***59***	***33***	1,200	ug/L	< 5 U	< 5 U	< 5 U
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 5 U	< 5 U	< 5 U
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 1 U	< 1 U	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MWOS-08 3/8/2023 MWOS-08_GW-030823	MWOS-08 6/8/2023 MWOS-08_GW-060823	MWOS-08 8/29/2023 MWOS-08_GW-082923
CFC-11	***300***	***160***	6,000	ug/L	< 1 U	< 1 U	< 1 U
CFC-12	***71***	***38***	1,400	ug/L	< 5 U	< 5 U	< 5 U
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 1 U	< 1 U	< 1 U
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 5 U	< 5 U	< 5 U
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 5 U	< 5 U	< 5 U
Chloroform	***19***	***10***	610	ug/L	1	1	1
Chloromethane	***340***	***200***	7,400	ug/L	< 5 U	< 5 U	< 5 U
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	5	2	1
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
Dibromomethane	***450***	***230***	9,000	ug/L	< 5 U	< 5 U	< 5 U
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 10 U	< 10 U	< 10 U
Ethylbenzene	***110***	***60***	3,600	ug/L	< 1 U	< 1 U	< 1 U
Hexachloroethane	***130***	***64***	3,900	ug/L	< 5 U	< 5 U	< 5 U
Iodomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
Isopropyl benzene	***26***	***13***	810	ug/L	< 5 U	< 5 U	< 5 U
m&p-Xylene	***- -***	***- -***	- -	ug/L	< 2 U	< 2 U	< 2 U
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 50 U	< 50 U	< 50 U
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 5 U	< 5 U	< 5 U
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 5 U	< 5 U	< 5 U
Naphthalene	***190***	***100***	6,200	ug/L	< 5 U	< 5 U	< 5 U
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 1 U	< 1 U	< 1 U
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 1 U	< 1 U	< 1 U
o-Xylene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 5 U	< 5 U	< 5 U
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 1 U	< 1 U	< 1 U
Styrene	***1,400***	***740***	45,000	ug/L	< 1 U	< 1 U	< 1 U
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 1 U	< 1 U	< 1 U
Tetrachloroethene	***250***	***130***	3,400	ug/L	< 1 U	< 1 U	< 1 U
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 90 U	< 90 U	< 90 U
Toluene	***56,000***	***30,000***	530,000	ug/L	< 1 U	< 1 U	< 1 U
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	< 1 U	< 1 U	< 1 U
trans-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
trans-1,4-Dichloro-2-butene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U
Trichloroethene	***15***	***8.1***	210	ug/L	< 1 U	< 1 U	< 1 U
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 1 U	< 1 U	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MWOS-09R 3/7/2023 MWOS-09R_GW-030723	MWOS-09R 6/8/2023 MWOS-09R_GW-060823	MWOS-09R 8/29/2023 MWOS-09R_GW-082923
Volatile Organics							
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	4	4 [4]	4
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	4	3 [3]	3
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 25 U	< 25 U [< 25 U]	< 25 U
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 50 U	< 50 U [< 50 U]	< 50 U
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 50 U	< 50 U [< 50 U]	< 50 U
Acrylonitrile	***120***	***67***	4,100	ug/L	< 2 U	< 2 U [< 2 U]	< 2 U
Benzene	***34***	***18***	1,100	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
Bromomethane	***59***	***33***	1,200	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MWOS-09R 3/7/2023 MWOS-09R_GW-030723	MWOS-09R 6/8/2023 MWOS-09R_GW-060823	MWOS-09R 8/29/2023 MWOS-09R_GW-082923
CFC-11	***300***	***160***	6,000	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
CFC-12	***71***	***38***	1,400	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
Chloroform	***19***	***10***	610	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
Chloromethane	***340***	***200***	7,400	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	28	22 [21]	19
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
Dibromomethane	***450***	***230***	9,000	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 10 U	< 10 U [< 10 U]	< 10 U
Ethylbenzene	***110***	***60***	3,600	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
Hexachloroethane	***130***	***64***	3,900	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
Iodomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
Isopropyl benzene	***26***	***13***	810	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
m&p-Xylene	***- -***	***- -***	- -	ug/L	< 2 U	< 2 U [< 2 U]	< 2 U
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 50 U	< 50 U [< 50 U]	< 50 U
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
Naphthalene	***190***	***100***	6,200	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
o-Xylene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
Styrene	***1,400***	***740***	45,000	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
Tetrachloroethene	***250***	***130***	3,400	ug/L	17	11 [12]	16
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 90 U	< 90 U [< 90 U]	< 90 U
Toluene	***56,000***	***30,000***	530,000	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	2	2 [2]	1
trans-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
trans-1,4-Dichloro-2-butene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U
Trichloroethene	***15***	***8.1***	210	ug/L	3	3 [3]	4
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MWOS-10 3/7/2023 MWOS-10_GW-030723	MWOS-10 6/12/2023 MWOS-10_GW-061223	MWOS-10 8/28/2023 MWOS-10_GW-082823	TW-12-22 6/8/2023 TW-12-22_GW-060823
Volatile Organics								
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	4	4	3	11
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	7	5	5	7
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 25 U	< 25 U	< 25 U	< 25 U
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 50 U	< 50 U	< 50 U	< 50 U
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 50 U	< 50 U	< 50 U	< 50 U
Acrylonitrile	***120***	***67***	4,100	ug/L	< 2 U	< 2 U	< 2 U	< 2 U
Benzene	***34***	***18***	1,100	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Bromomethane	***59***	***33***	1,200	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 1 U	< 1 U	< 1 U	2

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	MWOS-10 3/7/2023 MWOS-10_GW-030723	MWOS-10 6/12/2023 MWOS-10_GW-061223	MWOS-10 8/28/2023 MWOS-10_GW-082823	TW-12-22 6/8/2023 TW-12-22_GW-060823
CFC-11	***300***	***160***	6,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
CFC-12	***71***	***38***	1,400	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Chloroform	***19***	***10***	610	ug/L	< 1 U	< 1 U	< 1 U	10
Chloromethane	***340***	***200***	7,400	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	9	7	8	48
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Dibromomethane	***450***	***230***	9,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 10 U	< 10 U	< 10 U	< 10 U
Ethylbenzene	***110***	***60***	3,600	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Hexachloroethane	***130***	***64***	3,900	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Iodomethane	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Isopropyl benzene	***26***	***13***	810	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
m&p-Xylene	***- -***	***- -***	- -	ug/L	< 2 U	< 2 U	< 2 U	< 2 U
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 50 U	< 50 U	< 50 U	< 50 U
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
Naphthalene	***190***	***100***	6,200	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
o-Xylene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Styrene	***1,400***	***740***	45,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Tetrachloroethene	***250***	***130***	3,400	ug/L	< 1 U	< 1 U	< 1 U	4
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 90 U	< 90 U	< 90 U	< 90 U
Toluene	***56,000***	***30,000***	530,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	1	1	1	2
trans-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,4-Dichloro-2-butene	***- -***	***- -***	- -	ug/L	< 1 U	< 1 U	< 1 U	< 1 U
Trichloroethene	***15***	***8.1***	210	ug/L	***11***	***12***	***10***	***13***
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 1 U	< 1 U	< 1 U	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	UNKNOWN-1 6/7/2023 UNKNOWN-01_GW-060723
Volatile Organics					
1,1,1,2-Tetrachloroethane	***180***	***93***	5,700	ug/L	< 1 U
1,1,1-Trichloroethane	***22,000***	***11,000***	210,000	ug/L	47
1,1,2,2-Tetrachloroethane	***130***	***66***	4,100	ug/L	< 1 U
1,1,2-Trichloroethane	***21***	***11***	410	ug/L	< 1 U
1,1-Dichloroethane	***160***	***88***	5,300	ug/L	5
1,1-Dichloroethene	***410***	***220***	8,300	ug/L	< 1 U
1,2,3-Trichlorobenzene	***4,100***	***2,100***	18,000	ug/L	< 5 U
1,2,3-Trichloropropane	***91***	***47***	1,800	ug/L	< 1 U
1,2,3-Trimethylbenzene	***2,000***	***1,100***	41,000	ug/L	< 1 U
1,2,4-Trichlorobenzene	***270***	***130***	5,100	ug/L	< 5 U
1,2,4-Trimethylbenzene	***1,100***	***590***	22,000	ug/L	< 1 U
1,2-Dibromo-3-chloropropane	***0.00045***	***0.00045***	0.042	ug/L	< 5 U
1,2-Dibromoethane	***8***	***4***	250	ug/L	< 1 U
1,2-Dichlorobenzene	***19,000***	***9,900***	160,000	ug/L	< 1 U
1,2-Dichloroethane	***50***	***27***	1,600	ug/L	< 1 U
1,2-Dichloropropane	***100***	***56***	2,100	ug/L	< 1 U
1,3,5-Trimethylbenzene	***800***	***420***	16,000	ug/L	< 1 U
1,3-Dichlorobenzene	***130***	***70***	2,700	ug/L	< 1 U
1,4-Dichlorobenzene	***310***	***160***	9,800	ug/L	< 1 U
2-Butanone	***4,000,000***	***2,200,000***	59,000,000	ug/L	< 25 U
2-Methylnaphthalene	***3,500***	***1,800***	25,000	ug/L	< 5 U
4-Methyl-2-pentanone	***1,600,000***	***810,000***	19,000,000	ug/L	< 50 U
Acetone	***32,000,000***	***18,000,000***	240,000,000	ug/L	< 50 U
Acrylonitrile	***120***	***67***	4,100	ug/L	< 2 U
Benzene	***34***	***18***	1,100	ug/L	< 1 U
Bromobenzene	***3,300***	***1,700***	66,000	ug/L	< 1 U
Bromodichloromethane	***60***	***31***	1,700	ug/L	< 1 U
Bromoform	***6,400***	***3,200***	200,000	ug/L	< 1 U
Bromomethane	***59***	***33***	1,200	ug/L	< 5 U
Carbon Disulfide	***2,200***	***1,200***	46,000	ug/L	< 5 U
Carbon Tetrachloride	***14***	***7.2***	440	ug/L	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	Units	UNKNOWN-1 6/7/2023 UNKNOWN-01_GW-060723
CFC-11	***300***	***160***	6,000	ug/L	< 1 U
CFC-12	***71***	***38***	1,400	ug/L	< 5 U
Chlorobenzene	***1,300***	***720***	27,000	ug/L	< 1 U
Chlorodibromomethane	***58***	***29***	4,400	ug/L	< 5 U
Chlorobromomethane	***- -***	***- -***	- -	ug/L	< 1 U
Chloroethane	***15,000***	***8,600***	320,000	ug/L	< 5 U
Chloroform	***19***	***10***	610	ug/L	< 1 U
Chloromethane	***340***	***200***	7,400	ug/L	< 5 U
cis-1,2-Dichloroethene	***110***	***62***	2,300	ug/L	< 1 U
cis-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U
Dibromomethane	***450***	***230***	9,000	ug/L	< 5 U
Ethyl ether	***44,000***	***24,000***	900,000	ug/L	< 10 U
Ethylbenzene	***110***	***60***	3,600	ug/L	< 1 U
Hexachloroethane	***130***	***64***	3,900	ug/L	< 5 U
Iodomethane	***- -***	***- -***	- -	ug/L	< 1 U
Isopropyl benzene	***26***	***13***	810	ug/L	< 5 U
m&p-Xylene	***- -***	***- -***	- -	ug/L	< 2 U
Methyl N-Butyl Ketone	***24,000***	***12,000***	490,000	ug/L	< 50 U
Methyl tert-butyl ether	***10,000***	***5,300***	320,000	ug/L	< 5 U
Methylene chloride	***9,100***	***5,000***	190,000	ug/L	< 5 U
Naphthalene	***190***	***100***	6,200	ug/L	< 5 U
N-Butylbenzene	***2,000***	***1,100***	12,000	ug/L	< 1 U
N-Propylbenzene	***10,000***	***5,400***	52,000	ug/L	< 1 U
o-Xylene	***- -***	***- -***	- -	ug/L	< 1 U
p-Isopropyltoluene	***- -***	***- -***	- -	ug/L	< 5 U
sec-Butylbenzene	***9,200***	***4,300***	18,000	ug/L	< 1 U
Styrene	***1,400***	***740***	45,000	ug/L	< 1 U
tert-Butylbenzene	***3.4***	***1.8***	67	ug/L	< 1 U
Tetrachloroethene	***250***	***130***	3,400	ug/L	29
Tetrahydrofuran	***1,300,000***	***690,000***	27,000,000	ug/L	< 90 U
Toluene	***56,000***	***30,000***	530,000	ug/L	< 1 U
trans-1,2-Dichloroethene	***480***	***260***	9,800	ug/L	< 1 U
trans-1,3-Dichloropropene	***- -***	***- -***	- -	ug/L	< 1 U
trans-1,4-Dichloro-2-butene	***- -***	***- -***	- -	ug/L	< 1 U
Trichloroethene	***15***	***8.1***	210	ug/L	< 1 U
Vinyl Chloride	***2.2***	***1.2***	260	ug/L	< 1 U

Table 2
Summary of Monitoring Well Analytical Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Notes:

1) Criteria listed are from the EGLE Former Fiero Assembly Site-Specific Criteria Evaluation dated April 21, 2020.
2) Values in bold italics denotes exceedance and/or equal to Residential Site-Specific Volatilization to Indoor Air Criteria.
3) Values in red type denotes exceedance and/or equal to Non-Residential Site-Specific Volatilization to Indoor Air Criteria.
4) Duplicate analyses are presented in brackets.
5) Samples were analyzed by EPA Method SW5030C/8260C

Abbreviations:

µg/L	Micrograms per liter
BASE	Basement scenario
E	Concentration exceeds calibration range
NR	Non-Residential
Res	Residential
SOG	Slab-On-Grade scenario
SSVIAC	Site-Specific Volatilization to Indoor Air Criteria
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.
<50k	Less than 50,000 square feet

Table 3
Summary of Soil Vapor Monitoring Point Results
RACER Trust Pontiac North Campus
Former Fiero Properties
Pontiac, Michigan

Location ID: Sample Depth (ft. bgs): Date Collected:	Fiero SSVIAC Soil Gas Residential SOG Criteria	Fiero SSVIAC Soil Gas Residential Basement Criteria	Units	SV-01-21 14-14.5 3/20/2023	SV-01-21 14-14.5 6/5/2023	SV-01-21 14-14.5 8/28/2023	SV-02-21 23.25-23.75 3/20/2023	SV-02-21 23.25-23.75 6/5/2023	SV-02-21 23.25-23.75 8/28/2023	SV-03-21 11.5-12 3/20/2023	SV-03-21 11.5-12 6/6/2023	SV-03-21 11.5-12 8/28/2023	SV-04-21 22.5-23 3/20/2023	SV-04-21 22.5-23 6/6/2023	SV-04-21 22.5-23 8/28/2023	SV-05-21 11.5-12 3/20/2023	SV-05-21 11.5-12 6/5/2023	SV-05-21 11.5-12 8/28/2023	SV-06-21 22.5-23 3/20/2023	SV-06-21 22.5-23 6/5/2023	SV-06-21 22.5-23 8/28/2023
Analyte																					
1,1-Dichloroethene	**7,000**	7,000	ug/m^3	< 4.0 U	< 3.9 U	< 4.3 U	< 4.0 U (<4.0 U)	< 4.2 U (< 4.3 U)	< 4.3 U (< 4.1 U)	< 4.1 U	< 4.1 U	< 4.1 U	< 4.1 U	< 4.4 U	< 4.0 U	< 4.1 U	< 4.4 U	< 4.1 U	< 4.2 U	< 4.2 U	< 4.2 U
cis-1,2-Dichloroethene	**280**	280	ug/m^3	< 4.0 U	< 3.9 U	< 4.3 U	< 4.0 U (<4.0 U)	< 4.2 U (< 4.3 U)	< 4.3 U (< 4.1 U)	< 4.1 U	< 4.1 U	< 4.1 U	< 4.1 U	< 4.4 U	< 4.0 U	< 4.1 U	< 4.4 U	< 4.1 U	< 4.2 U	< 4.2 U	< 4.2 U
trans-1,2-Dichloroethene	**2,800**	2,800	ug/m^3	< 4.0 U	< 3.9 U	< 4.3 U	< 4.0 U (<4.0 U)	< 4.2 U (< 4.3 U)	< 4.3 U (< 4.1 U)	< 4.1 U	< 4.1 U	< 4.1 U	< 4.1 U	< 4.4 U	< 4.0 U	< 4.1 U	< 4.4 U	< 4.1 U	< 4.2 U	< 4.2 U	< 4.2 U
Tetrachloroethene	**1,400**	1,400	ug/m^3	< 6.8 U	7.5	17	7.6 (8.4)	8.8 (8.1)	12 (12)	< 7.0 U	< 7.0 U	< 7.0 U	< 7.0 U	< 7.5 U	< 6.8 U	< 7.0 U	< 7.5 U	< 7.0 U	< 7.2 U	< 7.2 U	< 7.2 U
Trichloroethene	**67**	67	ug/m^3	8.0	9.3	32	61.0 **(68.0)**	50.0 (54.0)	60 (60)	< 5.6 U	< 5.6 U	< 5.5 U	18	17	16	< 5.5 U	< 5.9 U	< 5.5 U	48	15	17
Vinyl Chloride	**54**	54	ug/m^3	< 2.6 U	< 2.5 U	< 2.8 U	< 2.6 U (<2.6 U)	< 2.7 U (< 2.8 U)	< 2.7 U (< 2.6 U)	< 2.6 U	< 2.6 U	< 2.6 U	< 2.6 U	< 2.8 U	< 2.6 U	< 2.6 U	< 2.8 U	< 2.6 U	< 2.7 U	< 2.7 U	< 2.7 U

NOTES:

1) Criteria listed are from the EGLE Former Fiero Assembly Site-Specific Criteria Evaluation dated April 21, 2020.
2) Values in bold denote exceedance and/or equal to Residential Site-Specific Volatilization to Indoor Air soil gas SOG criteria.
3) Values in red type denote exceedance and/or equal to Residential Site-Specific Volatilization to Indoor Air soil gas basement criteria.
4) Duplicate analyses are presented in parenthesis
5) Samples analyzed by USEPA TO-15 Methods

Abbreviations:
µg/m^3 - Micrograms per cubic meter.
< - Not detected
ft. bgs - feet below ground surface
U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value.
SOG - Slab-On-Grade
SSVIAC - Site-Specific Volatilization to Indoor Air Criteria

FIGURES

Service Layer Credits: Google Earth Pro Aerial Dated March 19, 2021

PZF17-01
PZF17-02
PZF17-03
PZF17-04
PZF17-05
MWF2
MWF8-01
MWF16-09
MWF16-17
MWF16-05
MW-09-22
MWF16-12
MWF16-18
MWF16-24
MWF16-26
TW-12-22
MWF16-06
MWF16-20
MW-16-22
MWF16-16
MWF16-19
MWF16-22
MW-14-22
MW-13-22
MW-15-22
MW-11-22
MWF16-25
MWF16-07
MWF16-15
MWF7-03
MWF16-23
MWF7-02
MWOS-08
MWOS-09R
MW-06-20
SV-01-21
MW-08-21
SV-02-21
UNKNOWN-01
MWF15-01
SV-06-21
SV-05-21
MWOS-10
SV-04-21
SV-03-21
MW-07-20
MW-05-18
MW-02-17
MWF12-01R
MWF12-02R

LEGEND

- EXISTING MONITORING WELL
- SOIL VAPOR MONITORING POINT
- SAMPLED ONLY
- GAUGED AND SAMPLED
- CURRENT OR FORMER RACER PROPERTY

0 200 400
SCALE IN FEET

RACER TRUST
PONTIAC NORTH CAMPUS
PONTIAC, MICHIGAN

2023 FIERO TEMPORARY MONITORING PLAN - 3Q MONITORING LOCATIONS

ARCADIS

FIGURE
1

E Beverly Ave
Price
Hollywood
W Tennyson
MWF2
MWF8-01
PZF17-01
PZF17-02
FORMER FIERO PARKING LOT
MWF16-09
PZF17-03
PZF17-04
FORMER FIERO PLANT 17
MWF16-17
MWF16-05
953.28
953
Saint Louis Ave
PZF17-05
MW-09-22
952.40
MWF16-12
MWF16-18
952.52
952
W Kennett Rd
MWF16-24
MWF16-26
TW-12-22
MWF16-06
MWF16-20
MWF16-16
950.87**
MWF16-19
951
MWF16-22
MW-14-22
950.35
MW-13-22
951.17
MW-16-22
946.02*
MWF16-07
Parkdale Ave
MW-11-22
MWF16-25
E Kennett Rd
MW-15-22
950.16
MWF16-15
MWF7-03
950
MWOS-08
949.08
MWF16-23
949.45
POWER HOUSE
MWF7-02
949
MW-06-20
948.94
MWOS-09R
948.88
UNKNOWN-01
MW-08-21
948.69
MWF15-01
N Merrimac St
Baldwin Ave
MWOS-10
949.02
MW-07-20
MW-05-18
N Merrimac St
S Merrimac
MW-02-17
MWF12-01R
MWF12-02R
Owens St
Saint Clair St
Young
Wing
Portland
MWOS-01
E Montcalm
MWOS-02
Rd

LEGEND

- MONITORING WELL
- 947.09 GROUNDWATER ELEVATION
- GROUNDWATER CONTOUR
- INFERRED GROUNDWATER CONTOUR
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- * ELEVATION NOT USED FOR CONTOURING
- ** GAUGED AT LATER DATE
- CURRENT OR FORMER RACER PROPERTY

0 210 420
SCALE IN FEET

RACER TRUST
PONTIAC NORTH CAMPUS
PONTIAC, MICHIGAN

FIERO GROUNDWATER CONTOUR MAP
AUGUST 28, 2023

ARCADIS

FIGURE
2

CITY: NOVI DIV: ENV DB: TRY PIC: S.INSALACO PM: T. LINDER TM: L. CRISP TR: PROJECT NUMBER: 30167840.00005 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
D:\GIS\Project Files\MotorsLiquidationCompany\PontiacNorthCampus\Documents\Former_Fiero_Property\DataPackage_2023_3Q\02_FieroProperty_GWE_2023Q3.mxd PLOTTED: 10/19/2023 1:51:32 PM BY: TYarbrough

Service Layer Credits: Google Earth Pro Aerial Dated March 19, 2021

PZF17-01
PZF17-02
PZF17-03
PZF17-04
PZF17-05
MWF2
MWF8-01
MWF16-09
MWF16-17
MWF16-05
MW-09-22
MWF16-12
MWF16-18
MWF16-24
MWF16-26
TW-12-22
MWF16-06
MWF16-20
MWF16-22
MWF16-16
MWF16-19
MW-13-22
MW-11-22
MW-16-22
MWF16-07
MWF16-25
MW-14-22
MW-15-22
MWF16-15
MWF7-03
MWOS-08
MWF16-23
MWF7-02
MWOS-09R
MW-06-20
UNKNOWN-01
SV-01-21
MW-08-21
MWF15-01
SV-02-21
SV-06-21
MW-07-20
SV-05-21
MWOS-10
SV-03-21
SV-04-21
MW-05-18
MW-02-17
MWF12-01R
MWF12-02R

LEGEND

- EXISTING MONITORING WELL
- SOIL VAPOR MONITORING POINT
- EXCEEDS RESIDENTIAL SSVIAC
- DOES NOT EXCEED RESIDENTIAL SSVIAC
- CURRENT OR FORMER RACER PROPERTY

NOTES:

1. SSVIAC - SITE SPECIFIC VOLATILIZATION TO INDOOR AIR CRITERIA

2. GROUNDWATER AND SOIL GAS DATA DOES NOT EXCEED NONRESIDENTIAL SSVIAC.

3. CRITERIA FROM DEPARTMENT OF ENVIRONMENT, GREAT LAKES AND ENERGY (EGLE) DEVELOPED SITE-SPECIFIC VOLATILIZATION TO INDOOR AIR CRITERIA FOR THE FORMER FIERO ASSEMBLY, APRIL 21, 2020.

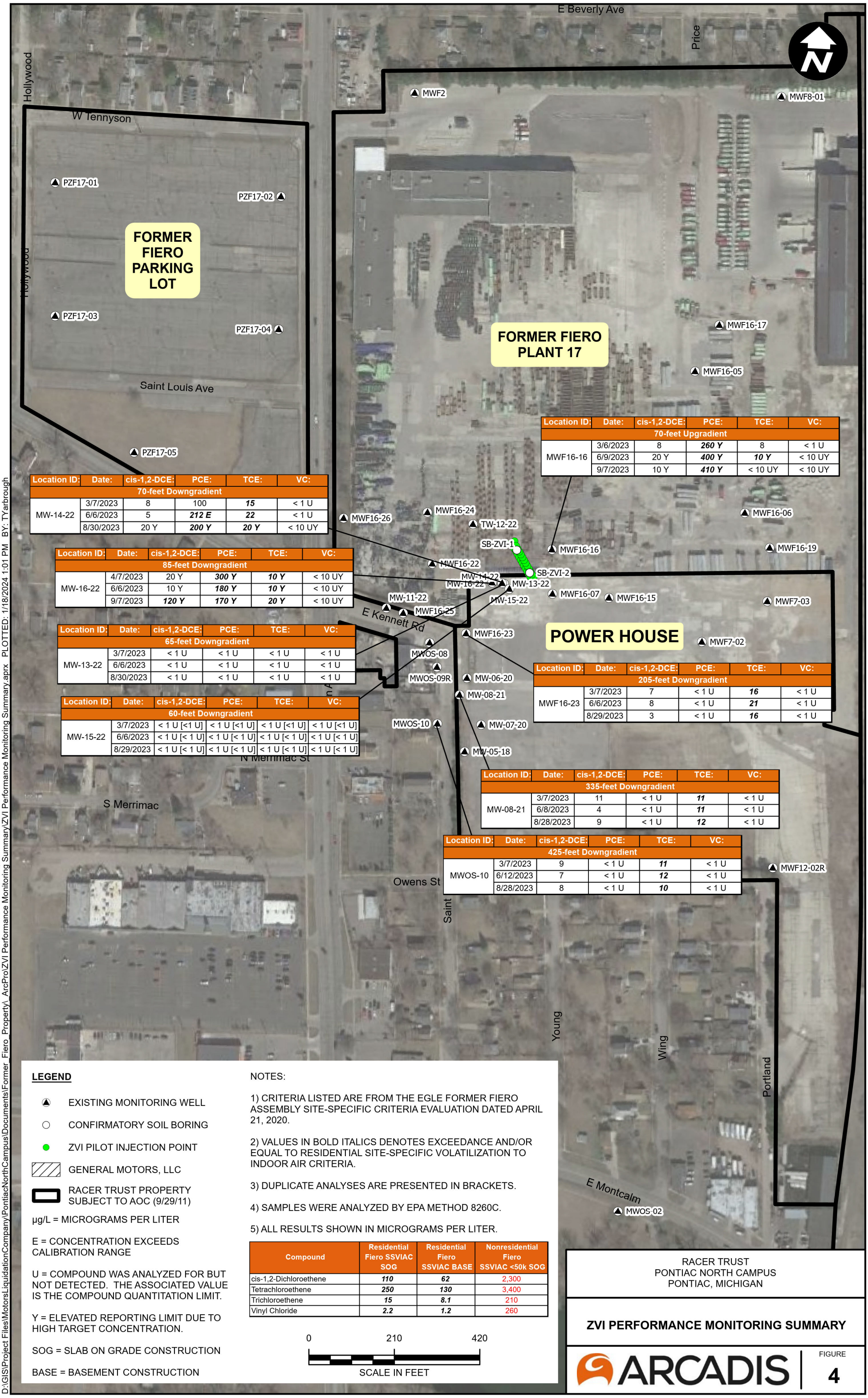
0 200 400
SCALE IN FEET

RACER TRUST
PONTIAC NORTH CAMPUS
PONTIAC, MICHIGAN

SUMMARY OF GROUNDWATER AND SOIL GAS RESULTS Q3 2023

ARCADIS

FIGURE
3



Location ID:	Date:	cis-1,2-DCE:	PCE:	TCE:	VC:
70-feet Downgradient					
MW-14-22	3/7/2023	8	100	***15***	< 1 U
	6/6/2023	5	***212 E***	***22***	< 1 U
	8/30/2023	20 Y	***200 Y***	***20 Y***	< 10 UY

Location ID:	Date:	cis-1,2-DCE:	PCE:	TCE:	VC:
85-feet Downgradient					
MW-16-22	4/7/2023	20 Y	***300 Y***	***10 Y***	< 10 UY
	6/6/2023	10 Y	***180 Y***	***10 Y***	< 10 UY
	9/7/2023	***120 Y***	***170 Y***	***20 Y***	< 10 UY

Location ID:	Date:	cis-1,2-DCE:	PCE:	TCE:	VC:
65-feet Downgradient					
MW-13-22	3/7/2023	< 1 U	< 1 U	< 1 U	< 1 U
	6/6/2023	< 1 U	< 1 U	< 1 U	< 1 U
	8/30/2023	< 1 U	< 1 U	< 1 U	< 1 U

Location ID:	Date:	cis-1,2-DCE:	PCE:	TCE:	VC:
60-feet Downgradient					
MW-15-22	3/7/2023	< 1 U [<1 U]	< 1 U [<1 U]	< 1 U [<1 U]	< 1 U [<1 U]
	6/6/2023	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]
	8/29/2023	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]	< 1 U [< 1 U]

Location ID:	Date:	cis-1,2-DCE:	PCE:	TCE:	VC:
70-feet Upgradient					
MWF16-16	3/6/2023	8	***260 Y***	8	< 1 U
	6/9/2023	20 Y	***400 Y***	***10 Y***	< 10 UY
	9/7/2023	10 Y	***410 Y***	< 10 UY	< 10 UY

Location ID:	Date:	cis-1,2-DCE:	PCE:	TCE:	VC:
205-feet Downgradient					
MWF16-23	3/7/2023	7	< 1 U	***16***	< 1 U
	6/6/2023	8	< 1 U	***21***	< 1 U
	8/29/2023	3	< 1 U	***16***	< 1 U

Location ID:	Date:	cis-1,2-DCE:	PCE:	TCE:	VC:
335-feet Downgradient					
MW-08-21	3/7/2023	11	< 1 U	***11***	< 1 U
	6/8/2023	4	< 1 U	***11***	< 1 U
	8/28/2023	9	< 1 U	***12***	< 1 U

Location ID:	Date:	cis-1,2-DCE:	PCE:	TCE:	VC:
425-feet Downgradient					
MWOS-10	3/7/2023	9	< 1 U	***11***	< 1 U
	6/12/2023	7	< 1 U	***12***	< 1 U
	8/28/2023	8	< 1 U	***10***	< 1 U

LEGEND

- EXISTING MONITORING WELL
- CONFIRMATORY SOIL BORING
- ZVI PILOT INJECTION POINT
- GENERAL MOTORS, LLC
- RACER TRUST PROPERTY SUBJECT TO AOC (9/29/11)

µg/L = MICROGRAMS PER LITER

E = CONCENTRATION EXCEEDS CALIBRATION RANGE

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.

SOG = SLAB ON GRADE CONSTRUCTION

BASE = BASEMENT CONSTRUCTION

NOTES:

1) CRITERIA LISTED ARE FROM THE EGLE FORMER FIERO ASSEMBLY SITE-SPECIFIC CRITERIA EVALUATION DATED APRIL 21, 2020.

2) VALUES IN BOLD ITALICS DENOTES EXCEEDANCE AND/OR EQUAL TO RESIDENTIAL SITE-SPECIFIC VOLATILIZATION TO INDOOR AIR CRITERIA.

3) DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.

4) SAMPLES WERE ANALYZED BY EPA METHOD 8260C.

5) ALL RESULTS SHOWN IN MICROGRAMS PER LITER.

Compound	Residential Fiero SSVIAC SOG	Residential Fiero SSVIAC BASE	Nonresidential Fiero SSVIAC <50k SOG
cis-1,2-Dichloroethene	***110***	***62***	2,300
Tetrachloroethene	***250***	***130***	3,400
Trichloroethene	***15***	***8.1***	210
Vinyl Chloride	***2.2***	***1.2***	260

0 210 420

SCALE IN FEET

RACER TRUST
PONTIAC NORTH CAMPUS
PONTIAC, MICHIGAN

ZVI PERFORMANCE MONITORING SUMMARY

ARCADIS

FIGURE
4

CITY: NOVI, MI DIV: ENV DB: TRY PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
D:\GIS\Project Files\MotorsLiquidationCompany\PontiacNorthCampus\Documents\Former_Fiero_Property_ArcPro\ZVI Performance Monitoring Summary\ZVI Performance Monitoring Summary.aprx PLOTTED: 1/18/2024 1:01 PM BY: TYarbrough

Attachment 1

Analytical Reports

Analytical Laboratory Report

Report ID: S53170.01(01)
Generated on 09/13/2023

Report to

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

Phone: 810-225-1909 FAX: 248-994-2241
Email: Alexis.Crisp@arcadis.com

Addtional 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 Laverty (johnlaverty@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S53170.01-S53170.02
Project: Racer PNC / 30167840.00005
Collected Date(s): 09/07/2023
Submitted Date/Time: 09/08/2023 14:50
Sampled by: Sommer Guy
P.O. #: 30167840.00005

Table of Contents

Maya Murshak
Technical Director

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.

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

Laboratory Certifications

Authority	Certification 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

Method Summary

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

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S53170.01	Trip Blank	Liquid	09/07/23 00:01
S53170.02	MW-16-22_GW-090723	Groundwater	09/07/23 14:43

Lab Sample ID: S53170.01
Sample Tag: Trip Blank
Collected Date/Time: 09/07/2023 00:01
Matrix: Liquid
COC Reference: 141362

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/13/23 10:41	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/12/23 14:11, 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	

Lab Sample ID: S53170.01 (continued)
Sample Tag: Trip Blank

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/12/23 14:11, 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	

Lab Sample ID: S53170.02
Sample Tag: MW-16-22_GW-090723
Collected Date/Time: 09/07/2023 14:43
Matrix: Groundwater
COC Reference: 141362

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/13/23 10:43	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/13/23 06:55, 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
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	120	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	Not detected	10		ug/L	10	71-43-2	Y
1,2-Dichloroethane	Not detected	10		ug/L	10	107-06-2	Y
Trichloroethene	20	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	170	10		ug/L	10	127-18-4	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S53170.02 (continued)
Sample Tag: MW-16-22_GW-090723

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/13/23 06:55, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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
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

Merit Laboratories Login Checklist

Lab Set ID: S53170
Client: ARCADIS_NOVI (Arcadis US, Inc. - Novi)
Project: Racer PNC / 30167840.00005
Submitted: 09/08/2023 14:50 Login User: MMC

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

Phone: 810-225-1909 FAX: 248-994-2241
Email: Alexis.Crisp@arcadis.com

Selection				Description	Note
Sample Receiving					
01.	[X] Yes	[ ] No	[ ] N/A	Samples are received at 4C +/- 2C Thermometer #	IR 4.5
02.	[X] Yes	[ ] No	[ ] N/A	Received on ice/ cooling process begun	
03.	[ ] Yes	[X] No	[ ] N/A	Samples shipped	
04.	[ ] Yes	[X] No	[ ] N/A	Samples left in 24 hr. drop box	
05.	[ ] Yes	[ ] No	[X] N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody					
06.	[X] Yes	[ ] No	[ ] N/A	COC adequately filled out	
07.	[X] Yes	[ ] No	[ ] N/A	COC signed and relinquished to the lab	
08.	[X] Yes	[ ] No	[ ] N/A	Sample tag on bottles match COC	
09.	[ ] Yes	[X] No	[ ] N/A	Subcontracting needed? Subcontacted to:	
Preservation					
10.	[X] Yes	[ ] No	[ ] N/A	Do sample have correct chemical preservation	
11.	[ ] Yes	[ ] No	[X] N/A	Completed pH checks on preserved samples? (no VOAs)	
12.	[ ] Yes	[X] No	[ ] N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions					
13.	[X] Yes	[ ] No	[ ] N/A	All bottles intact	
14.	[X] Yes	[ ] No	[ ] N/A	Appropriate analytical bottles are used	
15.	[X] Yes	[ ] No	[ ] N/A	Merit bottles used	
16.	[X] Yes	[ ] No	[ ] N/A	Sufficient sample volume received	
17.	[ ] Yes	[X] No	[ ] N/A	Samples require laboratory filtration	
18.	[X] Yes	[ ] No	[ ] N/A	Samples submitted within holding time	
19.	[ ] Yes	[X] No	[ ] 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: _____

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

141362

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Alexis Crisp
COMPANY: Arcadis
ADDRESS: 28550 Cabot Dr #500
CITY: Novi | STATE: MI | ZIP CODE:
PHONE NO.: | FAX NO.: | P.O. NO.:
E-MAIL ADDRESS: Alexis.crisp@arcadis.com tiffany.linder@arcadis.com | QUOTE NO.:

INVOICE TO

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: accountspayable.administration@arcadis.com

PROJECT NO./NAME: Racer PNC | 30167840.00005
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Sommer Guy / Sommer Guy

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

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOC's (8260)	Special Instructions
53170.01	–	–	tripblank	L	1		1						X	tripblank
.02	9/1/23	1443	MW-16-22_GW-090723	GW	3		3						X	

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Sommer Guy / Arcadis ☒ Sampler — DATE: 9/8/23 — TIME: 1400
RECEIVED BY: SIGNATURE/ORGANIZATION: — DATE: 9/8/23 — TIME: 1420
RELINQUISHED BY: SIGNATURE/ORGANIZATION: — DATE: 9/8/23 — TIME: 14:50
RECEIVED BY: SIGNATURE/ORGANIZATION: — DATE: 9/8/23 — TIME: 1450

RELINQUISHED BY: SIGNATURE/ORGANIZATION: — DATE: — TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: — DATE: — TIME:

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL: 4.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.1

Analytical Laboratory Report

Report ID: S52760.01(01)
Generated on 09/05/2023

Report to

Attention: Alexis Crisp
Arcadis US, Inc.
7575 Huntington Park Drive, Suite 130
Columbus, OH 43235

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

Addtional 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 Laverty (johnlaverty@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S52760.01-S52760.05
Project: 30167840.00005 / RACER PNC
Collected Date(s): 08/28/2023 - 08/29/2023
Submitted Date/Time: 08/29/2023 14:20
Sampled by: Kaylee DeRoo
P.O. #: 30167840.00005

Table of Contents

Maya Murshak
Technical Director

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.

