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Date: October 29, 2024

Our Ref: 30214036

Subject:

2024 Semi-Annual Groundwater Monitoring Report

RACER Lansing - Plants 2, 3 and 6

Lansing, Michigan

Dear Ms. Matlock,

Arcadis of Michigan, LLC (Arcadis) completed the first and second quarter 2024 gauging, groundwater monitoring, and sampling activities to support the on-going Resource Conservation and Recovery Act (RCRA) Corrective Action process on behalf of the Revitalizing Auto Communities Environmental Response (RACER) at the RACER Trust Plants 2, 3, and 6 (Site) located in Lansing, Michigan.

This Semi-Annual Report summarizes groundwater monitoring completed between January and June 2024. The groundwater monitoring events were completed consistent with the revised 2023 IGMP, approved by EGLE on May 23, 2023 (Arcadis 2023b). The storm sewer monitoring program, included as part of the 2023 IGMP, was approved by EGLE separately on January 26, 2023, and was implemented during both quarterly events.

- First quarter 2024 - included a quarterly event completed between February 12 to 14, 2024. Groundwater samples were collected from a total of 30 wells.
- Second quarter 2024 - included the annual site-wide groundwater gauging event, with gauging of light nonaqueous phase liquid (LNAPL) wells and the quarterly, semi-annual, annual, biennial, and quadrennial sampling event completed from May 13 through 24, 2024. Groundwater elevations were collected from a total of 220 monitoring wells, LNAPL gauging was completed at a total of 15 wells, and groundwater samples were collected from a total of 152 wells.
- Second quarter 2024 – also included the combined sampling with USEPA Adams Plating event with collection of samples from 15 wells on April 8 to 10, 2024.
- Storm sewer sampling for per- and polyfluoroalkyl substances (PFAS) was completed during the first and second quarter of 2024 on February 8 and April 10, respectively.

The sampling frequencies and analytes for each well are included in **Table 1**. The locations of all monitoring wells are provided on **Figures 1A, 1B, and 1C**. The following deviations from the 2023 IGMP were observed during the first and second quarter 2024 monitoring activities:

- **MW-14-69** was dry in second quarter 2024 and has been dry since installation in 2014. This monitoring well was installed in an area of Plant 6 with limited perched groundwater with the intent of verifying whether saturated conditions existed and if the well would produce enough water for sampling and is checked annually.
- **MW-18-96** was installed in shallow fill material at Plant 3 and contained water during development and initial sampling; however, the well has been dry since June 2020. No samples were collected at this location in second quarter 2024. The continued absence of groundwater at this well location suggests the clay in this area of the Site is a barrier to groundwater flow. This monitoring well has been proposed for abandonment in communication submitted to EGLE on August 16, 2024.
- **MW-19-110** was installed in August 2019 at the request of the EGLE in an area of Plant 3 with limited perched groundwater with the intent of verifying whether saturated conditions existed and if the well would produce enough water for sampling. Since installation in 2019, the well has had either low water levels or been dry, resulting in no groundwater samples collected. No samples were able to be collected at this location in second quarter 2024.
- **MW-19-113** was installed in August 2019 at the request of the EGLE in an area of Plant 3 with limited perched groundwater with the intent of verifying whether saturated conditions exist and if the well would produce enough water for sampling. Since installation in 2019, the well has had either very limited water or been dry, resulting in no groundwater samples collected. In second quarter 2024, enough water was present to collect a groundwater sample.
- **MW-20-130** was installed in July 2020 on Plant 2 near the eastern property boundary to Plant 6 in the deep overburden and weathered bedrock. This well has previously been sampled for 1,4-dioxane and PFAS and was last sampled in October 2023. During the second quarter 2024 event, sampling of MW-20-130 was unsuccessfully attempted on multiple occasions with a bladder pump. When the tubing was pulled from the wells it appeared to have iron fouling present. Sampling of MW-20-130 will be re-attempted in fourth quarter of 2024 during the semi-annual sampling event.
- **MW-22-159** was installed off-site to the east of Plant 6 and contained water during development, however, the well has been dry since December 2022. No samples were able to be collected at this location in first or second quarter 2024.

These wells will next be gauged, if possible, during fourth quarter 2024 and sampled as specified in the 2023 Revised IGMP (Arcadis 2023b).

Site Activities

Quarterly groundwater sampling was completed in first quarter 2024. Quarterly, semi-annual, annual, biennial, and quadrennial groundwater sampling and semi-annual site-wide groundwater gauging was completed in second quarter 2024.

Groundwater Gauging

Beginning in 2023, site-wide gauging was revised to occur semi-annually. A summary of groundwater and LNAPL gauging data is provided in **Tables 2 and 3**. A comprehensive report including groundwater elevation contour maps, groundwater elevation trend graphs, and groundwater analytical stability analysis will be provided as part of the *2024 Annual Groundwater Monitoring Report* to be submitted in the first half of 2025.

Groundwater Sampling

During the second quarter 2024, site-wide gauging was completed using an electronic water level meter. LNAPL wells were gauged using an oil/water interface probe. All gauging was completed within 24 hours with few exceptions due to access or other issues. Gauging methods were consistent with the 2023 revised IGMP (Arcadis 2023b).

The groundwater sampling matrix is provided as part of the 2023 Revised IGMP (**Table 1**). Groundwater samples were submitted for analysis for one or more of the following parameters:

- Target compound list (TCL) VOCs using United States Environmental Protection Agency (USEPA) Method SW5030C/8260B, Revision 2 or SW8260C, Revision 3.
- SVOCs using USEPA Method SW8270D.
- Selected metals (arsenic, total chromium, copper, lead, nickel, and vanadium) by USEPA Method 6020, and, at discrete locations, metals associated with known impacts (e.g., hexavalent chromium in Area 14 at Plant 3).
- 1,4-Dioxane using USEPA Method SW8260B-SIM (Merit Laboratories) or USEPA Method 522 (Eurofins).
- PFAS using USEPA Method 537 modified with isotope dilution (DoD QSM 5.3).

All groundwater samples were collected in a manner consistent with the low-flow sampling techniques outlined in the Arcadis Technical Guidance Instruction (TGI) for low-flow sample collection (Arcadis 2023c), and generally consistent with EGLE's Remediation and Redevelopment Division (RRD) Op Memo 2, Attachment 5 (EGLE 2004). Samples collected for 1,4-dioxane, VOCs, SVOCs, select metals and hexavalent chromium were submitted under chain of custody protocol to Merit Laboratories (Merit) located in Lansing, Michigan. Samples collected for PFAS analyses were submitted to Pace Analytical Laboratory located in West Columbia, South Carolina. Samples collected for Low-Level 1,4-Dioxane analysis (Method 522) were submitted to Eurofins Laboratory located in Barberton, Ohio. Groundwater low-flow sampling logs are included as **Attachment 1**. Laboratory analytical reports and data validation reports will be included in the 2024 Annual Groundwater Monitoring Report.

Quality control (QC) samples were collected during the sampling event and included the following:

- One duplicate sample per every ten samples.
- One matrix spike and matrix spike duplicate (MS/MSD) sample per every 20 samples.
- One field blank sample per sampler per sampling event.
- One equipment blank sample per pump per sampling event, as well as additional equipment blank samples from the water level meters used in wells with samples analyzed for PFAS.
- Additionally, trip blanks were included with each cooler containing samples for VOC analysis.

Storm Sewer Sampling

Storm sewer sampling was completed quarterly to confirm the effectiveness of storm sewer modifications and abandonments completed in Fall 2018, Winter 2019/2020, Fall 2020, Spring 2021, and Fall 2023 (Arcadis 2021b). Storm sewer sampling was completed prior to storm sewer modifications and abandonments in 2017 at Plant 2 and in 2019 on Plants 2 and 6. Storm sewer samples required for quarterly monitoring are collected from the sump of the structure. Past samples collected for investigation purposes were collected from sumps and individual inverts as needed. Samples are collected according to the Arcadis TGI for PFAS sample collection and analyzed using USEPA Method 537 modified with isotope dilution (DoD QSM 5.3). Samples collected for PFAS analyses were submitted to Pace Analytical Laboratory located in West Columbia, South Carolina.

Results

A summary table of the groundwater analytical data collected during the January to June 2024 reporting period is presented in **Table 4**. As a frame of reference, figures showing exceedances of EGLE Part 201 Residential Drinking Water (DW) criteria and Part 201 Groundwater-Surface Water Interface (GSI) criteria, are provided as **Figures 2 through 9**. Storm sewer PFAS sampling results compared to Rule 57 Surface Water Criteria are provided on **Figures 10 through 12**. Results of activities completed during the first and second quarter 2024 monitoring events are summarized in the following sections.

LNAPL Gauging

LNAPL thicknesses were generally consistent with previous observations and are provided in **Table 3**. LNAPL gauging will continue semi-annually and the next gauging event will be completed in fourth quarter 2024.

Groundwater Analytical Results

Groundwater analytical results are summarized in **Table 2** with exceedances of Part 201 Residential DW criteria highlighted in gray and summarized on **Figures 2 through 9**. Notes regarding the first and second quarter 2024 sampling event are provided below.

- **Perched 1,4-Dioxane:** Although not part of the approved 2023 IGMP (**Table 1**), perched groundwater in the MW-14-58R area was sampled for 1,4-dioxane during the second quarter 2024 sampling event as part of an ongoing investigation. Prescribed sampling of perched groundwater for 1,4-dioxane will next be completed as part of annual groundwater sampling event scheduled for fourth quarter 2024.
 - MW-14-58R Area: A summary of the 2022 MW-14-58R area investigation and proposed additional investigation activities for 2023 was provided in the MW-14-58R Area Data Summary and Proposed Additional Work submitted on February 3, 2023 (Arcadis 2023a). Perched 1,4-dioxane sampling was completed in the vicinity of MW-14-58R during the second quarter (**Figure 2**). The results were generally consistent with the results summarized in the 2023 Annual Groundwater Monitoring Report. These wells will be sampled next in fourth quarter 2024 and analytical results will be summarized in the 2024 Annual Groundwater Monitoring Report.

- **Lower 1,4-Dioxane:** A biosparge remedy has been implemented for the lower 1,4-dioxane plume per the *Interim Measures Work Plan: Lower 1,4-Dioxane Biosparge* work plan (Arcadis 2018). The lower 1,4-dioxane biosparge system has been operating at Plant 3 since 2019 and Plant 2 since 2020.
 - Performance monitoring demonstrates treatment of the lower 1,4-dioxane plume within the radius of influence of the biosparge wells on Plants 2 and 3 and shows indication of downgradient flushing. System performance reporting will continue on an annual basis. Performance monitoring activities for the biosparge system completed in 2024 will be summarized in the 2024 Lower 1,4-Dioxane Biosparge Update Report planned to be submitted in the first quarter 2025.