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

Laboratory Certifications

Authority	Certification 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

Method Summary

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

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S52760.01	MWOS-10_GW-082823	Groundwater	08/28/23 14:50
S52760.02	MW-08-21_GW-082823	Groundwater	08/28/23 16:00
S52760.03	Trip Blank	Water	08/28/23 00:01
S52760.04	MWOS-08_GW-082923	Groundwater	08/29/23 10:45
S52760.05	MWOS-09R_GW-082923	Groundwater	08/29/23 12:10

Lab Sample ID: S52760.01
Sample Tag: MWOS-10_GW-082823
Collected Date/Time: 08/28/2023 14:50
Matrix: Groundwater
COC Reference: 164393

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/05/23 11:11	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/01/23 19:35, 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	1	1		ug/L	1	156-60-5	
1,1-Dichloroethane	5	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	8	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	3	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	10	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	

Lab Sample ID: S52760.01 (continued)
Sample Tag: MWOS-10_GW-082823

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/01/23 19:35, 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	

Lab Sample ID: S52760.02
Sample Tag: MW-08-21_GW-082823
Collected Date/Time: 08/28/2023 16:00
Matrix: Groundwater
COC Reference: 164393

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/05/23 11:11	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/01/23 19:58, 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	6	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	9	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	2	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	12	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	

Lab Sample ID: S52760.02 (continued)
Sample Tag: MW-08-21_GW-082823

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/01/23 19:58, 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	

Lab Sample ID: S52760.03
Sample Tag: Trip Blank
Collected Date/Time: 08/28/2023 00:01
Matrix: Water
COC Reference: 164393

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	3.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/05/23 11:11	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/01/23 16:03, 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	

Lab Sample ID: S52760.03 (continued)
Sample Tag: Trip Blank

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/01/23 16:03, 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	

Lab Sample ID: S52760.04
Sample Tag: MWOS-08_GW-082923
Collected Date/Time: 08/29/2023 10:45
Matrix: Groundwater
COC Reference: 164393

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/05/23 11:11	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/01/23 20:22, 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	1	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	1	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	4	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	

Lab Sample ID: S52760.04 (continued)
Sample Tag: MWOS-08_GW-082923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/01/23 20:22, 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	

Lab Sample ID: S52760.05
Sample Tag: MWOS-09R_GW-082923
Collected Date/Time: 08/29/2023 12:10
Matrix: Groundwater
COC Reference: 164393

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/05/23 11:11	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/01/23 20:46, 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	1	1		ug/L	1	156-60-5	
1,1-Dichloroethane	3	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	19	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	4	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	4	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	16	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	

Lab Sample ID: S52760.05 (continued)
Sample Tag: MWOS-09R_GW-082923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/01/23 20:46, 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: S52760
Client: ARCADIS_NOVI (ARCADIS U.S., Inc.)
Project: 30167840.00005 / RACER PNC
Submitted: 08/29/2023 14:20 Login User: MMC

Attention: Alexis Crisp
Address: Arcadis US, Inc.
7575 Huntington Park Drive, Suite 130
Columbus, OH 43235

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

Selection				Description	Note
Sample Receiving					
01.	[X] Yes	[ ] No	[ ] N/A	Samples are received at 4C +/- 2C Thermometer #	IR 3.0
02.	[X] Yes	[ ] No	[ ] N/A	Received on ice/ cooling process begun	
03.	[ ] Yes	[X] No	[ ] N/A	Samples shipped	
04.	[ ] Yes	[X] No	[ ] N/A	Samples left in 24 hr. drop box	
05.	[ ] Yes	[ ] No	[X] N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody					
06.	[X] Yes	[ ] No	[ ] N/A	COC adequately filled out	
07.	[X] Yes	[ ] No	[ ] N/A	COC signed and relinquished to the lab	
08.	[X] Yes	[ ] No	[ ] N/A	Sample tag on bottles match COC	
09.	[ ] Yes	[X] No	[ ] N/A	Subcontracting needed? Subcontacted to:	
Preservation					
10.	[X] Yes	[ ] No	[ ] N/A	Do sample have correct chemical preservation	
11.	[ ] Yes	[ ] No	[X] N/A	Completed pH checks on preserved samples? (no VOAs)	
12.	[ ] Yes	[X] No	[ ] N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions					
13.	[X] Yes	[ ] No	[ ] N/A	All bottles intact	
14.	[X] Yes	[ ] No	[ ] N/A	Appropriate analytical bottles are used	
15.	[X] Yes	[ ] No	[ ] N/A	Merit bottles used	
16.	[X] Yes	[ ] No	[ ] N/A	Sufficient sample volume received	
17.	[ ] Yes	[X] No	[ ] N/A	Samples require laboratory filtration	
18.	[X] Yes	[ ] No	[ ] N/A	Samples submitted within holding time	
19.	[ ] Yes	[X] No	[ ] 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: _____

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

164393

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Lexi Crisp
COMPANY: Arcadis
ADDRESS: 7575 Huntington Park Drive, Suite 130
CITY: Columbus STATE: OH ZIP CODE: 43235
PHONE NO.: 614-985-9163 CELL NO.:
P.O. NO.: 30167840.00005
E-MAIL ADDRESS: Alexis.Crisp@arcadis.com QUOTE NO.:

INVOICE TO

CONTACT NAME: Accounts Payable ☐ SAME
COMPANY: Arcadis
ADDRESS: 630 Plaza Drive #600
CITY: Highlands Ranch STATE: CO ZIP CODE: 80129
PHONE NO.: E-MAIL ADDRESS: accountspayable.administration@arcadis.com

PROJECT NO./NAME: 30167840.00005/RALER PVC
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kaylee DeRoo/Kaylee DeRoo

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☒ EDD ☐ OTHER

MATRIX CODE: W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

MERIT LAB NO. (FOR LAB USE ONLY)	COLLECTION DATE	COLLECTION TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	8260	Special Instructions
52760.01	8/28/23	1450	MWOS-10_GW-082823	GW	3		X						X	
.02	8/28/23	1600	MW-08-21_GW-082823	GW	3		X						X	
.03	—	—	Trip blank	W	1		X						X	Trip blank
.04	8/29/23	1045	MWOS-08_GW-082923	GW	3		X						X	
.05	8/29/23	1210	MWOS-09R_GW-082923	GW	3		X						X	

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE	TIME
Kaylee DeRoo/Arcadis		8/29/23	1255
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		8/29/23	1855
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		8/29/23	14:20
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		8/29/23	1420

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 3.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 1.26.2

Analytical Laboratory Report

Report ID: S52802.01(01)
Generated on 09/05/2023

Report to

Attention: Alexis Crisp
Arcadis US, Inc.
7575 Huntington Park Drive, Suite 130
Columbus, OH 43235

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

Addtional 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 Laverty (johnlaverty@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S52802.01-S52802.04
Project: 30167840.00005 / RACER PNC
Collected Date(s): 08/29/2023
Submitted Date/Time: 08/30/2023 13:20
Sampled by: Kaylee DeRoo
P.O. #: 30167840.00005

Table of Contents

Maya Murshak
Technical Director

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.

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

Laboratory Certifications

Authority	Certification 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

Method Summary

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

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S52802.01	MW-06-20_GW-082923	Groundwater	08/29/23 13:30
S52802.02	MWF16-23_GW-082923	Groundwater	08/29/23 14:40
S52802.03	DUP-01_GW-082923	Groundwater	08/29/23 00:01
S52802.04	Trip Blank	Water	08/29/23 00:01

Lab Sample ID: S52802.01
Sample Tag: MW-06-20_GW-082923
Collected Date/Time: 08/29/2023 13:30
Matrix: Groundwater
COC Reference: 164394

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/05/23 11:21	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/02/23 03:49, 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	4	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	7	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	3	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	9	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	

Lab Sample ID: S52802.01 (continued)
Sample Tag: MW-06-20_GW-082923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/02/23 03:49, 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	

Lab Sample ID: S52802.02
Sample Tag: MWF16-23_GW-082923
Collected Date/Time: 08/29/2023 14:40
Matrix: Groundwater
COC Reference: 164394

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/05/23 11:21	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/02/23 04:13, 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	1	1		ug/L	1	156-60-5	
1,1-Dichloroethane	4	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	3	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	8	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	16	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	

Lab Sample ID: S52802.02 (continued)
Sample Tag: MWF16-23_GW-082923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/02/23 04:13, 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*	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	

Lab Sample ID: S52802.03
Sample Tag: DUP-01_GW-082923
Collected Date/Time: 08/29/2023 00:01
Matrix: Groundwater
COC Reference: 164394

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/05/23 11:21	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/02/23 04:36, 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	4	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	7	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	3	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	9	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	

Lab Sample ID: S52802.03 (continued)
Sample Tag: DUP-01_GW-082923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/02/23 04:36, 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	

Lab Sample ID: S52802.04
Sample Tag: Trip Blank
Collected Date/Time: 08/29/2023 00:01
Matrix: Water
COC Reference: 164394

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/05/23 11:54	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/02/23 01:28, 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	

Lab Sample ID: S52802.04 (continued)
Sample Tag: Trip Blank

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/02/23 01:28, 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: S52802
Client: ARCADIS_NOVI (ARCADIS U.S., Inc.)
Project: 30167840.00005 / RACER PNC
Submitted: 08/30/2023 13:20 Login User: MMC

Attention: Alexis Crisp
Address: Arcadis US, Inc.
7575 Huntington Park Drive, Suite 130
Columbus, OH 43235

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

Selection				Description	Note
Sample Receiving					
01.	[X] Yes	[ ] No	[ ] N/A	Samples are received at 4C +/- 2C Thermometer #	IR 4.1
02.	[X] Yes	[ ] No	[ ] N/A	Received on ice/ cooling process begun	
03.	[ ] Yes	[X] No	[ ] N/A	Samples shipped	
04.	[ ] Yes	[X] No	[ ] N/A	Samples left in 24 hr. drop box	
05.	[ ] Yes	[ ] No	[X] N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody					
06.	[X] Yes	[ ] No	[ ] N/A	COC adequately filled out	
07.	[X] Yes	[ ] No	[ ] N/A	COC signed and relinquished to the lab	
08.	[X] Yes	[ ] No	[ ] N/A	Sample tag on bottles match COC	
09.	[ ] Yes	[X] No	[ ] N/A	Subcontracting needed? Subcontacted to:	
Preservation					
10.	[X] Yes	[ ] No	[ ] N/A	Do sample have correct chemical preservation	
11.	[ ] Yes	[ ] No	[X] N/A	Completed pH checks on preserved samples? (no VOAs)	
12.	[ ] Yes	[X] No	[ ] N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions					
13.	[X] Yes	[ ] No	[ ] N/A	All bottles intact	
14.	[X] Yes	[ ] No	[ ] N/A	Appropriate analytical bottles are used	
15.	[X] Yes	[ ] No	[ ] N/A	Merit bottles used	
16.	[X] Yes	[ ] No	[ ] N/A	Sufficient sample volume received	
17.	[ ] Yes	[X] No	[ ] N/A	Samples require laboratory filtration	
18.	[X] Yes	[ ] No	[ ] N/A	Samples submitted within holding time	
19.	[ ] Yes	[X] No	[ ] 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: _____

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

164394

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Alexis Crisp
COMPANY: Arcadis
ADDRESS: 28550 Cabot Dr #500
CITY: Novi STATE: MI ZIP CODE: 48377
PHONE NO.: 614-985-9163 CELL NO.:
P.O. NO.: 30167840.00005
E-MAIL ADDRESS: Alexis.Crisp@arcadis.com
QUOTE NO.:

INVOICE TO

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: accountspayable.administration@arcadis.com

PROJECT NO./NAME: 30167840.00005/Racer PNC
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kaylee DeRoo / Kaylee DeRoo

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☒ EDD ☐ OTHER

MATRIX CODE: W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	COLLECTION DATE	COLLECTION TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Method 8260	Special Instructions
52802.01	8/29/23	1330	MW-06-20_GW-082923	GW	3		X						X	
.02	8/29/23	1440	MWF16-23_GW-082923	GW	3		X						X	
.03	8/29/23	—	DUP-01_GW-082923	GW	3		X						X	
.04	8/29/23	—	Trip Blank	W	1		X						X	Trip blank

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Kaylee DeRoo / Arcadis ☒ Sampler	DATE 8/30/23	TIME 11:45
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 8/30/23	TIME 11:45
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 8/30/23	TIME 13:20
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 8/30/23	TIME 1320

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RECEIVED BY: SIGNATURE/ORGANIZATION — DATE — TIME

SEAL NO. — SEAL INTACT YES ☐ NO ☐ — INITIALS
SEAL NO. — SEAL INTACT YES ☐ NO ☐ — INITIALS

NOTES: TEMP. ON ARRIVAL 4.1

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 1.26.22

Analytical Laboratory Report

Report ID: S52803.01(01)
Generated on 09/07/2023

Report to

Attention: Alexis Crisp
Arcadis US, Inc.
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Columbus, OH 43235

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

Addtional Contacts: Tiffany Linder, Ian Drost

Report produced by

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Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S52803.01-S52803.07
Project: 30167840.00005 / RACER PNC
Collected Date(s): 08/29/2023 - 08/30/2023
Submitted Date/Time: 08/30/2023 13:20
Sampled by: Kaylee DeRoo
P.O. #: 30167840.00005

Table of Contents

Maya Murshak
Technical Director

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.

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

Laboratory Certifications

Authority	Certification 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

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 (7 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S52803.01	MW-15-22_GW-082923	Groundwater	08/29/23 15:40
S52803.02	MW-13-22_GW-083023	Groundwater	08/30/23 10:30
S52803.03	MW-14-22_GW-083023	Groundwater	08/30/23 11:25
S52803.04	MW-14-22_GW-083023 MS	Groundwater	08/30/23 11:25
S52803.05	MW-14-22_GW-083023 MSD	Groundwater	08/30/23 11:25
S52803.06	DUP-02_GW-083023	Groundwater	08/29/23 00:01
S52803.07	Trip Blank	Water	08/29/23 00:01

Lab Sample ID: S52803.01
Sample Tag: MW-15-22_GW-082923
Collected Date/Time: 08/29/2023 15:40
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/05/23 11:21	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/02/23 05:00, 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	

Lab Sample ID: S52803.01 (continued)
Sample Tag: MW-15-22_GW-082923

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/02/23 05:00, 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	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	

Lab Sample ID: S52803.02
Sample Tag: MW-13-22_GW-083023
Collected Date/Time: 08/30/2023 10:30
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/05/23 11:21	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/02/23 05:24, 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	

Lab Sample ID: S52803.02 (continued)
Sample Tag: MW-13-22_GW-083023

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/02/23 05:24, 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	

Lab Sample ID: S52803.03
Sample Tag: MW-14-22_GW-083023
Collected Date/Time: 08/30/2023 11:25
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/07/23 12:01	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/06/23 21:47, 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
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	20	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	10	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	Not detected	10		ug/L	10	71-43-2	Y
1,2-Dichloroethane	Not detected	10		ug/L	10	107-06-2	Y
Trichloroethene	20	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	200	10		ug/L	10	127-18-4	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S52803.03 (continued)
Sample Tag: MW-14-22_GW-083023

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/06/23 21:47, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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
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

Lab Sample ID: S52803.04
Sample Tag: MW-14-22_GW-083023 MS
Collected Date/Time: 08/30/2023 11:25
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/05/23 11:11	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/06/23 12:24, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	560	100		ug/L	10	60-29-7	Y1
Acetone	540	500		ug/L	10	67-64-1	Y1
Methyl iodide	580	10		ug/L	10	74-88-4	Y1
Carbon disulfide	560	50		ug/L	10	75-15-0	Y1
tert-Methyl butyl ether (MTBE)	540	50		ug/L	10	1634-04-4	Y1
Acrylonitrile	540	20		ug/L	10	107-13-1	Y1
2-Butanone (MEK)	490	250		ug/L	10	78-93-3	Y1
Dichlorodifluoromethane	470	50		ug/L	10	75-71-8	Y1
Chloromethane	490	50		ug/L	10	74-87-3	Y1
Vinyl chloride	510	10		ug/L	10	75-01-4	Y1
Bromomethane	470	50		ug/L	10	74-83-9	Y1
Chloroethane	470	50		ug/L	10	75-00-3	Y1
Trichlorofluoromethane	470	10		ug/L	10	75-69-4	Y1
1,1-Dichloroethene	510	10		ug/L	10	75-35-4	Y1
Methylene chloride	530	50		ug/L	10	75-09-2	Y1
trans-1,2-Dichloroethene	500	10		ug/L	10	156-60-5	Y1
1,1-Dichloroethane	520	10		ug/L	10	75-34-3	Y1
cis-1,2-Dichloroethene	550	10		ug/L	10	156-59-2	Y1
Tetrahydrofuran*	Not detected	900		ug/L	10	109-99-9	Y1
Chloroform	500	10		ug/L	10	67-66-3	Y1
Bromochloromethane	550	10		ug/L	10	74-97-5	Y1
1,1,1-Trichloroethane	510	10		ug/L	10	71-55-6	Y1
4-Methyl-2-pentanone (MIBK)	Not detected	500		ug/L	10	108-10-1	Y1
2-Hexanone	Not detected	500		ug/L	10	591-78-6	Y1
Carbon tetrachloride	510	10		ug/L	10	56-23-5	Y1
Benzene	500	10		ug/L	10	71-43-2	Y1
1,2-Dichloroethane	430	10		ug/L	10	107-06-2	Y1
Trichloroethene	520	10		ug/L	10	79-01-6	Y1
1,2-Dichloropropane	500	10		ug/L	10	78-87-5	Y1
Bromodichloromethane	500	10		ug/L	10	75-27-4	Y1
Dibromomethane	560	50		ug/L	10	74-95-3	Y1
cis-1,3-Dichloropropene	520	10		ug/L	10	10061-01-5	Y1
Toluene	480	10		ug/L	10	108-88-3	Y1
trans-1,3-Dichloropropene	530	10		ug/L	10	10061-02-6	Y1
1,1,2-Trichloroethane	490	10		ug/L	10	79-00-5	Y1
Tetrachloroethene	730	10		ug/L	10	127-18-4	Y1

Y-Elevated reporting limit due to high target concentration 1-Spiked at 500ug/L

Lab Sample ID: S52803.04 (continued)
Sample Tag: MW-14-22_GW-083023 MS

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/06/23 12:24, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	490	10		ug/L	10	110-57-6	Y1
Dibromochloromethane	580	50		ug/L	10	124-48-1	Y1
1,2-Dibromoethane	540	10		ug/L	10	106-93-4	Y1
Chlorobenzene	520	10		ug/L	10	108-90-7	Y1
1,1,1,2-Tetrachloroethane	560	10		ug/L	10	630-20-6	Y1
Ethylbenzene	520	10		ug/L	10	100-41-4	Y1
p,m-Xylene*	1,040	20		ug/L	10		Y1
o-Xylene	510	10		ug/L	10	95-47-6	Y1
Styrene	530	10		ug/L	10	100-42-5	Y1
Isopropylbenzene	520	50		ug/L	10	98-82-8	Y1
Bromoform	590	10		ug/L	10	75-25-2	Y1
1,1,2,2-Tetrachloroethane	520	10		ug/L	10	79-34-5	Y1
1,2,3-Trichloropropane	520	10		ug/L	10	96-18-4	Y1
n-Propylbenzene	530	10		ug/L	10	103-65-1	Y1
Bromobenzene	560	10		ug/L	10	108-86-1	Y1
1,3,5-Trimethylbenzene	530	10		ug/L	10	108-67-8	Y1
tert-Butylbenzene	500	10		ug/L	10	98-06-6	Y1
1,2,4-Trimethylbenzene	530	10		ug/L	10	95-63-6	Y1
sec-Butylbenzene	500	10		ug/L	10	135-98-8	Y1
p-Isopropyltoluene	500	50		ug/L	10	99-87-6	Y1
1,3-Dichlorobenzene	510	10		ug/L	10	541-73-1	Y1
1,4-Dichlorobenzene	510	10		ug/L	10	106-46-7	Y1
1,2-Dichlorobenzene	520	10		ug/L	10	95-50-1	Y1
1,2,3-Trimethylbenzene	500	10		ug/L	10	526-73-8	Y1
n-Butylbenzene	510	10		ug/L	10	104-51-8	Y1
Hexachloroethane	570	50		ug/L	10	67-72-1	Y1
1,2-Dibromo-3-chloropropane	570	50		ug/L	10	96-12-8	Y1
1,2,4-Trichlorobenzene	570	50		ug/L	10	120-82-1	Y1
1,2,3-Trichlorobenzene	560	50		ug/L	10	87-61-6	Y1
Naphthalene	520	50		ug/L	10	91-20-3	Y1
2-Methylnaphthalene	520	50		ug/L	10	91-57-6	Y1

Y-Elevated reporting limit due to high target concentration 1-Spiked at 500ug/L

Lab Sample ID: S52803.05
Sample Tag: MW-14-22_GW-083023 MSD
Collected Date/Time: 08/30/2023 11:25
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/05/23 11:11	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/06/23 12:47, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	600	100		ug/L	10	60-29-7	Y1
Acetone	550	500		ug/L	10	67-64-1	Y1
Methyl iodide	570	10		ug/L	10	74-88-4	Y1
Carbon disulfide	510	50		ug/L	10	75-15-0	Y1
tert-Methyl butyl ether (MTBE)	580	50		ug/L	10	1634-04-4	Y1
Acrylonitrile	530	20		ug/L	10	107-13-1	Y1
2-Butanone (MEK)	500	250		ug/L	10	78-93-3	Y1
Dichlorodifluoromethane	420	50		ug/L	10	75-71-8	Y1
Chloromethane	460	50		ug/L	10	74-87-3	Y1
Vinyl chloride	470	10		ug/L	10	75-01-4	Y1
Bromomethane	470	50		ug/L	10	74-83-9	Y1
Chloroethane	470	50		ug/L	10	75-00-3	Y1
Trichlorofluoromethane	420	10		ug/L	10	75-69-4	Y1
1,1-Dichloroethene	470	10		ug/L	10	75-35-4	Y1
Methylene chloride	550	50		ug/L	10	75-09-2	Y1
trans-1,2-Dichloroethene	480	10		ug/L	10	156-60-5	Y1
1,1-Dichloroethane	510	10		ug/L	10	75-34-3	Y1
cis-1,2-Dichloroethene	540	10		ug/L	10	156-59-2	Y1
Tetrahydrofuran*	Not detected	900		ug/L	10	109-99-9	Y1
Chloroform	500	10		ug/L	10	67-66-3	Y1
Bromochloromethane	570	10		ug/L	10	74-97-5	Y1
1,1,1-Trichloroethane	480	10		ug/L	10	71-55-6	Y1
4-Methyl-2-pentanone (MIBK)	Not detected	500		ug/L	10	108-10-1	Y1
2-Hexanone	Not detected	500		ug/L	10	591-78-6	Y1
Carbon tetrachloride	450	10		ug/L	10	56-23-5	Y1
Benzene	470	10		ug/L	10	71-43-2	Y1
1,2-Dichloroethane	440	10		ug/L	10	107-06-2	Y1
Trichloroethene	480	10		ug/L	10	79-01-6	Y1
1,2-Dichloropropane	490	10		ug/L	10	78-87-5	Y1
Bromodichloromethane	500	10		ug/L	10	75-27-4	Y1
Dibromomethane	560	50		ug/L	10	74-95-3	Y1
cis-1,3-Dichloropropene	530	10		ug/L	10	10061-01-5	Y1
Toluene	460	10		ug/L	10	108-88-3	Y1
trans-1,3-Dichloropropene	540	10		ug/L	10	10061-02-6	Y1
1,1,2-Trichloroethane	500	10		ug/L	10	79-00-5	Y1
Tetrachloroethene	680	10		ug/L	10	127-18-4	Y1

Y-Elevated reporting limit due to high target concentration 1-Spiked at 500ug/L

Lab Sample ID: S52803.05 (continued)
Sample Tag: MW-14-22_GW-083023 MSD

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/06/23 12:47, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	480	10		ug/L	10	110-57-6	Y1
Dibromochloromethane	550	50		ug/L	10	124-48-1	Y1
1,2-Dibromoethane	510	10		ug/L	10	106-93-4	Y1
Chlorobenzene	490	10		ug/L	10	108-90-7	Y1
1,1,1,2-Tetrachloroethane	530	10		ug/L	10	630-20-6	Y1
Ethylbenzene	460	10		ug/L	10	100-41-4	Y1
p,m-Xylene*	940	20		ug/L	10		Y1
o-Xylene	470	10		ug/L	10	95-47-6	Y1
Styrene	490	10		ug/L	10	100-42-5	Y1
Isopropylbenzene	460	50		ug/L	10	98-82-8	Y1
Bromoform	570	10		ug/L	10	75-25-2	Y1
1,1,2,2-Tetrachloroethane	490	10		ug/L	10	79-34-5	Y1
1,2,3-Trichloropropane	490	10		ug/L	10	96-18-4	Y1
n-Propylbenzene	460	10		ug/L	10	103-65-1	Y1
Bromobenzene	530	10		ug/L	10	108-86-1	Y1
1,3,5-Trimethylbenzene	480	10		ug/L	10	108-67-8	Y1
tert-Butylbenzene	440	10		ug/L	10	98-06-6	Y1
1,2,4-Trimethylbenzene	480	10		ug/L	10	95-63-6	Y1
sec-Butylbenzene	430	10		ug/L	10	135-98-8	Y1
p-Isopropyltoluene	430	50		ug/L	10	99-87-6	Y1
1,3-Dichlorobenzene	480	10		ug/L	10	541-73-1	Y1
1,4-Dichlorobenzene	480	10		ug/L	10	106-46-7	Y1
1,2-Dichlorobenzene	490	10		ug/L	10	95-50-1	Y1
1,2,3-Trimethylbenzene	460	10		ug/L	10	526-73-8	Y1
n-Butylbenzene	440	10		ug/L	10	104-51-8	Y1
Hexachloroethane	500	50		ug/L	10	67-72-1	Y1
1,2-Dibromo-3-chloropropane	520	50		ug/L	10	96-12-8	Y1
1,2,4-Trichlorobenzene	540	50		ug/L	10	120-82-1	Y1
1,2,3-Trichlorobenzene	550	50		ug/L	10	87-61-6	Y1
Naphthalene	490	50		ug/L	10	91-20-3	Y1
2-Methylnaphthalene	530	50		ug/L	10	91-57-6	Y1

Y-Elevated reporting limit due to high target concentration 1-Spiked at 500ug/L

Lab Sample ID: S52803.06
Sample Tag: DUP-02_GW-083023
Collected Date/Time: 08/29/2023 00:01
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/05/23 11:21	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/02/23 05:47, 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	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	

Lab Sample ID: S52803.06 (continued)
Sample Tag: DUP-02_GW-083023

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/02/23 05:47, 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: S52803.07
Sample Tag: Trip Blank
Collected Date/Time: 08/29/2023 00:01
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	n/a	n/a	Yes	n/a	n/a

Other / Misc.

Method: , Run Date: 08/31/23 13:25, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
No Analyses*	Completed				1		

Merit Laboratories Login Checklist

Lab Set ID: S52803
Client: ARCADIS_NOVI (ARCADIS U.S., Inc.)
Project: 30167840.00005 / RACER PNC
Submitted: 08/30/2023 13:20 Login User: MMC

Attention: Alexis Crisp
Address: Arcadis US, Inc.
7575 Huntington Park Drive, Suite 130
Columbus, OH 43235

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

Selection				Description	Note
Sample Receiving					
01.	[X] Yes	[ ] No	[ ] N/A	Samples are received at 4C +/- 2C Thermometer #	IR 4.1
02.	[X] Yes	[ ] No	[ ] N/A	Received on ice/ cooling process begun	
03.	[ ] Yes	[X] No	[ ] N/A	Samples shipped	
04.	[ ] Yes	[X] No	[ ] N/A	Samples left in 24 hr. drop box	
05.	[ ] Yes	[ ] No	[X] N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody					
06.	[X] Yes	[ ] No	[ ] N/A	COC adequately filled out	
07.	[X] Yes	[ ] No	[ ] N/A	COC signed and relinquished to the lab	
08.	[X] Yes	[ ] No	[ ] N/A	Sample tag on bottles match COC	
09.	[ ] Yes	[X] No	[ ] N/A	Subcontracting needed? Subcontacted to:	
Preservation					
10.	[X] Yes	[ ] No	[ ] N/A	Do sample have correct chemical preservation	
11.	[ ] Yes	[ ] No	[X] N/A	Completed pH checks on preserved samples? (no VOAs)	
12.	[ ] Yes	[X] No	[ ] N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions					
13.	[X] Yes	[ ] No	[ ] N/A	All bottles intact	No trip blank
14.	[X] Yes	[ ] No	[ ] N/A	Appropriate analytical bottles are used	
15.	[X] Yes	[ ] No	[ ] N/A	Merit bottles used	
16.	[X] Yes	[ ] No	[ ] N/A	Sufficient sample volume received	
17.	[ ] Yes	[X] No	[ ] N/A	Samples require laboratory filtration	
18.	[X] Yes	[ ] No	[ ] N/A	Samples submitted within holding time	
19.	[ ] Yes	[X] No	[ ] 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: _____

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Lexi Crise / Arcadis	Telephone: 614-985-9163
Address: 28550 Cabot Drive, Suite 500	Fax:
City: Novi State: MI Zip: 48377	E-mail Address: Alexis.Crise@arcadis.com
Project Name/Location (City, State): Pontiac, MI	Project #: 30167840.00005
Sampler's Printed Name: Kaylee DeRoo	Sampler's Signature: Kaylee DeRoo

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Method 8260	Preservative	Filtered (✓)	# of Containers	Container Information	REMARKS
							HCl		3		
MW-15-22_GW-082923	8/29/23	1540		✓	GW	X					3 containers 52803.01
MW-13-22_GW-083023	8/30/23	1030		✓	GW	X					3 containers .02
MW-14-22_GW-083023	8/30/23	1125		✓	GW	X					9 containers .03/.04/.05
DUP-02_GW-082923	8/29/23	—		✓	GW	X					3 containers .06
Trip Blank	8/29/23	—		—	W	X					1 container .07

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil | SE - Sediment | NL - NAPL/Oil
W - Water | SL - Sludge | SW - Sample Wipe
T - Tissue | A - Air | Other: _____

Special Instructions/Comments:
MS/MSD = MW-14-22

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Kaylee DeRoo	Printed Name: Doug Miller	Printed Name: Doug Miller	Printed Name: M Chilcote
☐ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature: Kaylee DeRoo	Signature:	Signature:	Signature: M Chilcote
Specify Turnaround Requirements: Standard TAT	Sample Receipt:	Firm: Arcadis	Firm/Courier: Merit	Firm/Courier: Merit	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 4.1	Date/Time: 8/30/23 / 11:45	Date/Time: 8/30/23 11:45	Date/Time: 8/30/23 13:20	Date/Time: 8/30/23 1320

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by Arcadis

Analytical Laboratory Report

Report ID: S53169.01(01)
Generated on 09/13/2023

Report to

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

Phone: 810-225-1909 FAX: 248-994-2241
Email: Alexis.Crisp@arcadis.com

Addtional 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 Laverty (johnlaverty@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S53169.01-S53169.05
Project: Racer PNC / 30167840.00005
Collected Date(s): 09/07/2023
Submitted Date/Time: 09/08/2023 14:50
Sampled by: Sommer Guy
P.O. #: 30167840.00005

Table of Contents

Maya Murshak
Technical Director

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.

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

Laboratory Certifications

Authority	Certification 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

Method Summary

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

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S53169.01	Trip Blank	Liquid	09/07/23 00:01
S53169.02	MWF16-05_GW-090723	Groundwater	09/07/23 10:35
S53169.03	MWF16-18_GW-090723	Groundwater	09/07/23 11:28
S53169.04	MWF16-16_GW-090723	Groundwater	09/07/23 12:25
S53169.05	MW-09-22_GW-090723	Groundwater	09/07/23 13:17

Lab Sample ID: S53169.01
Sample Tag: Trip Blank
Collected Date/Time: 09/07/2023 00:01
Matrix: Liquid
COC Reference: 141363

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/13/23 10:43	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/12/23 14:11, 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	

Lab Sample ID: S53169.01 (continued)
Sample Tag: Trip Blank

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/12/23 14:11, 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	

Lab Sample ID: S53169.02
Sample Tag: MWF16-05_GW-090723
Collected Date/Time: 09/07/2023 10:35
Matrix: Groundwater
COC Reference: 141363

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/13/23 10:43	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/12/23 20:24, Analyst: NDK

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
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	Not detected	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	Not detected	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	490	20		ug/L	20	127-18-4	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S53169.02 (continued)
Sample Tag: MWF16-05_GW-090723

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/12/23 20:24, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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	Not detected	20		ug/L	20	100-41-4	Y
p,m-Xylene*	Not detected	40		ug/L	20		Y
o-Xylene	Not detected	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	Not detected	20		ug/L	20	103-65-1	Y
Bromobenzene	Not detected	20		ug/L	20	108-86-1	Y
1,3,5-Trimethylbenzene	Not detected	20		ug/L	20	108-67-8	Y
tert-Butylbenzene	Not detected	20		ug/L	20	98-06-6	Y
1,2,4-Trimethylbenzene	Not detected	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	Not detected	20		ug/L	20	526-73-8	Y
n-Butylbenzene	Not detected	20		ug/L	20	104-51-8	Y
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	Not detected	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

Lab Sample ID: S53169.03
Sample Tag: MWF16-18_GW-090723
Collected Date/Time: 09/07/2023 11:28
Matrix: Groundwater
COC Reference: 141363

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/13/23 10:43	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/12/23 20:01, 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
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	130	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	Not detected	10		ug/L	10	71-43-2	Y
1,2-Dichloroethane	Not detected	10		ug/L	10	107-06-2	Y
Trichloroethene	30	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	1,090	10		ug/L	10	127-18-4	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S53169.03 (continued)
Sample Tag: MWF16-18_GW-090723

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/12/23 20:01, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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
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

Lab Sample ID: S53169.04
Sample Tag: MWF16-16_GW-090723
Collected Date/Time: 09/07/2023 12:25
Matrix: Groundwater
COC Reference: 141363

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/13/23 10:43	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/13/23 06:31, 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
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	Not detected	10		ug/L	10	71-43-2	Y
1,2-Dichloroethane	Not detected	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	410	10		ug/L	10	127-18-4	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S53169.04 (continued)
Sample Tag: MWF16-16_GW-090723

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/13/23 06:31, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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
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

Lab Sample ID: S53169.05
Sample Tag: MW-09-22_GW-090723
Collected Date/Time: 09/07/2023 13:17
Matrix: Groundwater
COC Reference: 141363

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/13/23 10:43	ACK	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/12/23 23:56, 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	3	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	78	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	

Lab Sample ID: S53169.05 (continued)
Sample Tag: MW-09-22_GW-090723

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 09/12/23 23:56, 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: S53169
Client: ARCADIS_NOVI (Arcadis US, Inc. - Novi)
Project: Racer PNC / 30167840.00005
Submitted: 09/08/2023 14:50 Login User: MMC

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

Phone: 810-225-1909 FAX: 248-994-2241
Email: Alexis.Crisp@arcadis.com

Selection				Description	Note
Sample Receiving					
01.	[X] Yes	[ ] No	[ ] N/A	Samples are received at 4C +/- 2C Thermometer #	IR 4.5
02.	[X] Yes	[ ] No	[ ] N/A	Received on ice/ cooling process begun	
03.	[ ] Yes	[X] No	[ ] N/A	Samples shipped	
04.	[ ] Yes	[X] No	[ ] N/A	Samples left in 24 hr. drop box	
05.	[ ] Yes	[ ] No	[X] N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody					
06.	[X] Yes	[ ] No	[ ] N/A	COC adequately filled out	
07.	[X] Yes	[ ] No	[ ] N/A	COC signed and relinquished to the lab	
08.	[X] Yes	[ ] No	[ ] N/A	Sample tag on bottles match COC	
09.	[ ] Yes	[X] No	[ ] N/A	Subcontracting needed? Subcontacted to:	
Preservation					
10.	[X] Yes	[ ] No	[ ] N/A	Do sample have correct chemical preservation	
11.	[ ] Yes	[ ] No	[X] N/A	Completed pH checks on preserved samples? (no VOAs)	
12.	[ ] Yes	[X] No	[ ] N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions					
13.	[X] Yes	[ ] No	[ ] N/A	All bottles intact	
14.	[X] Yes	[ ] No	[ ] N/A	Appropriate analytical bottles are used	
15.	[X] Yes	[ ] No	[ ] N/A	Merit bottles used	
16.	[X] Yes	[ ] No	[ ] N/A	Sufficient sample volume received	
17.	[ ] Yes	[X] No	[ ] N/A	Samples require laboratory filtration	
18.	[X] Yes	[ ] No	[ ] N/A	Samples submitted within holding time	
19.	[ ] Yes	[X] No	[ ] 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: _____

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

141363

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Alexis Crisp
COMPANY: Arcadis
ADDRESS: 28550 Cabot Dr #500
CITY: Novi STATE: MI ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Alexis.crisp@arcadis.com tiffany.linder@arcadis.com QUOTE NO.:

INVOICE TO

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: accountspayable.administration@arcadis.com

PROJECT NO./NAME: Racer PNC | 30167840.00005
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Sommer Guy / Sommer Guy

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

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOC's (8260)	Special Instructions
53169.01	-	-	tripblank	L	1		1						X	trip blank
.02	9/7/23	1035	MWF16-05_GW-090723	GW	3		3						X	
.03	9/7/23	1128	MWF16-18_GW-090723	GW	3		3						X	
.04	9/7/23	1225	MWF16-16_GW-090723	GW	3		3						X	
.05	9/7/23	1317	MW-09-22_GW-090723	GW	3		3						X	

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	Sommer Guy / Arcadis ☒ Sampler	9/8/23	1400
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		9/8/23	14:14
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		9/8/23	14:54
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		9/8/23	1450

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

eurofins | Air Toxics

9/7/2023
Ms. Lexi Crisp
Arcadis U.S., Inc.
7575 Huntington Park Drive
Suite 130
Columbus OH 43235

Project Name: Racer PNC
Project #:
Workorder #: 2308673

Dear Ms. Lexi Crisp

The following report includes the data for the above referenced project for sample(s) received on 8/30/2023 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Jade White at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Jade White

Project Manager

eurofins | Air Toxics

WORK ORDER #: 2308673

Work Order Summary

CLIENT:	Ms. Lexi Crisp Arcadis U.S., Inc. 7575 Huntington Park Drive Suite 130 Columbus, OH 43235	**BILL TO:**	Accounts Payable Arcadis U.S., Inc. 630 Plaza Drive Suite 600 Highlands Ranch, CO 80129
PHONE:		**P.O. #**	30167840.00004
FAX:		**PROJECT #**	Racer PNC
DATE RECEIVED:	08/30/2023	**CONTACT:**	Jade White
DATE COMPLETED:	09/07/2023		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SV-01-21_SG-082823	TO-15	6.7 "Hg	10 psi
02A	SV-02-21_SG-082823	TO-15	6.7 "Hg	9.9 psi
03A	SV-03-21_SG-082823	TO-15	5.5 "Hg	9.9 psi
04A	SV-04-21_SG-082823	TO-15	5.0 "Hg	10psi
05A	SV-05-21_SG-082823	TO-15	5.5 "Hg	10psi
06A	SV-06-21_SG-082823	TO-15	6.5 "Hg	10psi
07A	DUP-01_SG-082823	TO-15	5.5 "Hg	10psi
08A	Lab Blank	TO-15	NA	NA
09A	CCV	TO-15	NA	NA
10A	LCS	TO-15	NA	NA
10AA	LCSD	TO-15	NA	NA

CERTIFIED BY:  DATE: 09/07/23

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA ELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-017
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

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(916) 985-1000

LABORATORY NARRATIVE
EPA Method TO-15
Arcadis U.S., Inc.
Workorder# 2308673

Seven 1 Liter Summa Canister samples were received on August 30, 2023. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

The Chain of Custody (COC) information for sample DUP-01_SG-082823 did not match the information on the canister with regard to canister barcode. The sample labeled 2480 on the COC is labeled as 4280 on the canister. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SV-01-21_SG-082823

Lab ID#: 2308673-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	1.1	6.1	5.8	32
Tetrachloroethene	1.1	2.5	7.3	17

Client Sample ID: SV-02-21_SG-082823

Lab ID#: 2308673-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	1.1	11	5.8	60
Tetrachloroethene	1.1	1.8	7.3	12

Client Sample ID: SV-03-21_SG-082823

Lab ID#: 2308673-03A

No Detections Were Found.

Client Sample ID: SV-04-21_SG-082823

Lab ID#: 2308673-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	1.0	3.0	5.4	16

Client Sample ID: SV-05-21_SG-082823

Lab ID#: 2308673-05A

No Detections Were Found.

Client Sample ID: SV-06-21_SG-082823

Lab ID#: 2308673-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	1.1	3.1	5.8	17

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: DUP-01_SG-082823

Lab ID#: 2308673-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	1.0	11	5.5	60
Tetrachloroethene	1.0	1.8	7.0	12

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Client Sample ID: SV-01-21_SG-082823

Lab ID#: 2308673-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91090523**	**Date of Collection: 8/28/23 1:26:00 PM**	
Dil. Factor:	**2.16**	**Date of Analysis: 9/5/23 10:23 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.3	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Trichloroethene	1.1	6.1	5.8	32
trans-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Tetrachloroethene	1.1	2.5	7.3	17

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	109	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: SV-02-21_SG-082823

Lab ID#: 2308673-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91090524**	**Date of Collection: 8/28/23 1:47:00 PM**	
Dil. Factor:	**2.15**	**Date of Analysis: 9/5/23 10:48 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.1	Not Detected	2.7	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.3	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Trichloroethene	1.1	11	5.8	60
trans-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Tetrachloroethene	1.1	1.8	7.3	12

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	111	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: SV-03-21_SG-082823

Lab ID#: 2308673-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91090525**	**Date of Collection:**	**8/28/23 2:15:00 PM**
Dil. Factor:	**2.05**	**Date of Analysis:**	**9/5/23 11:13 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.1	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected
Trichloroethene	1.0	Not Detected	5.5	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected
Tetrachloroethene	1.0	Not Detected	7.0	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: SV-04-21_SG-082823

Lab ID#: 2308673-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91090526**	**Date of Collection:**	**8/28/23 2:30:00 PM**
Dil. Factor:	**2.02**	**Date of Analysis:**	**9/5/23 11:38 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.0	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.0	Not Detected
Trichloroethene	1.0	3.0	5.4	16
trans-1,2-Dichloroethene	1.0	Not Detected	4.0	Not Detected
Tetrachloroethene	1.0	Not Detected	6.8	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: SV-05-21_SG-082823

Lab ID#: 2308673-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91090527**	**Date of Collection: 8/28/23 2:49:00 PM**	
Dil. Factor:	**2.06**	**Date of Analysis: 9/6/23 12:03 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.1	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected
Trichloroethene	1.0	Not Detected	5.5	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected
Tetrachloroethene	1.0	Not Detected	7.0	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: SV-06-21_SG-082823

Lab ID#: 2308673-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91090528**	**Date of Collection: 8/28/23 3:06:00 PM**	
Dil. Factor:	**2.14**	**Date of Analysis: 9/6/23 12:28 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.1	Not Detected	2.7	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.2	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Trichloroethene	1.1	3.1	5.8	17
trans-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Tetrachloroethene	1.1	Not Detected	7.2	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	112	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: DUP-01_SG-082823

Lab ID#: 2308673-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91090529**	**Date of Collection: 8/28/23**	
Dil. Factor:	**2.06**	**Date of Analysis: 9/6/23 12:53 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.1	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected
Trichloroethene	1.0	11	5.5	60
trans-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected
Tetrachloroethene	1.0	1.8	7.0	12

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2308673-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91090507f**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/5/23 12:30 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: CCV

Lab ID#: 2308673-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91090503**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/5/23 10:13 AM**	

Compound	%Recovery
Vinyl Chloride	110
1,1-Dichloroethene	97
cis-1,2-Dichloroethene	94
Trichloroethene	90
trans-1,2-Dichloroethene	97
Tetrachloroethene	112

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	93	70-130

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Client Sample ID: LCS

Lab ID#: 2308673-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91090504**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/5/23 10:36 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	104	70-130
1,1-Dichloroethene	89	70-130
cis-1,2-Dichloroethene	90	70-130
Trichloroethene	89	70-130
trans-1,2-Dichloroethene	92	70-130
Tetrachloroethene	110	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: LCSD

Lab ID#: 2308673-10AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91090505**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/5/23 11:00 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	106	70-130
1,1-Dichloroethene	90	70-130
cis-1,2-Dichloroethene	92	70-130
Trichloroethene	90	70-130
trans-1,2-Dichloroethene	92	70-130
Tetrachloroethene	107	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	94	70-130

Attachment 2

Groundwater Sampling Logs

Groundwater Sampling Form

Project Number	30167840	**Well ID**	MW-06-20			**Date**	08/29/2023
Project Name/Location	RACER Pontiac North Campus 2023	**Weather(°F)**	73.0 degrees F and Mostly Cloudy. The wind is blowing W/SW at 11.4 mph.				
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**		**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	26.02	**Total Depth (ft-bmp)**	29.55	**Water Column (ft)**	3.53	**Gallons in Well**	0.57
Purge Start	12:50	**Pump Intake (ft-bmp)**	27.5	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Purge End		**Volumes Purged**	3.71	**Sample ID**	MW-06-20_GW-082923	**Sampled by**	Kaylee DeRoo
Sample Time	13:30	**Gallons Purged**	2.11	**Replicate/ Code No.**	DUP-01_GW-082923	**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
12:55	0	0	200	26.02	0.26	7.45	0.85	0.49	1.45	17	102	--	--
13:00	5	5	200	26.02	0.53	7.45	0.85	0.43	1.39	16.9	86.1	--	--
13:05	5	10	200	26.02	7.93	7.48	0.86	0.02	1.27	16.9	28	--	--
13:10	5	15	200	26.02	1.06	7.48	0.87	0.02	1.21	16.7	2	--	--
13:15	5	20	200	26.02	1.32	7.48	0.86	0.02	1.14	16.7	-10.4	--	--
13:20	5	25	200	26.02	1.59	7.48	0.87	0.02	1.1	16.7	-16.3	--	--
13:25	5	30	200	26.02	1.85	7.48	0.87	0.02	1.13	16.6	-18.9	Clear	None

Constituent Sampled	Container	Number	Preservative

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: In residential area.
Condition of Well: Good condition
Well Completion: Flush mount
Well Locked at Arrival: yes
Well Locked at Departure: yes
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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS

Project Number	30167840	**Well ID**	MW-08-21			**Date**	08/28/2023
Project Name/Location	RACER Pontiac North Campus 2023	**Weather(°F)**	72.0 degrees F and Mostly Clear. The wind is blowing at 5.8 mph.				
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**		**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	26.83	**Total Depth (ft-bmp)**	30.7	**Water Column (ft)**	3.87	**Gallons in Well**	0.63
Purge Start	15:20	**Pump Intake (ft-bmp)**	28	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Purge End		**Volumes Purged**	3.35	**Sample ID**	MW-08-21	**Sampled by**	Kaylee DeRoo
Sample Time	16:00	**Gallons Purged**	2.11	**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
15:25	0	0	200	26.83	0.26	7.39	1.17	1.78	7.97	16.8	105.4	--	--
15:30	5	5	200	26.83	0.53	7.4	1.15		4.69	16.9	83.3	--	--
15:35	5	10	200	26.83	0.79	7.4	1.17	0.31	1.16	17	63.6	--	--
15:40	5	15	200	26.83	10.57	7.4	1.17	0.18	4.37	17.1	59.1	--	--
15:45	5	20	200	26.83	1.32	7.39	1.16	0.02	4.21	16.9	51	--	--
15:50	5	25	200	26.83	1.59	7.39	1.16	0.02	4.01	17	43.4	--	--
15:55	5	30	200	26.83	1.85	7.39	1.16	0.02	3.93	16.8	41.3	Clear	None

Constituent Sampled	Container	Number	Preservative

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:	In residential area.	Well Locked at Arrival:	no
Condition of Well:	Good condition	Well Locked at Departure:	no
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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

Project Number	30167840	**Well ID**	MW-13-22			**Date**	08/30/2023
Project Name/Location	RACER Pontiac North Campus 2023	**Weather(°F)**					
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**		**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	21.20	**Total Depth (ft-bmp)**	27.5	**Water Column (ft)**	6.3	**Gallons in Well**	1.02
Purge Start	09:55	**Pump Intake (ft-bmp)**	25	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Purge End		**Volumes Purged**	1.81	**Sample ID**	MW-13-22_GW-083023	**Sampled by**	Kaylee DeRoo
Sample Time	10:30	**Gallons Purged**	1.85	**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
10:00	0	0	200	21.20	0.26	6.78	0.94	4.83	0.45	14	-53.3	--	--
10:05	5	5	200	21.20	0.53	6.83	0.95	3.76	1.05	13.9	-90.8	--	--
10:10	5	10	200	21.20	0.79	6.84	0.95	0.62	1.01	14	-93.9	--	--
10:15	5	15	200	21.20	1.06	6.85	0.95	0.02	0.98	14.1	-102.6	--	--
10:20	5	20	200	21.20	1.32	6.85	0.95	0.02	0.95	14	-105.9	--	--
10:25	5	25	200	21.20	1.59	6.86	0.95	0.02	0.93	14	-107.8	Clear	None

Constituent Sampled	Container	Number	Preservative

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: In fenced in area.

Condition of Well: Good condition

Well Completion: Flush mount

Well Locked at Arrival: no

Well Locked at Departure: no

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

Project Number	30167840	**Well ID**	MW-14-22			**Date**	08/30/2023
Project Name/Location	RACER Pontiac North Campus 2023	**Weather(°F)**	55.9 degrees F and Cloudy. The wind is blowing N/NW at 13.9 mph.				
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**		**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	27.20	**Total Depth (ft-bmp)**	35.2	**Water Column (ft)**	8	**Gallons in Well**	1.3
Purge Start	10:55	**Pump Intake (ft-bmp)**	32.5	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Purge End		**Volumes Purged**	1.22	**Sample ID**	MW-14-22_GW-083023	**Sampled by**	Kaylee DeRoo
Sample Time	11:25	**Gallons Purged**	1.59	**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
11:00	0	0	200	27.20	0.26	7.6	0.586	1.22	0.97	14	-47.2	--	--
11:05	5	5	200	27.20	0.53	7.6	0.586	0.02	1.77	14	-50.3	--	--
11:10	5	10	200	27.20	0.79	7.6	0.588	0.02	1.45	14	-51.8	--	--
11:15	5	15	200	27.20	1.06	7.6	0.59	0.02	1.46	14	-52.9	--	--
11:20	5	20	200	27.20	1.32	7.59	0.598	0.02	1.42	14	-55.9	Clear	None

Constituent Sampled	Container	Number	Preservative

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: In fenced in area.

Condition of Well: Good condition

Well Completion: Flush mount

Well Locked at Arrival: no

Well Locked at Departure: no

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS

Project Number	30167840	**Well ID**	MW-15-22			**Date**	08/29/2023
Project Name/Location	RACER Pontiac North Campus 2023	**Weather(°F)**	75.0 degrees F and Cloudy. The wind is blowing W/SW at 9.2 mph.				
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**		**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	23.40	**Total Depth (ft-bmp)**	36.5	**Water Column (ft)**	13.1	**Gallons in Well**	2.13
Purge Start	15:05	**Pump Intake (ft-bmp)**	32	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Purge End		**Volumes Purged**	0.87	**Sample ID**	MW-15-22_GW-082923	**Sampled by**	Kaylee DeRoo
Sample Time	15:40	**Gallons Purged**	1.85	**Replicate/ Code No.**	DUP-02_GW-082923	**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
15:10	0	0	200	23.40	0.26	8.37	0.34	7.84	5.99	15.8	73.4	--	--
15:15	5	5	200	23.40	0.53	7.24	0.72	8.52	4.04	15.5	-41.4	--	--
15:20	5	10	200	23.40	0.79	7.24	0.73	8.37	3.85	15.6	-87	--	--
15:25	5	15	200	23.40	1.06	7.24	0.74	9.37	3.39	15.4	-110.8	--	--
15:30	5	20	200	23.40	1.32	7.24	0.74	8.7	3.46	15.4	-116.8	--	--
15:35	5	25	200	23.40	1.59	7.24	0.75	8.7	3.49	15.3	-119.2	Clear	None

Constituent Sampled	Container	Number	Preservative

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: Within Racer property.
Condition of Well: Good condition,Missing lock
Well Completion: Flush mount
Well Locked at Arrival: no
Well Locked at Departure: no
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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS

Project Number	30167840	**Well ID**	MWF16-23			**Date**	08/29/2023
Project Name/Location	RACER Pontiac North Campus 2023	**Weather(°F)**	73.0 degrees F and Mostly Cloudy. The wind is blowing S/SW at 8.1 mph.				
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**		**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	23.20	**Total Depth (ft-bmp)**	30.75	**Water Column (ft)**	7.55	**Gallons in Well**	1.23
Purge Start	14:05	**Pump Intake (ft-bmp)**	26.5	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Purge End		**Volumes Purged**	1.50	**Sample ID**	MWF16-23_GW-082923.	**Sampled by**	Kaylee DeRoo
Sample Time	14:40	**Gallons Purged**	1.85	**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
14:10	0	0	200	23.83	0.26	7.09	0.9	1.88	4.04	17.2	57.4	--	--
14:15	5	5	200	23.85	0.53	7.12	0.9	1.06	3.73	17.3	-3.1	--	--
14:20	5	10	200	23.90	0.79	7.13	0.92	0.69	2.71	16.8	-20.2	--	--
14:25	5	15	200	23.90	1.06	7.13	0.91	0.34	2.59	16.9	-31	--	--
14:30	5	20	200	23.90	1.32	7.14	0.9	0.17	2.5	17	-35.6	--	--
14:35	5	25	200	23.90	1.59	7.14	0.9	0.02	2.41	17.1	-39.1	Clear	None

Constituent Sampled	Container	Number	Preservative

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: In residential area.

Condition of Well: Missing bolts

Well Completion: Flush mount

Well Locked at Arrival: yes

Well Locked at Departure: yes

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

Project Number	30167840	**Well ID**	MWOS-08			**Date**	08/29/2023
Project Name/Location	RACER Pontiac North Campus 2023	**Weather(°F)**	61.0 degrees F and Partly Cloudy. The wind is blowing SW at 5.8 mph.				
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**		**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	26.01	**Total Depth (ft-bmp)**	29.15	**Water Column (ft)**	3.14	**Gallons in Well**	0.51
Purge Start	10:20	**Pump Intake (ft-bmp)**	27	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Purge End		**Volumes Purged**	2.59	**Sample ID**	MWOS-08_GW-082923	**Sampled by**	Kaylee DeRoo
Sample Time	10:45	**Gallons Purged**	1.32	**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
10:25	0	0	200	26.03	0.26	7.31	0.75	0.4	2.62	15.4	49.1	--	--
10:30	5	5	200	26.03	0.53	7.34	0.74	0.02	2.45	15.3	48	--	--
10:35	5	10	200	26.04	0.79	7.35	0.73	0.02	2.33	15.4	47	--	--
10:40	5	15	200	26.04	1.06	7.36	0.73	0.02	2.31	15.3	43.3	Clear	Mild

Constituent Sampled	Container	Number	Preservative

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: In residential area.

Condition of Well: Good condition,Missing bolts

Well Completion: Flush mount

Well Locked at Arrival: yes

Well Locked at Departure: yes

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS

Project Number	30167840	**Well ID**	MWOS-09R			**Date**	08/29/2023
Project Name/Location	RACER Pontiac North Campus 2023	**Weather(°F)**	69.1 degrees F and Mostly Cloudy. The wind is blowing SW at 11.4 mph.				
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**		**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	27.50	**Total Depth (ft-bmp)**	29.8	**Water Column (ft)**	2.3	**Gallons in Well**	0.37
Purge Start	11:25	**Pump Intake (ft-bmp)**	28	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Purge End		**Volumes Purged**	6.43	**Sample ID**	MWOS-09R_GW-082923	**Sampled by**	Kaylee DeRoo
Sample Time	12:10	**Gallons Purged**	2.38	**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
11:30	0	0	200	27.25	0.26	7.26	0.99	2.34	0.57	16.6	123.3	--	--
11:35	5	5	200	27.27	0.53	7.29	1.03	3.44	0.39	16.4	45.2	--	--
11:40	5	10	200	27.27	0.79	7.29	1.06	8.35	0.52	16.3	0.8	--	--
11:45	5	15	200	27.27	1.06	7.28	1.07	6.92	0.52	16.3	-10.5	--	--
11:50	5	20	200	27.27	1.32	7.29	1.07	5.13	0.53	16.2	-32.4	--	--
11:55	5	25	200	27.27	1.59	7.29	1.07	3.92	0.52	16.4	-52.4	--	--
12:00	5	30	200	27.27	1.85	7.29	1.07	4.33	0.52	16.5	-50.5	--	--
12:05	5	35	200	27.27	2.11	7.29	1.07	3.95	0.53	16.3	-48.7	Clear	None

Constituent Sampled	Container	Number	Preservative

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: In residential area.
Condition of Well: Good condition
Well Completion: Flush mount
Well Locked at Arrival: no
Well Locked at Departure: no
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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS

Project Number	30167840	**Well ID**	MWOS-10			**Date**	08/28/2023
Project Name/Location	RACER Pontiac North Campus 2023	**Weather(°F)**	69.1 degrees F and Mostly Clear. The wind is blowing N at 9.2 mph.				
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**		**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	28.55	**Total Depth (ft-bmp)**	31.5	**Water Column (ft)**	2.95	**Gallons in Well**	0.48
Purge Start	13:10	**Pump Intake (ft-bmp)**	29	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Purge End		**Volumes Purged**	11.01	**Sample ID**	MWOS-10_GW-082823	**Sampled by**	Kaylee DeRoo
Sample Time	14:50	**Gallons Purged**	5.28	**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
13:15	0	0	200	27.55	0.26	7.35	0.92	47.5	2.29	16	143.3	--	--
13:20	5	5	200	27.55	0.53	7.36	0.94	35.7	2.4	15.8	140.6	--	--
13:25	5	10	200	27.55	0.79	7.37	0.93	29.1	2.4	15.9	92.8	--	--
13:30	5	15	200	27.55	1.06	7.37	0.93		2.39	15.8	71.2	--	--
13:35	5	20	200	27.55	1.32	7.38	0.95	17.6	1.25	15.8	79.6	--	--
13:40	5	25	200	27.55	1.59	7.37	0.93	13.3	1.3	15.7	70.3	--	--
13:45	5	30	200	27.55	1.85	7.38	0.92	10.8	1.35	15.7	65.4	--	--
13:50	5	35	200	27.55	2.11	7.37	0.92	8.06	1.71	15.7	66.8	--	--
13:55	5	40	200	28.55	2.38	7.37	0.92	36.5	1.48	15.9	64.9	--	--
14:00	5	45	200	28.55	2.64	7.37	0.93	34.2	2.32	15.5	66.7	--	--
14:05	5	50	200	28.55	2.91	7.37	0.92	31.9	2.24	15.6	63.6	--	--
14:10	5	55	200	28.55	3.17	7.37	0.92	30.5	2.12	15.6	62.8	--	--
14:15	5	60	200	28.55	3.43	7.37	0.92	30.2	2.07	15.6	64	--	--
14:20	5	65	200	28.55	3.70	7.37	0.92	24.5	0.92	15.7	63.8	--	--
14:25	5	70	200	28.55	3.96	7.37	0.92	21.4	0.92	15.7	63.8	--	--
14:30	5	75	200	28.55	4.23	7.37	0.92	18.9	0.92	15.7	63.2	--	--
14:35	5	80	200	28.55	4.49	7.37	0.92	16.7	0.92	15.7	62.7	--	--
14:40	5	85	200	28.55	4.76	7.37	0.92	15.1	0.92	15.7	62.4	--	--
14:45	5	90	200	28.55	5.02	7.37	0.92	11.4	0.92	15.7	63.8	Clear	None

Constituent Sampled	Container	Number	Preservative

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

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

Well Information

Well Location:	In residential area.	Well Locked at Arrival:	no
Condition of Well:	Good condition	Well Locked at Departure:	no
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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS

Project Number	30167840	**Well ID**	MW-09-22			**Date**	9/7/2023
Project Name/Location	RACER Pontiac North Campus 2023	**Weather(°F)**	71.1 degrees F and Haze. The wind is blowing W at 5.8 mph.				
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**		**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	20.90	**Total Depth (ft-bmp)**	33.37	**Water Column (ft)**	12.47	**Gallons in Well**	2.03
Purge Start	12:41	**Pump Intake (ft-bmp)**	30.8	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Purge End	13:19	**Volumes Purged**	1.23	**Sample ID**	MW-09-22_GW-090723	**Sampled by**	Sommer Guy
Sample Time	13:17	**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
12:43	0	0	130	20.91	0.00	7.3	0.79	5.72	2.25	16.5	163.6	Clear	None
12:48	5	5	130	20.91	0.00	7.32	0.71	8.21	0.49	16.4	141.7	Clear	None
12:53	5	10	130	20.91	0.00	7.35	0.73	10.1	0.35	16.6	123.6	Clear	None
12:58	5	15	130	20.91	0.00	7.36	0.74	8.55	0.3	16.6	110.5	Clear	None
13:03	5	20	130	20.91	0.00	7.34	0.75	9.15	0.28	16.4	104.9	Clear	None
13:08	5	25	130	20.91	0.00	7.35	0.76	8.97	0.27	16.5	102.7	Clear	None
13:13	5	30	130	20.91	0.00	7.36	0.76	8.26	0.27	16.8	97.5	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: GFL property
Condition of Well: Good condition
Well Completion: Flush mount
Well Locked at Arrival:
Well Locked at Departure:
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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

Project Number	30167840	**Well ID**	MW-16-22			**Date**	9/7/2023
Project Name/Location	RACER Pontiac North Campus 2023	**Weather(°F)**	70.0 degrees F and Light Drizzle and Fog/Mist. The wind is blowing NW at 9.2 mph.				
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**		**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	26.28	**Total Depth (ft-bmp)**	34.76	**Water Column (ft)**	8.48	**Gallons in Well**	1.38
Purge Start	14:01	**Pump Intake (ft-bmp)**	32.2	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Purge End	14:44	**Volumes Purged**	1.81	**Sample ID**	MW-16-22_GW-090723	**Sampled by**	Sommer Guy
Sample Time	14:43	**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
14:03	0	0	130	26.29	0.00	7.29	0.73	2.2	1.05	17.6	76.4	Clear	None
14:08	5	5	130	26.29	0.00	7.27	0.73	6.32	0.35	17.7	15	Clear	None
14:13	5	10	130	26.29	0.00	7.33	0.73	7.91	0.22	17.7	-6.5	Clear	None
14:18	5	15	130	26.29	0.00	7.35	0.73	5.5	0.19	18	-22	Clear	None
14:23	5	20	130	26.29	0.00	7.33	0.73	7.25	0.23	17.6	-33.6	Clear	None
14:28	5	25	130	26.29	0.00	7.32	0.73	5	0.17	17.5	-39.8	Clear	None
14:33	5	30	130	26.29	0.00	7.34	0.73	4.92	0.18	17.3	-45.3	Clear	None
14:38	5	35	130	26.29	0.00	7.34	0.73	4.58	0.18	17.3	-49.5	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: South Fiero
Well Locked at Arrival:
Condition of Well: Good condition
Well Locked at Departure:
Well Completion: Stick-up
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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

Project Number	30167840	**Well ID**	MWF16-05			**Date**	9/7/2023
Project Name/Location	RACER Pontiac North Campus 2023	**Weather(°F)**	66.9 degrees F and Fog/Mist. The wind is blowing SW at 5.8 mph.				
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**		**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	20.11	**Total Depth (ft-bmp)**	23	**Water Column (ft)**	2.89	**Gallons in Well**	0.47
Purge Start	09:36	**Pump Intake (ft-bmp)**	22	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Purge End	10:38	**Volumes Purged**	5.32	**Sample ID**	MWF16-05_GW-090723	**Sampled by**	Sommer Guy
Sample Time	10:35	**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
09:38	0	0	120	20.25	0.00	7.38	0.95	116	9.41	16.9	171.6	Clear	None
09:43	5	5	120	20.21	0.00	7.34	1.25	180	7.24	16.2	156	Clear	None
09:48	5	10	120	20.21	0.00	7.37	1.26	86.6	6.04	15.9	141.3	Clear	None
09:53	5	15	120	20.21	0.00	7.38	1.23	35.2	5.77	15.9	132.1	Clear	None
09:58	5	20	120	20.21	0.00	7.38	1.21	25	5.45	15.7	126.4	Clear	None
10:03	5	25	120	20.21	0.00	7.39	1.18	22.6	5.24	15.7	121.3	Clear	None
10:08	5	30	120	20.21	0.00	7.38	1.17	14.7	5.03	15.6	118.5	Clear	None
10:13	5	35	120	20.21	0.00	7.4	1.15	16.3	4.99	15.5	115.5	Clear	None
10:18	5	40	120	20.21	0.00	7.4	1.15	10.8	4.9	15.5	113.3	Clear	None
10:23	5	45	120	20.21	0.00	7.4	1.12	8.44	4.73	15.6	110.2	Clear	None
10:28	5	50	120	20.21	0.00	7.4	1.12	8.93	4.85	15.5	109.5	Clear	None
10:33	5	55	120	20.21	0.00	7.4	1.1	8.45	4.65	15.5	107.2	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: GFL property
Condition of Well:
Well Completion: Flush mount
Well Locked at Arrival:
Well Locked at Departure:
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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS

Project Number	30167840	**Well ID**	MWF16-16			**Date**	9/7/2023
Project Name/Location	RACER Pontiac North Campus 2023	**Weather(°F)**	68.0 degrees F and Fog/Mist. The wind is blowing W/NW at 8.1 mph.				
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**		**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	22.22	**Total Depth (ft-bmp)**	31.25	**Water Column (ft)**	9.03	**Gallons in Well**	1.47
Purge Start	11:43	**Pump Intake (ft-bmp)**	28.75	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Purge End	12:27	**Volumes Purged**	1.70	**Sample ID**	MWF16-16_GW-090723	**Sampled by**	Sommer Guy
Sample Time	12:25	**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
11:45	0	0	130	22.22	0.00	7.36	0.83	8.96	1.82	16	174.2	Clear	None
11:50	5	5	130	22.22	0.00	7.32	0.83	7.99	0.39	16.1	154.7	Clear	None
11:55	5	10	130	22.22	0.00	7.35	0.83	5.66	0.26	15.9	137.4	Clear	None
12:00	5	15	130	22.22	0.00	7.38	0.84	7.89	0.19	15.8	125.4	Clear	None
12:05	5	20	130	22.22	0.00	7.41	0.85	0.95	0.21	15.9	114.1	Clear	None
12:10	5	25	130	22.22	0.00	7.4	0.83	4.12	0.19	16	108.2	Clear	None
12:15	5	30	130	22.22	0.00	7.39	0.84	3.56	0.18	15.8	103.4	Clear	None
12:20	5	35	130	22.22	0.00	7.42	0.84	3.2	0.18	15.9	101.9	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: GFL property
Well Locked at Arrival:
Condition of Well: Good condition,Missing bolts
Well Locked at Departure:
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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS

Project Number	30167840	**Well ID**	MWF16-18			**Date**	9/7/2023
Project Name/Location	RACER Pontiac North Campus 2023	**Weather(°F)**	66.9 degrees F and Fog/Mist. The wind is blowing W at 5.8 mph.				
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**		**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	20.51	**Total Depth (ft-bmp)**	32	**Water Column (ft)**	11.49	**Gallons in Well**	1.87
Purge Start	10:52	**Pump Intake (ft-bmp)**	29.5	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Purge End	11:30	**Volumes Purged**	1.34	**Sample ID**	MWF16-18_GW-090723	**Sampled by**	Sommer Guy
Sample Time	11:28	**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
10:54	0	0	120	20.52	0.00	7.05	0.92	0.73	5.17	16.6	144.4	Clear	None
10:59	5	5	120	20.52	0.00	7.02	0.9	2.62	3.96	16.1	125.5	Clear	None
11:04	5	10	120	20.52	0.00	7.06	0.9	2.89	3.87	16	108.6	Clear	None
11:09	5	15	120	20.52	0.00	7.09	0.9	0.61	3.43	16.2	99.1	Clear	None
11:14	5	20	120	20.52	0.00	7.08	0.9	0.18	3.25	16.1	95.5	Clear	None
11:19	5	25	120	20.52	0.00	7.09	0.9	0.02	3.15	16.2	93.4	Clear	None
11:24	5	30	120	20.52	0.00	7.09	0.9	0.02	3.18	16.1	92.1	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: GFL property
Well Locked at Arrival:
Condition of Well: Good condition,Missing bolts
Well Locked at Departure:
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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Attachment 3

Groundwater and Soil Vapor Stability Analysis

ARCADIS Design & Consultancy for natural and built assets

TABLE 3-1
Groundwater Summary Statistics and Trend Results
RACER Trust Pontiac North Campus
Pontiac, MI

Well ID	Analyte	Date Range	Figure	FOD	Detected Results Summary [1]				Mann-Kendall Test [2]				Sen's Estimator of Slope [2]			
					Range	Mean	Median	SD	Result[4]	MK Result Note	P-Value	S Value	Result[4]	Sen's Result Note	Slope (Units/Day)	95% CI (Units/Day)
MW-06-20	cis-1,2-Dichloroether	09/20 - 08/23	3-1	13 / 13	4 - 10	6.8	7	1.5	NST	--	0.475	-2	NST	--	0	-0.00155 to 0.00309
MW-06-20	Trichloroethene	09/20 - 08/23	3-2	13 / 13	7 - 14	9.8	9	2.2	UP	--	0.019	34	NT	--	0.00218	0 to 0.00600
MW-08-21	cis-1,2-Dichloroether	06/21 - 08/23	3-3	9 / 10	3 - 12	8.4	10	3.5	NST	--	0.466	-2	NST	--	0	-0.0113 to 0.0100
MW-08-21	Trichloroethene	06/21 - 08/23	3-4	10 / 10	9 - 12	10.4	10	1.1	UP	--	0.093	16	NT	--	0.00213	0 to 0.00549
MW-09-22	Tetrachloroethene	01/22 - 09/23	3-5	8 / 8	48 - 195	111	108.5	51.4	NST	--	0.548	0	NST	--	0.0157	-0.279 to 0.333
MW-09-22	Trichloroethene	01/22 - 09/23	3-6	7 / 8	1 - 4	3	3	1.2	NST	--	0.199	8	NST	--	0.00251	-0.00298 to 0.00618
MW-14-22	cis-1,2-Dichloroether	03/22 - 08/23	3-7	7 / 7	5 - 20	11.7	12	4.8	NST	5a	0.500	1	NST	5a	0.00556	-0.0239 to 0.0218
MW-14-22	Tetrachloroethene	03/22 - 08/23	3-8	7 / 7	52 - 212	117	98	63.3	UP	5a	0.001	19	UP	5a	0.214	0.132 to 0.371
MW-14-22	Trichloroethene	03/22 - 08/23	3-9	7 / 7	12 - 22	17.4	18	3.4	UP	5a	0.068	11	NST	5a	0.0116	-0.00343 to 0.0240
MWF16-05	Tetrachloroethene	10/17 - 09/23	3-10	11 / 11	12 - 730	505	500	192	NST	--	0.175	13	NST	--	0.0735	-0.111 to 0.292
MWF16-05	Trichloroethene	10/17 - 09/23	3-11	8 / 11	3 - 40	25.8	30	10.9	NST	--	0.112	-16	NT	--	-0.00854	-0.0348 to 0
MWF16-16	cis-1,2-Dichloroether	10/17 - 09/23	3-12	10 / 13	2 - 20	13.4	12.5	6.3	NST	--	0.450	3	NST	--	0	-0.00698 to 0.00969
MWF16-16	Tetrachloroethene	10/17 - 09/23	3-13	13 / 13	14 - 490	303	290	136	UP	--	0.033	31	UP	--	0.148	0.00669 to 0.186
MWF16-16	Trichloroethene	10/17 - 09/23	3-14	7 / 13	4 - 20	11.1	10	6.1	NST	--	0.423	-4	NST	--	0	-0.00430 to 0.00195
MWF16-18	cis-1,2-Dichloroether	03/21 - 09/23	3-15	10 / 10	20 - 130	75	70	33.4	UP	--	<0.001	36	UP	--	0.110	0.0839 to 0.124
MWF16-18	Tetrachloroethene	03/21 - 09/23	3-16	10 / 10	740 - 1350	1110	1120	184	NST	--	0.431	-3	NST	--	-0.113	-0.429 to 0.365
MWF16-18	Trichloroethene	03/21 - 09/23	3-17	10 / 10	10 - 30	20	20	4.7	UP	--	0.078	17	NT	--	0	0 to 0.0103
MWF16-23	cis-1,2-Dichloroether	10/17 - 08/23	3-18	16 / 16	2 - 21	9.5	10.5	5.2	DWN	--	0.071	-33	NT	--	-0.00438	-0.00936 to 0
MWF16-23	Trichloroethene	10/17 - 08/23	3-19	16 / 16	9 - 23	17.6	17	3.6	NST	--	0.392	-7	NST	--	0	-0.00489 to 0.00136
MWOS-08	cis-1,2-Dichloroether	09/20 - 08/23	3-20	12 / 12	1 - 6	3.2	3.5	1.6	NST	--	0.114	-18	NT	--	-0.00179	-0.00411 to 0
MWOS-09R	cis-1,2-Dichloroether	11/21 - 08/23	3-21	9 / 9	19 - 28	23.9	23	3.5	NST	--	0.306	-6	NST	--	-0.00170	-0.0164 to 0.00657
MWOS-09R	Tetrachloroethene	11/21 - 08/23	3-22	9 / 9	10 - 17	13.3	13	2.4	NST	--	0.179	10	NST	--	0.00451	-0.00534 to 0.0119
MWOS-09R	Trichloroethene	11/21 - 08/23	3-23	9 / 9	3 - 5	3.6	3	0.73	NST	--	0.155	-11	NT	--	0	-0.00356 to 0
MWOS-10	cis-1,2-Dichloroether	11/21 - 08/23	3-24	9 / 9	4 - 9	6.7	7	1.9	NST	--	0.460	2	NST	--	0	-0.00769 to 0.00651
MWOS-10	Trichloroethene	11/21 - 08/23	3-25	9 / 9	7 - 12	9.2	9	1.9	NST	--	0.272	7	NST	--	0.00272	-0.00816 to 0.00732

Abbreviations:

-- = insufficient data for calculating statistics (n < 4) or not available
FOD = frequency of detection (# detects / # samples)
mean = arithmetic mean
SD = standard deviation
NST = no significant trend
NT = no trend
DWN = downward trend
UP = upward trend

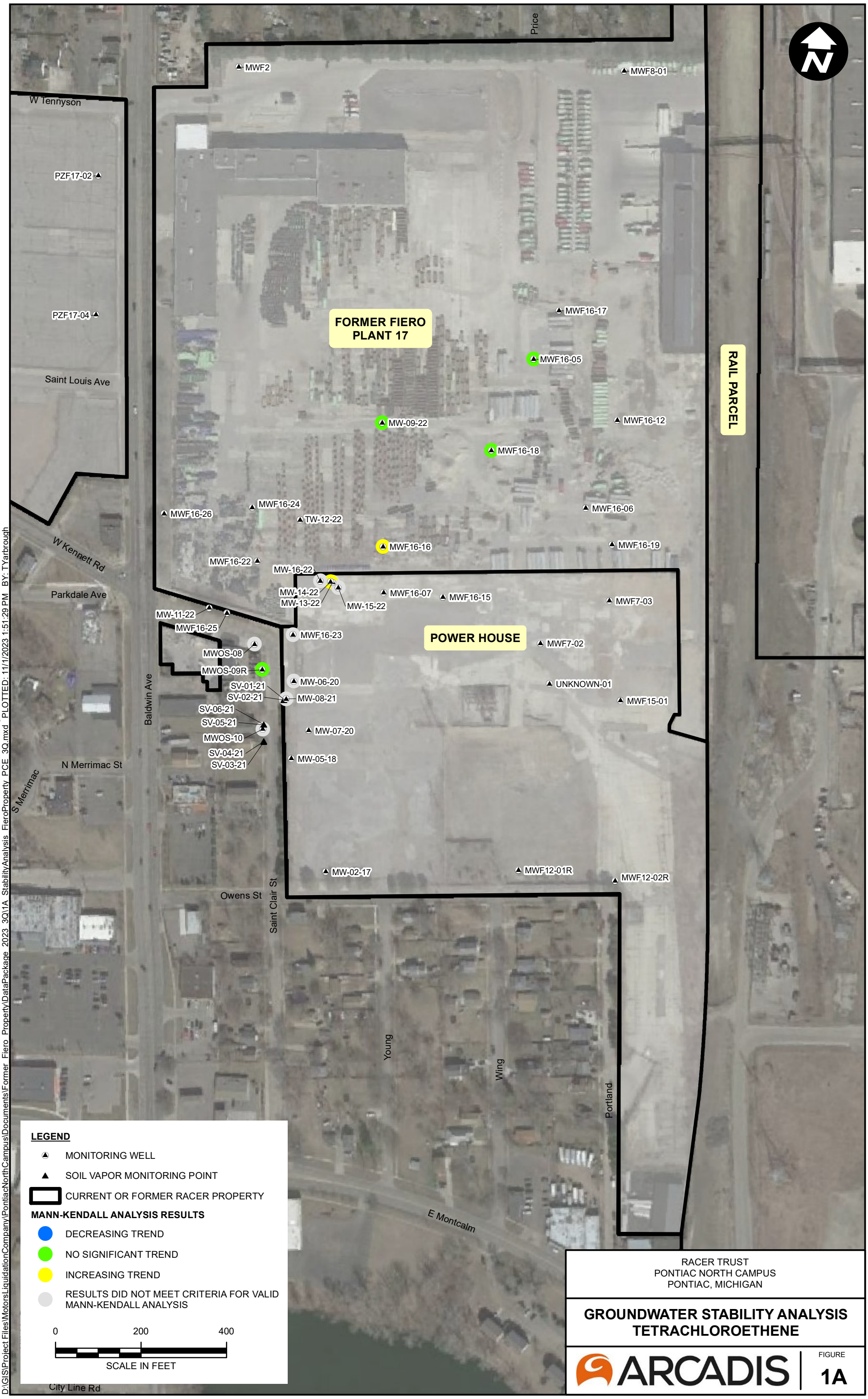
Notes:

1. All analytical results are in micrograms per liter (µg/L).
2. Trend results are presented when at least five samples are available and the frequency of detection is at least 50%.
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 ≤ 0.10, or 90% confidence.

5a. MK and Sen's Trend 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.