The results at the perimeter of the lower 1,4-dioxane plume (**Figure 3**) were reviewed for potential changes:

- Northern extent on Plant 3: The lower 1,4-dioxane plume is defined to the north (MW-12-20 and MW-15-71), west (MW-13-24, MW-14-64, and MW-13-25), and east (MW-13-23). These results suggest no significant expansion has occurred at the northern extent of the 1,4-dioxane plume. These wells will continue to be monitored for 1,4-dioxane in accordance with the approved 2023 IGMP.
 - Southern Extent (the toe, Plant 2) – The lower 1,4-dioxane plume is defined to the south (MW-16-74, MW-16-75, MW-16-77, MW-16-78, and MW-19-121) and southeast (MW-19-120, MW-21-140, and MW-21-141). These results suggest no significant expansion has occurred at the southern toe of the lower 1,4-dioxane plume since 2018. Future migration to the southeast is not expected due to the operation of the biosparge system and because of geologic conditions described as part of the Lower 1,4-Dioxane Conceptual Site Model report (Arcadis 2021a).
 - Northeast Lobe (Plant 2) – Increasing and/or stable concentrations were observed within the northeast lobe of the lower 1,4-dioxane plume on Plant 2 during 2018-2021. Since then, stable to decreasing concentrations have been observed, likely attributable to the operation of the biosparge system.
 - An updated plume stability analysis, including statistical evaluation of lower 1,4-dioxane concentrations will be completed as part of the 2024 Annual Groundwater Monitoring Report.
- **VOCs (other than 1,4-dioxane):** Of the thirty-nine wells that were sampled for VOCs, four perched monitoring wells had concentrations that exceeded the DW criteria (**Figure 4**).
 - *Plant 6 perched well MW-03-06:* located in the north central portion of Plant 6, is monitored for VOCs on a biennial basis due to previously observed low detection of vinyl chloride. Perched well MW-03-06 exceeded DW criteria for vinyl chloride (2 µg/L) with a concentration of 11 µg/L. VOCs were not exceeded in nearby perched monitoring wells MW-02-02(6) and MW-03-05. MW-03-06 will continue to be monitored for VOCs on a biennial basis.
 - *Weathered bedrock wells MW-14-61, MW-17-86, and MW-19-120:* located in the lower 1,4-dioxane plume on Plant 2, are monitored for VOCs semi-annually due to previously observed low detections of chlorinated VOCs (e.g., 1,2-DCE, chloroethane) potentially related to leakage from the perched zone. VOCs were not detected at MW-14-61, MW-17-86, and MW-19-120 in 2021, 2022, 2023, or in second quarter 2024 (these wells are sampled on a semi-annual basis and planned to be sampled fourth quarter 2024).

- *Western Plant 2 property boundary*: As part of the MW-14-58R area evaluation, several of the area monitoring wells were sampled for VOCs. Perched well MW-22-156 exceeded DW Criteria for 1,1-DCE (7 µg/L) with concentrations of 20 µg/L in second quarter 2024. Additional work may be completed in this area following a planned sharing of data and discussion with the USEPA regarding the adjacent former Adams Plating facility.
- MW-14-54 is sampled for VOCs biennially due to previously observed detections of VOCs. MW-14-54 exceeded residential DW and/or GSI criteria for 1,2,4-trimethylbenzene (63 µg/L) with concentrations of 310 µg/L, benzene (5 µg/L) with concentrations of 460 µg/L, ethylbenzene (74 µg/L) with concentrations of 690 µg/L, naphthalene (11 µg/L) with concentrations of 130 µg/L, and total xylene (280 µg/L) concentrations of 1,210 µg/L. These results are consistent with previous sampling events, are delineated by monitoring wells installed along the western Plant 2 property boundary and will continue to be monitored on a biennial basis.
- **Metals**: Of the twelve wells that were sampled for metals in the second quarter, 6 of the monitoring wells had concentrations that exceeded the DW and/or GSI criteria (**Figure 5**). Select metals will continue to be monitored on a quadrennial basis in accordance with the 2023 IGMP.
 - *Plant 3 Deep Overburden wells MW-02-04(3) and MW-91-2R*: located in the north-central portion of Plant 3, both wells exceed arsenic criteria for residential DW and GSI and MW-02-04(3) exceeds dissolved arsenic for residential DW and GSI. In addition, MW-02-04(3) exceeded lead and vanadium criteria for residential DW.
 - *Plant 3 Perched well CH-14-RO*: located in the north-central portion of Plant 3, exceeded chromium III and chromium VI for residential DW and GSI criteria. Chromium concentrations at CH-14-RO are related to the former plating line and have been steadily decreasing since monitoring began in 2012.
 - *Plant 3 Perched well MW-13-32*: located on the southeast border of Plant 3, exceeded nickel criteria for residential DW and GSI. As previously discussed, nickel in this area appears to migrate onto the RACER property from the adjacent railroad property.
 - *Plant 6 Perched well MW-13-36R*: located on the eastern border of Plant 6, exceeded vanadium criteria for residential DW.
 - *Plant 6 Perched well MWBP-10-UST5-6*: located on the southern border of Plant 6, exceeded arsenic criteria for residential DW.

These metals results are consistent with previous sampling events. An evaluation of metals stability in groundwater and subsequent monitoring will be conducted in the 2024 annual groundwater report.

- **PFAS**: Overall, PFAS results are consistent with those found in the 2019 PFAS addendum and the 2023 Annual Groundwater Monitoring Report (Arcadis 2019a; 2024).
 - Perfluorooctane sulfonic acid (PFOS) concentrations exceeded the GSI criterion 12 nanograms per liter [ng/L]) and/or the DW criterion (16 ng/L) at a total of seventeen perched monitoring well locations at all three plants (**Figure 6**). PFOS impacts are currently defined at each plant by the perimeter or off-site monitoring well network.
 - Perfluorooctanoic acid (PFOA) concentrations exceeded the DW criterion of 8 ng/L at a total of twenty-seven perched monitoring wells and exceeded GSI criterion of 170 ng/L at one perched monitoring well at all three plants (**Figure 7**). PFOA impacts are currently defined at each plant by the perimeter or off-site monitoring well network.

- Perfluorononanoic acid (PFNA) concentrations exceeded the DW criterion value of 6 ng/L at two perched monitoring wells at Plant 2 and two perched monitoring wells located at Plant 6 (**Figure 8**). The highest concentration of PFNA was 81 ng/L observed in the central Plant 6 source area at well P6-SB-07.
- The only detections of perfluorohexanesulfonic acid (PFHxS) that exceed the DW criterion value (51 ng/L) were concentrations of 1,900 ng/L in perched well CH-14-RO in the Plant 3 PFAS source area, 240 ng/L in perched well MW-21-139 in the Plant 2 PFAS source area, and 63 ng/L in perched well MW-18-103 located along the northern boundary of Dunneback Park east of Plant 3. The PFHxS detected at MW-18-103 appears to be isolated and may be related to an off-site source to the north where large quantities of roofing shingles are stored, processed, and recycled.
- Sporadic low detections of perfluorobutanesulfonic acid (PFBS) and perfluorohexanoic acid (PFHxA) observed in monitoring wells during the second quarter groundwater monitoring event are one to two orders of magnitude below their DW criteria of 420 ng/L for PFBS and 400,000 ng/L for PFHxA.
- In addition to PFOS, PFOA, PFNA, PFHxS, PFBS, and PFHxA, other PFAS compounds have been detected at the Site, however there are no established criteria for comparison. In general, these concentrations appear to correlate with, but are lower than PFOS and PFOA concentrations and decrease with distance from PFOS and PFOA source areas.

Groundwater Elevation Monitoring

Groundwater elevations collected from the second quarter gauging event are summarized on **Table 4**.

Groundwater elevation contour maps, hydrographs, and plume stability evaluation will be completed as part of the *2024 Annual Groundwater Monitoring Report* planned to be submitted in the first half of 2025.

Storm Sewer Analytical Results

Storm sewer PFAS analytical results for first and second quarter 2024 are summarized on **Tables 5 through 7** with exceedances of Rule 57 criteria highlighted in gray. First and second quarter data are also summarized on **Figures 10 through 12**. Results of the first and second quarter 2024 sampling events are summarized below.

- No exceedances occurred on Plant 2 in first and second quarter 2024.
- No exceedances occurred on Plant 3 in first and second quarter 2024.
- Rule 57 criteria for PFOS was exceeded on Plant 6 as listed below. No other exceedances occurred on Plant 6 in first and second quarter 2024.
 - Osborn-MH-1 exceeded in first and second quarter with detections of 16.0 and 17.0 ng/L, respectively.

Ms. Christine Matlock
EGLE
October 29, 2024

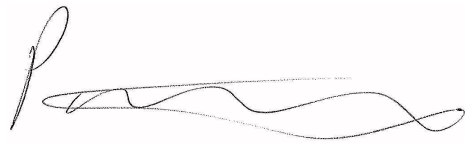
Conclusions

The first quarter and second quarter 2024 monitoring results do not suggest significant changes to the Site groundwater conditions. The storm sewer sampling indicates the storm sewer modifications at Plant 2 and 3 have successfully reduced PFAS discharge to concentrations at or below the Rule 57 criteria. Plant 6 modifications have reduced PFAS concentrations to near Rule 57 Criteria and will continue to be monitored for changes.

Groundwater monitoring will continue during the third and fourth quarters of 2024 per the EGLE approved revised 2023 IGMP matrix and storm sewer PFAS monitoring will continue quarterly. The 2024 Annual Monitoring Report will be prepared following the fourth quarter sampling event and will include a summary of all 2024 groundwater and storm sewer monitoring activities and analytical results, validated analytical reports, updated groundwater elevation contour figures, and an updated plume stability analysis. A revised interim monitoring plan will be submitted to EGLE and describe post-2024 monitoring.

If you should have any questions regarding the enclosed data, please do not hesitate to contact Brendan Mullen at bmullen@racertrust.com (201.247.4890) or Patrick Curry at patrick.curry@arcadis.com (810.225.1926).