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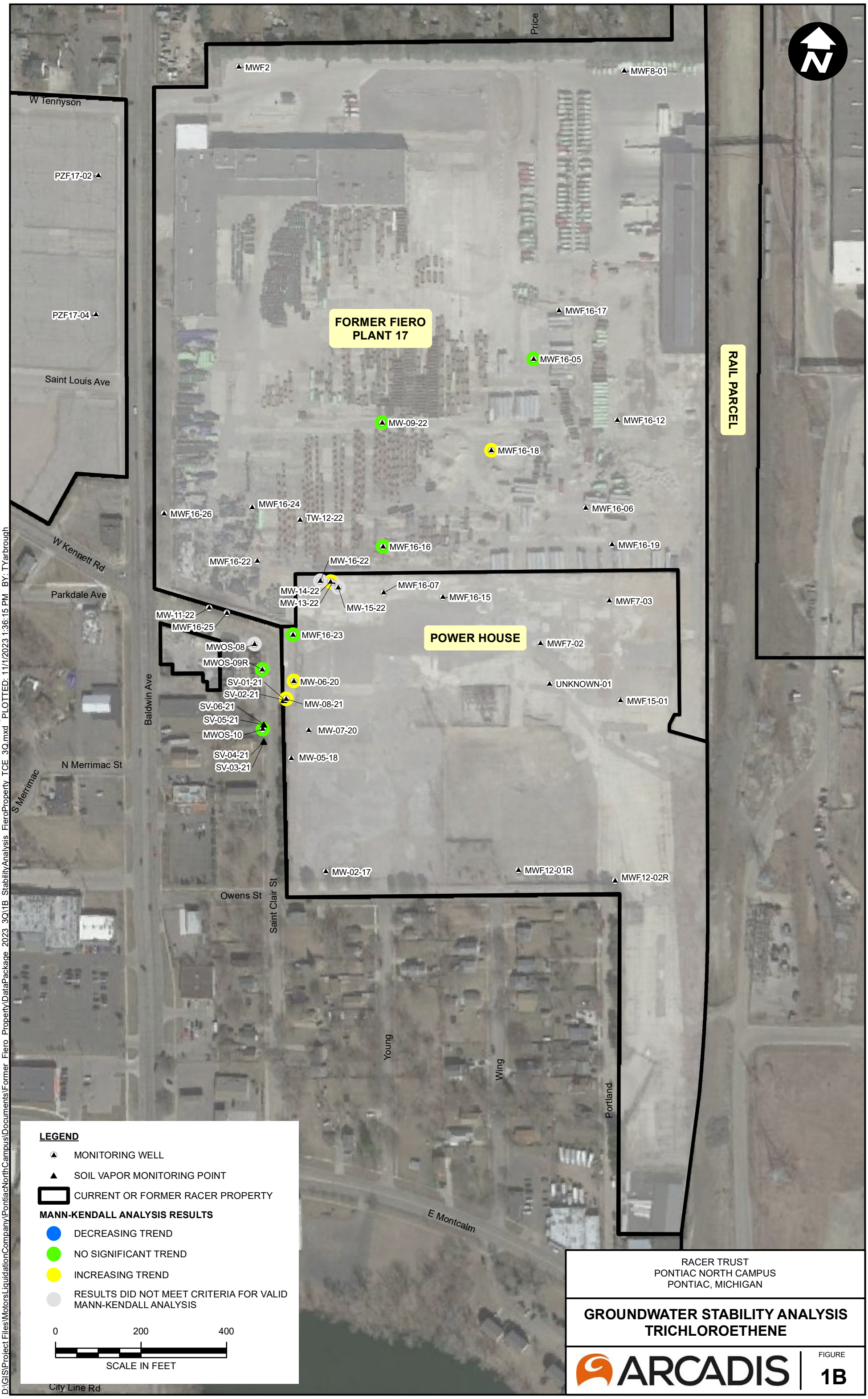

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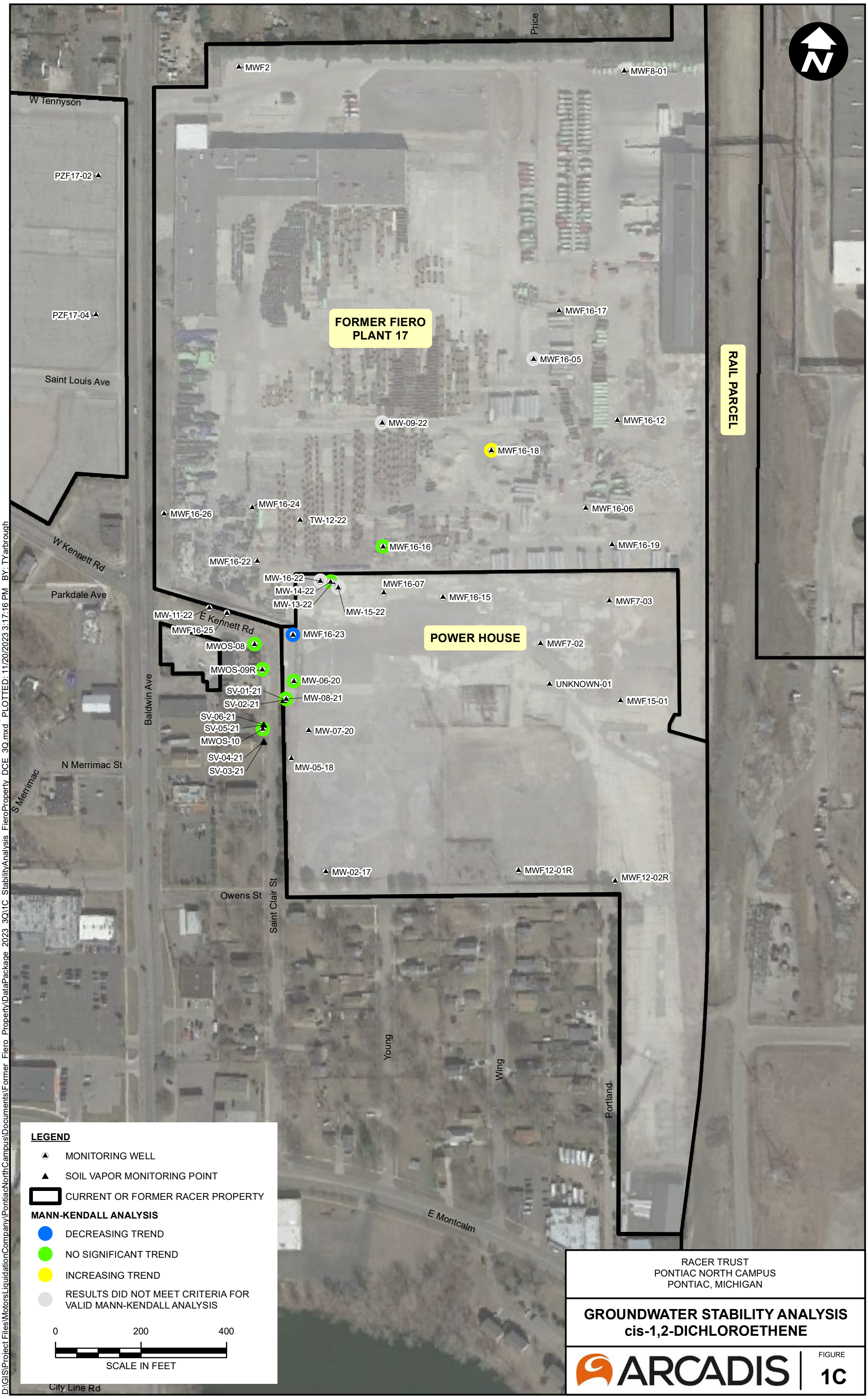

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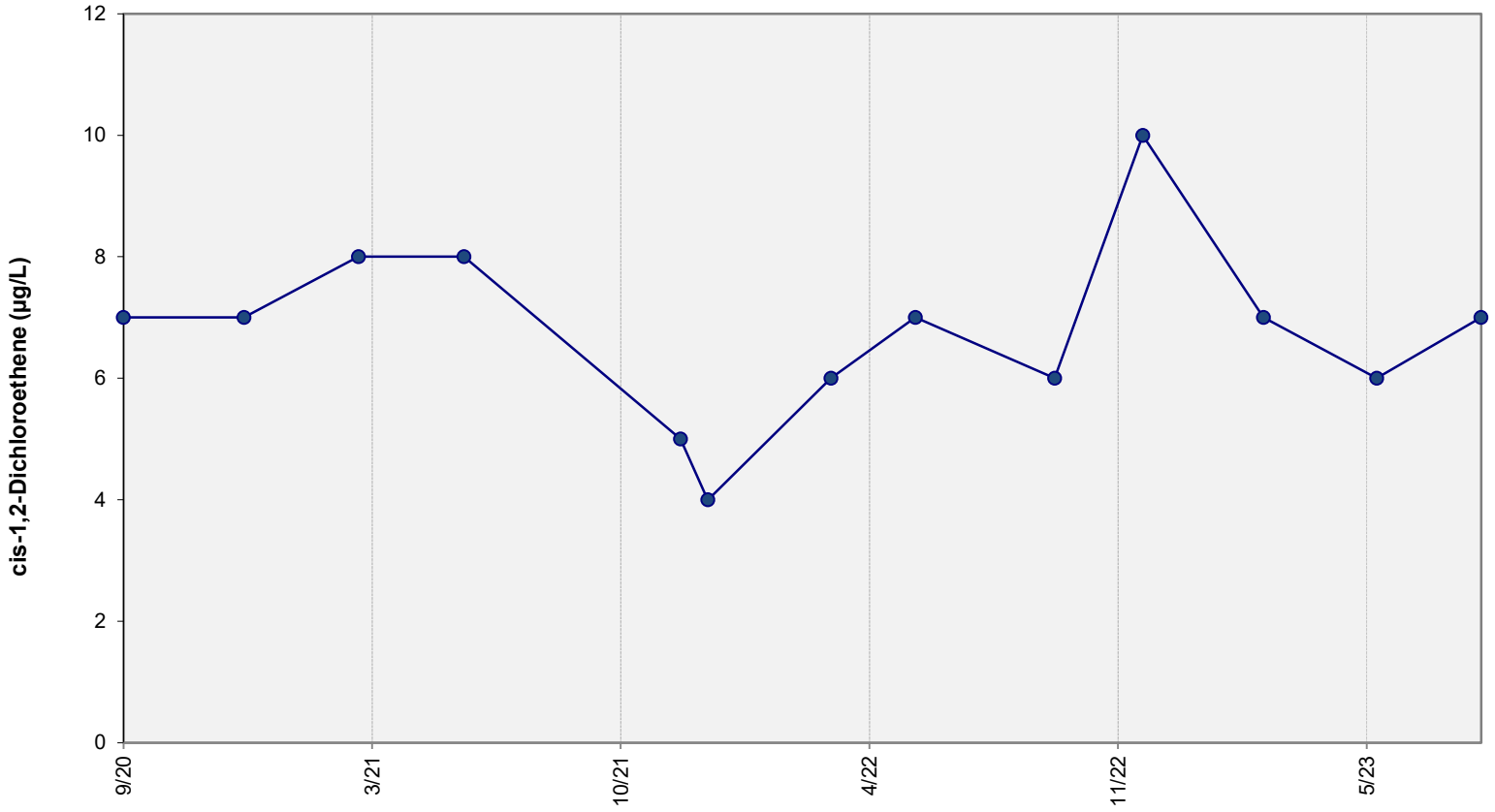


Res Fiero SSVIAC BASE criteria value of 62 is off-scale.

Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.475 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = 0.0E+00 µg/L Per Day

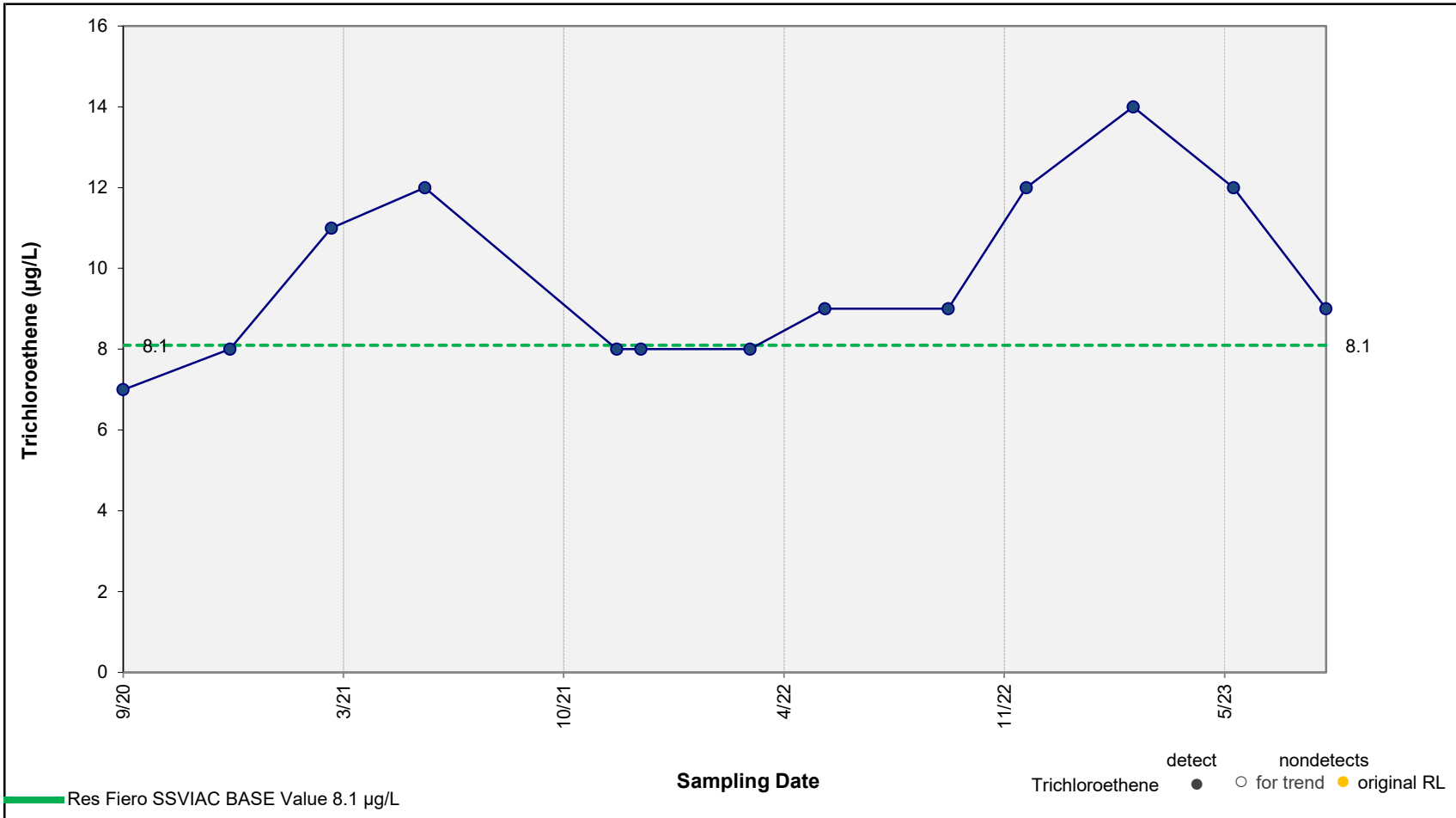
95% Confidence Interval = -1.6E-03 to 3.1E-03 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – cis-1,2-Dichloroethene in Well MW-06-20

Racer PNC Groundwater

Figure 3-1



Results of Mann-Kendall Test for Trend: **INCREASING TREND**

p value = 0.019 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No trend**

Median Slope Estimate = 2.2E-03 µg/L Per Day

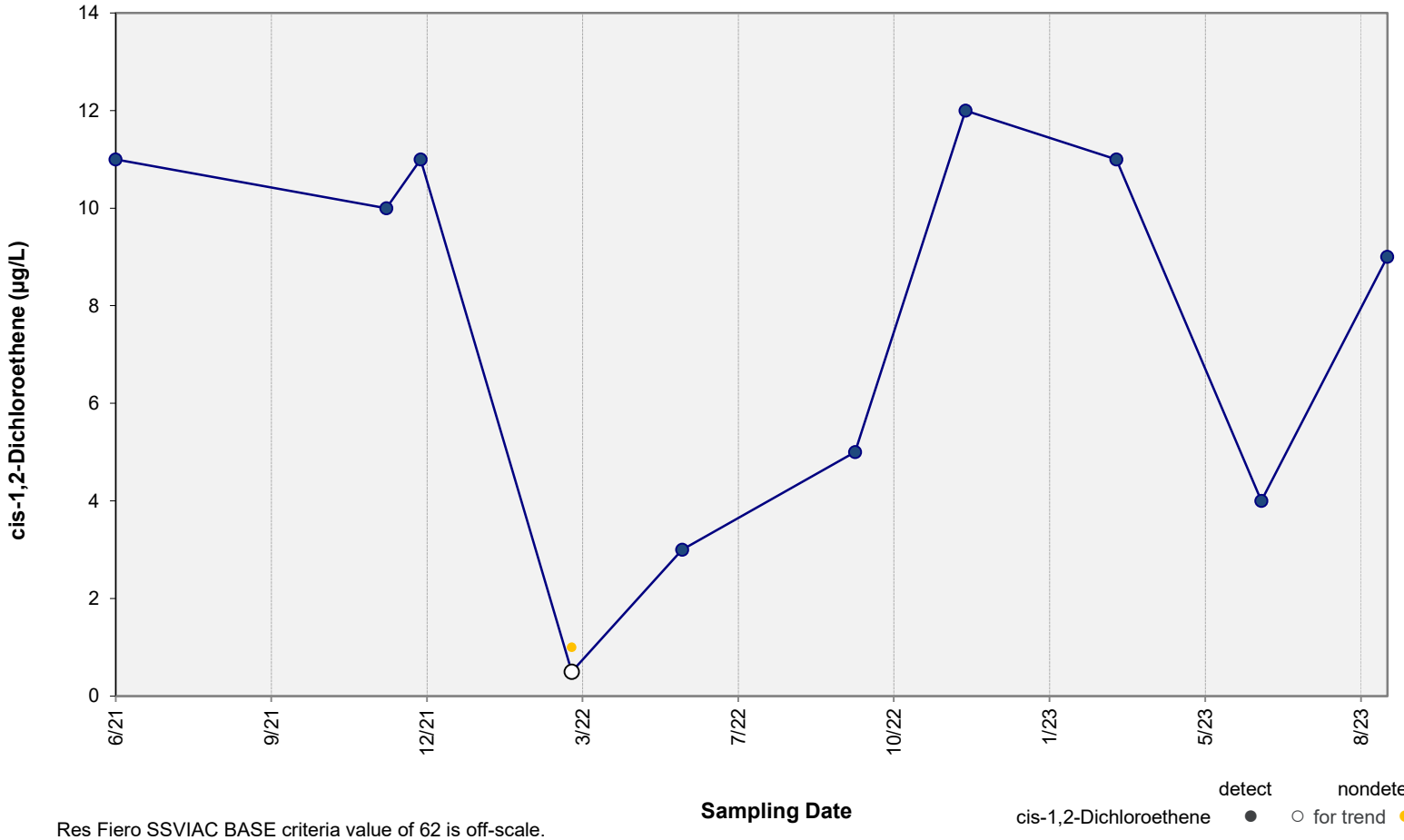
95% Confidence Interval = 0.0E+00 to 6.0E-03 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – Trichloroethene in Well MW-06-20

Racer PNC Groundwater

Figure 3-2



Res Fiero SSVIAC BASE criteria value of 62 is off-scale.

Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.466 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = 0.0E+00 µg/L Per Day

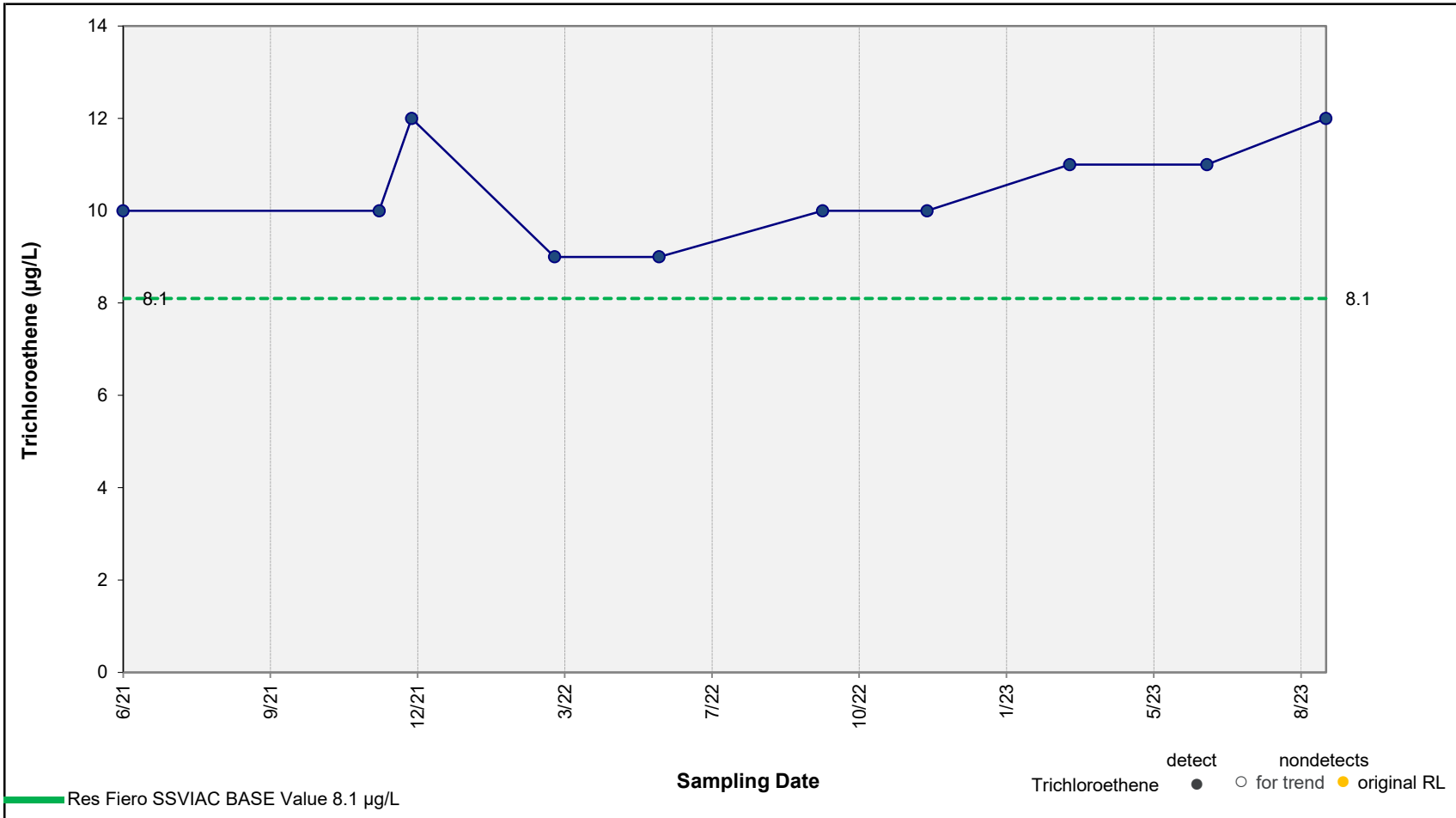
95% Confidence Interval = -1.1E-02 to 1.0E-02 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – cis-1,2-Dichloroethene in Well MW-08-21

Racer PNC Groundwater

Figure 3-3



Results of Mann-Kendall Test for Trend: **INCREASING TREND**

p value = 0.093 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No trend**

Median Slope Estimate = 2.1E-03 µg/L Per Day

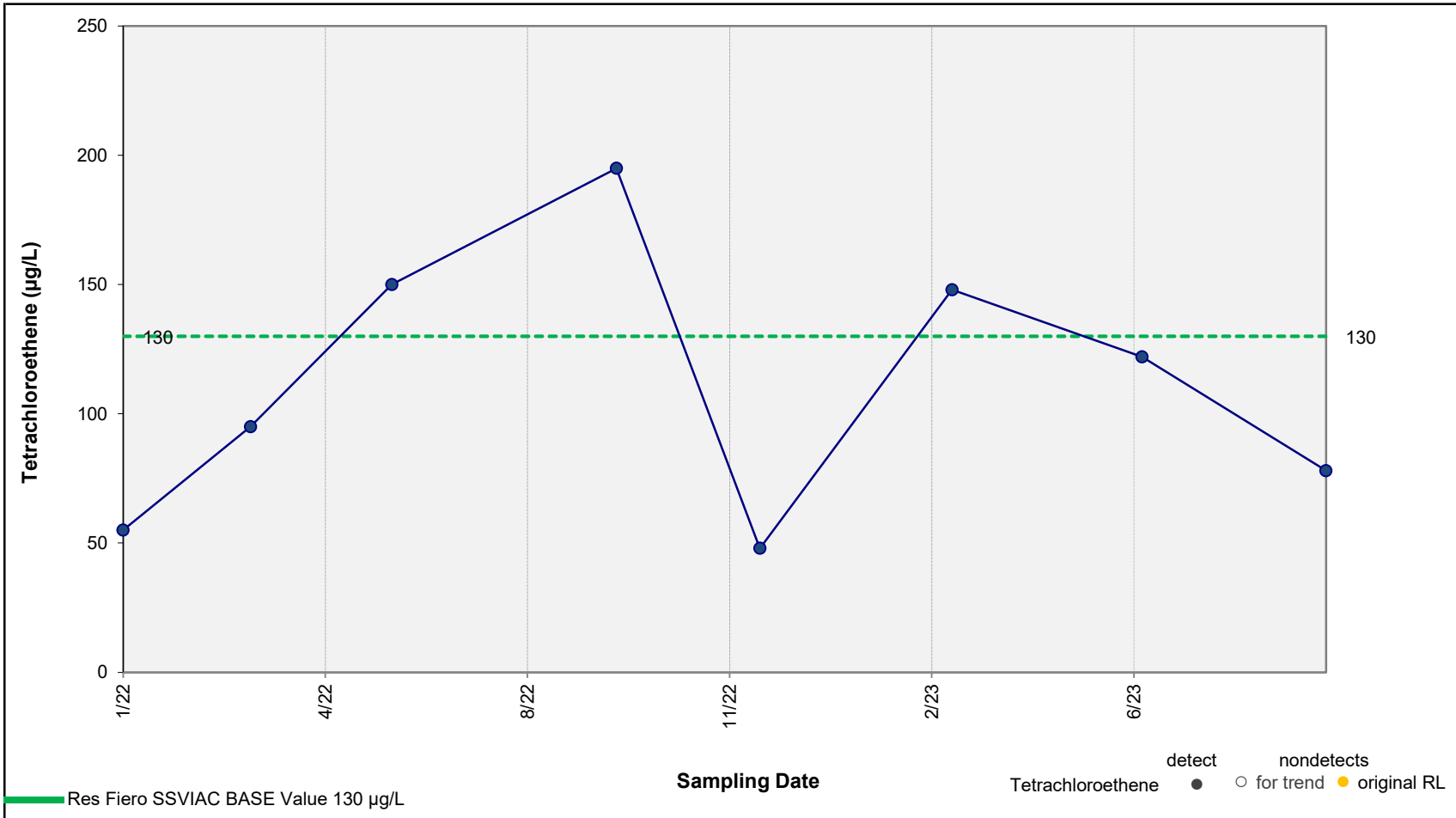
95% Confidence Interval = 0.0E+00 to 5.5E-03 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – Trichloroethene in Well MW-08-21

Racer PNC Groundwater

Figure 3-4



Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.548 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = 1.6E-02 µg/L Per Day

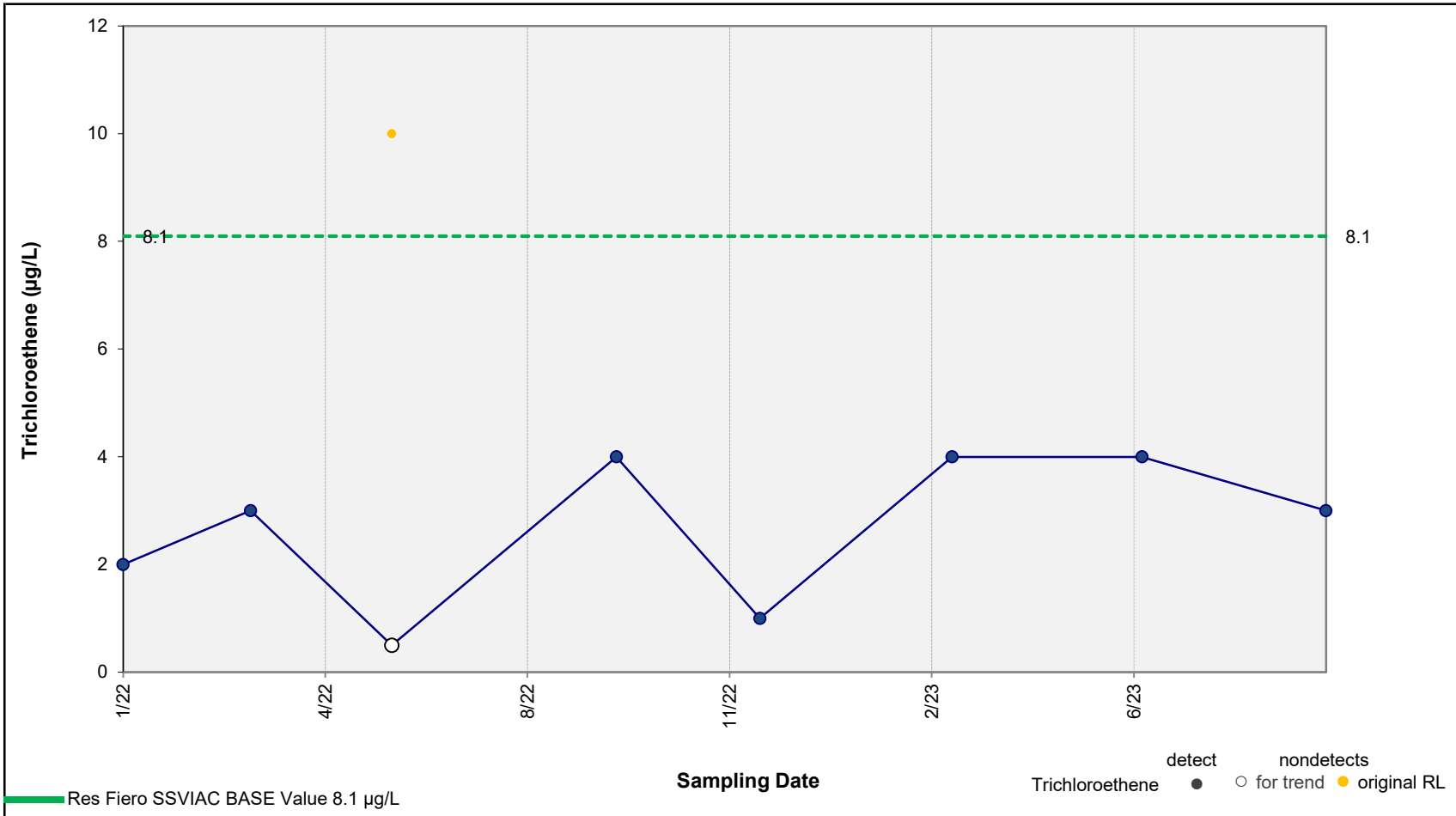
95% Confidence Interval = -2.8E-01 to 3.3E-01 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – Tetrachloroethene in Well MW-09-22

Racer PNC Groundwater

Figure 3-5



Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.199 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = 2.5E-03 µg/L Per Day

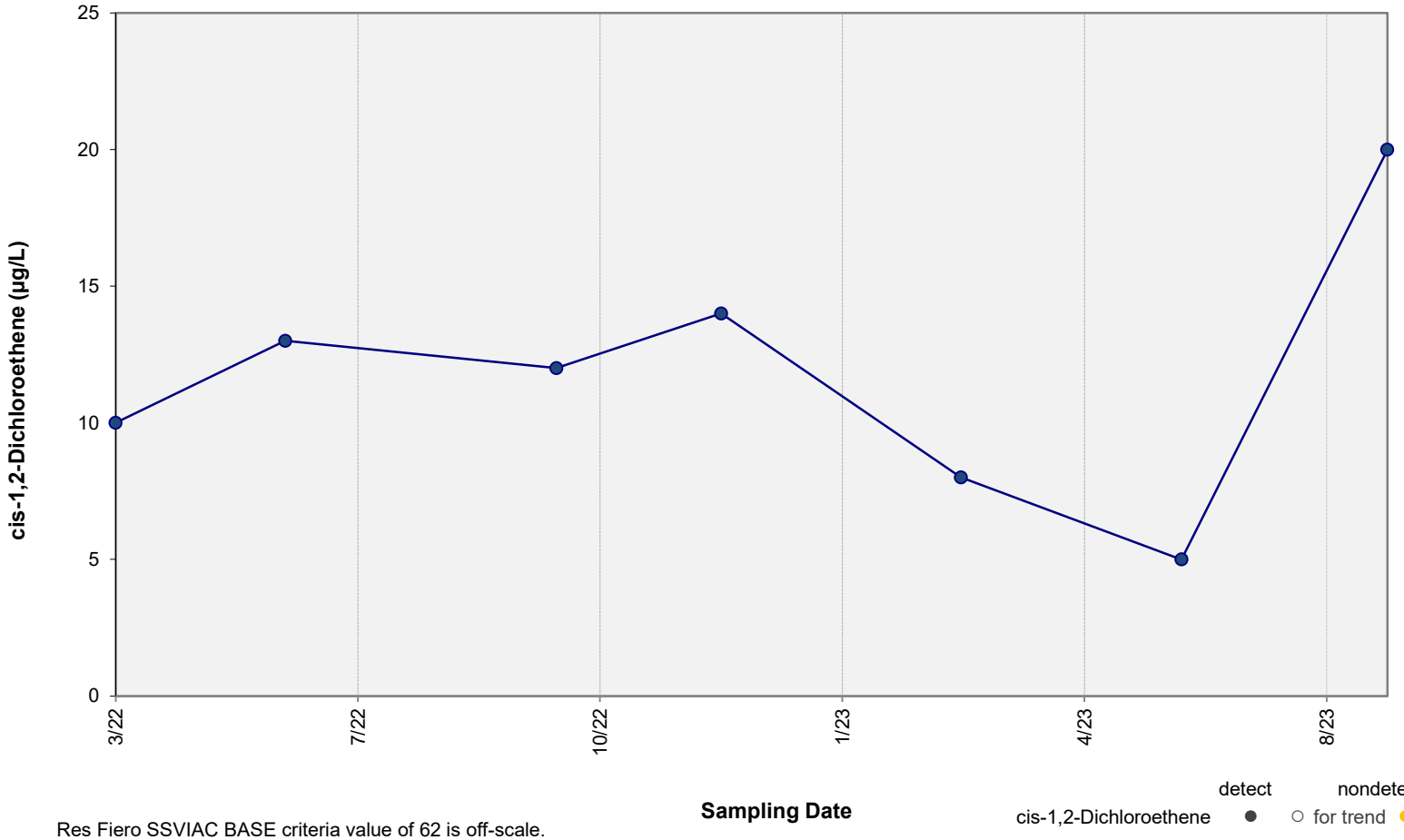
95% Confidence Interval = -3.0E-03 to 6.2E-03 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – Trichloroethene in Well MW-09-22

Racer PNC Groundwater

Figure 3-6



Res Fiero SSVIAC BASE criteria value of 62 is off-scale.

Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.500 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = 5.6E-03 µg/L Per Day

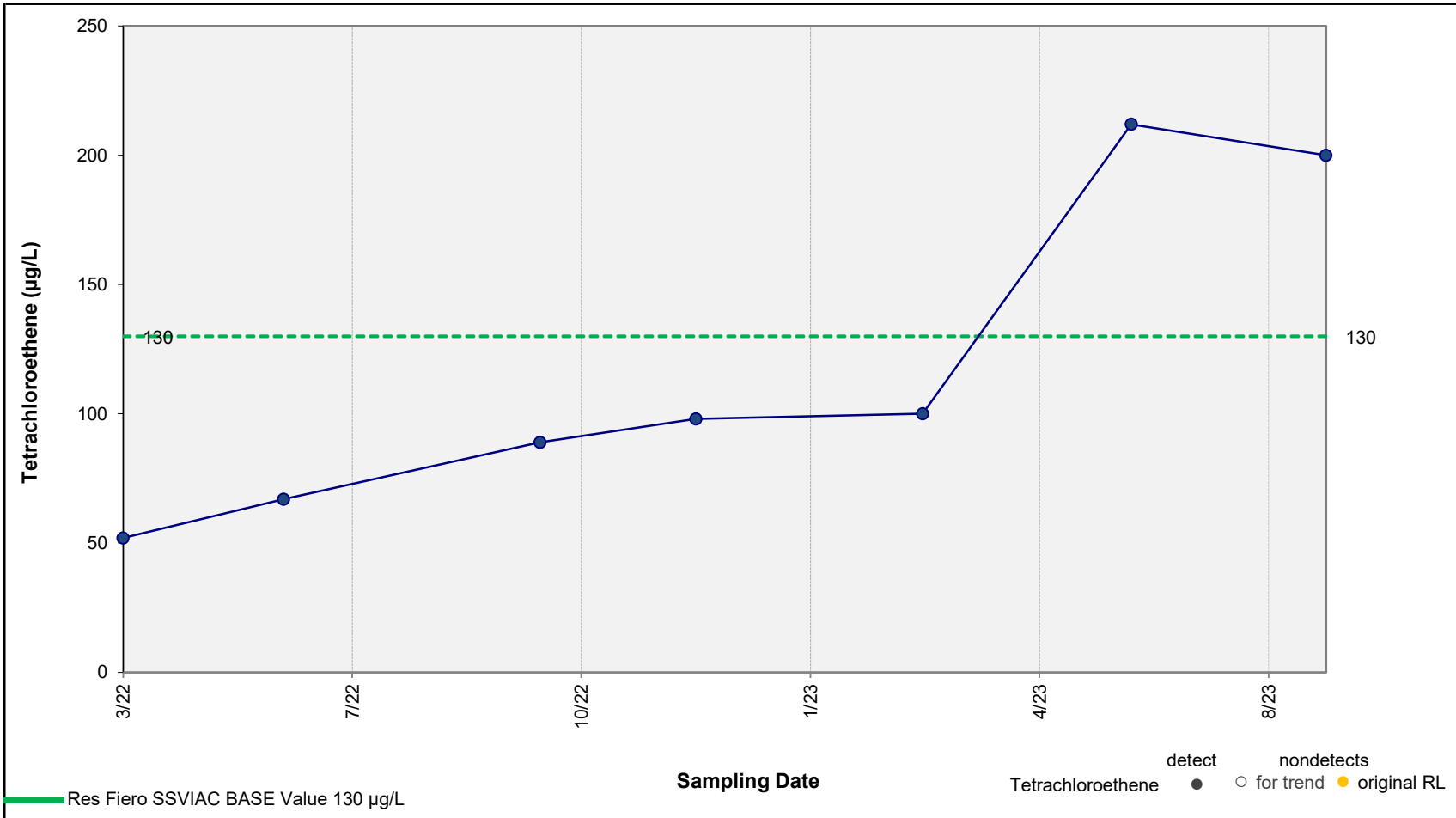
95% Confidence Interval = -2.4E-02 to 2.2E-02 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – cis-1,2-Dichloroethene in Well MW-14-22

Racer PNC Groundwater

Figure 3-7



Results of Mann-Kendall Test for Trend: **INCREASING TREND**

p value = 0.001 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **INCREASING TREND**

Median Slope Estimate = 2.1E-01 µg/L Per Day

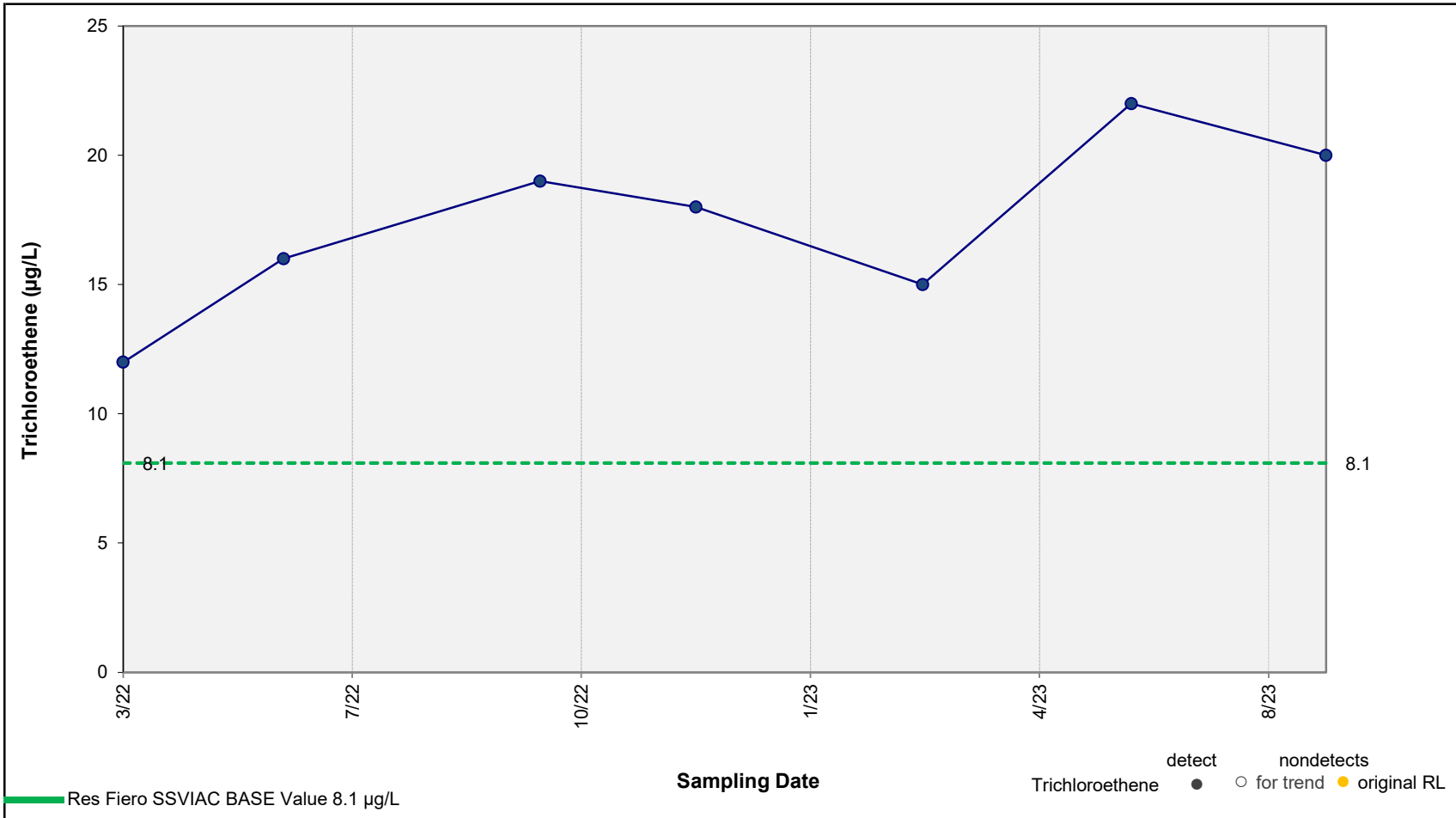
95% Confidence Interval = 1.3E-01 to 3.7E-01 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – Tetrachloroethene in Well MW-14-22

Racer PNC Groundwater

Figure 3-8



Results of Mann-Kendall Test for Trend: **INCREASING TREND**

p value = 0.068 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = 1.2E-02 µg/L Per Day

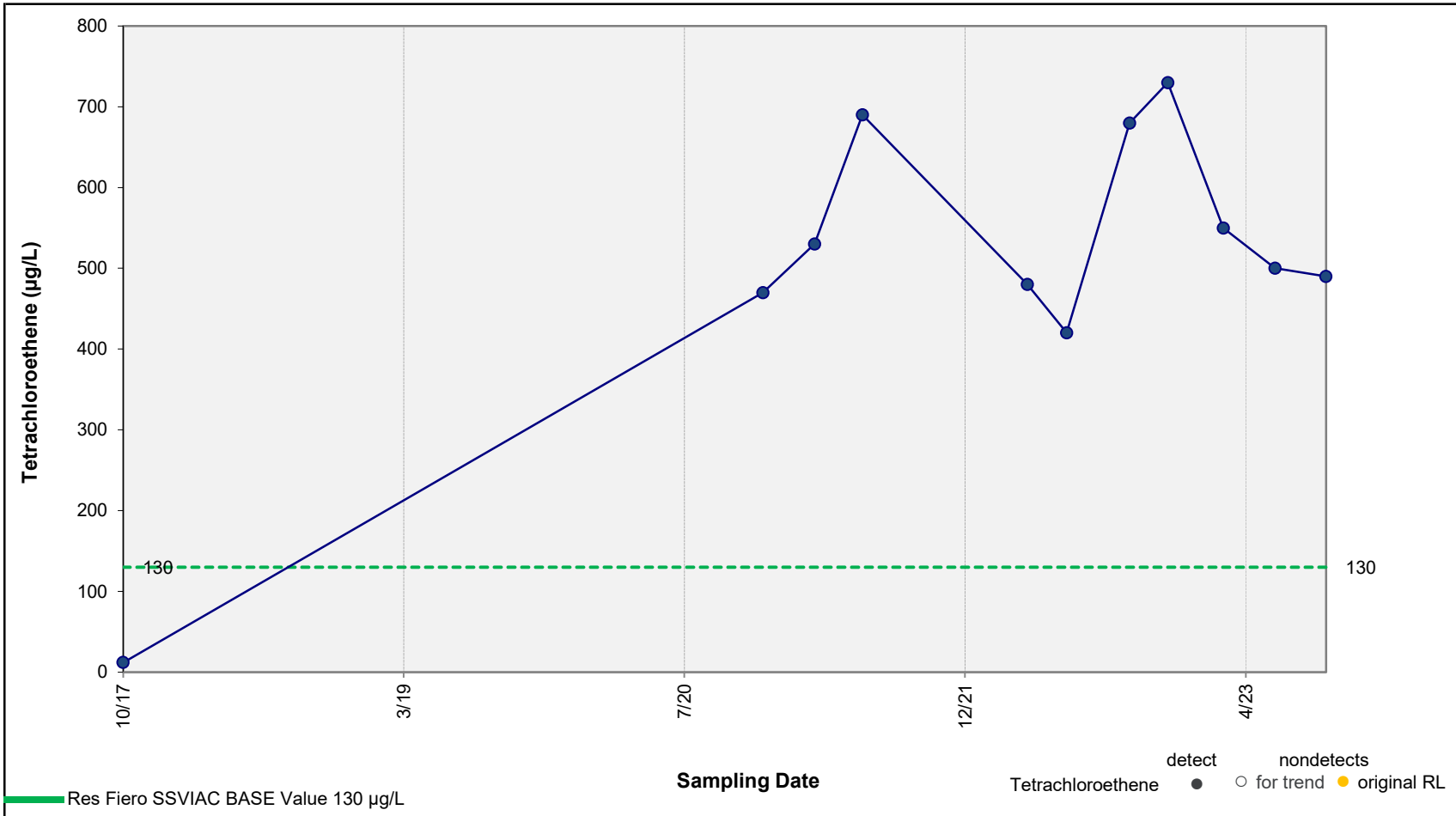
95% Confidence Interval = -3.4E-03 to 2.4E-02 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – Trichloroethene in Well MW-14-22

Racer PNC Groundwater

Figure 3-9



Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.175 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = 7.4E-02 µg/L Per Day

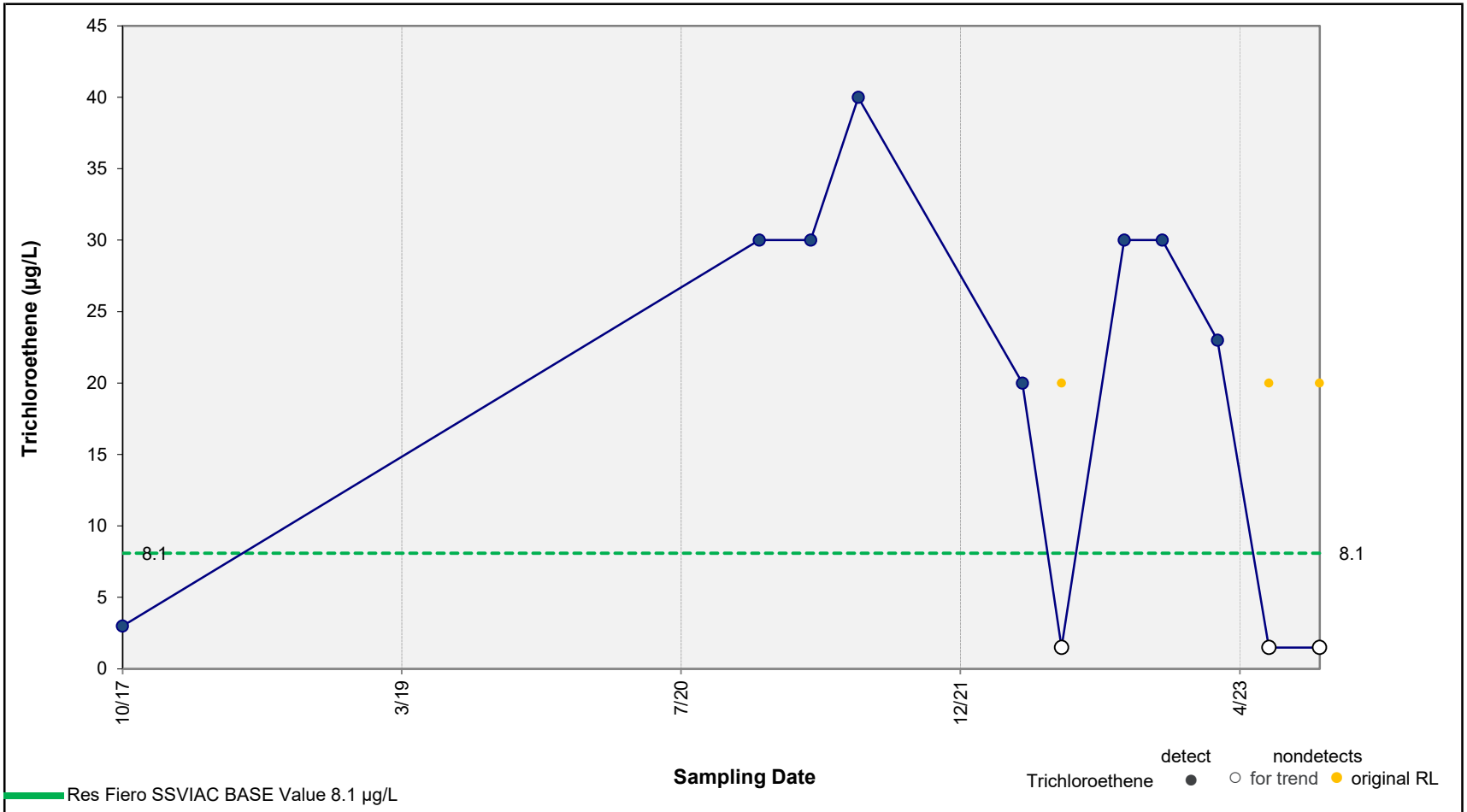
95% Confidence Interval = -1.1E-01 to 2.9E-01 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – Tetrachloroethene in Well MWF16-05

Racer PNC Groundwater

Figure 3-10



Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.112 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No trend**

Median Slope Estimate = -8.5E-03 µg/L Per Day

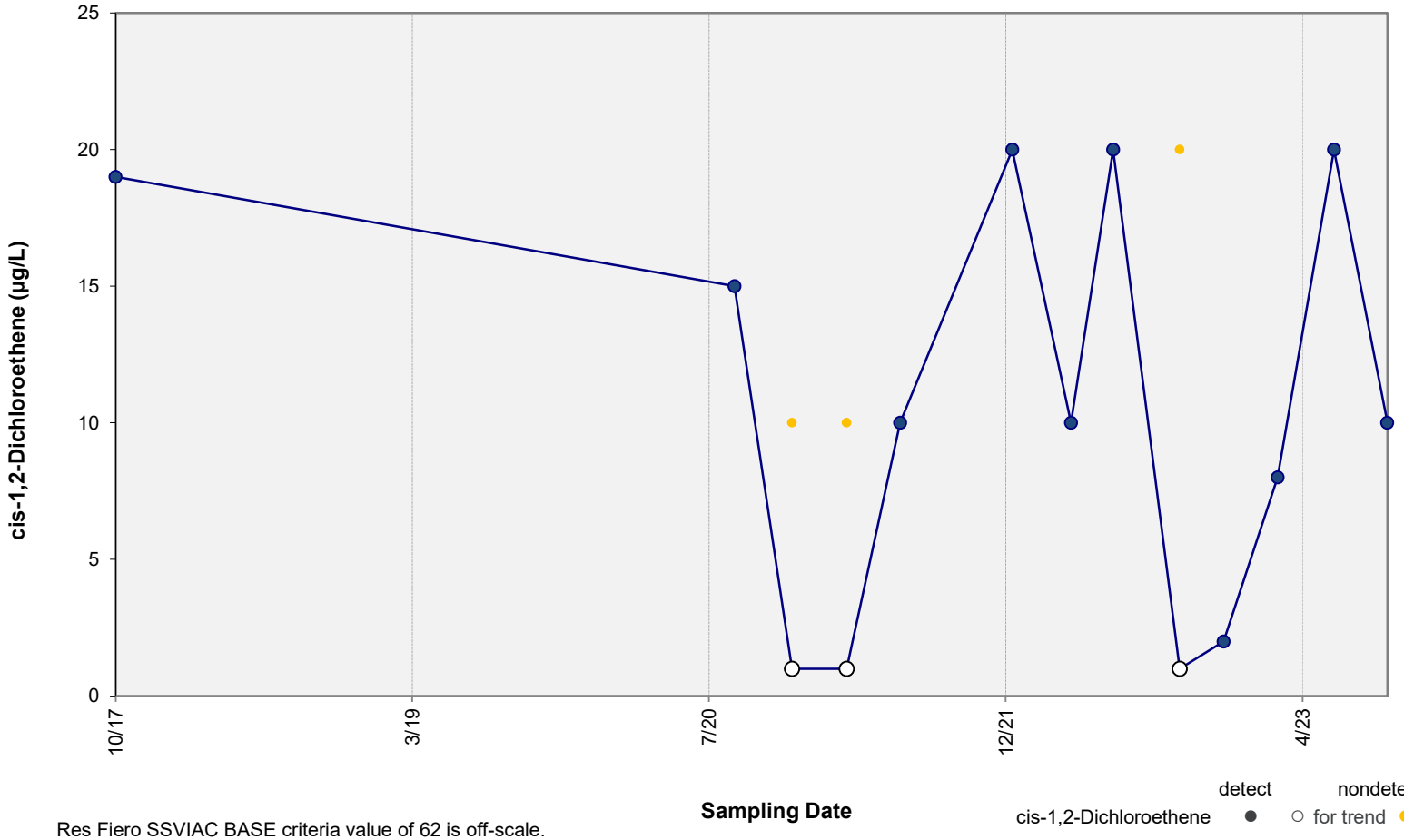
95% Confidence Interval = -3.5E-02 to 0.0E+00 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – Trichloroethene in Well MWF16-05

Racer PNC Groundwater

Figure 3-11



Res Fiero SSVIAC BASE criteria value of 62 is off-scale.

Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.450 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = 0.0E+00 µg/L Per Day

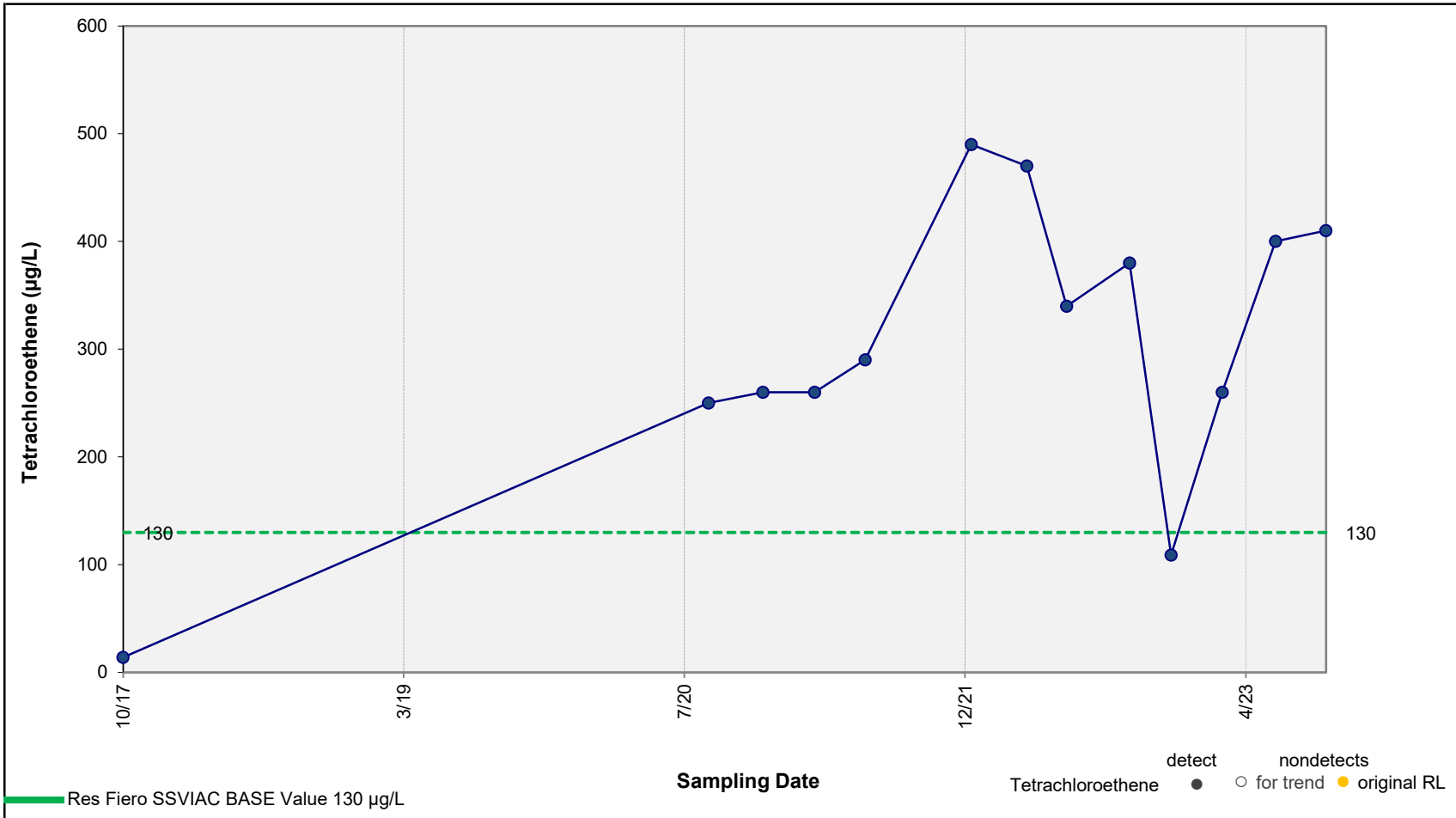
95% Confidence Interval = -7.0E-03 to 9.7E-03 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – cis-1,2-Dichloroethene in Well MWF16-16

Racer PNC Groundwater

Figure 3-12



Results of Mann-Kendall Test for Trend: **INCREASING TREND**

p value = 0.033 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **INCREASING TREND**

Median Slope Estimate = 1.5E-01 µg/L Per Day

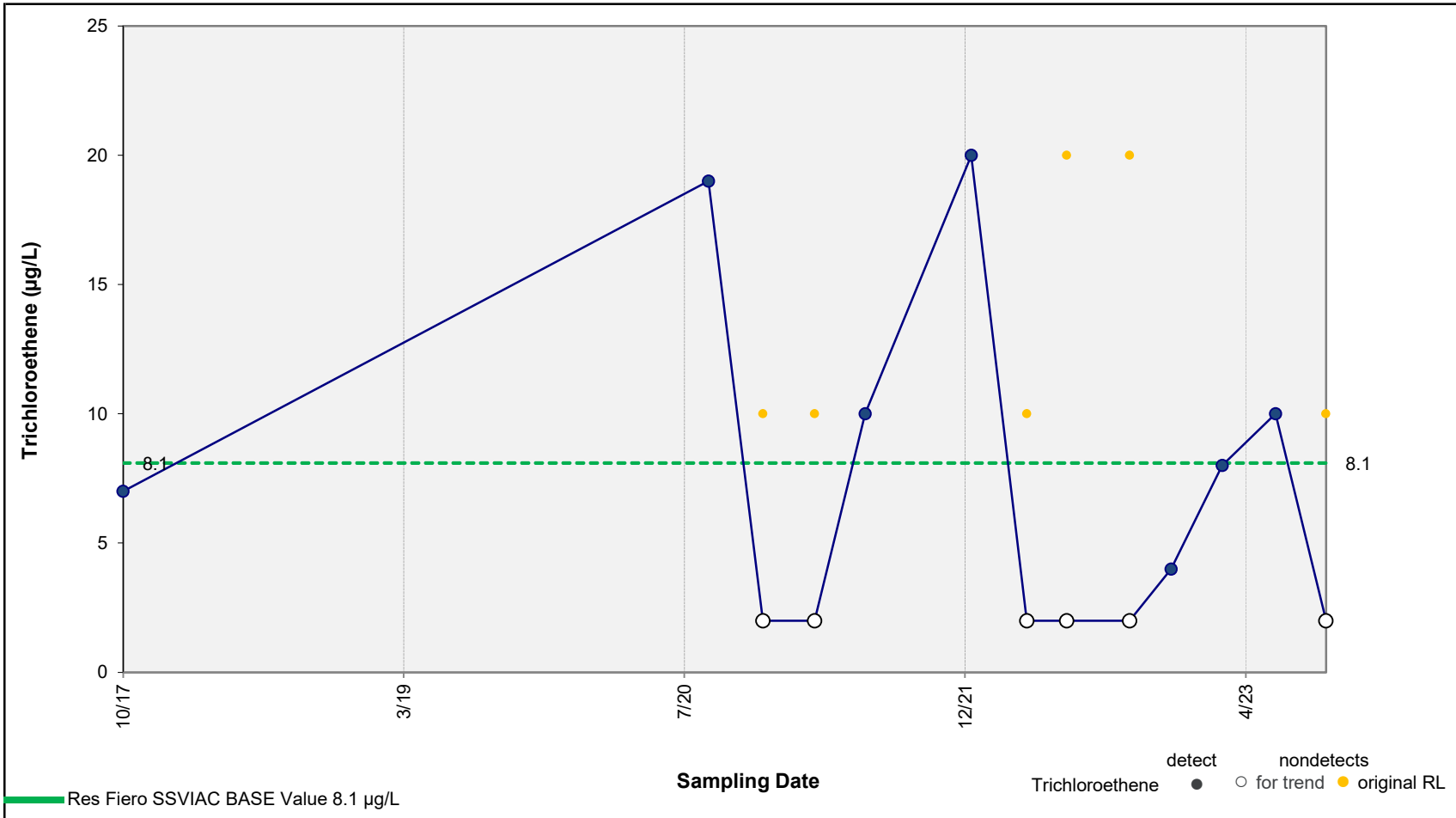
95% Confidence Interval = 6.7E-03 to 1.9E-01 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – Tetrachloroethene in Well MWF16-16

Racer PNC Groundwater

Figure 3-13



Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.423 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = 0.0E+00 µg/L Per Day

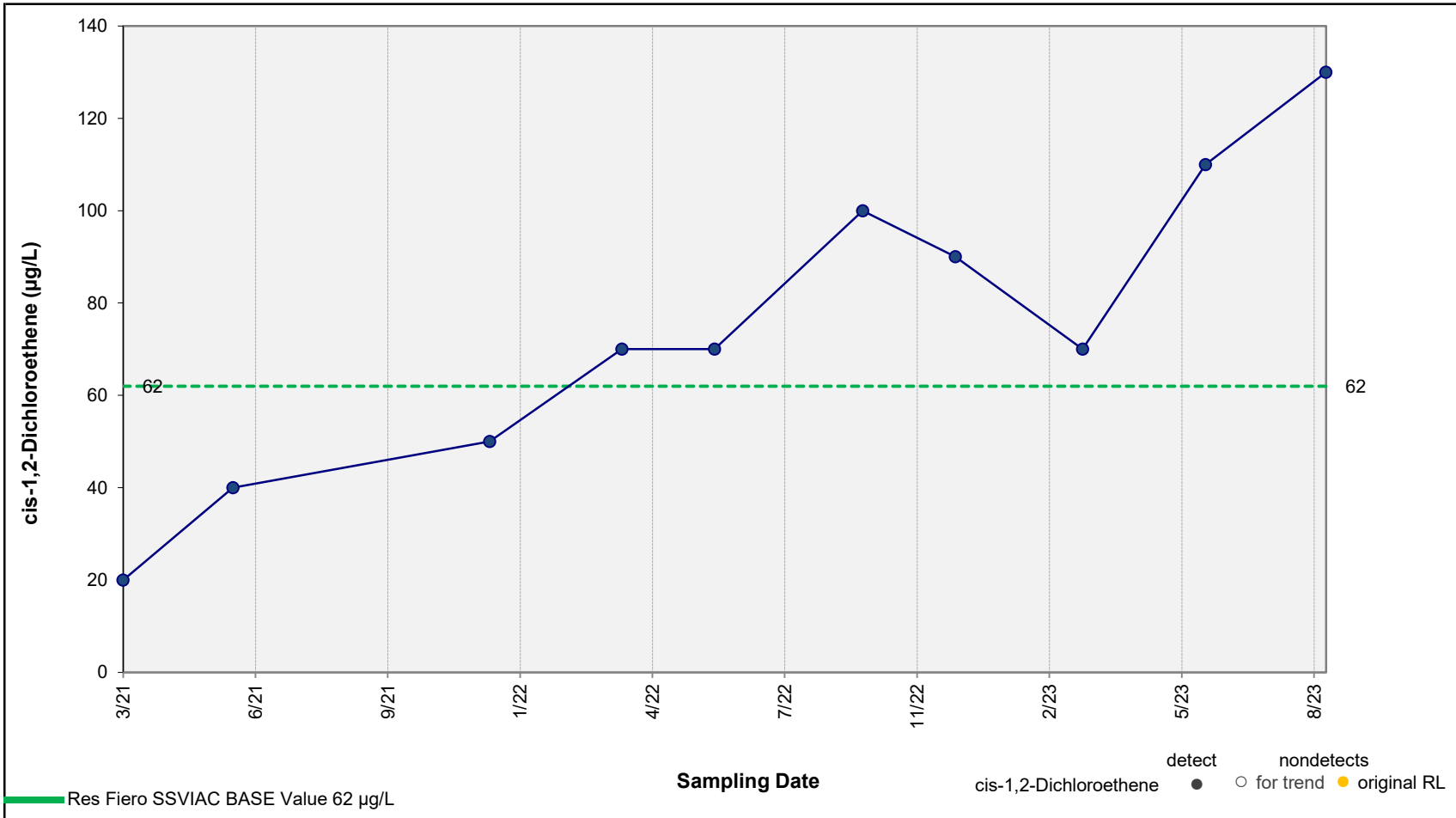
95% Confidence Interval = -4.3E-03 to 1.9E-03 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – Trichloroethene in Well MWF16-16

Racer PNC Groundwater

Figure 3-14



Results of Mann-Kendall Test for Trend: **INCREASING TREND**

p value = <0.001 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **INCREASING TREND**

Median Slope Estimate = 1.1E-01 µg/L Per Day

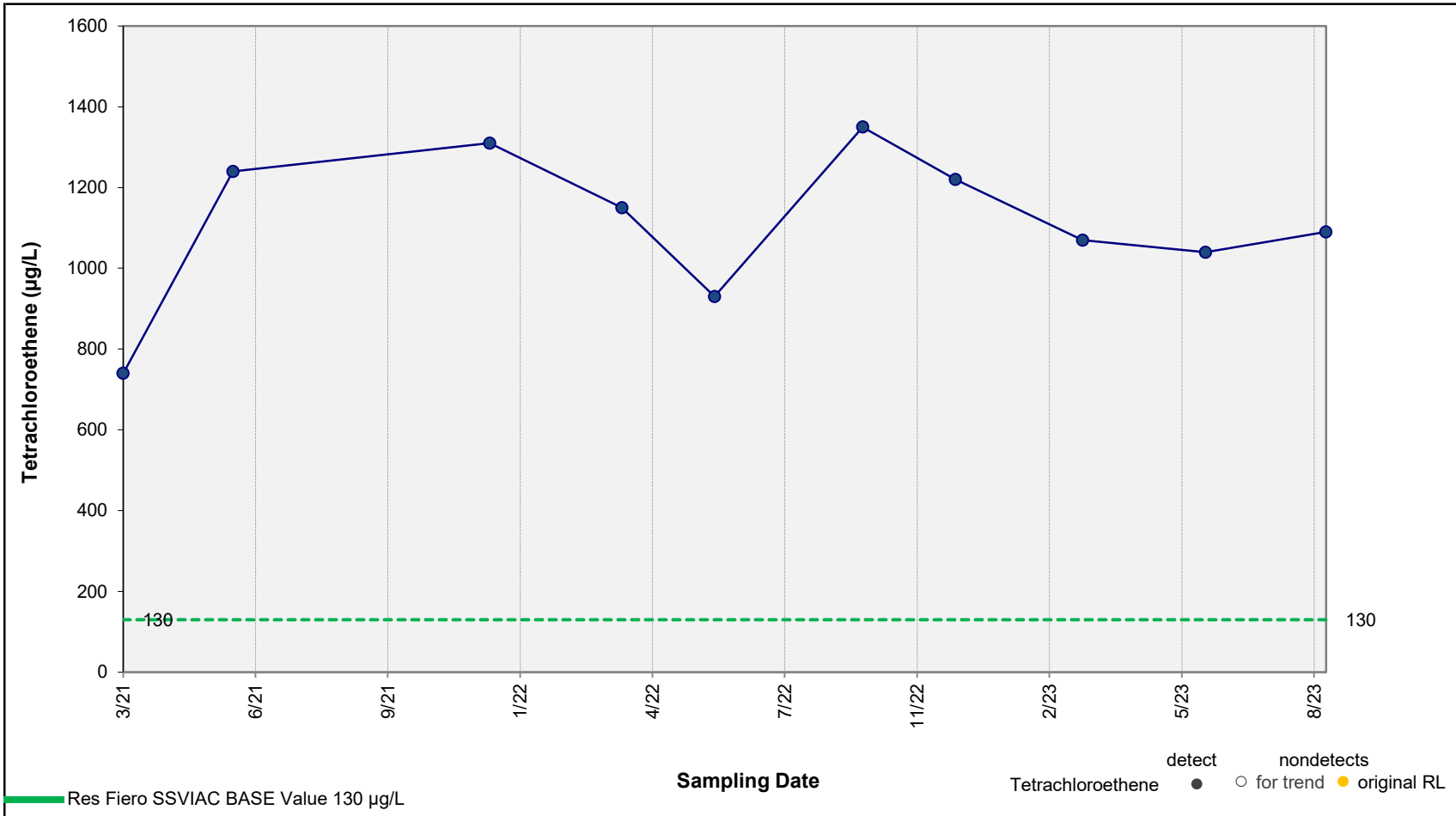
95% Confidence Interval = 8.4E-02 to 1.2E-01 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – cis-1,2-Dichloroethene in Well MWF16-18

Racer PNC Groundwater

Figure 3-15



Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.431 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = -1.1E-01 µg/L Per Day

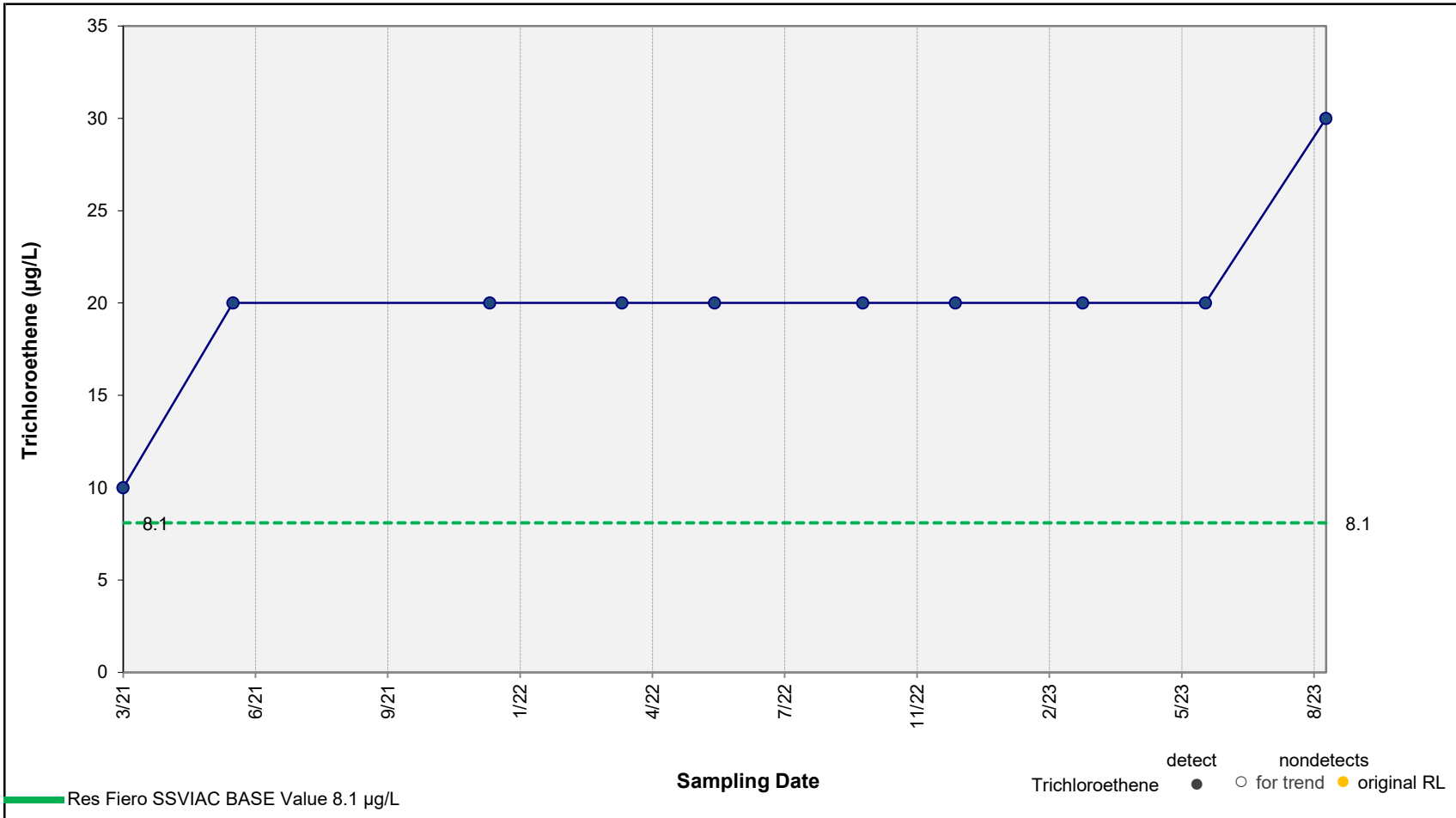
95% Confidence Interval = -4.3E-01 to 3.6E-01 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – Tetrachloroethene in Well MWF16-18

Racer PNC Groundwater

Figure 3-16



Results of Mann-Kendall Test for Trend: **INCREASING TREND**

p value = 0.078 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No trend**

Median Slope Estimate = 0.0E+00 µg/L Per Day

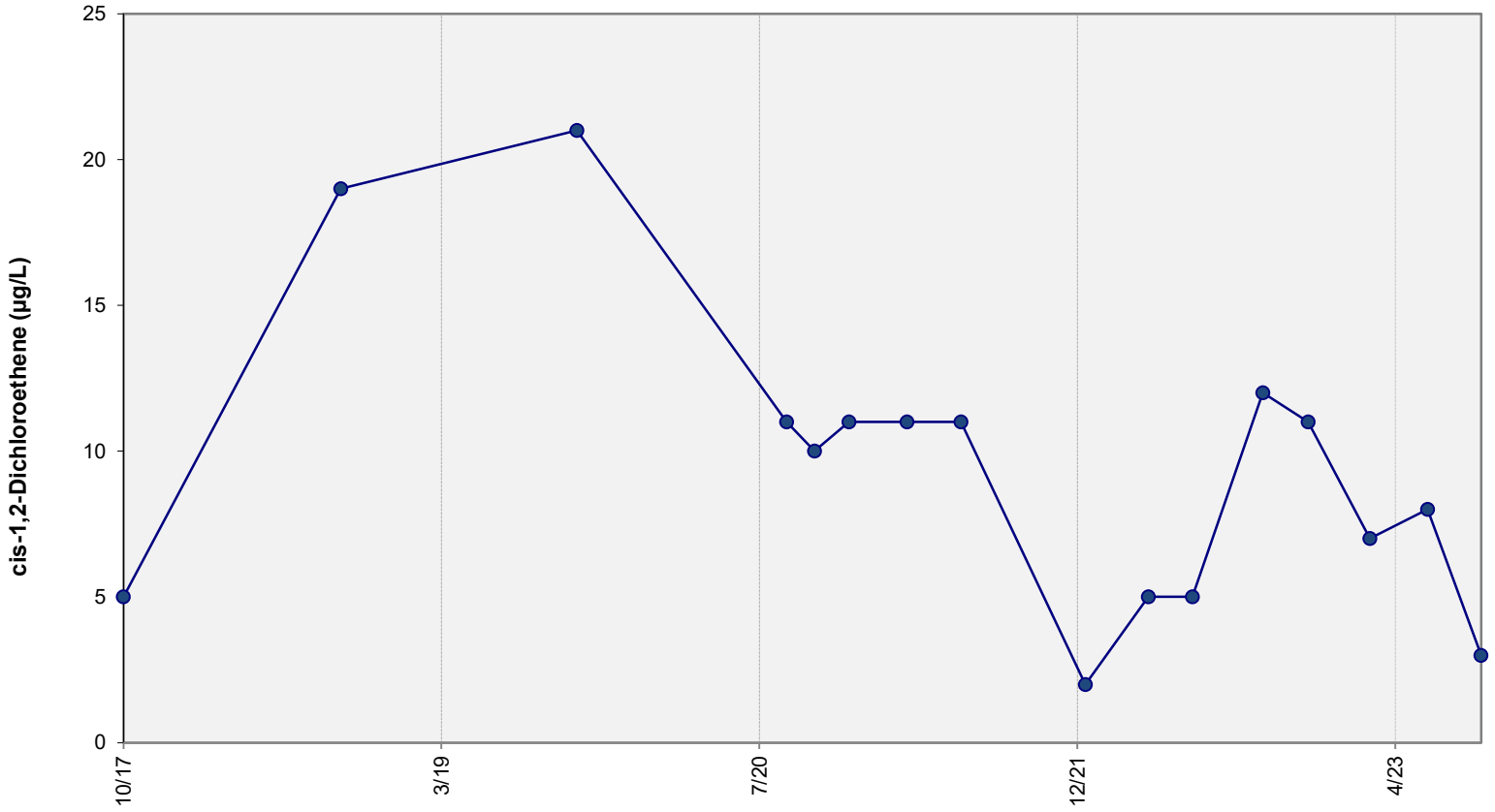
95% Confidence Interval = 0.0E+00 to 1.0E-02 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – Trichloroethene in Well MWF16-18

Racer PNC Groundwater

Figure 3-17



Res Fiero SSVIAC BASE criteria value of 62 is off-scale.