Sincerely,
Arcadis of Michigan, LLC



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Randy Seida, Westside Water
Nicole McPherson, City of Lansing
Brad Beck, Lansing Township
Cheryl Loudon, LBWL
Angie Cosman, Ingham County Drain Commission
Lansing Public Library

Enclosures:

Tables

Table 1 – Revised Interim Groundwater Monitoring Summary – Revised May 2023

Table 2 – Summary of Groundwater Elevations – May 2024

Table 3 – Summary of LNAPL Thickness – May 2024

Table 4 – Summary of Groundwater Analytical Results – January through June 2024

Table 5 – Summary of Plant 2 Storm Sewer Sampling Results

Table 6 – Summary of Plant 3 Storm Sewer Sampling Results

Table 7 – Summary of Plant 6 Storm Sewer Sampling Results

Figures

Figure 1A – Summary of Plant 2 Monitoring Well Locations

Figure 1B – Summary of Plant 6 Monitoring Well Locations

Figure 1C – Summary of Plant 3 Monitoring Well Locations

Figure 2 – Summary of 1,4-Dioxane Analytical Results in Perched Wells – January through June 2024

Figure 3 – Summary of 1,4-Dioxane Analytical Results in Lower Wells – January through June 2024

Figure 4 – Summary of VOC Analytical Results – January through June 2024

Figure 5 – Summary of Metals Analytical Results – January through June 2024

Figure 6 – Summary of PFOS Analytical Results – January through June 2024

Figure 7 – Summary of PFOA Analytical Results – January through June 2024

Figure 8 – Summary of PFNA Analytical Results – January through June 2024

Figure 9 – Summary of 1,4-Dioxane Analytical Results in Bedrock – January through June 2024

Figure 10 – Plant 2 PFAS Storm Sewer Sampling Analytical Results

Figure 11 – Plant 3 PFAS Storm Sewer Sampling Analytical Results

Figure 12 – Plant 6 PFAS Storm Sewer Sampling Analytical Results

Attachments

Attachment 1 – Low-Flow Groundwater Sampling Logs – January to June 2024

Ms. Christine Matlock
EGLE
October 29, 2024

References

- Arcadis. 2018. Interim Measures Work Plan: Lower 1,4-Dioxane Biosparge. October 19, 2018.
- Arcadis 2019a. Plant 6 PFAS Investigation Summary – Phase 2. RACER Trust Site, Lansing, Michigan. August 23.
- Arcadis 2021a. Lower 1,4-Dioxane Conceptual Site Model. Lansing Industrial Land, Lansing, Michigan. January 6.
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- Arcadis. 2023a. MW-14-58R Area Data Summary and Proposed Additional Work, RACER Trust Plant 2, Lansing, Michigan. February 3.
- Arcadis. 2023b. Revised 2023 Interim Groundwater Monitoring Work Plan, RACER Trust, Plants 2, 3, & 6, Lansing, Michigan. May 23.
- Arcadis 2023c. TGI – Low-Flow Groundwater Purging and Sampling Procedures for Monitoring Wells. April 5.
- Arcadis. 2024. 2023 Annual Groundwater Monitoring Report. RACER Trust Lansing Industrial Land, Lansing, Michigan. June 20.

Tables

Table 1
Revised Interim Groundwater Monitoring Summary
Revised February 2024
RACER Trust Plants 2, 3, and 6 - Lansing, Michigan



Well	Screen Interval (ft bgs)	Gauging*	Analyte				Primary Function
			VOCs	1,4-Dioxane	SVOCs	PFAS	
Plant 2							
Perched							
LMW-12-01	7-12	SA					LNAPL Monitoring
LMW-12-03D	17.3-22.3	SA					LNAPL Monitoring
LMW-12-03S	4-9	SA					LNAPL Monitoring
LMW-12-05	7-12	SA					LNAPL Monitoring
LMW-12-07	4-9	SA					LNAPL Monitoring
LMW-12-08	8-13	SA					LNAPL Monitoring
LMW-14-12D	18-23	SA					LNAPL Monitoring
LMW-14-13D	17.5-22.5	SA					LNAPL Monitoring
LMW-14-15D	18-23	SA					LNAPL Monitoring
LMW-15-16D	19.5-24.5	SA					LNAPL Monitoring
MW-01(2)	10-20	SA	B				VOC sentinel
MW-12-07	10-15	SA					Groundwater elevation monitoring
MW-12-08	19-24	SA					Groundwater elevation monitoring
MW-12-09	14-19	SA	B	B		A	VOC Sentinel, perched 1,4-dioxane sentinel, PFAS sentinel
MW-12-18	28-33	SA	B			A	VOC sentinel, PFAS sentinel
MW-14-54	14-19	SA	B				VOC monitoring
MW-14-55	13-18	SA	Qd				VOC monitoring
MW-14-57	15-20	SA		A			Perched 1,4-dioxane monitoring
MW-14-58R	22-27	SA	B	A		A	Perched 1,4-dioxane monitoring, PFAS Monitoring
MW-14-59	12-17	SA	B	A	Qd	A	Perched 1,4-dioxane monitoring, SVOC evaluation, PFAS monitoring
MW-14-60	15-20	SA	B	A	Qd	A	Perched 1,4-dioxane monitoring, SVOC evaluation, PFAS monitoring
MW-14-62	12-17	SA	B	A	Qd	A	Perched 1,4-dioxane monitoring, PFAS Monitoring
MW-21-139	7-12	SA		SA		SA	Perched 1,4-dioxane monitoring
MW-22-153	25-30	SA	Q	Q			Perched 1,4-dioxane monitoring
MW-22-155	25.5-30.5	SA		Q			Perched 1,4-dioxane monitoring
MW-22-156	23-28	SA		Q			Perched 1,4-dioxane monitoring
MW-22-157	24-29	SA		Q			Perched 1,4-dioxane monitoring
MW-23-161	20-25	SA	Q	Q			Perched 1,4-dioxane monitoring
MW-23-162	29-34	SA	Q	Q			Perched 1,4-dioxane monitoring
MW-23-163	20-25	SA	Q	Q			Perched 1,4-dioxane monitoring
P2-MW-02	31-41	SA				A	Groundwater elevation monitoring
P2-MW-03	27-32	SA					Groundwater elevation monitoring
P2-MW-04	26-36	SA		A	Qd	A	Perched 1,4-dioxane monitoring, SVOC evaluation
P2-SB-03	14-19	SA					Groundwater elevation monitoring
P2-SB-06	24-29	SA					Groundwater elevation monitoring
P2-SB-20	8-13	SA					Groundwater elevation monitoring
P2-SB-37	5-10	SA					LNAPL Monitoring
PMW-01	2.59-7.59	SA					LNAPL Monitoring
PMW-02	2.59-7.59	SA					LNAPL Monitoring
Deep Overburden and Weathered Bedrock							
MW-13-43	72-77	SA		SA			Lower 1,4-dioxane monitoring
MW-13-45	72-77	SA		SA			Lower 1,4-dioxane monitoring
MW-13-51	77-87	SA					Lower 1,4-dioxane sentinel
MW-14-56	71-76	SA		A		A	Lower 1,4-dioxane sentinel
MW-14-61	70-75	SA	A	SA	Qd	A	Lower 1,4-dioxane sentinel, SVOC Monitoring, PFAS Monitoring
MW-14-63	68-73	SA		A			Lower 1,4-dioxane sentinel
MW-15-72	63-68	SA	B	SA	Qd	A	Lower 1,4-dioxane monitoring
MW-15-73	78-83	SA		B			Lower 1,4-dioxane monitoring
MW-16-74	66-71	SA		A			Lower 1,4-dioxane sentinel
MW-16-75	66-71	SA		A			Lower 1,4-dioxane sentinel
MW-16-76	70-75	SA		A			Lower 1,4-dioxane sentinel
MW-16-77	66-71	SA		A			Lower 1,4-dioxane sentinel
MW-16-78	68-73	SA		A			Lower 1,4-dioxane sentinel
MW-16-80	68-73	SA		A			Lower 1,4-dioxane monitoring
MW-16-81	70-75	SA	B	SA		A	Lower 1,4-dioxane monitoring
MW-16-82	70-75	SA		A			Lower 1,4-dioxane monitoring
MW-16-83	71-76	SA		B			Lower 1,4-dioxane sentinel
MW-16-84	72-77	SA	A	SA			Lower 1,4-dioxane monitoring
MW-16-85	74-79	SA	B	SA			Lower 1,4-dioxane monitoring
MW-17-86	73-78	SA	B	SA			Lower 1,4-dioxane monitoring
MW-19-115	72.5-77.5	SA		SA			Lower 1,4-dioxane monitoring
MW-19-116	65-70	SA		SA			Lower 1,4-dioxane monitoring
MW-19-117	54-59	SA		SA			Lower 1,4-dioxane monitoring



Well	Screen Interval (ft bgs)	Gauging*	Analyte				Primary Function
			VOCs	1,4-Dioxane	SVOCs	PFAS	
Plant 2							
MW-19-120	66-71	SA	A	SA			Lower 1,4-dioxane monitoring
MW-19-121	66-71	SA		SA			
MW-19-122	59-64	SA		SA			
MW-19-123	66-71	SA		SA			
MW-19-124	65-70	SA		SA			
MW-20-126	69-74	SA		SA			
MW-20-127	72-77	SA		SA			
MW-20-128	65-70	SA		SA			
MW-20-129	64-69	SA		SA			
MW-20-130	63-68	SA		SA		SA	PFAS Sentinal
MW-21-140	67-72	SA		SA			Lower 1,4-dioxane monitoring
MW-21-142	71.5-76.5	SA		SA			Lower 1,4-dioxane monitoring
PW-14-01	71.6-76.8	SA		SA			Lower 1,4-dioxane monitoring
PW-14-02	75-80	SA	Qd	SA			Lower 1,4-dioxane monitoring
TW-14-02	67-72	SA	Qd	SA			Lower 1,4-dioxane monitoring
TW-15-12	73-78	SA		SA			
Bedrock							
MW-12-01	87-110	SA		B ⁽¹⁾			Bedrock sentinel
MW-12-02	87-110	SA		B ⁽¹⁾			Bedrock sentinel
MW-12-05R	100-112	SA		A ⁽¹⁾			Bedrock sentinel
MW-12-06	80.6-99.5	SA		A ⁽¹⁾			Bedrock sentinel
MW-13-44	96-115	SA		A ⁽¹⁾			Bedrock sentinel
MW-17-87	100-112	SA		A ⁽¹⁾			Bedrock sentinel
MW-19-118D	175-190	SA		A ⁽¹⁾			Bedrock sentinel
MW-19-118S	145-160	SA		A ⁽¹⁾			Bedrock sentinel
MW-19-125	100-115	SA		A ⁽¹⁾			Bedrock sentinel
Lansing Township Wells							
TWP-03	-	-		A ⁽¹⁾			Municipal Well
TWP-04	-	-		A ⁽¹⁾			Municipal Well
TWP-05	-	-		A ⁽¹⁾			Municipal Well
Storm Sewer							
P2-MH-2	-	-				Q	PFAS sewer monitoring
P2-MH-9	-	-				Q	PFAS sewer monitoring, typically dry, no sample
P2-MH-W	-	-				Q	PFAS sewer monitoring

Notes:

Wells shown in gray shading are part of biosparge performance monitoring, not part of previous formal IGMP submission. Additional details included in Table 7.