Results of Mann-Kendall Test for Trend: **DECREASING TREND**

p value = 0.071 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No trend**

Median Slope Estimate = -4.4E-03 µg/L Per Day

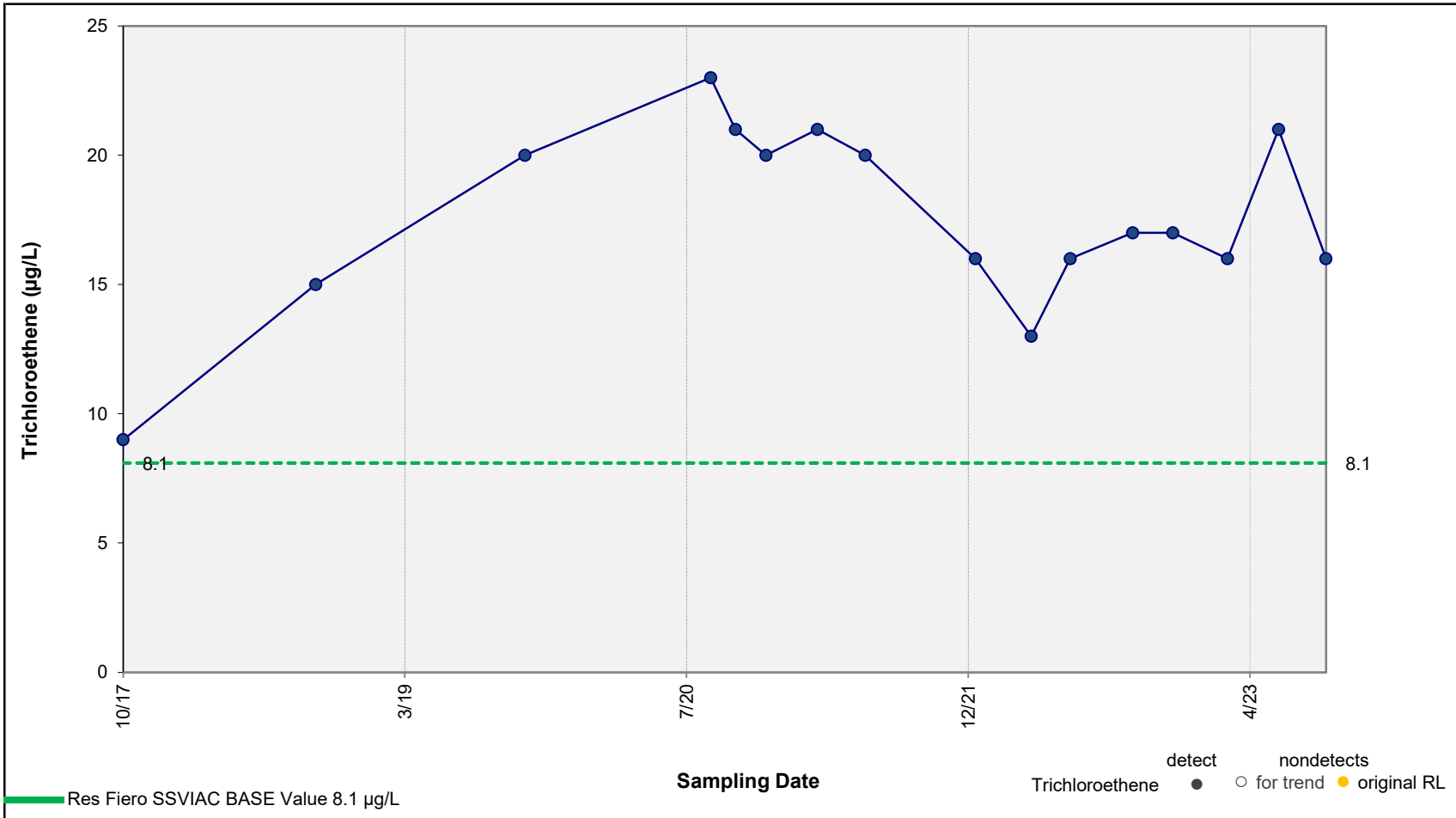
95% Confidence Interval = -9.4E-03 to 0.0E+00 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – cis-1,2-Dichloroethene in Well MWF16-23

Racer PNC Groundwater

Figure 3-18



Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.392 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = 0.0E+00 µg/L Per Day

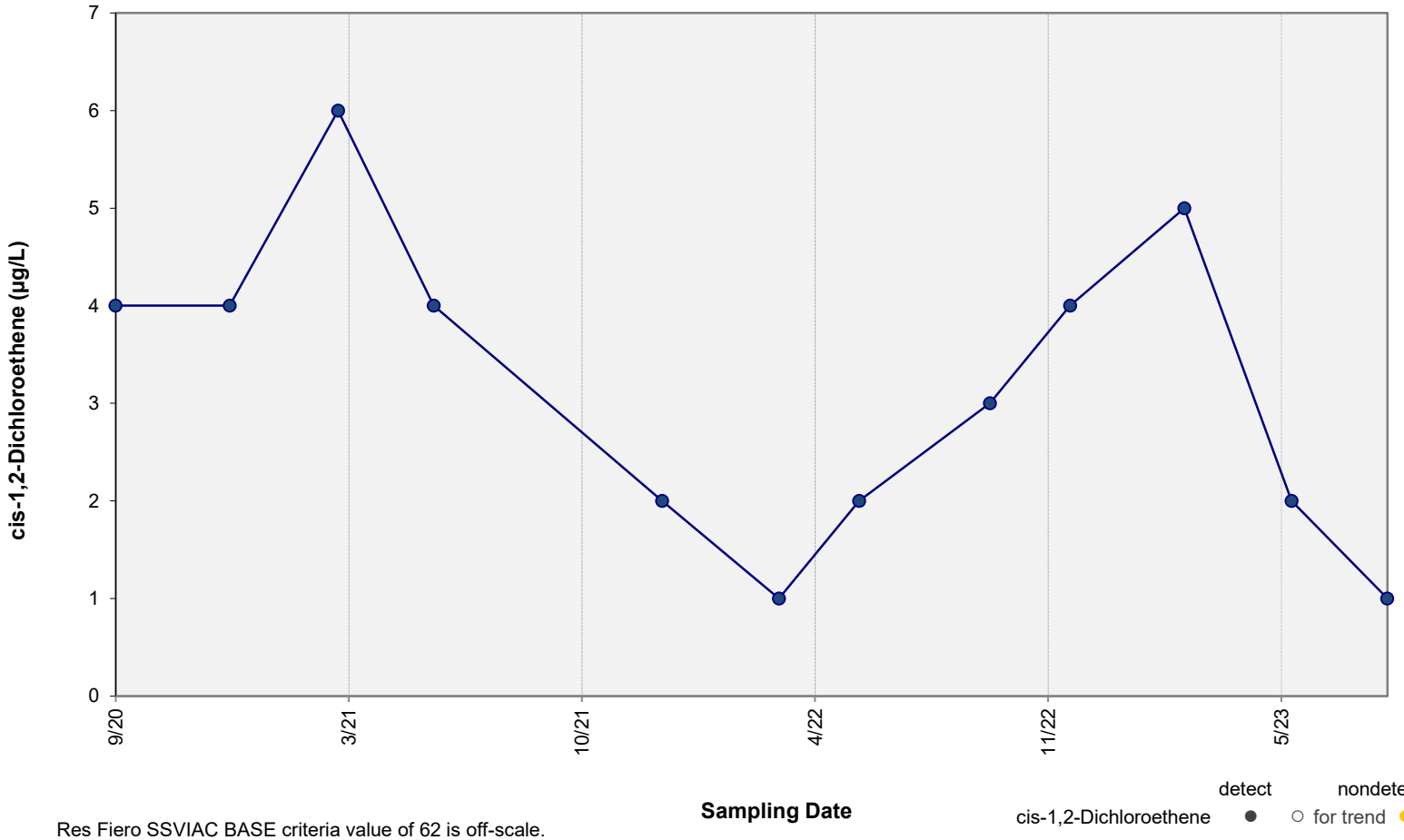
95% Confidence Interval = -4.9E-03 to 1.4E-03 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – Trichloroethene in Well MWF16-23

Racer PNC Groundwater

Figure 3-19



Res Fiero SSVIAC BASE criteria value of 62 is off-scale.

Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.114 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No trend**

Median Slope Estimate = -1.8E-03 µg/L Per Day

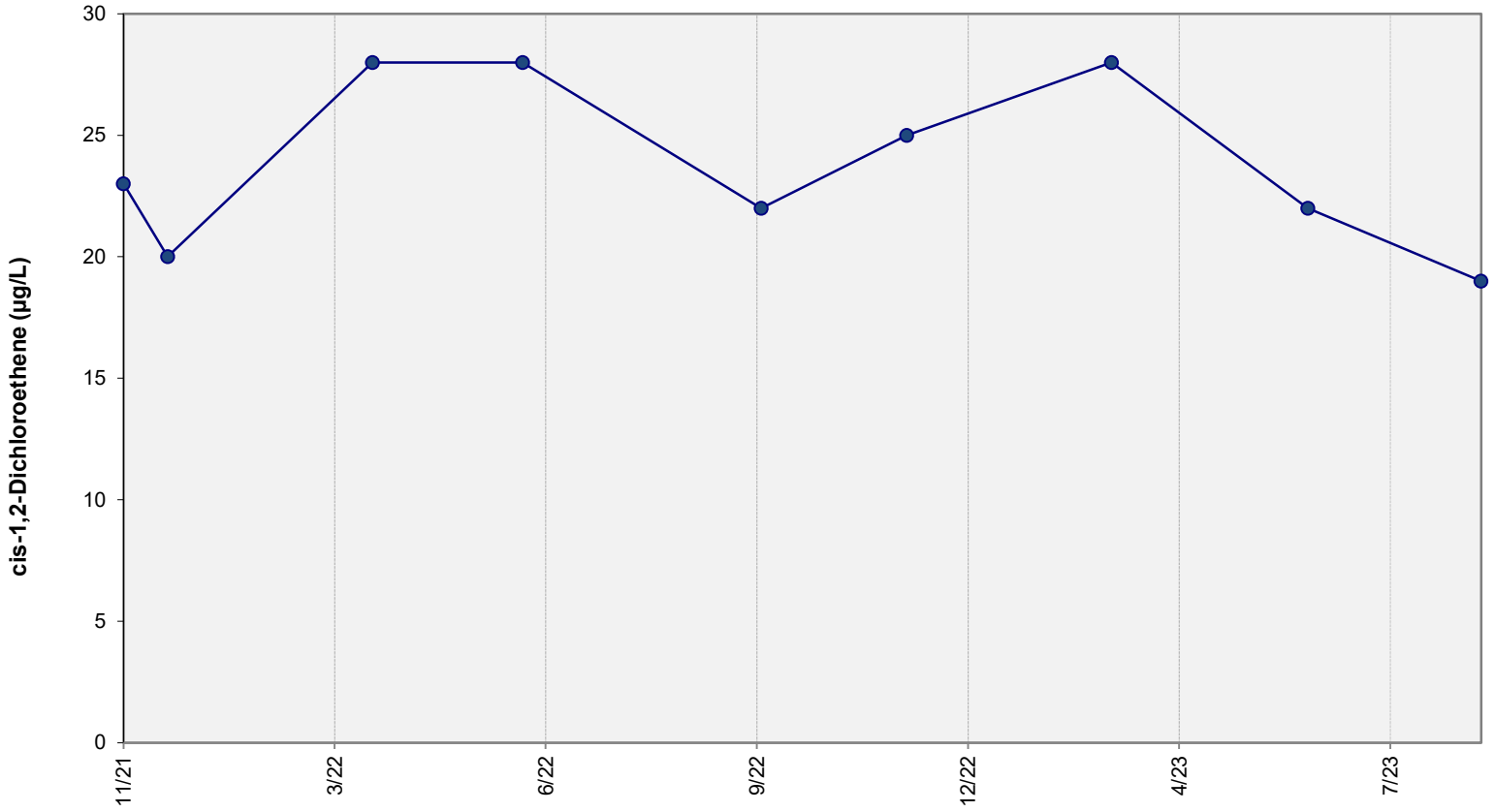
95% Confidence Interval = -4.1E-03 to 0.0E+00 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – cis-1,2-Dichloroethene in Well MWOS-08

Racer PNC Groundwater

Figure 3-20



Res Fiero SSVIAC BASE criteria value of 62 is off-scale.

Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.306 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = -1.7E-03 µg/L Per Day

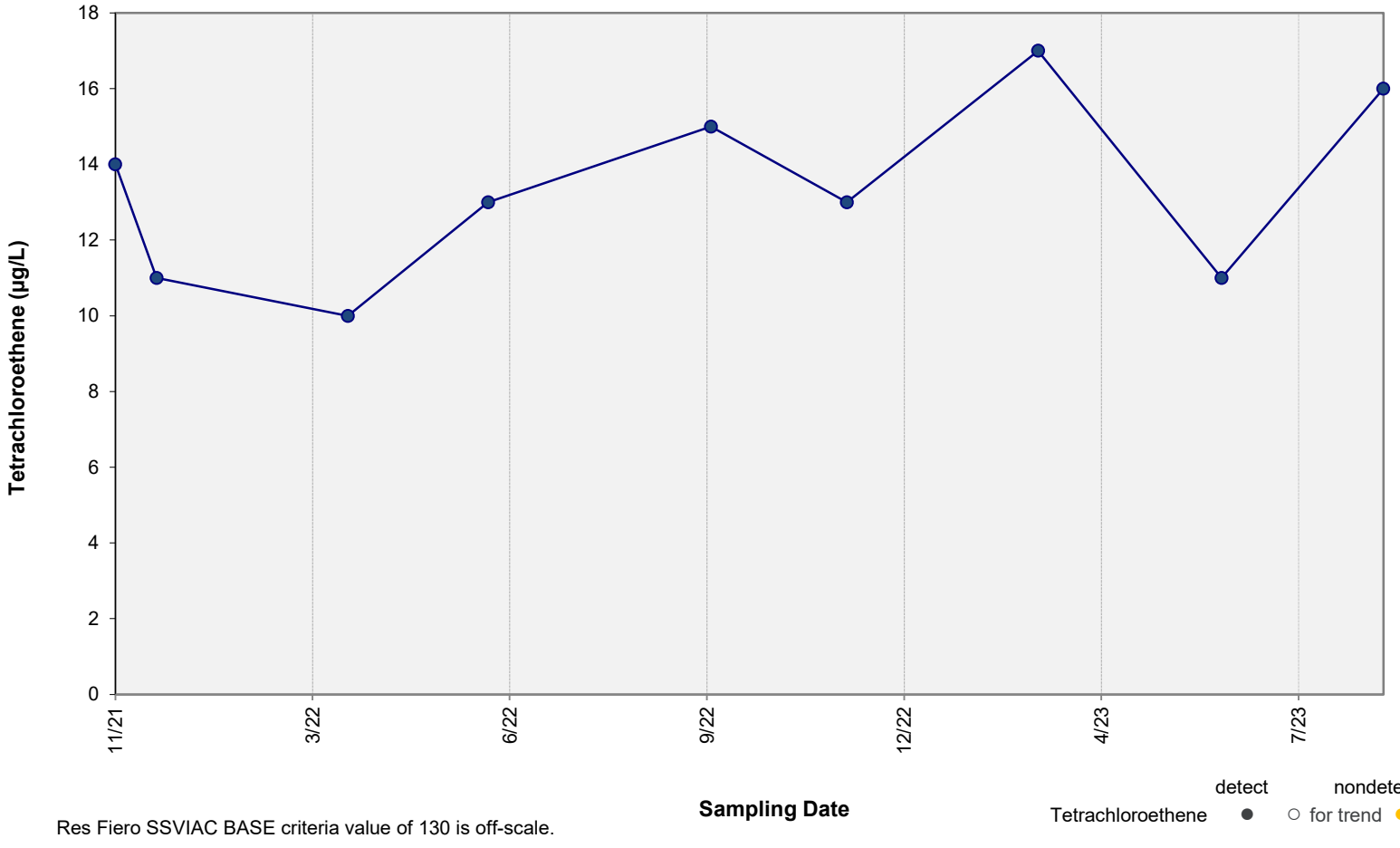
95% Confidence Interval = -1.6E-02 to 6.6E-03 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – cis-1,2-Dichloroethene in Well MWOS-09R

Racer PNC Groundwater

Figure 3-21



Res Fiero SSVIAC BASE criteria value of 130 is off-scale.

Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.179 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = 4.5E-03 µg/L Per Day

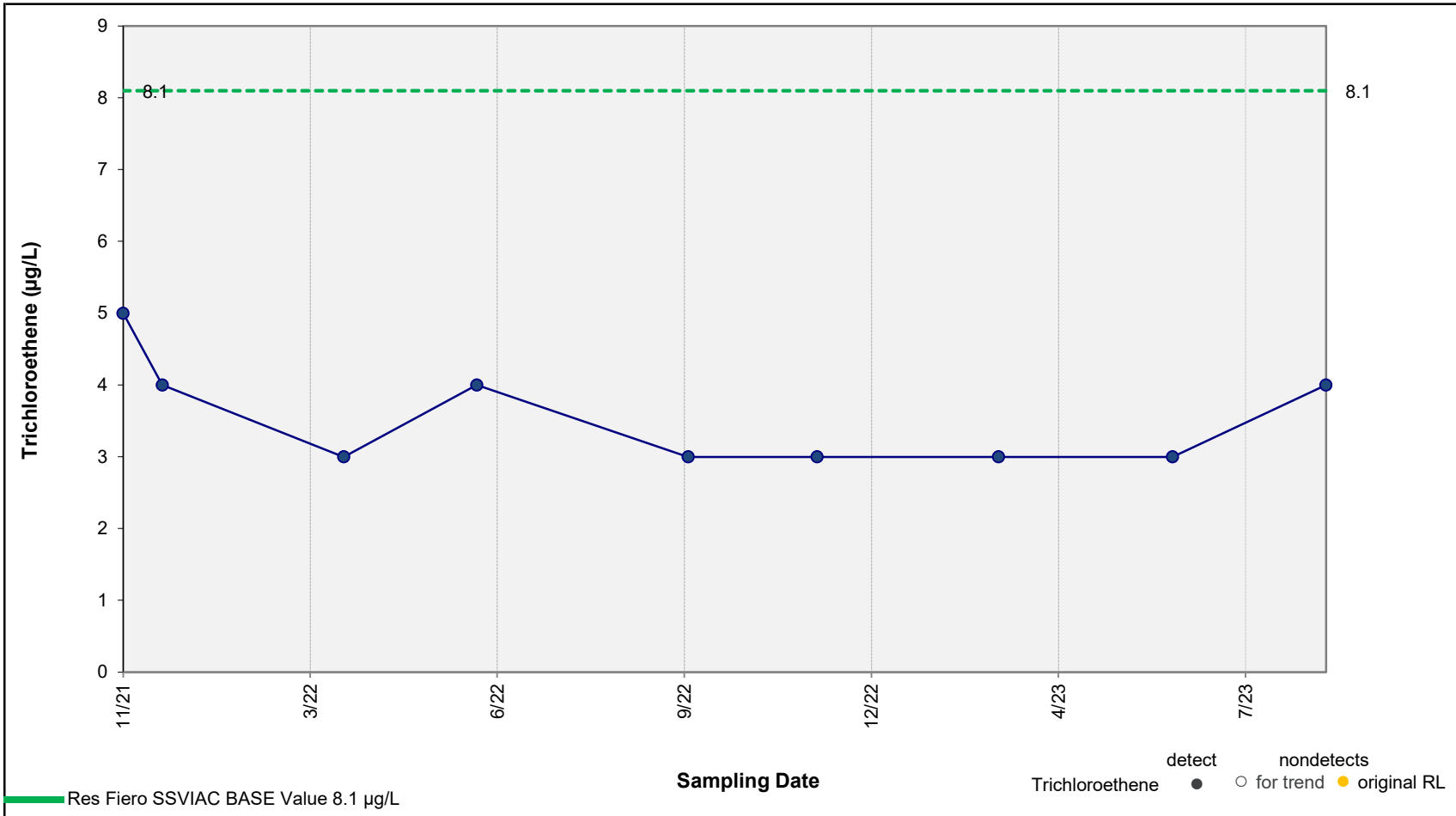
95% Confidence Interval = -5.3E-03 to 1.2E-02 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – Tetrachloroethene in Well MWOS-09R

Racer PNC Groundwater

Figure 3-22



Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.155 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No trend**

Median Slope Estimate = 0.0E+00 µg/L Per Day

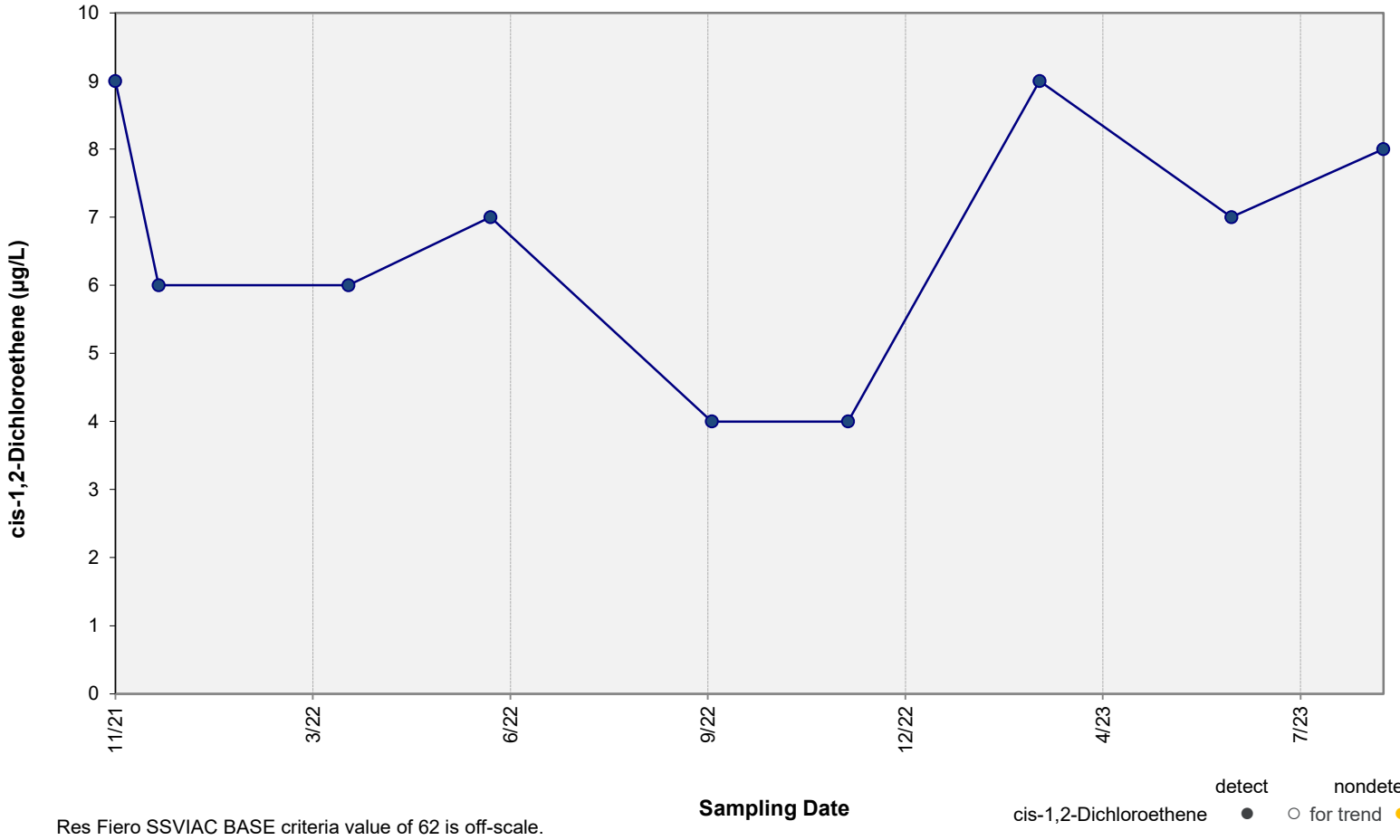
95% Confidence Interval = -3.6E-03 to 0.0E+00 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – Trichloroethene in Well MWOS-09R

Racer PNC Groundwater

Figure 3-23



Res Fiero SSVIAC BASE criteria value of 62 is off-scale.

Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.460 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = 0.0E+00 µg/L Per Day

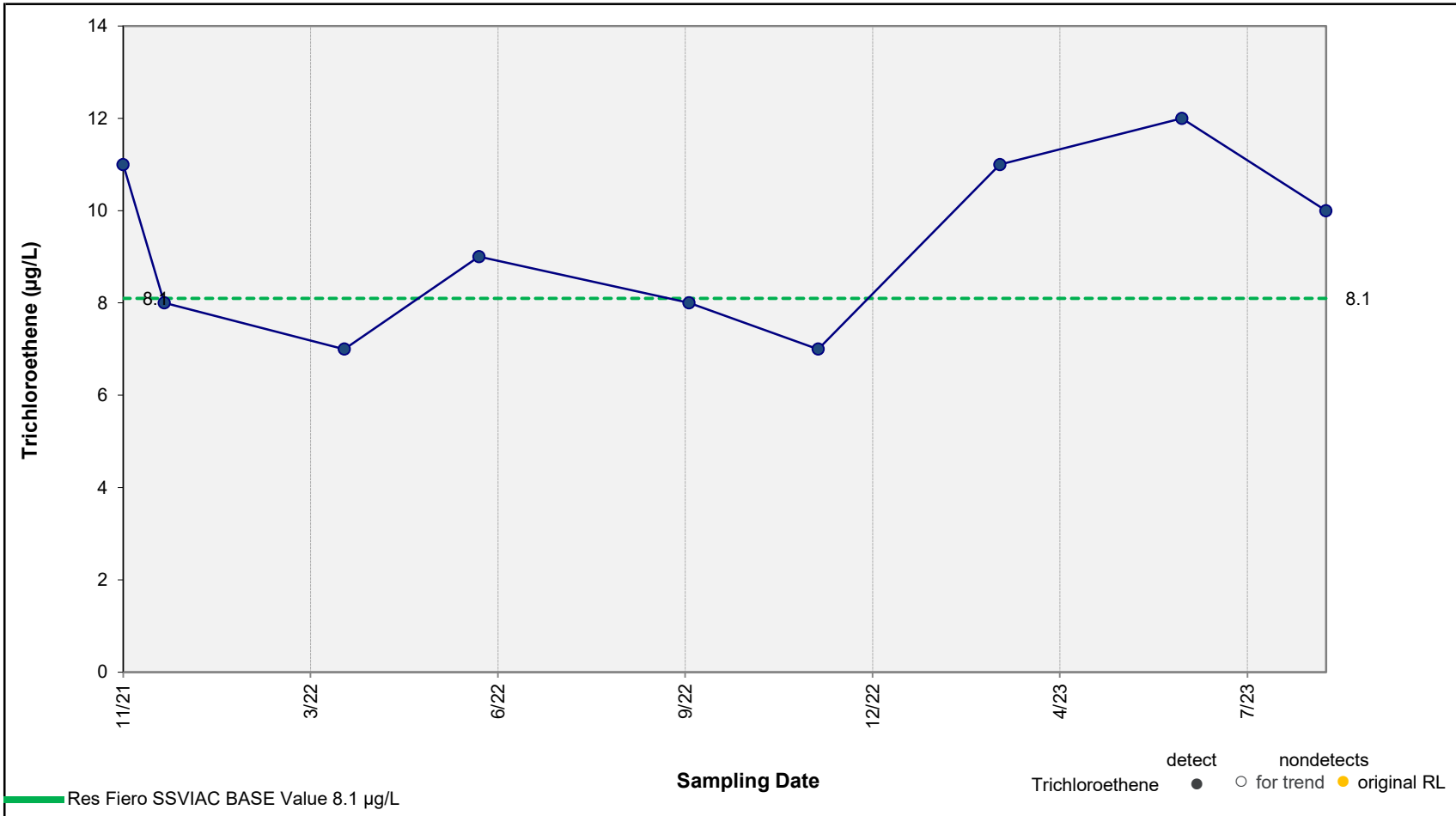
95% Confidence Interval = -7.7E-03 to 6.5E-03 µg/L Per Day

ARCADIS

Concentration vs. Time Plot – cis-1,2-Dichloroethene in Well MWOS-10

Racer PNC Groundwater

Figure 3-24



Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.272 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = 2.7E-03 µg/L Per Day

95% Confidence Interval = -8.2E-03 to 7.3E-03 µg/L Per Day

ARCADIS

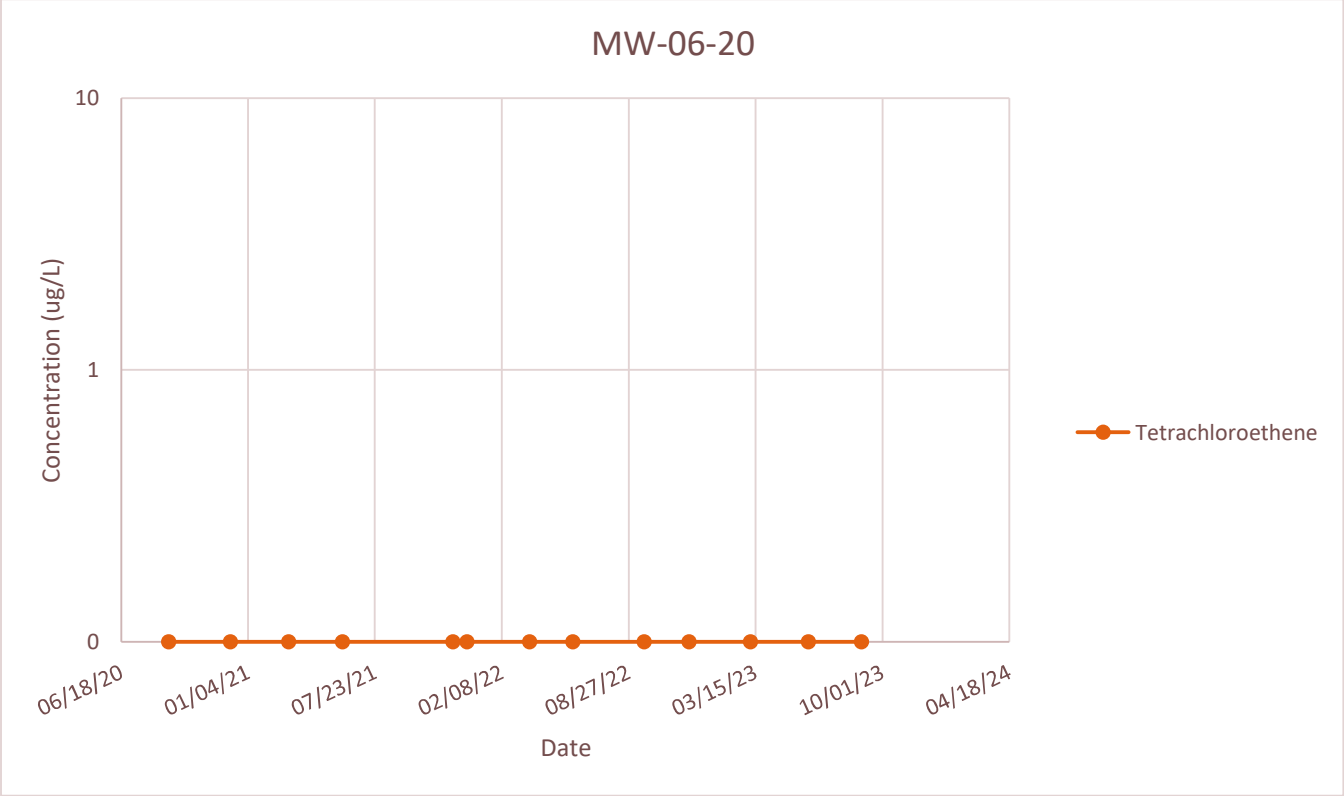
Concentration vs. Time Plot – Trichloroethene in Well MWOS-10

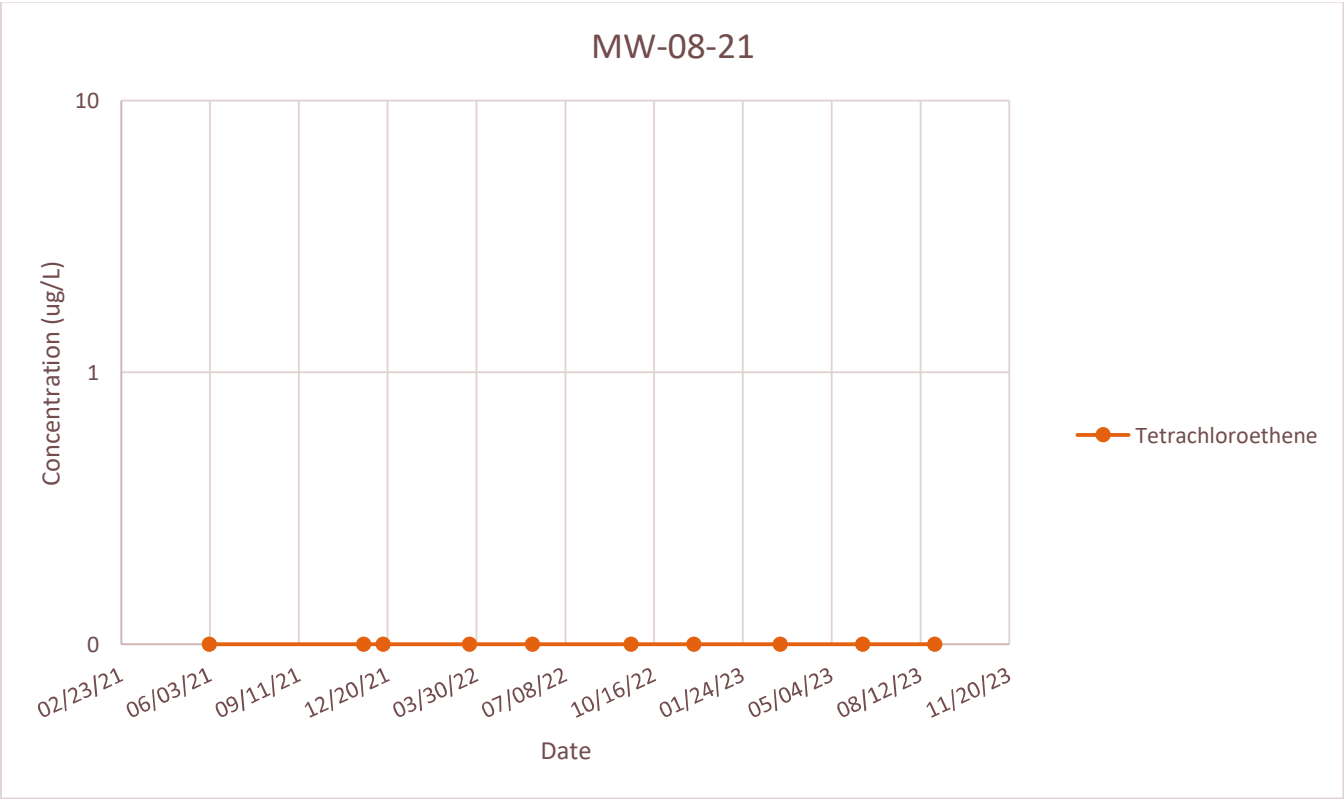
Racer PNC Groundwater

Figure 3-25

Attachment 3 -

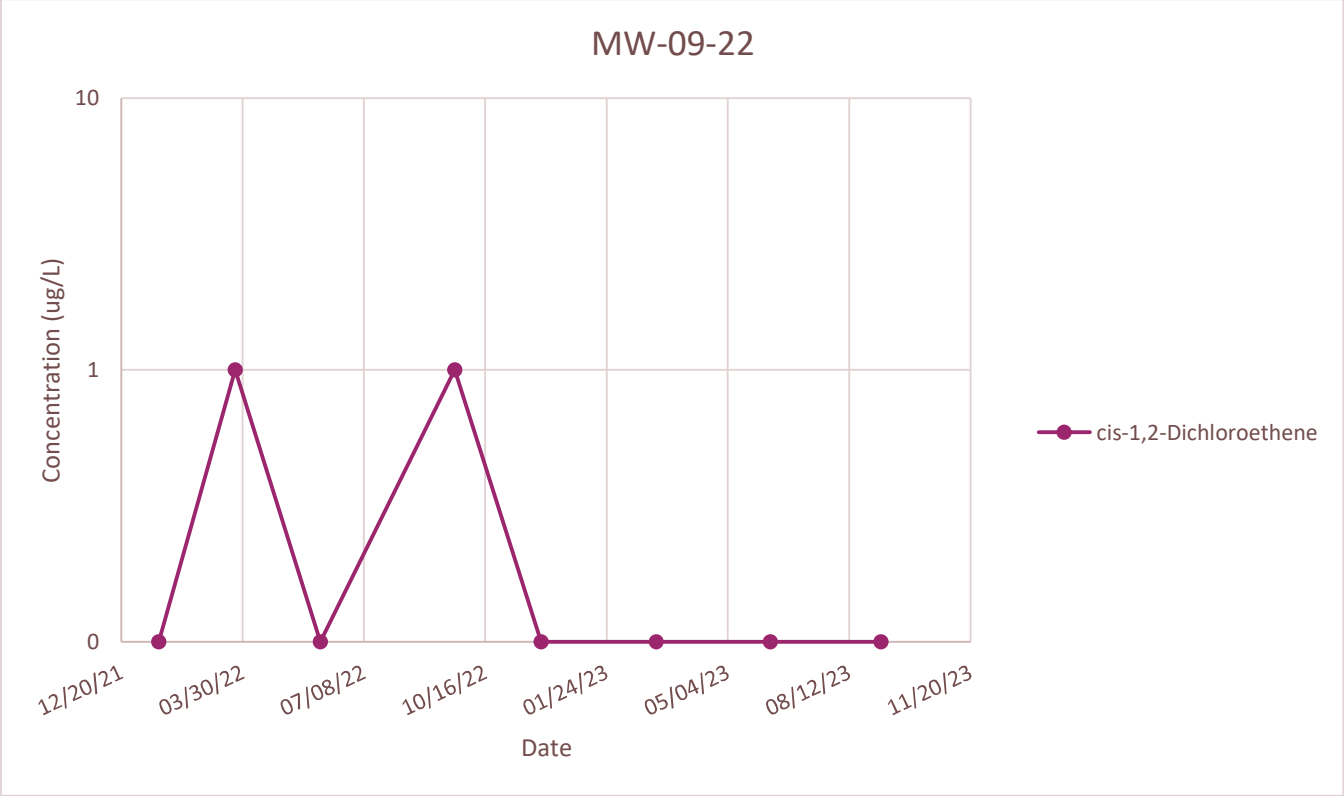
Groundwater Trend Graphs

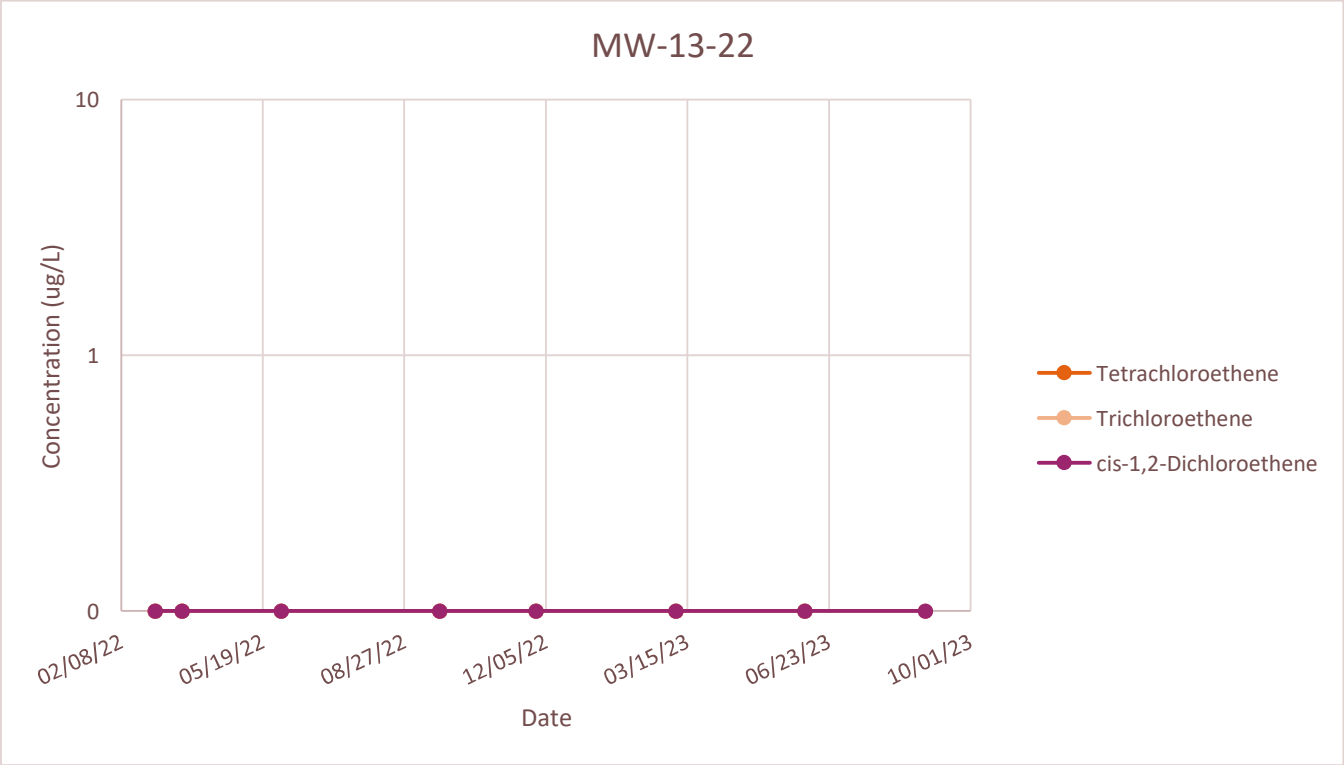




Attachment 3 -

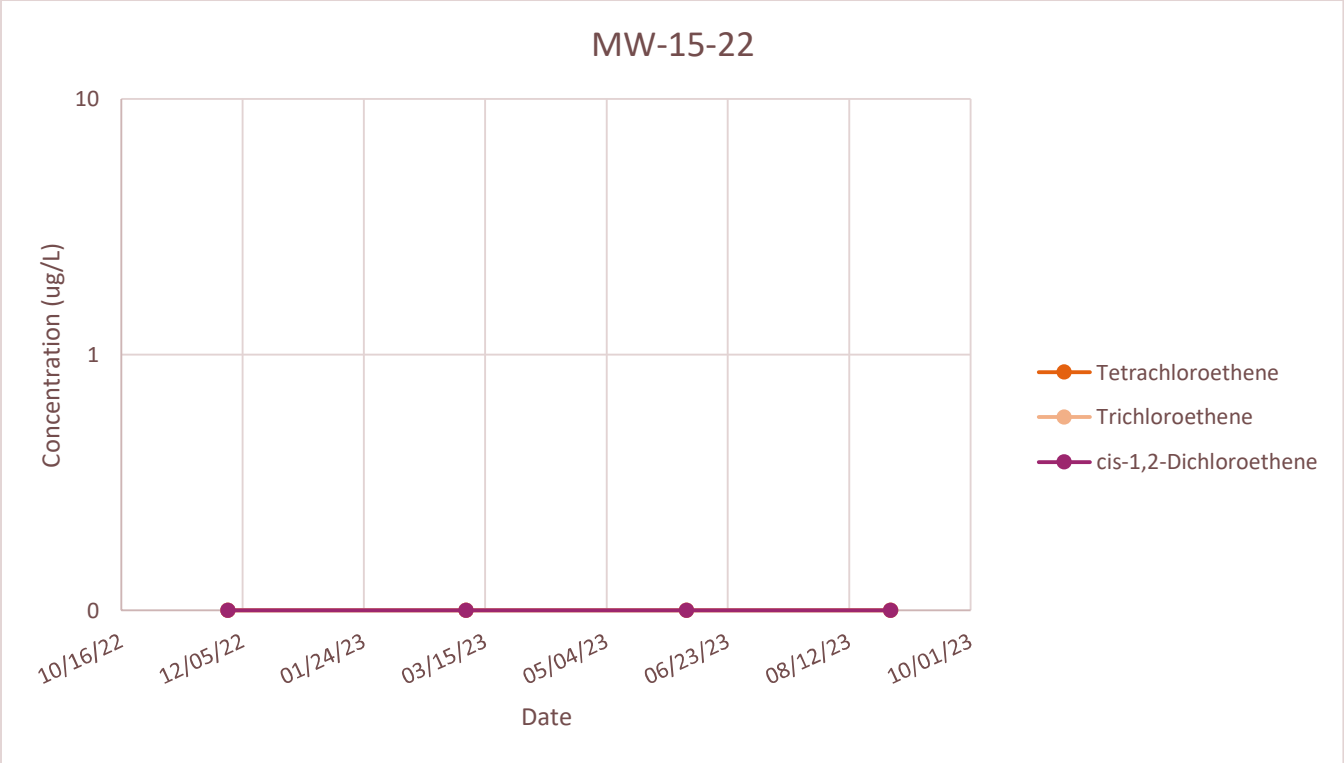
Groundwater Trend Graphs

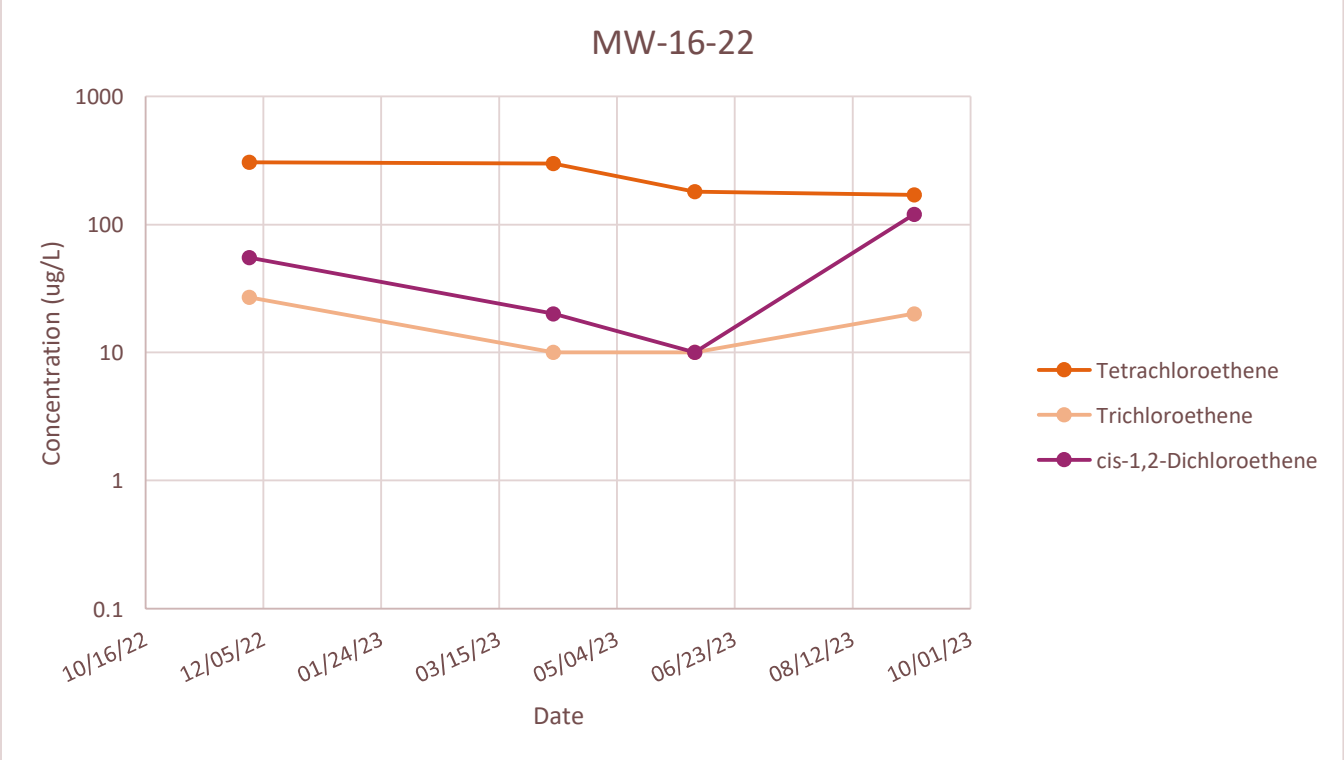




Attachment 3 -

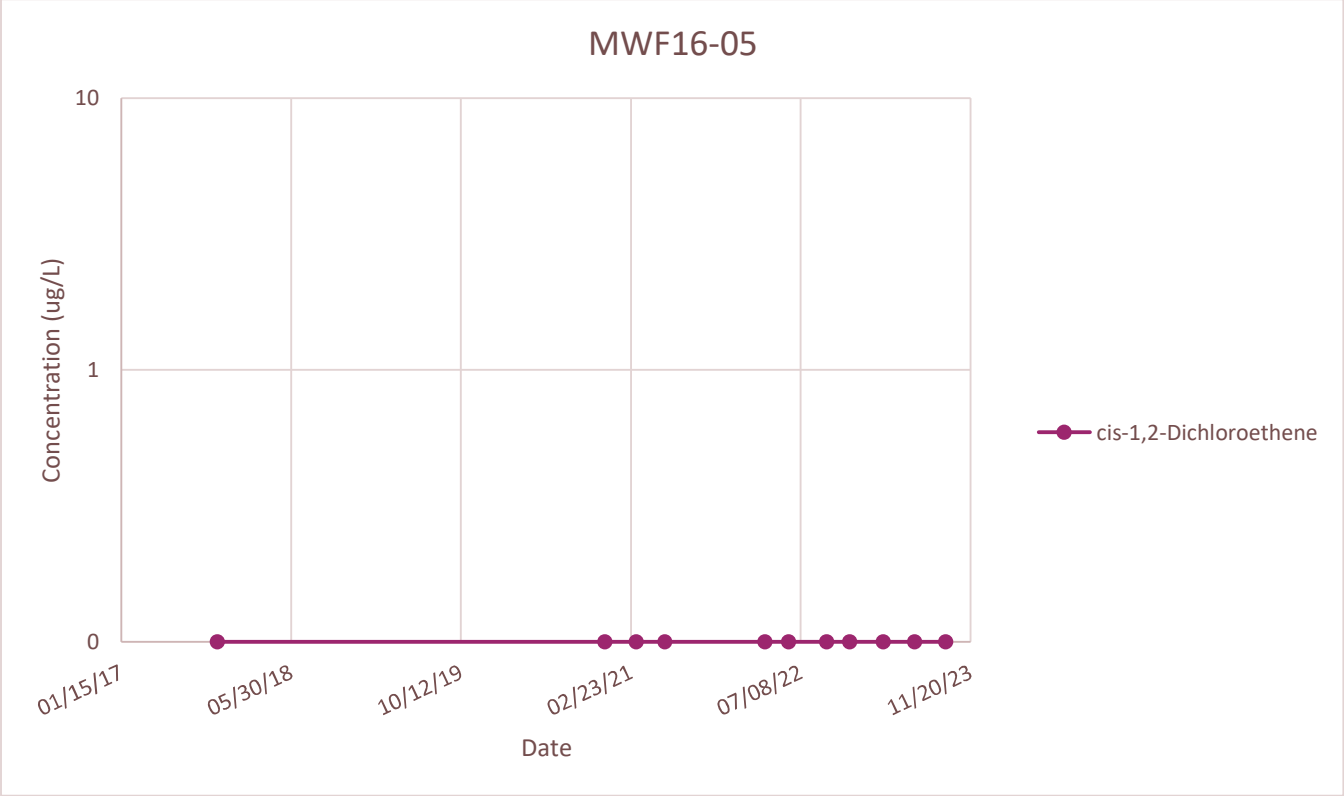
Groundwater Trend Graphs

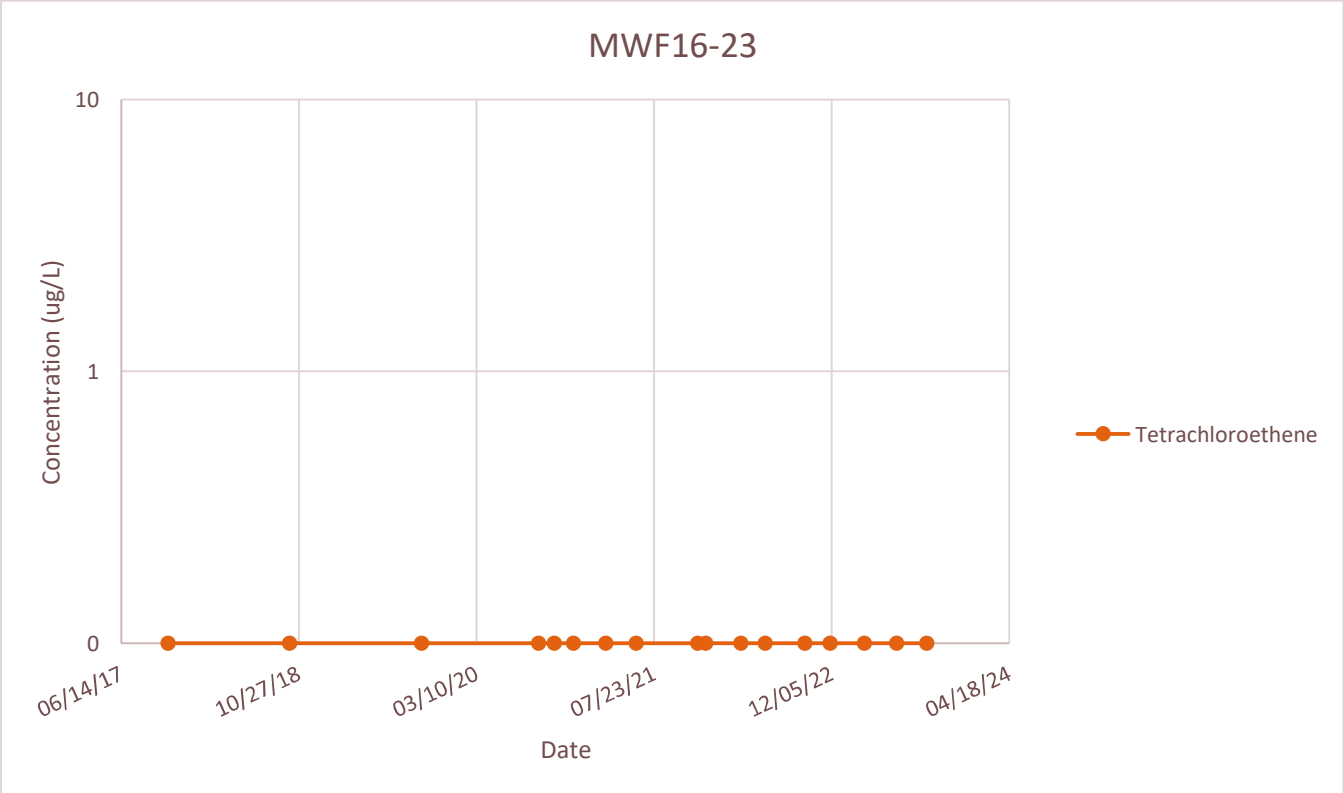




Attachment 3 -

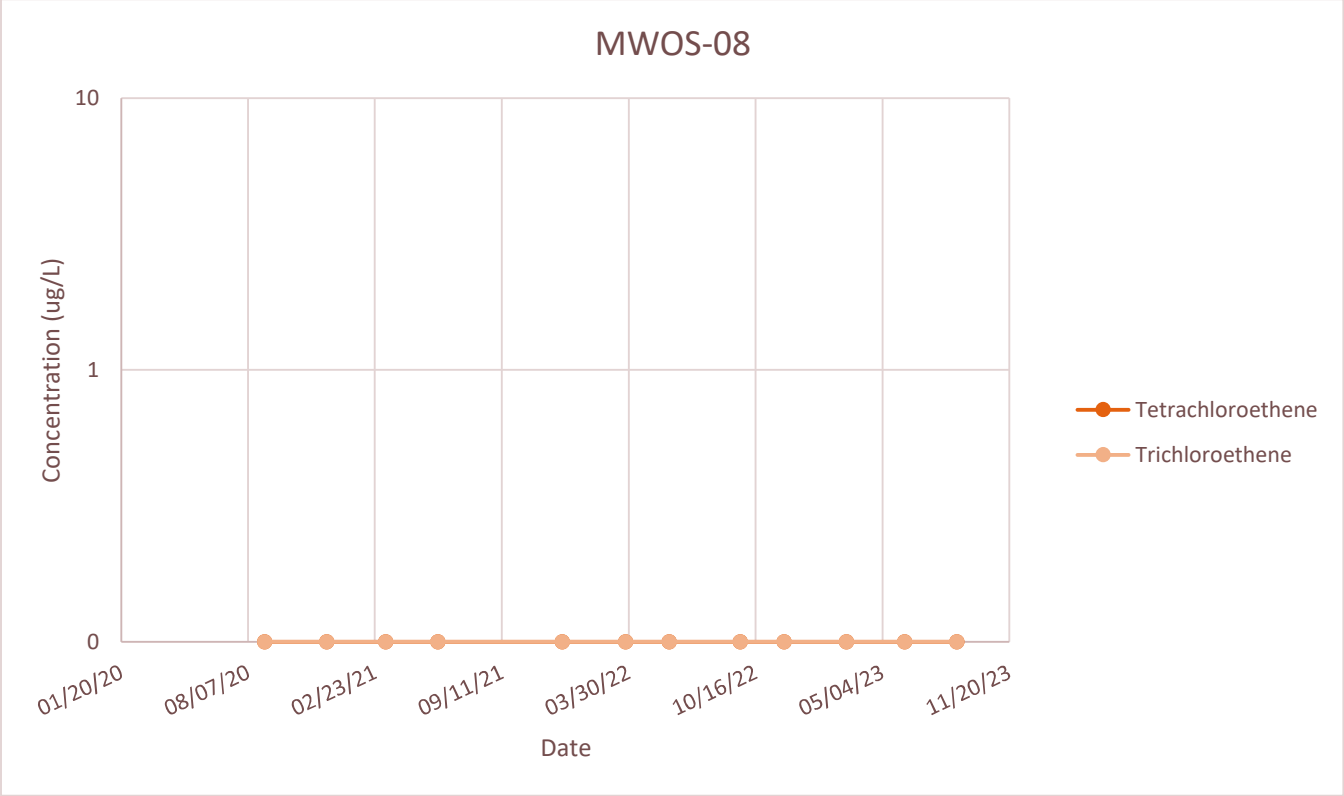
Groundwater Trend Graphs





Attachment 3 -

Groundwater Trend Graphs



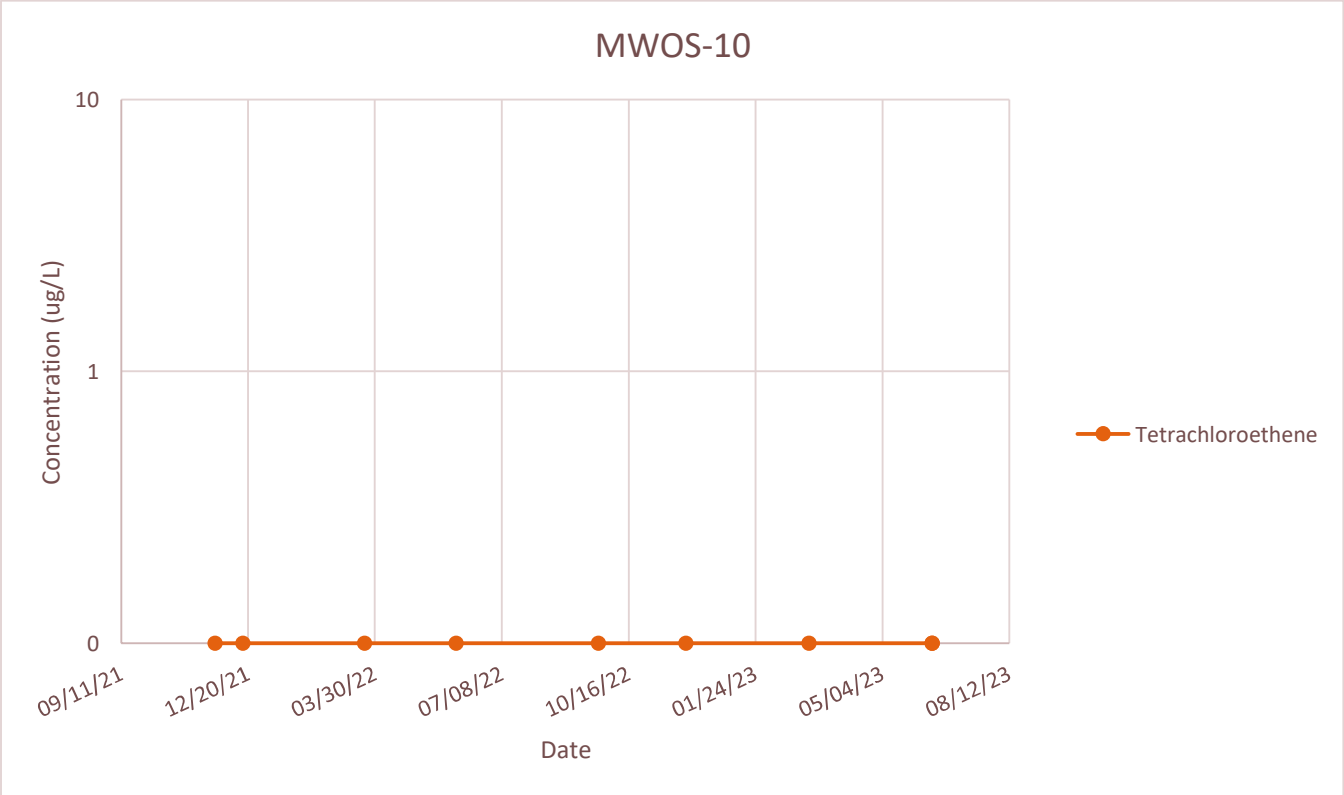


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TABLE 3-1
Summary Statistics and Trend Results
Racer PNC SVE (Including November 2022)
Pontiac, MI
October, 2023

Well ID	Analyte	Date Range	Figure	FOD	Detected Results Summary [1]				Mann-Kendall Test [2]				Sen's Estimator of Slope [2]			
					Range	Mean	Median	SD	Result[4]	MK Result Note	P-Value	S Value	Result[4]	Sen's Result Note	Slope (Units/Day)	95% CI (Units/Day)
SV-01-21	Tetrachloroethylene	05/21 - 08/23	3-1	7 / 10	7.5 - 17	12.2	13	3.3	NST	--	0.431	-3	NST	--	0	-0.0189 to 0.00916
SV-01-21	Trichloroethylene	05/21 - 08/23	3-2	9 / 10	8 - 32	15.5	12	8	NST	--	0.332	-6	NST	--	-0.00454	-0.0210 to 0.0191
SV-02-21	Tetrachloroethylene	05/21 - 08/23	3-3	8 / 10	7.5 - 12	9.1	8.55	1.6	NST	--	0.536	0	NST	--	0	-0.00932 to 0.00468
SV-02-21	Trichloroethylene	05/21 - 08/23	3-4	10 / 10	50 - 83	61.4	57.5	11.2	DWN	--	0.093	-16	NT	--	-0.0200	-0.0441 to 0
SV-04-21	Trichloroethylene	10/21 - 08/23	3-5	8 / 9	11 - 18	15.5	16.5	2.8	NST	--	0.421	-3	NST	--	-0.000839	-0.0138 to 0.0125
SV-06-21	Trichloroethylene	03/22 - 08/23	3-6	6 / 7	13 - 48	20.5	15.5	13.5	NST	5a	0.119	9	NST	5a	0.00763	-0.0254 to 0.0381

Abbreviations:

-- = insufficient data for calculating statistics (n < 4) or not available
FOD = frequency of detection (# detects / # samples)
mean = arithmetic mean
SD = standard deviation
NST = no significant trend
NT = no trend
DWN = downward trend
UP = upward trend
H_0 = null hypothesis: no significant trend (slope = 0)
H_a = alternative hypothesis: significant trend (slope ≠ 0)
95% CI = 95% confidence interval

Notes:

1. All analytical results are in µg/m^3.
2. Trend results are presented when at least five samples are available and the frequency of detection is at least 50%.
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 ≤ 0.10, or 90% confidence.

5a. MK and Sen's Trend 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.

MWF16-24
MWF16-26
TW-12-22
MWF16-22
MW-16-22
MW-13-22
MW-14-22
MW-15-22
MW-11-22
MWF16-25
E Kennett Rd
MWF16-23
MWOS-08
MWOS-09R
MW-06-20
MW-08-21
SV-02-21
SV-01-21
SV-05-21
SV-06-21
MWOS-10
MW-07-20
SV-04-21
SV-03-21
Saint Clair St
MW-05-18

LEGEND

- MONITORING WELL
- SOIL VAPOR MONITORING POINT
- CURRENT OR FORMER RACER PROPERTY

MANN-KENDALL ANALYSIS RESULTS

- DECREASING TREND
- NO SIGNIFICANT TREND
- INCREASING TREND
- RESULTS DID NOT MEET CRITERIA FOR VALID MANN-KENDALL ANALYSIS

0 50 100

SCALE IN FEET

RACER TRUST
PONTIAC NORTH CAMPUS
PONTIAC, MICHIGAN

SOIL VAPOR STABILITY ANALYSIS TETRACHLOROETHENE

ARCADIS

FIGURE
2A

CITY: NOVI, MI DIV: ENV DB: TRY PIC: J. BARRETT PM: T. LINDER TM: L. CRISP TR: PROJECT NUMBER: 30167840 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
D:\GIS\Project Files\MotorsLiquidationCompany\PontiacNorthCampus\Documents\Former Fiero Property\DataPackage 2023 2Q\SV StabilityAnalysis FieroProperty PCE 2Q new.mxd PLOTTED: 7/31/2023 9:10:26 PM BY: TYarbrough

MWF16-26
MWF16-24
TW-12-22
MWF16-22
MW-16-22
MW-14-22
MW-13-22
MW-15-22
MW-11-22
MWF16-25
E Kennett Rd
MWF16-23
MWOS-08
MWOS-09R
MW-06-20
MW-08-21
SV-02-21
SV-01-21
SV-06-21
SV-05-21
MWOS-10
MW-07-20
SV-04-21
SV-03-21
Saint Clair St
MW-05-18

LEGEND

- MONITORING WELL
- SOIL VAPOR MONITORING POINT
- CURRENT OR FORMER RACER PROPERTY

MANN-KENDALL ANALYSIS RESULTS

- DECREASING TREND
- NO SIGNIFICANT TREND
- INCREASING TREND
- RESULTS DID NOT MEET CRITERIA FOR VALID MANN-KENDALL ANALYSIS

0 50 100

SCALE IN FEET

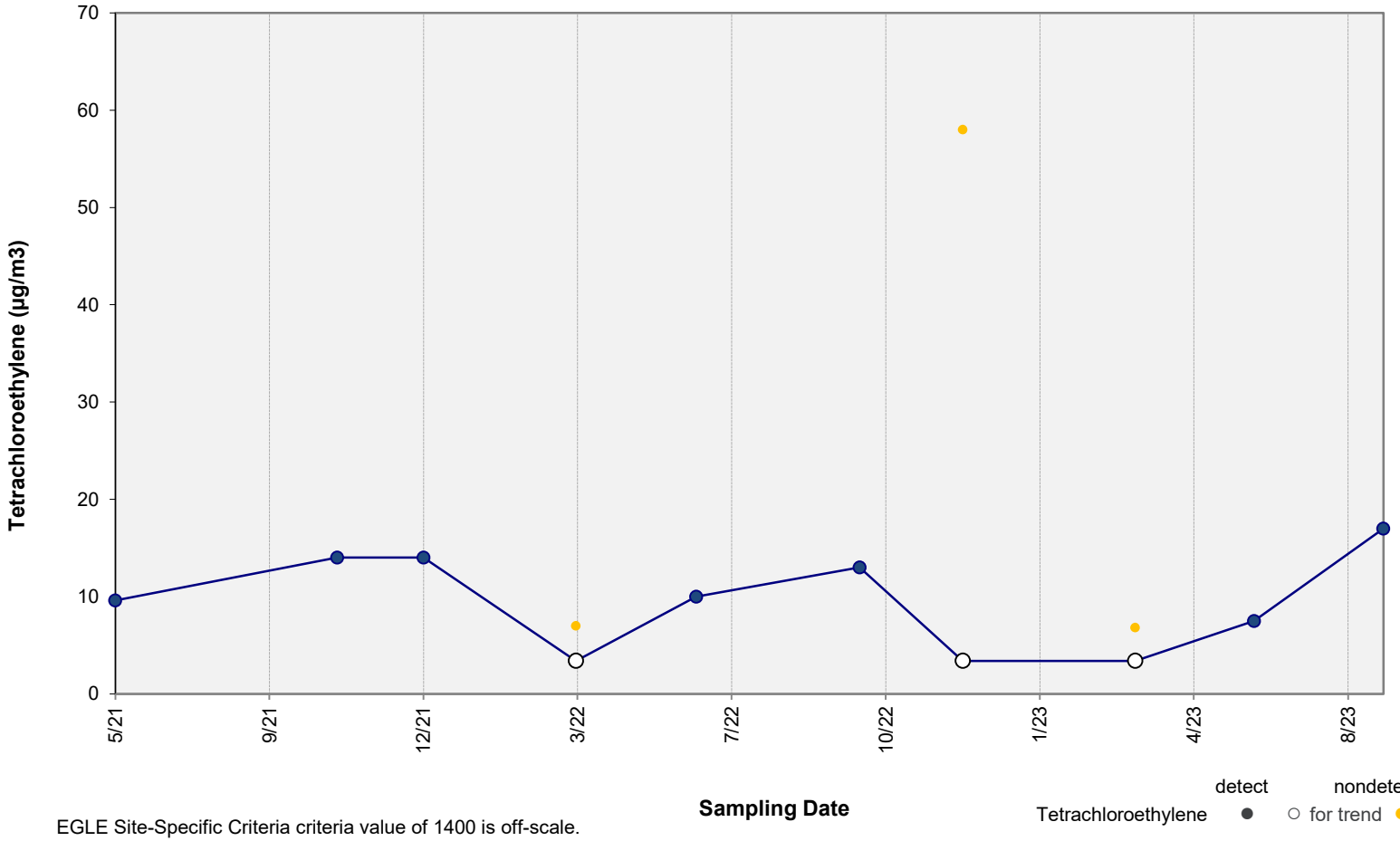
RACER TRUST
PONTIAC NORTH CAMPUS
PONTIAC, MICHIGAN

SOIL VAPOR STABILITY ANALYSIS TRICHLOROETHENE

ARCADIS

FIGURE
2B

CITY: NOVI, MI DIV: ENV DB: TRY PIC: J. BARRETT PM: T. LINDER TM: L. CRISP TR: PROJECT NUMBER: 30167840 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
D:\GIS\Project Files\MotorsLiquidationCompany\PontiacNorthCampus\Documents\Former Fiero Property\DataPackage 2023 3Q\2B SV StabilityAnalysis FieroProperty TCE 3Q new.mxd PLOTTED: 11/1/2023 1:57:27 PM BY: TYarbrough



EGLE Site-Specific Criteria criteria value of 1400 is off-scale.

Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.431 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = 0.0E+00 µg/m3 Per Day

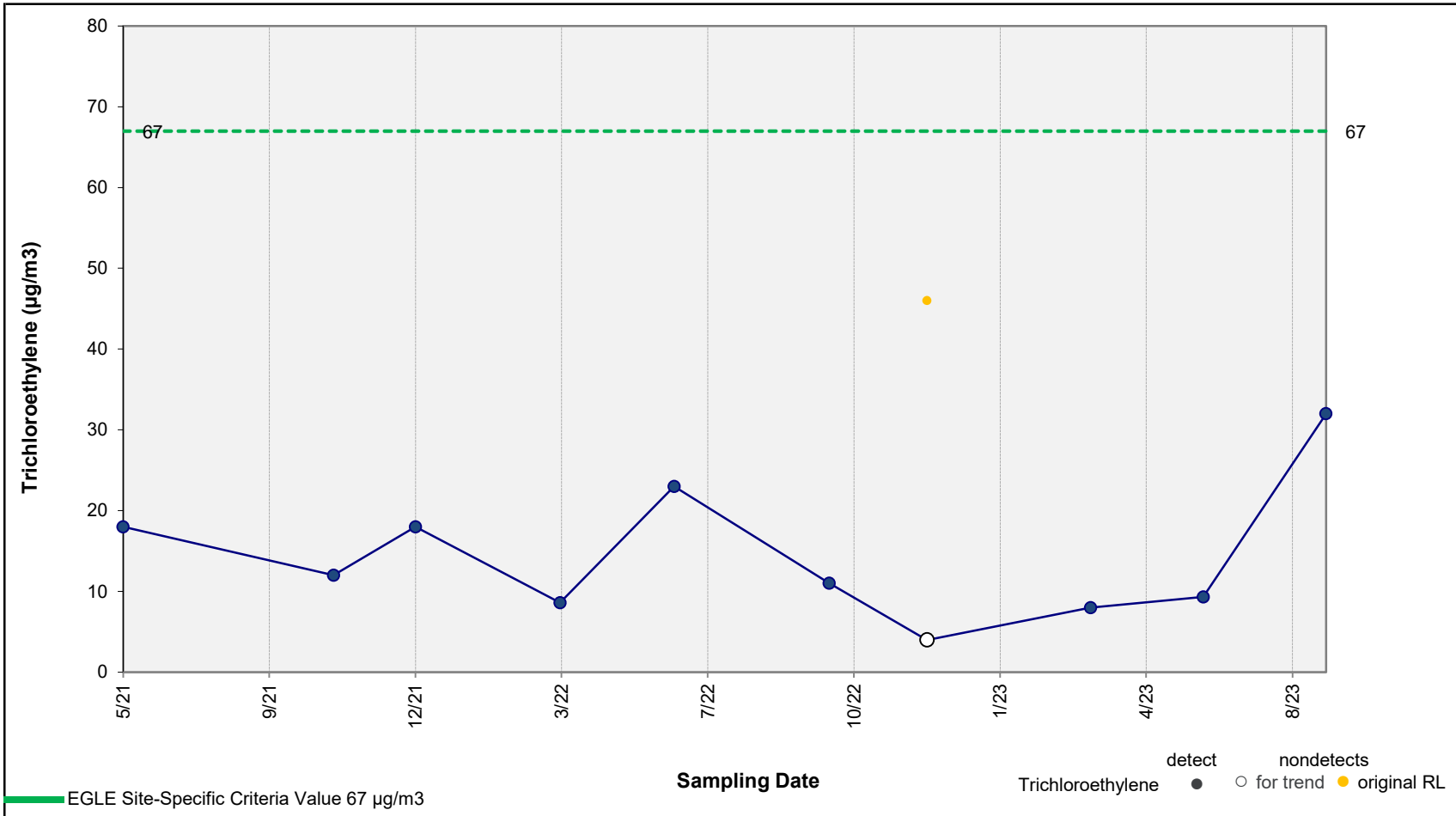
95% Confidence Interval = -1.9E-02 to 9.2E-03 µg/m3 Per Day

ARCADIS

Concentration vs. Time Plot – Tetrachloroethylene in Well SV-01-21

Racer PNC SVE (Including November 2022)

Figure 3-1



Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.332 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = -4.5E-03 µg/m3 Per Day

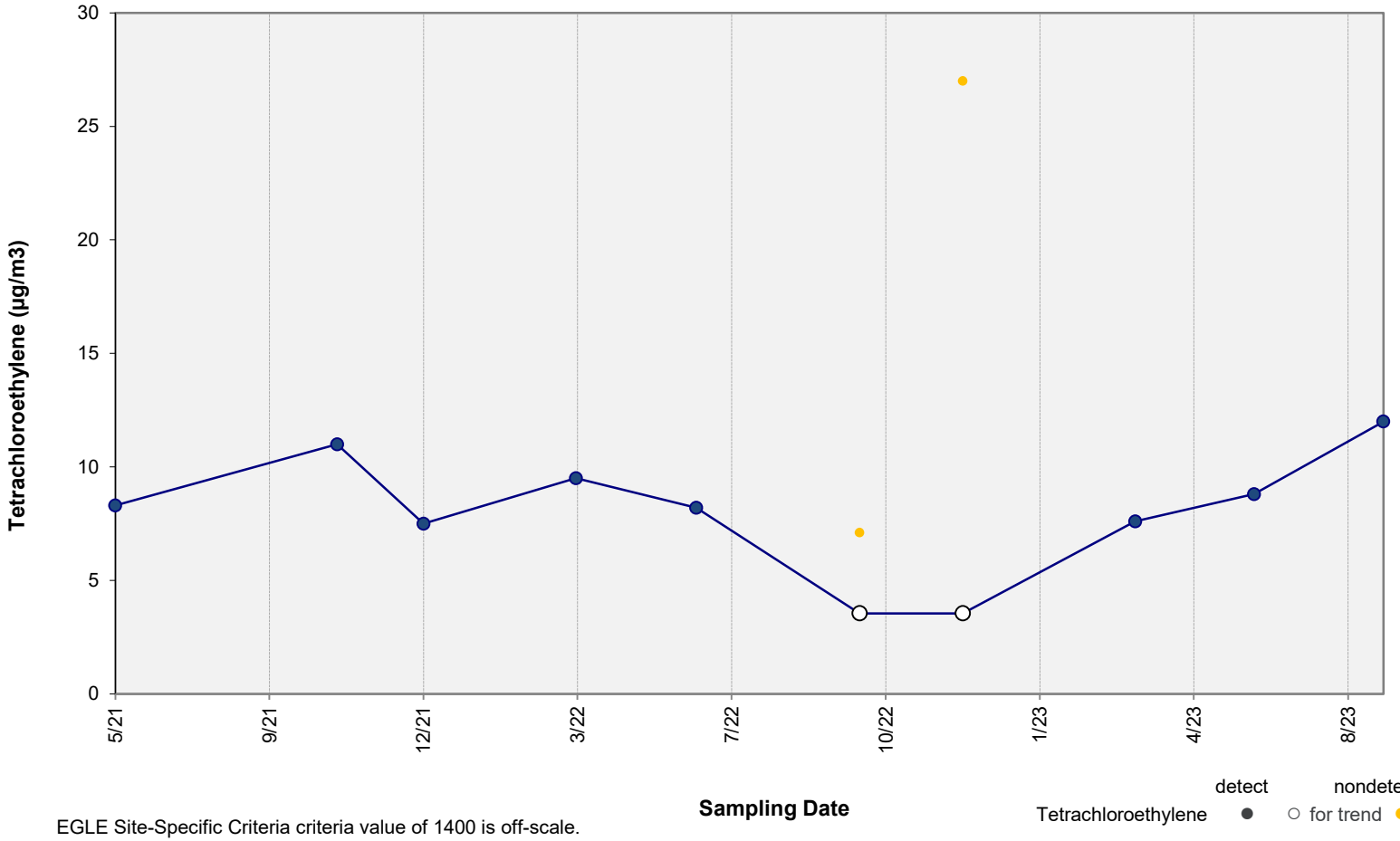
95% Confidence Interval = -2.1E-02 to 1.9E-02 µg/m3 Per Day

ARCADIS

Concentration vs. Time Plot – Trichloroethylene in Well SV-01-21

Racer PNC SVE (Including November 2022)

Figure 3-2



EGLE Site-Specific Criteria criteria value of 1400 is off-scale.

Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.536 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = 0.0E+00 µg/m3 Per Day

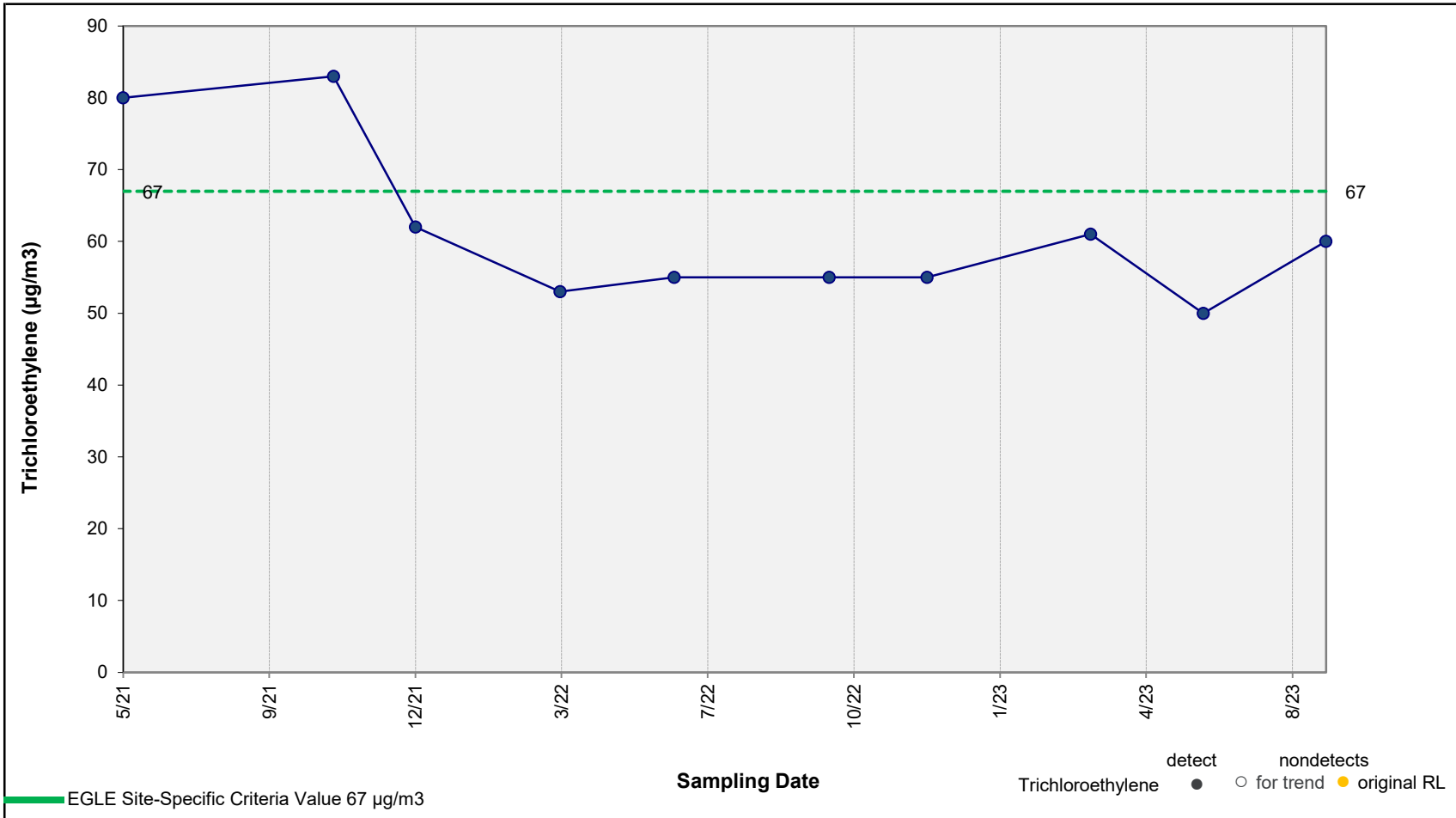
95% Confidence Interval = -9.3E-03 to 4.7E-03 µg/m3 Per Day

ARCADIS

Concentration vs. Time Plot – Tetrachloroethylene in Well SV-02-21

Racer PNC SVE (Including November 2022)

Figure 3-3



Results of Mann-Kendall Test for Trend: **DECREASING TREND**

p value = 0.093 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No trend**

Median Slope Estimate = -2.0E-02 µg/m3 Per Day

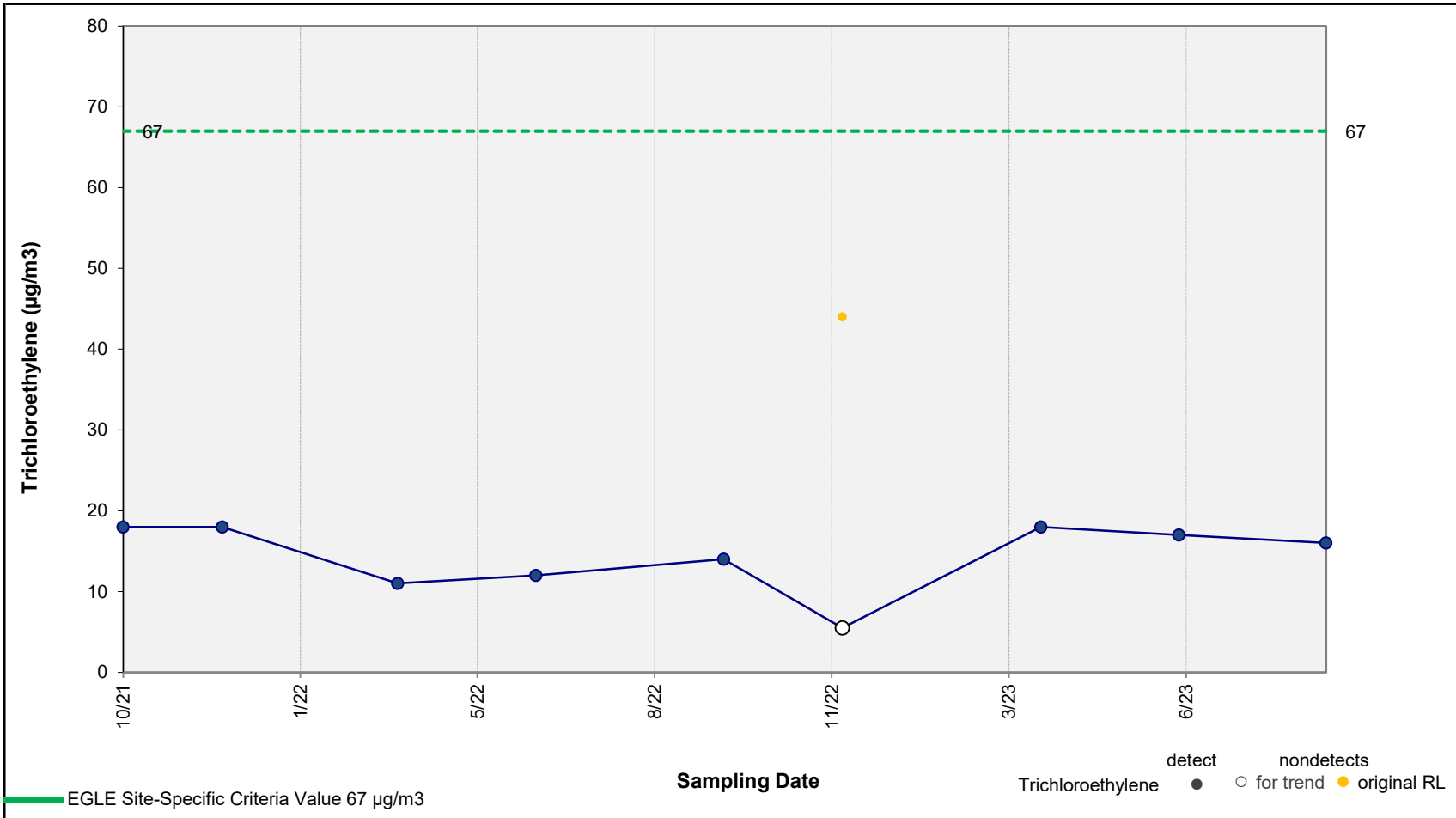
95% Confidence Interval = -4.4E-02 to 0.0E+00 µg/m3 Per Day

ARCADIS

Concentration vs. Time Plot – Trichloroethylene in Well SV-02-21

Racer PNC SVE (Including November 2022)

Figure 3-4



Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.421 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = -8.4E-04 µg/m3 Per Day

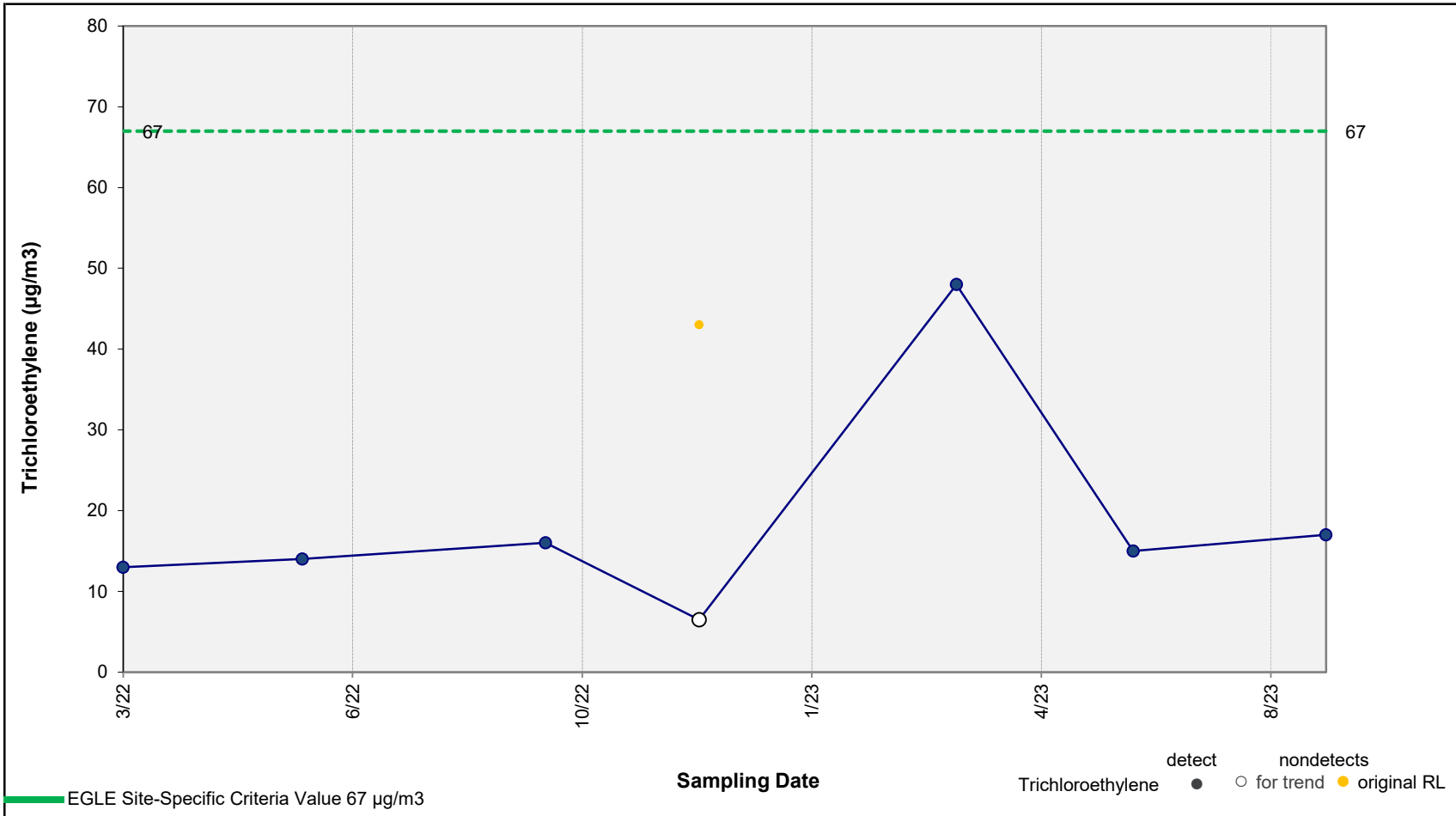
95% Confidence Interval = -1.4E-02 to 1.3E-02 µg/m3 Per Day

ARCADIS

Concentration vs. Time Plot – Trichloroethylene in Well SV-04-21

Racer PNC SVE (Including November 2022)

Figure 3-5



Results of Mann-Kendall Test for Trend: **No Significant Trend**

p value = 0.119 Note: p value < 0.10 indicates a statistically significant trend (90% confidence level).

Results of Sen's Estimator of Slope: **No Significant Trend**

Median Slope Estimate = 7.6E-03 µg/m3 Per Day

95% Confidence Interval = -2.5E-02 to 3.8E-02 µg/m3 Per Day

ARCADIS

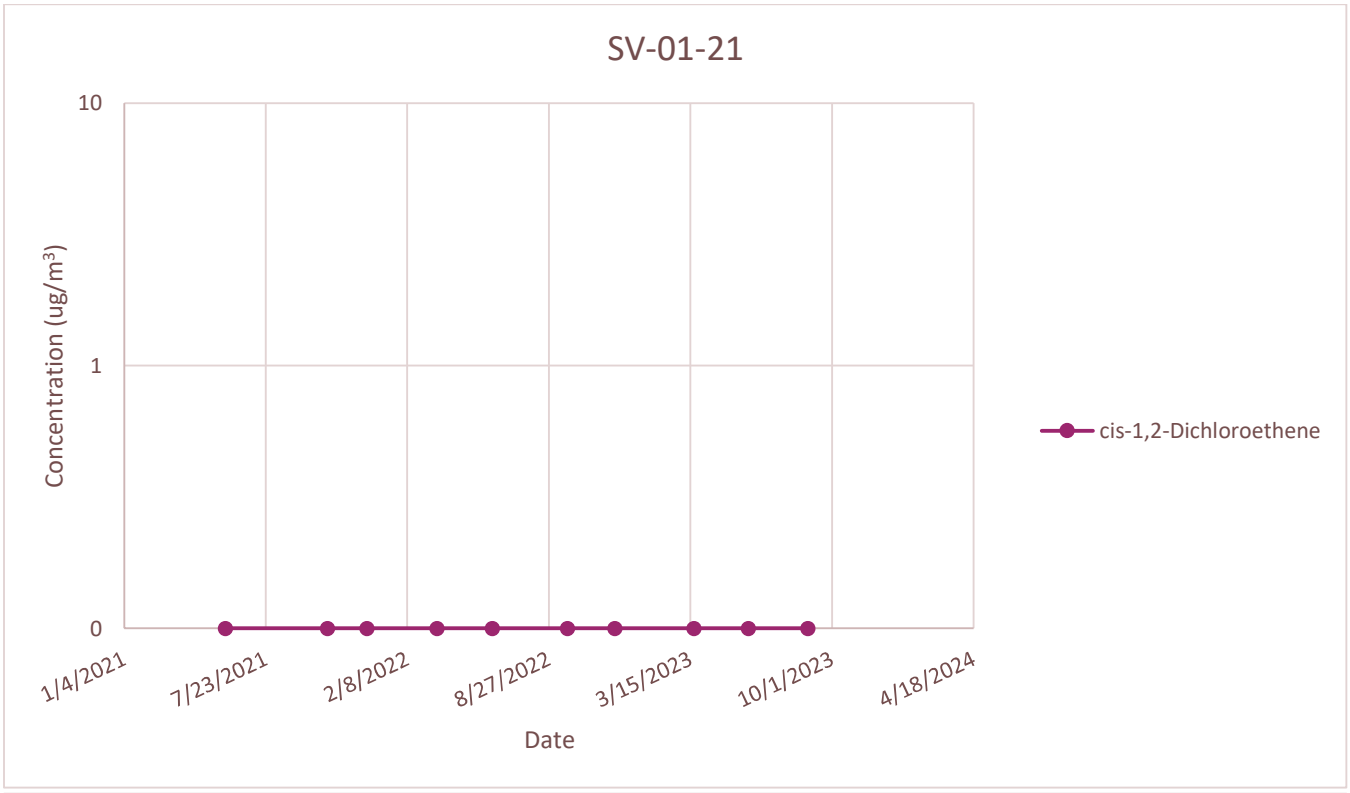
Concentration vs. Time Plot – Trichloroethylene in Well SV-06-21

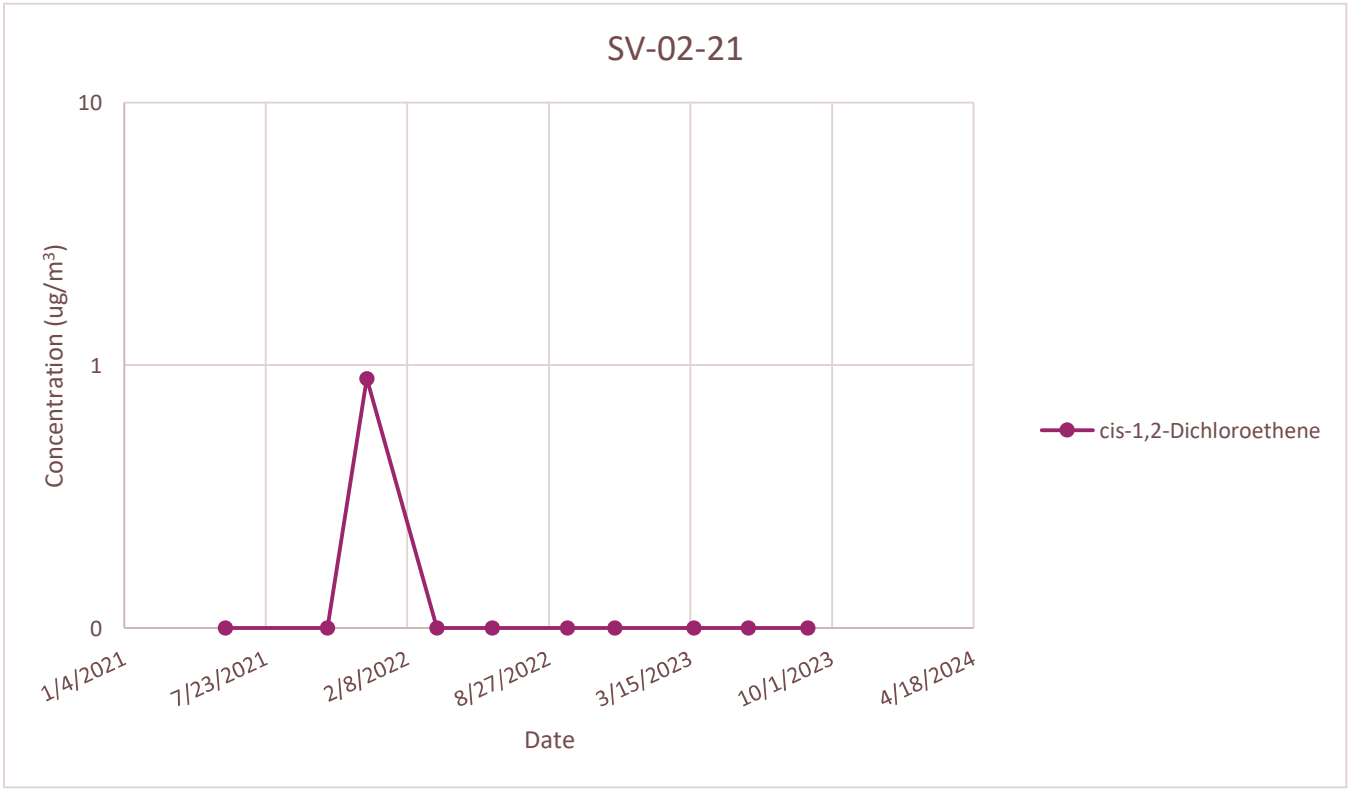
Racer PNC SVE (Including November 2022)

Figure 3-6

Attachment 3 -

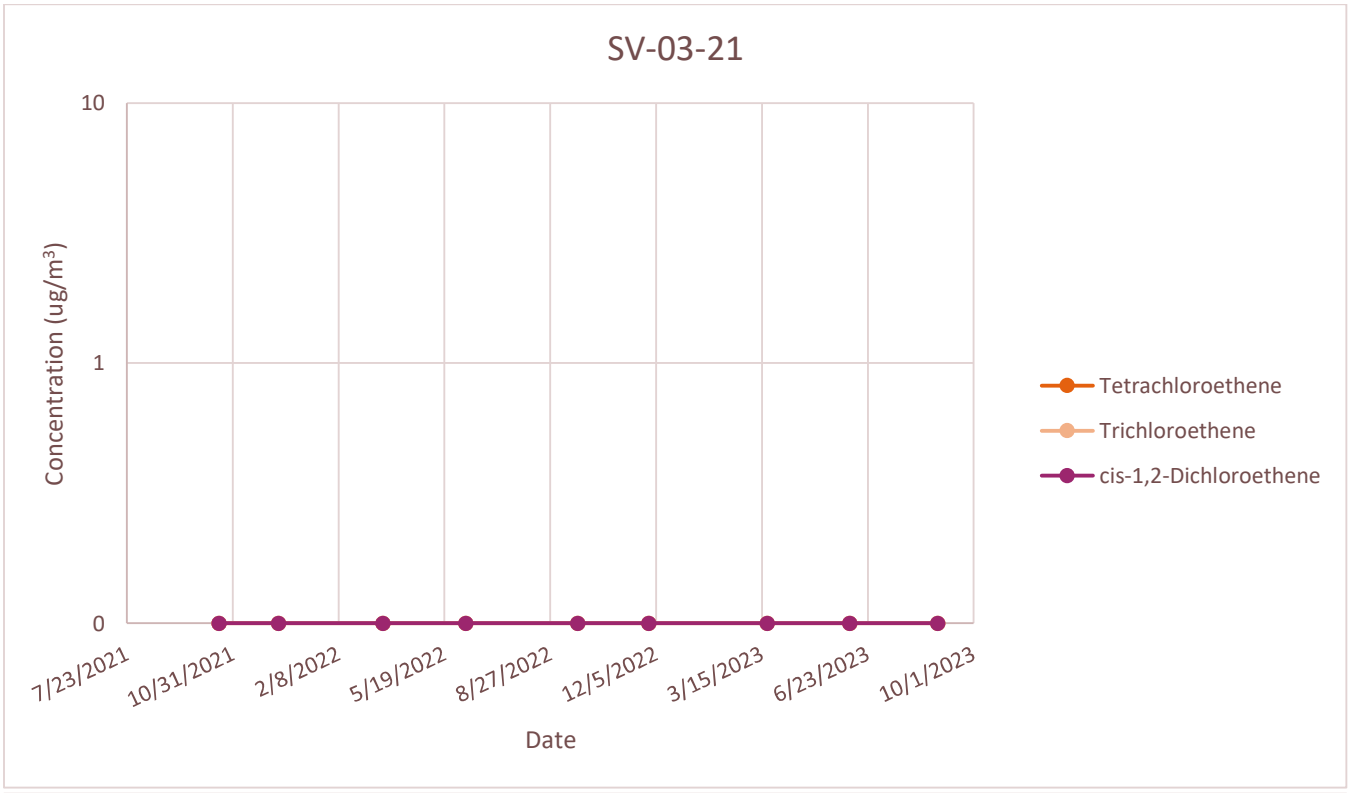
Soil Vapor Trend Graphs

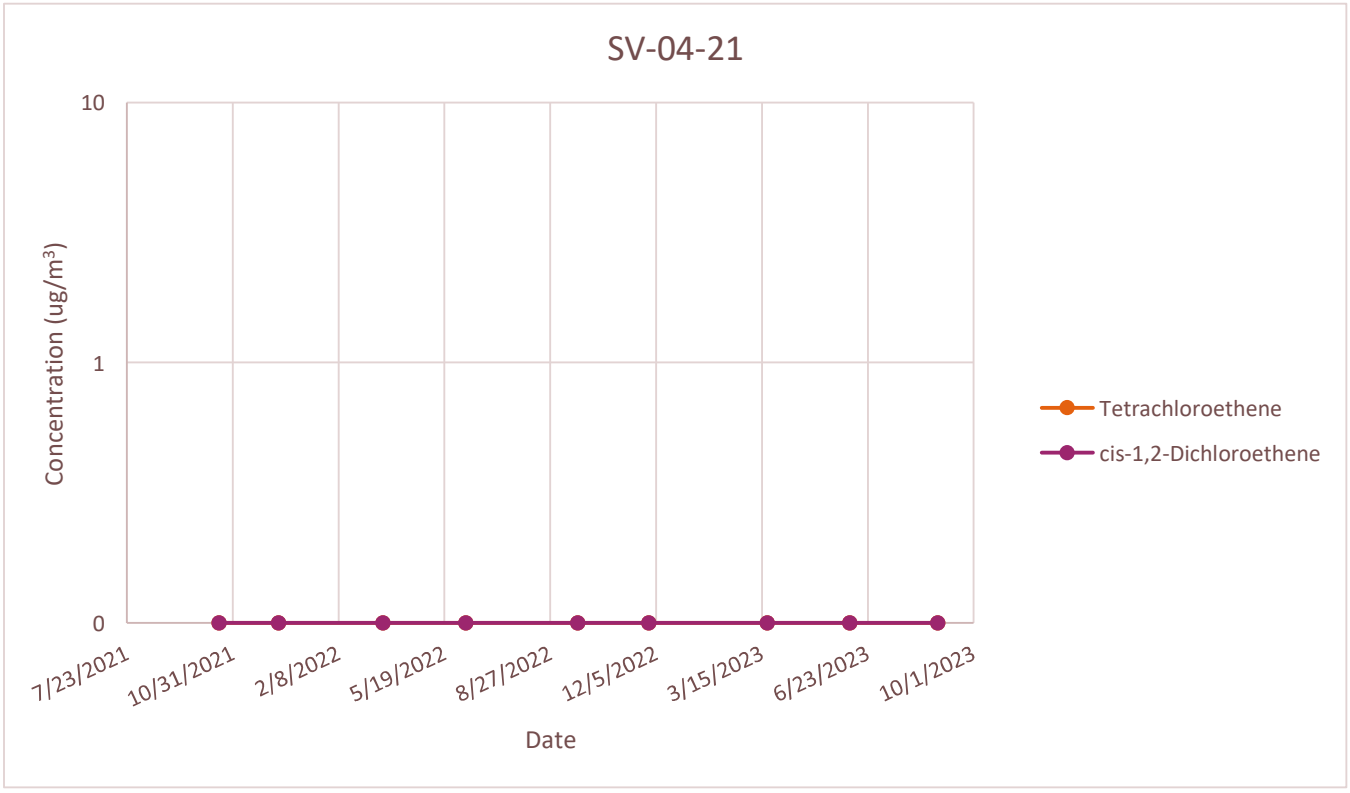




Attachment 3 -

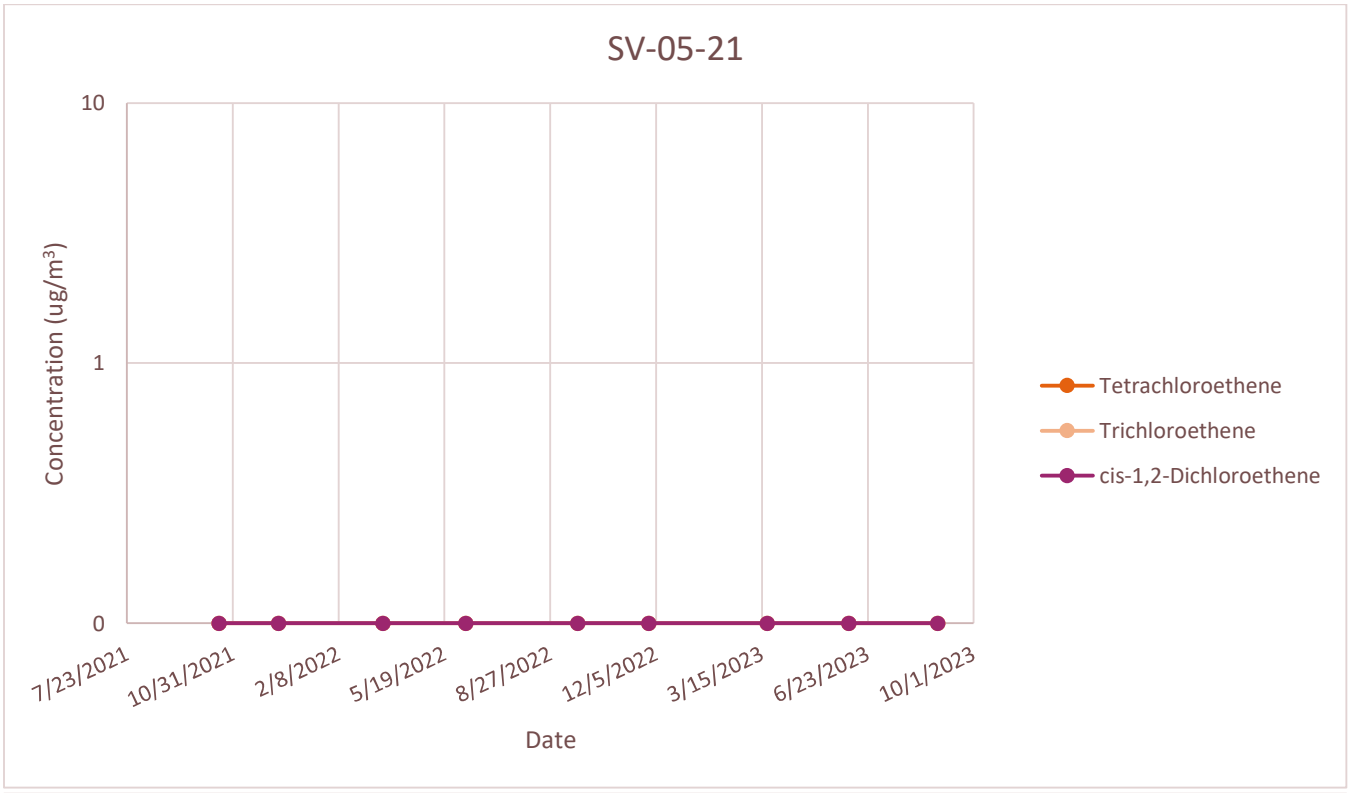
Soil Vapor Trend Graphs

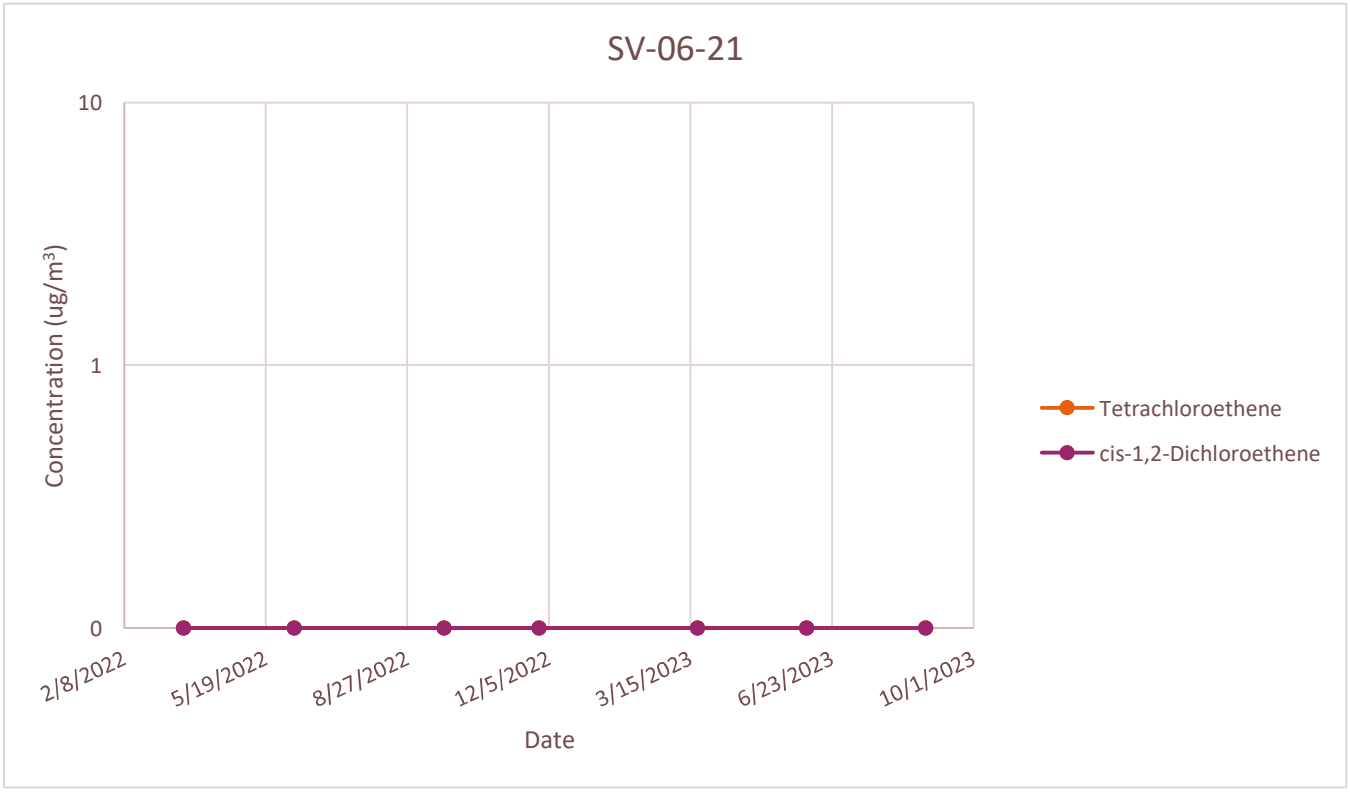




Attachment 3 -

Soil Vapor Trend Graphs





Attachment 4

Soil Vapor Collection Logs

Soil Vapor Collection Log Sheet

Office Name & Address (Reporting Information): Novi, MI 28550 Cabot Dr #500 Novi, MI			Project Name: RACER Pontiac North Campus 2023
Field Manager: Alexis Crisp			Project Number: 30167840
Phone: 937-206-4005	Special Instructions: TO-15		Site Address: 200 E Montcalm St Pontiac MI 48340 US
Email Address for Result Reporting: Alexis.crisp@arcadis.com		Sampler Name: Sommer Guy	Phone Number:947-465-3421
		Email:Alexis.crisp@arcadis.com	
Helium Detector Used: MGD-2002	Helium Leak Method: Helium Tracer Test	Summa Canister Size (1L, 2.7 L, 6L): 1 L	Lab: Eurofins

Sample ID	Sample Location Description	Date	Leak/Tracer Test completed prior to sample collection						Canister Number	Flow Controller Number	Sample Collection Start Time	Beginning Canister Pressure (in. Hg)	Sample Collection End Time	Ending Canister Pressure (in. Hg)	Notes
			Shut in Test Pass/Fail?	Purge Reading (ppm)	Shroud Helium Concentration (%)	Helium Test Pass/Fail?	Purge Volume (mL)	Purge Rate (mL/min)							
SV-02-21_SG-082823	Eastern ROW of St. Clair	08/28/2023	Pass	0	42.2	Pass	334.83	100	3658	25204	13:39	-29	13:47	-5	N/A
SV-05-21_SG-082823	Western ROW of St. Clair	08/28/2023	Pass	0	51.5	Pass	174.12	100	2055	23525	14:42	-29	14:49	-5	N/A
SV-04-21_SG-082823	Western ROW of St. Clair	08/28/2023	Pass	0	46.6	Pass	321.45001	100	2036	23796	14:23	-29	14:30	-5	N/A
SV-03-21_SG-082821	Western ROW of St. Clair	08/28/2023	Pass	0	52.8	Pass	174.12	100	3698	25237	14:08	-29	14:15	-5	N/A
SV-06-21_SG-082823	Western ROW of St. Clair	08/28/2023	Pass	0	46.3	Pass	321.45001	100	2825	23826	15:00	-29	15:06	-5	N/A
SV-01-21_SG-082823	Eastern ROW of St. Clair	08/28/2023	Pass	0	45.2	Pass	200.91	100	3775	23425	13:18	-29	13:26	-5	N/A
DUP-01_SG-082823	Eastern ROW of St. Clair	08/28/2023	Pass	0	42.2	Pass	334.83	100	2480	24501	13:39	-29	13:48	-5	N/A

Meteorological Data

Date	Time	Temp		Relative Humidity (%)	Barometric Pressure (in.Hg)	Weather source	**General Notes or Observations**
		Indoor	Outdoor				
08/28/2023	11:53		69	51	30	69.1 degrees F and Mostly Clear. The wind is blowing N at 9.2 mph.	N/A

Air Parameters (completed after sample collection)

Location ID	CH4 %	CH4 LEL %	O2 %	PID (ppm)	Differential Pressure (in. Water Column)
SV-02-21	0	NM	14.3	NM	NM
SV-05-21	0	NM	10.7	NM	NM
SV-04-21	0	NM	12.8	NM	NM
SV-03-21	0	NM	10.5	NM	NM

SV-06-21	0	NM	12.8	NM	NM
SV-01-21	0	NM	13.3	NM	NM
--	0	NM	14.3	NM	NM