* Site wide gauging to alternate between semi-annual events to account for seasonal variability. Semi-annual gauging includes all wells sampled semi-annually.

** Select metals includes arsenic, nickel, lead, vanadium, chromium, and copper.

(1) = Analyzed for 1,4-dioxane via low-level USEPA Method 522

New wells will be added to the figures and incorporated into the annual monitoring once 4 samples are collected and a COC list is determined.

ft bgs = feet below ground surface

M = Monthly

Q = Quarterly

SA = Semi-annual

A = Annual (2Q or 4Q of each year, each year rotates which quarter)

B = Biennial (starting 2nd quarter of 2020)

Qd = Quadrennial (every 4 years, starting 2020)



Well	Screen Interval (ft bgs)	Gauging*	Analyte						Primary Function
			VOCs	1,4-Dioxane	Select Metals**	Hexavalent Chromium	SVOCs	PFAS	
Plant 3									
Perched									
CH-14-RO	7-12	SA			Qd	Qd		A	Metals monitoring
LMW-12-09	3-8	SA							LNAPL Monitoring
LMW-12-10	14-19	SA							LNAPL Monitoring
MW-05(3)	10-15	SA	B						VOC sentinel
MW-13-32	5-10	SA			Qd		Qd		Groundwater elevation monitoring / perimeter SVOC & Metals monitoring
MW-18-88	6-11	SA	B		Qd	Qd		SA	PFAS monitoring / sentinel VOC & Metals
MW-18-89	7-12	SA						A	PFAS monitoring
MW-18-90	15-20	SA						A	PFAS monitoring
MW-18-91	7-12	SA						A	PFAS monitoring
MW-18-92	23-28	SA						A	PFAS sentinel
MW-18-95	4.5-9.5	SA						SA	PFAS monitoring
MW-18-96	7-12	SA						A	PFAS sentinel
MW-18-98	7-12	SA						SA	PFAS sentinel
MW-18-99	9-14	SA						SA	PFAS sentinel
MW-18-100	8-13	SA						SA	PFAS sentinel
MW-18-102	10-15	SA						A	PFAS sentinel
MW-18-103	5-10	SA						A	PFAS monitoring
MW-18-104	5-10	SA						A	PFAS sentinel
MW-18-105	6-11	SA						SA	PFAS monitoring
MW-18-106	5-10	SA							PFAS sentinel
MW-19-107	23-28	SA						SA	PFAS sentinel
MW-19-108	23-28	SA						SA	PFAS sentinel
MW-19-110	8-13	SA						A	PFAS sentinel
MW-19-111	20-25	SA						SA	PFAS sentinel
MW-19-112	9-14	SA						A	PFAS sentinel
MW-19-113	16-21	SA						A	PFAS sentinel
MW-19-114	6-11	SA						A	PFAS sentinel
P3-SB-28	8-13	SA					Qd		Groundwater elevation monitoring
UNK-11	6.5-11.5	SA					Qd		VOC monitoring/SVOCs monitoring, VOCs sentinel well
UNK-15	11-16	SA						SA	PFAS monitoring
Deep Overburden and Weathered Bedrock									
MW-02-01(3)	59-69	SA							Groundwater elevation monitoring
MW-02-02(3)	74-84	SA		B					Lower 1,4-dioxane sentinel
MW-02-03(3)	79-89	SA							Groundwater elevation monitoring
MW-02-04(3)	76-86	SA		B	Qd			A	Lower 1,4-dioxane/PFAS/metals sentinel
MW-04-03(3)	80-90	SA							Groundwater elevation monitoring
MW-04-04(3)	72-82	SA							Groundwater elevation monitoring
MW-12-20	75-80	SA		B					Lower 1,4-dioxane sentinel
MW-12-21	70-75	SA	B	SA					Lower 1,4-dioxane monitoring
MW-13-22	89-94	SA	B	A					Lower 1,4-dioxane monitoring
MW-13-23	69-74	SA		B					Lower 1,4-dioxane sentinel
MW-13-24	69-74	SA		B					Lower 1,4-dioxane sentinel
MW-13-25	67-72	SA		A					Lower 1,4-dioxane monitoring
MW-13-26	72-77	SA							Groundwater elevation monitoring
MW-13-27	67-72	SA							Groundwater elevation monitoring
MW-13-29	68-73	SA		A					Lower 1,4-dioxane monitoring
MW-13-30	72-77	SA							Groundwater elevation monitoring
MW-13-34	74-79	SA	B	SA					Lower 1,4-dioxane monitoring
MW-13-40	72-77	SA							Groundwater elevation monitoring
MW-13-41	77-82	SA	B						lower VOC sentinel
MW-13-46	68-73	SA		A					Lower 1,4-dioxane monitoring



Well	Screen Interval (ft bgs)	Gauging*	Analyte						Primary Function
			VOCs	1,4-Dioxane	Select Metals**	Hexavalent Chromium	SVOCs	PFAS	
Plant 3									
MW-13-48	65-70	SA	B	SA					Lower 1,4-dioxane monitoring
MW-13-49	73-78	SA		B					Lower 1,4-dioxane monitoring
MW-14-64	98.6-103.6	SA		B					Lower 1,4-dioxane sentinel
MW-15-71	110-115	SA		B					Lower 1,4-dioxane sentinel
MW-18-93	77.5-82.5	SA						A	Lower PFAS Sentinel
MW-18-94	72-77	SA						A	Lower PFAS, 1,4-Dioxane Sentinel
MW-18-97	85-90	SA						A	Lower PFAS Sentinel
MW-18-101	80-85	SA		B				SA	Lower PFAS Sentinel
MW-22	52.5-62.5	SA							Groundwater elevation monitoring
MW-23	52-62	SA						A	PFAS sentinel
MW-91-2R	75-80	SA		B	Qd	Qd		A	Lower 1,4-dioxane, PFAS and metals sentinel
MW-93-1	65-75	SA							Groundwater elevation monitoring
PW-14-03	85-90	SA		SA					Lower 1,4-dioxane monitoring
TW-15-11	85-90	SA		SA					
Bedrock									
MW-04-01(3)	95-105	-							No longer part of sampling or gauging
MW-04-02(3)	126-136	SA							Groundwater elevation monitoring
MW-12-04	77-100	SA							Groundwater elevation monitoring
MW-13-28	99-115.5	SA		A ⁽¹⁾					Bedrock sentinel
MW-13-37	97-112	SA		B ⁽¹⁾					1,4-D sentinel
MW-13-38	107-124	SA		B ⁽¹⁾					Bedrock sentinel
MW-13-39B	97-112	SA							Groundwater elevation monitoring
MW-13-47	99-119	SA		B ⁽¹⁾					Bedrock sentinel
MW-19-119D	180-195	SA		A ⁽¹⁾					Bedrock sentinel
MW-19-119S	145-160	SA		A ⁽¹⁾					Bedrock sentinel
MW-88-1	103.5-140	SA							Groundwater elevation monitoring
MW-91-3	105-117	SA							Bedrock sentinel
MW-91-4	116-132.5	SA							Groundwater elevation monitoring
MW-91-5	112.5-128	SA		B ⁽¹⁾					Bedrock sentinel
MW-91-6	82-98	SA		B ⁽¹⁾					Bedrock sentinel
Storm Sewer									
P3-MH-284	-	-						Q	PFAS sewer monitoring
P3-MH-NE	-	-						Q	PFAS sewer monitoring, typically dry, no sample

Notes:
Wells shown in gray shading are part of biosparge performance monitoring, not part of previous formal IGMP submission. Additional details included in Table 7.

* Site wide gauging to alternate between semi-annual events to account for seasonal variability. Semi-annual gauging includes all wells sampled semi-annually.

** Select metals includes arsenic, nickel, lead, vanadium, chromium, and copper.

(1) - Analyzed for 1,4-dioxane via low-level USEPA Method 522

ft bgs = feet below ground surface

Q = quarterly

SA = semi-annual

A = annual

B = biennial (starting 2nd quarter of 2020)

Qd = Quadrennial

Table 1
Revised Interim Groundwater Monitoring Summary
Revised February 2024
RACER Trust Plants 2, 3, and 6 - Lansing, Michigan



Well	Screen Interval (ft bgs)	Gauging*	Analyte					Primary Function
			VOCs	1,4-Dioxane	Select Metals**	SVOCs	PFAS	
Plant 6								
Perched								
MW-02-02(6)	35-45	SA	B	A		Qd		Perched 1,4-dioxane monitoring, SVOC evaluation
MW-03-02	30-40	SA						Groundwater elevation monitoring
MW-03-05	35-45	SA	B	A				Perched 1,4-dioxane sentinel
MW-03-06	30-40	SA	B	A				Perched 1,4-dioxane sentinel
MW-03-08	35-45	SA						Perched VOC monitoring
MW-04-05(6)	20-30	SA	SA				A	Perched PFAS sentinel
MW-12-10R	10-15	SA					A	Groundwater elevation monitoring, PFAS
MW-12-11	13-18	SA					A	PFAS Sentinel
MW-12-12	13-18	SA					SA	PFAS monitoring
MW-12-13	18.5-23.5	SA			Qd		SA	PFAS monitoring
MW-12-14	25-30	SA						Groundwater elevation monitoring
MW-12-16	28-33	SA						Boundary monitoring
MW-13-35	25-30	-						Potential PFAS Monitoring if needed/ No gauging necessary
MW-13-36R	5.5-10.5	SA			Qd		SA	PFAS monitoring
MW-14-66	14-19	SA			Qd			Metals sentinel
MW-14-67	13-18	SA			Qd		A	Metals/PFAS sentinel
MW-14-69	41-46	SA						Groundwater elevation monitoring
MW-14-70	16-21	SA					A	PFAS Sentinel
MW-20-131	5-10	SA	SA				SA	PFAS monitoring
MW-20-132	6-11	SA	SA				SA	PFAS monitoring
MW-21-133	10-15	SA					SA	PFAS monitoring
MW-21-134	11-16	SA					SA	PFAS monitoring
MW-21-135	22-27	SA					SA	PFAS monitoring
MW-21-136	9-14	SA					A	PFAS monitoring
MW-21-137	7-12	SA					A	PFAS monitoring
MW-21-138	24-29	SA					A	PFAS monitoring
MW-22-143	26-31	SA					Q	PFAS monitoring
MW-22-144	19.5-24.5	SA					Q	PFAS monitoring
MW-22-145	10.5-15.5	SA					Q	PFAS monitoring
MW-22-146	5.5-10.5	SA					Q	PFAS monitoring
MW-22-147	7.5-12.5	SA					Q	PFAS monitoring
MW-22-148	24.5-29.5	SA					Q	PFAS monitoring
MW-22-149	5.5-10.5	SA					Q	PFAS monitoring
MW-22-150	13-18	SA					Q	PFAS monitoring
MW-22-151	13-18	SA					Q	PFAS monitoring
MW-22-152	10-15	SA	SA				Q	PFAS monitoring
MW-22-154	16-11	SA	Q					VOCs monitoring
MW-22-158	16-21	SA					Q	PFAS monitoring
MW-22-159	26-31	SA					Q	PFAS monitoring
MW-22-160	14-19	SA					Q	PFAS monitoring
MWBP-10-UST5-6	28-38	SA			Qd			VOCs/metal monitoring
MWBP-11-UST1-4	9-19	SA			Qd			VOCs/metal monitoring
MWBP-12-UST1-4	15-25	SA	B		Qd	Qd		VOCs/metal monitoring, SVOC evaluation
P6-MW-01	23-28	SA						Groundwater elevation monitoring
P6-SB-07	15-20	SA				Qd	A	PFAS monitoring
P6-SB-18	3-8	SA						Groundwater elevation monitoring
P6-SB-21	3-8	SA						Groundwater elevation monitoring
Deep Overburden and Weathered Bedrock								
MW-13-52	70-80	SA		B				Lower 1,4-dioxane sentinel
MW-13-53	73-83	SA						Lower 1,4-dioxane sentinel
MW-21-141	72-77	SA		SA				Lower 1,4-dioxane sentinel
Bedrock								
MW-04-01(6)	78-88	SA		B				Bedrock sentinel
MW-04-04R	82-110	SA		B			A	Bedrock sentinel
MW-04-06R	74-99.5	SA		B			A	Bedrock sentinel
MW-12-03	57-80	SA						Groundwater elevation monitoring
MW-13-50	85-107	SA		B				Bedrock sentinel
Storm Sewer								
Osborn-MH-1	-	-					Q	PFAS sewer monitoring
Verlinden-MH-1	-	-						PFAS sewer monitoring
Verlinden-MH-2	-	-						PFAS sewer monitoring
Verlinden-MH-3	-	-						PFAS sewer monitoring
Verlinden-MH-4	-	-						PFAS sewer monitoring
Verlinden-MH-5	-	-					Q	PFAS sewer monitoring
MichAve-MH-3	-	-					Q	PFAS sewer monitoring
MichAve-MH-4	-	-						PFAS sewer monitoring

Notes:

* Site wide gauging to alternate between semi-annual events to account for seasonal variability. Semi-annual gauging includes all wells sampled semi-annually.

** Select metals includes arsenic, nickel, lead, vanadium, chromium, and copper.

***TAL metals defined in Table 3 of the Quality Assurance Project Plan (ARCADIS 2011b).

ft bgs = feet below ground surface

Q = quarterly

SA = semi-annual

A = annual

B = biennial (starting 2nd quarter of 2020)

Qd = Quadrennial

Table 2
Summary of Groundwater Elevations - May 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Well ID	Date Collected	Screened Interval Top (feet bgs)	Screened Interval Bottom (feet bgs)	Reference Elevation - TOC (feet amsl)	Ground Surface Elevation (feet amsl)	Total Well Depth (feet below TOC)	Corrected Depth to Water (feet below TOC)	Corrected Groundwater Elevation (feet amsl)
Plant 2								
MW-01(2)	5/13/2024	10.0	20.0	875.79	876.10	19.69	6.90	868.89
MW-12-01	5/13/2024	87.0	110.0	867.94	865.46	112.48	79.44	788.50
MW-12-02	5/13/2024	87.0	110.0	853.91	851.88	112.03	68.28	785.63
MW-12-05R	5/13/2024	100.0	112.0	861.80	862.30	111.50	74.31	787.49
MW-12-06	5/13/2024	80.6	99.5	864.64	861.69	102.45	73.78	790.86
MW-12-07	5/13/2024	10.0	15.0	872.11	869.21	17.90	6.92	865.19
MW-12-08	5/13/2024	19.0	24.0	864.68	861.50	27.18	3.23	861.45
MW-12-09	5/13/2024	14.0	19.0	863.54	860.63	21.91	11.77	851.77
MW-12-18	5/13/2024	28.0	33.0	866.43	864.19	35.24	21.55	844.88
MW-13-43	5/13/2024	72.0	77.0	863.82	860.97	79.85	67.86	795.96
MW-13-44	5/13/2024	96.0	115.0	864.24	861.03	118.21	76.60	787.64
MW-13-45	5/13/2024	72.0	77.0	863.80	861.54	79.26	66.66	797.14
MW-13-51	5/13/2024	77.0	87.0	875.34	872.51	89.83	72.48	802.86
MW-14-54	5/13/2024	14.0	19.0	865.21	862.21	22.00	7.37	857.84
MW-14-55	5/13/2024	13.0	18.0	864.17	861.73	20.44	14.09	850.08
MW-14-56	5/13/2024	71.0	76.0	860.21	860.62	75.59	65.70	794.51
MW-14-57	5/13/2024	15.0	20.0	863.97	861.10	22.87	9.34	854.63
MW-14-58R	5/13/2024	22.0	27.0	862.93	860.09	29.84	12.45	850.48
MW-14-59	5/13/2024	12.0	17.0	865.13	861.63	20.49	4.71	860.42
MW-14-60	5/13/2024	15.0	20.0	864.65	861.70	22.95	8.65	856.00
MW-14-61	5/13/2024	70.0	75.0	865.51	862.30	78.21	67.90	797.61
MW-14-62	5/13/2024	12.0	17.0	865.17	862.25	19.92	3.42	861.75
MW-14-63	5/13/2024	68.0	73.0	854.64	851.68	75.96	67.72	786.92
MW-15-72	5/13/2024	63.0	68.0	865.09	862.35	70.74	56.86	808.23
MW-15-73	5/13/2024	78.0	83.0	861.56	859.12	85.44	74.23	787.33
MW-16-74	5/13/2024	66.0	71.0	864.81	862.10	73.71	66.44	798.37
MW-16-75	5/13/2024	66.0	71.0	864.87	862.13	73.74	62.08	802.79
MW-16-76	5/13/2024	70.0	75.0	867.76	865.12	77.64	65.58	802.18
MW-16-77	5/13/2024	66.0	71.0	866.17	863.42	73.75	61.23	804.94
MW-16-78	5/13/2024	68.0	73.0	864.98	862.09	75.89	65.21	799.77
MW-16-80	5/13/2024	68.0	73.0	853.03	853.41	72.62	66.06	786.97
MW-16-81	5/13/2024	70.0	75.0	864.68	862.04	77.64	63.92	800.76
MW-16-82	5/14/2024	70.0	75.0	864.79	862.10	77.69	68.17	796.62
MW-16-83	5/13/2024	71.0	76.0	862.97	860.17	78.80	74.50	788.47
MW-16-84	5/13/2024	72.0	77.0	864.09	861.81	79.29	69.92	794.17
MW-16-85	5/13/2024	74.0	79.0	864.77	861.87	81.90	71.28	793.49
MW-17-86	5/13/2024	73.0	78.0	864.55	861.92	80.63	66.91	797.64
MW-17-87	5/13/2024	100.0	112.0	862.82	860.44	114.38	76.57	786.25
MW-19-115	5/13/2024	72.5	77.5	865.04	862.19	80.35	58.66	806.38
MW-19-116	5/13/2024	65.0	70.0	865.12	862.17	72.95	56.37	808.75
MW-19-117	5/13/2024	54.0	59.0	865.10	862.15	61.95	59.23	805.87
MW-19-118D	5/13/2024	175.0	190.0	862.78	859.80	192.98	77.82	784.96
MW-19-118S	5/13/2024	145.0	160.0	862.81	859.80	163.01	77.81	785.00
MW-19-120	5/13/2024	66.0	71.0	864.73	862.13	73.60	67.03	797.70
MW-19-121	5/13/2024	66.0	71.0	864.55	862.19	73.36	66.31	798.24
MW-19-122	5/13/2024	59.0	64.0	865.02	862.15	66.87	64.46	800.56

Table 2
Summary of Groundwater Elevations - May 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Well ID	Date Collected	Screened Interval Top (feet bgs)	Screened Interval Bottom (feet bgs)	Reference Elevation - TOC (feet amsl)	Ground Surface Elevation (feet amsl)	Total Well Depth (feet below TOC)	Corrected Depth to Water (feet below TOC)	Corrected Groundwater Elevation (feet amsl)
MW-19-123	5/13/2024	66.0	71.0	864.45	862.04	73.41	65.59	798.86
MW-19-124	5/13/2024	65.0	70.0	864.53	862.22	72.31	66.48	798.05
MW-19-125	5/13/2024	100.0	115.0	865.11	862.11	117.99	78.32	786.79
MW-20-126	5/13/2024	69.0	74.0	861.89	859.50	76.39	73.02	788.87
MW-20-127	5/13/2024	72.0	77.0	862.58	861.30	78.28	67.72	794.86
MW-20-128	5/13/2024	65.0	70.0	863.73	861.40	72.33	65.91	797.82
MW-20-129	5/13/2024	64.0	69.0	864.91	862.20	71.71	61.45	803.46
MW-20-130	5/13/2024	63.0	68.0	863.98	862.20	69.78	67.14	796.84
MW-21-139	5/13/2024	7.0	12.0	865.00	862.17	14.83	3.00	862.00
MW-21-140	5/13/2024	67.0	72.0	866.06	862.76	75.30	68.64	797.42
MW-21-142	5/13/2024	71.5	76.5	853.70	850.79	79.41	66.74	786.96
MW-22-153	5/13/2024	25.0	30.0	860.43	859.44	30.99	9.94	850.49
MW-22-155	5/13/2024	25.5	30.5	861.58	858.99	33.09	11.17	850.41
MW-22-156	5/13/2024	23.0	28.0	863.07	860.13	30.94	12.46	850.61
MW-22-157	5/13/2024	24.0	29.0	852.38	853.06	28.32	1.80	850.58
MW-23-161	5/13/2024	20.0	25.0	858.48	856.00	27.48	9.85	848.63
MW-23-162	5/13/2024	29.0	34.0	861.95	859.41	36.54	13.32	848.63
MW-23-163	5/13/2024	20.0	25.0	862.61	860.31	27.30	12.85	849.76
P2-MW-02	5/13/2024	31.0	41.0	872.24	872.70	40.54	36.19	836.05
P2-MW-03	5/13/2024	27.0	32.0	854.18	854.66	31.52	7.85	846.33
P2-MW-04	5/13/2024	26.0	36.0	866.12	862.75	39.37	11.05	855.07
P2-SB-03	5/13/2024	14.0	19.0	863.89	861.03	21.87	13.10	850.79
P2-SB-06	5/13/2024	24.0	29.0	866.06	862.09	32.97	15.60	850.46
P2-SB-20	5/13/2024	8.0	13.0	864.46	861.12	16.34	7.81	856.65
PW-14-01	5/13/2024	71.6	76.8	864.97	862.38	79.39	68.20	796.77
PW-14-02	5/13/2024	75.0	80.0	863.87	860.93	82.94	67.15	796.72
TW-14-02	5/13/2024	67.0	72.0	865.01	862.13	74.88	61.79	803.22
TW-15-12	5/13/2024	73.0	78.0	860.88	861.23	77.65	65.52	795.36
Plant 3								
CH-14-RO	5/13/2024	7.0	12.0	866.47	863.71	14.76	6.16	860.31
MW-02-01(3)	5/13/2024	59.0	69.0	865.54	863.35	71.19	50.36	815.18
MW-02-02(3)	5/13/2024	74.0	84.0	862.70	863.11	83.59	61.63	801.07
MW-02-03(3)	5/13/2024	79.0	89.0	859.63	859.90	88.73	NM	NM
MW-02-04(3)	5/13/2024	76.0	86.0	859.41	859.96	85.46	60.73	798.68
MW-04-01(3)	5/13/2024	95.0	105.0	862.61	862.93	104.68	49.41	813.20
MW-04-02(3)	5/13/2024	126.0	136.0	861.09	861.26	135.83	63.93	797.16
MW-04-03(3)	5/13/2024	80.0	90.0	860.72	861.00	89.72	62.70	798.02
MW-04-04(3)	5/13/2024	72.0	82.0	855.72	856.11	81.61	57.13	798.59
MW-05(3)	5/13/2024	10.0	15.0	863.44	859.80	18.64	3.98	859.46
MW-12-04	5/13/2024	77.0	100.0	844.08	844.26	99.82	49.11	794.97
MW-12-20	5/13/2024	75.0	80.0	864.20	861.45	82.75	66.43	797.77
MW-12-21	5/13/2024	70.0	75.0	864.50	861.45	78.05	65.82	798.68
MW-13-22	5/13/2024	89.0	94.0	864.37	861.50	96.87	69.02	795.35
MW-13-23	5/13/2024	69.0	74.0	864.31	861.45	76.86	66.62	797.69
MW-13-24	5/13/2024	69.0	74.0	864.35	861.48	76.87	65.56	798.79
MW-13-25	5/13/2024	67.0	72.0	863.77	860.49	75.28	65.46	798.31

Table 2
Summary of Groundwater Elevations - May 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan

Well ID	Date Collected	Screened Interval Top (feet bgs)	Screened Interval Bottom (feet bgs)	Reference Elevation - TOC (feet amsl)	Ground Surface Elevation (feet amsl)	Total Well Depth (feet below TOC)	Corrected Depth to Water (feet below TOC)	Corrected Groundwater Elevation (feet amsl)
MW-13-26	5/13/2024	72.0	77.0	863.95	861.67	79.28	65.05	798.90
MW-13-27	5/13/2024	67.0	72.0	864.50	861.54	74.96	65.80	798.70
MW-13-28	5/13/2024	99.0	115.5	864.42	861.61	118.31	69.75	794.67
MW-13-29	5/13/2024	68.0	73.0	862.81	859.81	76.00	65.02	797.79
MW-13-30	5/13/2024	72.0	77.0	864.53	861.66	79.87	67.04	797.49
MW-13-32	5/13/2024	5.0	10.0	860.11	857.32	12.79	6.03	854.08
MW-13-34	5/13/2024	74.0	79.0	853.92	851.82	81.10	65.83	788.09
MW-13-37	5/13/2024	97.0	112.0	866.02	863.75	114.27	69.66	796.36
MW-13-38	5/13/2024	107.0	124.0	866.47	863.71	126.76	70.31	796.16
MW-13-39B	5/13/2024	97.0	112.0	860.20	857.33	114.87	63.38	796.82
MW-13-40	5/13/2024	72.0	77.0	862.95	859.74	80.21	55.42	807.53
MW-13-41	5/13/2024	77.0	82.0	863.41	863.68	81.73	55.13	808.28
MW-13-46	5/13/2024	68.0	73.0	854.54	852.12	75.42	63.89	790.65
MW-13-47	5/13/2024	99.0	119.0	853.74	851.89	120.85	65.22	788.52
MW-13-48	5/13/2024	65.0	70.0	854.83	852.17	72.66	56.42	798.41
MW-13-49	5/13/2024	73.0	78.0	853.01	850.55	80.46	65.45	787.56
MW-14-64	5/13/2024	98.6	103.6	864.56	861.77	106.39	69.75	794.81
MW-15-71	5/13/2024	110.0	115.0	864.07	861.71	117.36	66.41	797.66
MW-18-100	5/13/2024	8.0	13.0	863.94	861.49	15.45	9.52	854.42
MW-18-101	5/13/2024	80.0	85.0	863.87	861.24	87.63	63.45	800.42
MW-18-102	5/13/2024	10.0	15.0	863.13	863.44	14.69	7.54	855.59
MW-18-103	5/13/2024	5.0	10.0	859.13	859.74	9.39	1.64	857.49
MW-18-104	5/13/2024	5.0	10.0	859.12	859.82	9.30	1.32	857.80
MW-18-105	5/13/2024	6.0	11.0	858.59	859.01	10.57	0.51	858.08
MW-18-106	5/13/2024	5.0	10.0	866.15	866.51	9.64	1.96	864.19
MW-18-88	5/13/2024	6.0	11.0	863.70	860.93	13.77	4.25	859.45
MW-18-89	5/13/2024	7.0	12.0	866.53	863.51	15.02	5.47	861.06
MW-18-90	5/13/2024	15.0	20.0	866.32	863.25	23.07	8.69	857.63
MW-18-91	5/13/2024	7.0	12.0	865.94	863.43	14.51	5.17	860.77
MW-18-92	5/13/2024	23.0	28.0	870.43	869.08	29.35	12.14	858.29
MW-18-93	5/13/2024	77.5	82.5	863.77	860.99	85.28	47.94	815.83
MW-18-94	5/14/2024	72.0	77.0	866.34	863.86	79.48	53.03	813.31
MW-18-95	5/13/2024	4.5	9.5	864.66	861.76	12.40	6.33	858.33
MW-18-96	5/13/2024	7.0	12.0	864.60	861.64	14.96	DRY	DRY
MW-18-97	5/13/2024	85.0	90.0	860.91	859.13	91.78	62.99	797.92
MW-18-98	5/13/2024	7.0	12.0	862.16	859.10	15.06	4.68	857.48
MW-18-99	5/13/2024	9.0	14.0	862.47	859.95	16.52	2.78	859.69
MW-19-107	5/13/2024	23.0	28.0	870.65	869.20	29.45	13.51	857.14
MW-19-108	5/13/2024	23.0	28.0	872.60	870.22	30.38	13.31	859.29
MW-19-110	5/13/2024	8.0	13.0	863.67	860.72	15.95	16.22	847.45
MW-19-111	5/13/2024	20.0	25.0	874.51	871.70	27.81	20.94	853.57
MW-19-112	5/13/2024	9.0	14.0	861.63	858.53	17.10	5.35	856.28
MW-19-113	5/13/2024	16.0	21.0	860.67	857.73	23.94	24.11	836.56
MW-19-114	5/13/2024	6.0	11.0	861.25	861.79	10.46	1.50	859.75
MW-19-119D	5/13/2024	180.0	195.0	864.42	861.66	197.76	57.48	806.94
MW-19-119S	5/13/2024	145.0	160.0	864.32	861.66	162.66	70.86	793.46
MW-22	5/13/2024	52.5	62.5	859.69	860.08	62.11	45.29	814.40
MW-23	5/13/2024	52.0	62.0	863.71	859.82	65.89	48.58	815.13
MW-88-1	5/13/2024	103.5	140.0	858.75	859.06	139.69	64.65	794.10
MW-91-2R	5/13/2024	75.0	80.0	866.84	863.63	83.21	57.46	809.38

Table 2
Summary of Groundwater Elevations - May 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Well ID	Date Collected	Screened Interval Top (feet bgs)	Screened Interval Bottom (feet bgs)	Reference Elevation - TOC (feet amsl)	Ground Surface Elevation (feet amsl)	Total Well Depth (feet below TOC)	Corrected Depth to Water (feet below TOC)	Corrected Groundwater Elevation (feet amsl)
MW-91-3	5/13/2024	105.0	117.0	860.81	859.35	118.46	65.62	795.19
MW-91-4	5/13/2024	116.0	132.5	855.59	855.93	132.16	58.63	796.96
MW-91-5	5/13/2024	112.5	128.0	860.61	861.20	127.41	63.33	797.28
MW-91-6	5/13/2024	82.0	98.0	851.84	852.22	97.62	62.05	789.79
MW-93-1	5/13/2024	65.0	75.0	866.05	863.56	77.49	63.56	802.49
P3-SB-28	5/13/2024	8.0	13.0	866.43	863.63	15.80	5.20	861.23
PW-14-03R	5/13/2024	85.0	90.0	864.31	861.55	92.76	72.17	792.14
TW-15-11	5/13/2024	85.0	90.0	864.51	861.60	92.91	71.76	792.75
UNK-11	5/13/2024	6.5	11.5	859.91	860.17	11.24	0.03	859.88
UNK-15	5/13/2024	11.0	16.0	859.56	859.94	15.62	0.49	859.07
Plant 6								
MW-02-02(6)	5/13/2024	35.0	45.0	868.04	868.41	44.63	28.58	839.46
MW-03-02	5/13/2024	30.0	40.0	864.52	864.76	39.76	19.98	844.54
MW-03-05	5/13/2024	35.0	45.0	868.90	869.14	44.76	22.24	846.66
MW-03-06	5/13/2024	30.0	40.0	870.45	870.80	39.65	35.78	834.67
MW-03-08	5/13/2024	35.0	45.0	869.03	869.39	44.64	NM	NM
MW-04-01(6)	5/13/2024	78.0	88.0	866.85	867.15	87.70	70.40	796.45
MW-04-04R	5/13/2024	82.0	110.0	873.31	870.64	112.67	76.02	797.29
MW-04-05(6)	5/13/2024	20.0	30.0	858.33	858.87	29.46	8.83	849.50
MW-04-06R	5/13/2024	74.0	99.5	861.56	858.59	102.47	65.39	796.17
MW-12-03	5/13/2024	57.0	80.0	859.10	856.71	82.39	61.88	797.22
MW-12-10R	5/13/2024	10.0	15.0	862.29	858.92	18.37	10.83	851.46
MW-12-11	5/13/2024	13.0	18.0	857.26	857.68	17.58	3.07	854.19
MW-12-12	5/13/2024	13.0	18.0	874.34	874.61	17.73	6.13	868.21
MW-12-13	5/13/2024	18.5	23.5	882.60	880.51	25.59	9.65	872.95
MW-12-14	5/13/2024	25.0	30.0	872.56	869.28	33.28	24.98	847.58
MW-12-16	5/13/2024	28.0	33.0	864.24	864.73	32.51	22.59	841.65
MW-13-36R	5/13/2024	5.5	10.5	878.04	875.28	13.26	5.09	872.95
MW-13-50	5/13/2024	85.0	107.0	872.85	869.93	109.92	83.41	789.44
MW-13-52	5/13/2024	70.0	80.0	872.50	869.84	82.66	68.35	804.15
MW-13-53	5/13/2024	73.0	83.0	875.56	873.10	85.46	74.75	800.81
MW-14-66	5/13/2024	14.0	19.0	877.85	874.73	22.12	4.49	873.36
MW-14-67	5/13/2024	13.0	18.0	877.76	875.07	20.69	4.71	873.05
MW-14-69	5/13/2024	41.0	46.0	883.62	880.72	48.90	DRY	DRY
MW-14-70	5/13/2024	16.0	21.0	882.79	880.08	23.71	9.80	872.99
MW-20-131	5/13/2024	5.0	10.0	858.21	858.66	9.55	4.26	853.95
MW-20-132	5/13/2024	6.0	11.0	858.01	858.38	10.63	4.65	853.36
MW-21-133	5/13/2024	10.0	15.0	876.67	872.91	18.75	7.59	869.08
MW-21-134	5/13/2024	11.0	16.0	872.97	869.38	19.59	7.43	865.54
MW-21-135	5/13/2024	22.0	27.0	872.10	868.60	30.50	24.99	847.11
MW-21-136	5/13/2024	9.0	14.0	865.91	866.31	13.60	6.72	859.19
MW-21-137	5/13/2024	7.0	12.0	866.99	867.50	11.49	8.84	858.15
MW-21-138	5/13/2024	24.0	29.0	867.05	867.54	28.51	21.23	845.82
MW-21-141	5/13/2024	72.0	77.0	874.03	871.05	79.98	77.42	796.61
MW-22-143	5/13/2024	26.0	31.0	864.23	864.52	30.71	17.82	846.41
MW-22-144	5/13/2024	19.5	24.5	863.27	863.91	23.86	11.56	851.71
MW-22-145	5/13/2024	10.5	15.5	863.25	863.87	14.88	10.84	852.41
MW-22-146	5/13/2024	5.5	10.5	861.74	862.17	10.07	4.97	856.77
MW-22-147	5/13/2024	7.5	12.5	865.46	865.83	12.13	8.78	856.68
MW-22-148	5/13/2024	24.5	29.5	865.93	866.12	29.31	24.77	841.16
MW-22-149	5/13/2024	5.5	10.5	866.24	866.68	10.06	5.02	861.22

Table 2
Summary of Groundwater Elevations - May 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan

Well ID	Date Collected	Screened Interval Top (feet bgs)	Screened Interval Bottom (feet bgs)	Reference Elevation - TOC (feet amsl)	Ground Surface Elevation (feet amsl)	Total Well Depth (feet below TOC)	Corrected Depth to Water (feet below TOC)	Corrected Groundwater Elevation (feet amsl)
MW-22-150	5/13/2024	13.0	18.0	859.62	859.84	17.78	5.30	854.32
MW-22-151	5/13/2024	13.0	18.0	856.66	857.04	17.62	5.92	850.74
MW-22-152	5/13/2024	10.0	15.0	857.23	857.50	14.73	7.35	849.88
MW-22-154	5/13/2024	6.0	11.0	855.81	856.29	10.52	4.62	851.19
MW-22-158	5/13/2024	16.0	21.0	863.45	863.87	20.58	12.46	850.99
MW-22-159	5/13/2024	26.0	31.0	864.41	864.78	30.63	NM	NM
MW-22-160	5/13/2024	14.0	19.0	860.77	861.40	18.37	12.65	848.12
MWBP-10-UST5-6	5/13/2024	28.0	38.0	867.70	867.99	37.71	29.37	838.33
MWBP-11-UST1-4	5/13/2024	9.0	19.0	868.66	869.07	18.59	0.54	868.12
MWBP-12-UST1-4	5/13/2024	15.0	25.0	870.02	870.58	24.44	1.07	868.95
P6-MW-01	5/13/2024	23.0	28.0	870.10	866.87	31.23	28.61	841.49
P6-SB-07	5/13/2024	15.0	20.0	877.36	874.36	23.00	5.21	872.15
P6-SB-18	5/13/2024	3.0	8.0	878.72	874.65	12.07	4.82	873.90
P6-SB-21	5/13/2024	3.0	8.0	874.20	870.92	11.28	2.31	871.89

Notes:

1. Previously included wells MW-16-79, TW-14-07, TW-14-08, TW-14-09, TW-15-10 have been abandoned and removed from the table.
2. MW-02-03(3), MW-03-08, and MW-22-159 could not be gauged as planned due to flooding in the area.

Abbreviations:

amsl = above mean sea level
bgs = below ground surface
DRY = well was dry and depth to water could not be gauged
NM = not measured
RACER = Revitalizing Auto Communities Environmental Response
TOC = top of casing

Table 3
Summary of LNAPL Thickness - May 2024
2024 Semi-Annual Groundwater Monitoring Report
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Well ID	Date Collected	Reference Elevation - TOC (feet amsl)	Ground Surface Elevation (feet amsl)	Depth to Water (feet below TOC)	Depth to LNAPL (feet below TOC)	Calculated Thickness LNAPL (feet)	Groundwater Elevation (feet amsl)	Corrected Groundwater Elevation (feet amsl)
Plant 2								
LMW-12-01	5/21/2024	864.91	862.14	4.54	NP	NP	860.37	860.37
LMW-12-03D	5/21/2024	864.99	862.08	19.73	3.59	16.14	845.26	859.78*
LMW-12-03S	5/21/2024	864.93	862.06	3.76	3.71	0.05	861.17	861.21*
LMW-12-05	5/21/2024	865.03	862.17	6.80	5.86	0.94	858.23	859.08*
LMW-12-07	5/21/2024	864.13	861.50	2.83	NP	NP	861.30	861.30
LMW-12-08	5/21/2024	864.40	861.56	4.40	2.93	1.47	860.00	861.32*
LMW-14-12D	5/21/2024	864.59	862.11	24.95	3.54	21.41	839.64	858.90*
LMW-14-13D	5/21/2024	865.03	862.06	4.81	NP	NP	860.22	860.22
LMW-14-15D	5/21/2024	865.11	861.66	22.65	4.35	18.30	842.46	858.92*
LMW-15-16D	5/21/2024	865.20	862.24	23.25	4.88	18.37	841.95	858.47*
P2-SB-37	5/21/2024	865.90	861.90	5.42	4.24	1.18	860.48	861.54*
PMW-01	5/21/2024	860.85	861.33	0.47	0.35	0.12	860.38	860.49*
PMW-02	5/13/2024	860.94	861.33	NM	NM	NM	NM	NM
Plant 3								
LMW-12-09	5/21/2024	863.22	860.40	3.31	3.29	0.02	859.91	859.93*
LMW-12-10	5/21/2024	866.82	863.60	18.90	11.44	7.46	847.92	854.63*

Notes:

1. * Where LNAPL was observed, groundwater elevations have been corrected using a measured LNAPL density of 0.8995 gram per milliliter.
2. Previously included well MW-16-79 has been abandoned and removed from the table.
3. Could not gauge PMW-02 as planned due to flooding in the area.

Abbreviations:

amsl = above mean sea level

LNAPL = light nonaqueous phase liquid

NM = not measured

NP = no LNAPL

RACER = Revitalizing Auto Communities Environmental Response

TOC = top of casing

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):	Part 201 Residential Drinking Water	Part 201 Groundwater Surface Water Interface	Units	CH-14-RO	MW-01(2)	MW-02-02(3)	MW-02-02(6)	MW-02-04(3)	MW-03-05	MW-03-06	MW-04-01(6)	MW-04-04R	MW-04-05(6)	MW-04-06R	MW-05(3)	MW-12-01	MW-12-02	MW-12-05R	MW-12-06	MW-12-09	MW-12-10R	MW-12-11	MW-12-12	MW-12-13
				05/22/24	05/17/24	05/21/24	05/23/24	05/21/24	05/23/24	05/22/24	05/22/24	05/23/24	05/23/24	05/22/24	05/22/24	05/24/24	05/24/24	05/24/24	05/24/24	05/16/24	05/22/24	05/22/24	05/22/24	05/23/24
				CH-14-RO 7-12	MW-01(2) 10-20	MW-02-02(3) 74-84	MW-02-02(6) 35-45	MW-02-04(3) 76-86	MW-03-05 35-45	MW-03-06 30-40	MW-04-01(6) 78-88	MW-04-04R 98-108	MW-04-05(6) 20-30	MW-04-06R 74-99.5	MW-05(3) 10-15	MW-12-01 87-110	MW-12-02 87-110	MW-12-05R 100-112	MW-12-06 80.6-99.5	MW-12-09 14-19	MW-12-10R 10-15	MW-12-11 13-18	MW-12-12 13-18	MW-12-13 18.5-23.5
Field Parameters																								
pH	6.5 to 8.5	6.5 to 9.0	s.u.	7.22	6.78	6.74	6.79	6.86	7.82	6.73	6.79	6.88	7.38	7.23	7.86	7.29	7.93	10.28	7.49	7.06	6.85	6.69	7.36	7.42
Conductivity	--	--	mS/cm	1.024	3.719	1.832	7.583	3.767	1.591	8.646	0.934	1.054	2.594	6.21	0.561	1.492	0.692	0.449	0.762	1.967	2.395	3.83	1.228	0.55
Turbidity	--	--	NTU	8.11	5.62	219	19	695.67	49	14	111	177	4.18	221	12.02	141	24.72	33.14	132.63	3.64	192.83	550.98	221.52	4.24
Dissolved oxygen (DO)	--	--	mg/L	0.15	0	0.5	0.24	1.24	0.73	0.2	0.26	0.35	0	0.2	3.19	0.29	0.22	2.19	9.93	0	0	0	0	0.67
Temperature	--	--	Deg C	16.1	14.3	18.5	23.6	15.4	19.1	19.5	19.9	19.9	15.2	19.5	15.8	14.1	16.8	20.8	18.6	13.5	15.5	14	16.8	12
Oxidation reduction potential (ORP)	--	--	millivolts	73.9	77.8	-40.9	-77.4	-51.8	-42.5	-56.6	-52.8	-88.1	-90	-171.6	100.4	-163.7	-203	41	96.4	4.7	-6.5	-56.4	44.2	141.1
Volatile Organics (via EPA Method SW5030C/8260C)																								
1,1-Dichloroethane	880	740	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	5 [5]	NA	NA	NA	NA
1,1-Dichloroethene	7.0	130	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
1,1,1-Trichloroethane	200	89	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
1,1,1,2-Tetrachloroethane	77	--	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
1,1,2-Trichloroethane	5.0	330	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	8.5	78	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane (DBCP)	0.2	--	µg/L	NA	< 5	NA	< 5	NA	< 5	< 5 (< 5]	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	< 5 (< 5]	NA	NA	NA	NA
1,2-Dibromomethane (Ethylene dibromide)	0.05	5.7	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
1,2-Dichlorobenzene	600	13	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
1,2-Dichloroethane	5.0	360	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
1,2-Dichloropropane	5.0	230	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
1,2,3-Trichlorobenzene	--	--	µg/L	NA	< 5	NA	< 5	NA	< 5	< 5 (< 5]	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	< 5 (< 5]	NA	NA	NA	NA
1,2,3-Trichloropropane	42	--	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
1,2,3-Trimethylbenzene	--	--	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	99	µg/L	NA	< 5	NA	< 5	NA	< 5	< 5 (< 5]	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	< 5 (< 5]	NA	NA	NA	NA
1,2,4-Trimethylbenzene	63	17	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
1,3-Dichlorobenzene	6.6	28	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
1,3,5-Trimethylbenzene	72	45	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
1,4-Dichlorobenzene	75	17	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
1,4-Dioxane	7.2	280	µg/L	NA	NA	< 1	30	6	< 1	5 [6]	< 1	< 1	NA	< 1 (< 1]	NA	< 0.20 *	0.92* [0.89*]	0.71 *	0.11 J*	< 1 (< 1]	NA	NA	NA	NA
2-Butanone (Methyl ethyl ketone) (MEK)	13,000	2,200	µg/L	NA	< 25	NA	< 25	NA	< 25	< 25 (< 25]	NA	NA	< 25	NA [NA]	< 25	NA	NA	NA	NA	< 25 (< 25]	NA	NA	NA	NA
2-Hexanone	1,000	--	µg/L	NA	< 50	NA	< 50	NA	< 50	< 50 (< 50]	NA	NA	< 50	NA [NA]	< 50	NA	NA	NA	NA	< 50 (< 50]	NA	NA	NA	NA
2-Methylnaphthalene	260	19	µg/L	NA	< 5	NA	< 5	NA	< 5	< 5 (< 5]	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	< 5 (< 5]	NA	NA	NA	NA
2-Phenylbutane (sec-Butylbenzene)	80	--	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1,800	--	µg/L	NA	< 50	NA	< 50	NA	< 50	< 50 (< 50]	NA	NA	< 50	NA [NA]	< 50	NA	NA	NA	NA	< 50 (< 50]	NA	NA	NA	NA
Acetone	730	1,700	µg/L	NA	< 50	NA	< 50	NA	< 50	< 50 (< 50]	NA	NA	< 50	NA [NA]	< 50	NA	NA	NA	NA	< 50 (< 50]	NA	NA	NA	NA
Acrylonitrile	2.6	2.0	µg/L	NA	< 2	NA	< 2	NA	< 2	< 2 (< 2]	NA	NA	< 2	NA [NA]	< 2	NA	NA	NA	NA	< 2 (< 2]	NA	NA	NA	NA
Benzene	5.0	200	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
Bromobenzene	18	--	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
Bromodichloromethane	80	--	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
Bromoform	80	--	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
Bromomethane (Methyl bromide)	10	5.0	µg/L	NA	< 5	NA	< 5	NA	< 5	< 5 (< 5]	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	< 5 (< 5]	NA	NA	NA	NA
Carbon disulfide	800	--	µg/L	NA	< 5	NA	< 5	NA	< 5	< 5 (< 5]	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	< 5 (< 5]	NA	NA	NA	NA
Carbon tetrachloride	5.0	38	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
Chlorobenzene	100	25	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
Chlorobromomethane	--	--	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
Chloroethane	430	1,100	µg/L	NA	< 5	NA	< 5	NA	< 5	< 5 (< 5]	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	< 5 (< 5]	NA	NA	NA	NA
Chloroform (Trichloromethane)	80	350	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
Chloromethane (Methyl chloride)	260	--	µg/L	NA	< 5	NA	< 5	NA	< 5	< 5 (< 5]	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	< 5 (< 5]	NA	NA	NA	NA
cis-1,2-Dichloroethene	70	620	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
cis-1,3-Dichloropropene	--	--	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
Cymene (p-Isopropyltoluene)	--	--	µg/L	NA	< 5	NA	< 5	NA	< 5	< 5 (< 5]	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	< 5 (< 5]	NA	NA	NA	NA
Dibromochloromethane	80	--	µg/L	NA	< 5	NA	< 5	NA	< 5	< 5 (< 5]	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	< 5 (< 5]	NA	NA	NA	NA
Dibromomethane	80	--	µg/L	NA	< 5	NA	< 5	NA	< 5	< 5 (< 5]	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	< 5 (< 5]	NA	NA	NA	NA
Dichlorodifluoromethane (CFC-12)	1,700	--	µg/L	NA	< 5	NA	< 5	NA	< 5	< 5 (< 5]	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	< 5 (< 5]	NA	NA	NA	NA
Ethyl ether	10	--	µg/L	NA	< 10	NA	< 10	NA	< 10	< 10 (< 10]	NA	NA	< 10	NA [NA]	< 10	NA	NA	NA	NA	< 10 (< 10]	NA	NA	NA	NA
Ethylbenzene	74	18	µg/L	NA	< 1	NA	< 1	NA	< 1	< 1 (< 1]	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	< 1 (< 1]	NA	NA	NA	NA
Hexachloroethane	7.3	6.7	µg/L	NA	< 5	NA	< 5	NA	< 5	<														

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):	Part 201	Part 201	Units	CH-14-RO	MW-01(2)	MW-02-02(3)	MW-02-02(6)	MW-02-04(3)	MW-03-05	MW-03-06	MW-04-01(6)	MW-04-04R	MW-04-05(6)	MW-04-06R	MW-05(3)	MW-12-01	MW-12-02	MW-12-05R	MW-12-06	MW-12-09	MW-12-10R	MW-12-11	MW-12-12	MW-12-13	
	Residential	Groundwater		CH-14-RO	MW-01(2)	MW-02-02(3)	MW-02-02(6)	MW-02-04(3)	MW-03-05	MW-03-06	MW-04-01(6)	MW-04-04R	MW-04-05(6)	MW-04-06R	MW-05(3)	MW-12-01	MW-12-02	MW-12-05R	MW-12-06	MW-12-09	MW-12-10R	MW-12-11	MW-12-12	MW-12-13	
	Drinking	Surface Water		CH-14-RO	MW-01(2)	MW-02-02(3)	MW-02-02(6)	MW-02-04(3)	MW-03-05	MW-03-06	MW-04-01(6)	MW-04-04R	MW-04-05(6)	MW-04-06R	MW-05(3)	MW-12-01	MW-12-02	MW-12-05R	MW-12-06	MW-12-09	MW-12-10R	MW-12-11	MW-12-12	MW-12-13	
	Water	Interface		7-12	10-20	74-84	35-45	76-86	35-45	30-40	78-88	98-108	20-30	74-99.5	10-15	87-110	87-110	100-112	80.6-99.5	14-19	10-15	13-18	13-18	18.5-23.5	
Semi-Volatile Organics (via EPA Method SW5030C/8270D)																									
1,2-Dichlorobenzene	600	13	µg/L	NA	NA	NA	< 1	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
1,2-Diphenylhydrazine	--	--	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
1,2,4-Trichlorobenzene	70	99	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
1,3-Dichlorobenzene	6.6	28	µg/L	NA	NA	NA	< 1	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
1,4-Dichlorobenzene	75	17	µg/L	NA	NA	NA	< 1	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	--	--	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
2,4-Dichlorophenol	73	11	µg/L	NA	NA	NA	< 10	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
2,4-Dimethylphenol	370	380	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
2,4-Dinitrophenol	--	--	µg/L	NA	NA	NA	< 25	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
2,4-Dinitrotoluene	7.7	--	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
2,4,5-Trichlorophenol	730	--	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
2,4,6-Trichlorophenol	120	5.0	µg/L	NA	NA	NA	< 4	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
2,6-Dinitrotoluene	--	--	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
2-Chloronaphthalene	1,800	--	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
2-Chlorophenol	45	18	µg/L	NA	NA	NA	< 10	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
2-Methylnaphthalene	260	19	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
2-Methylphenol	--	--	µg/L	NA	NA	NA	< 10	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
2-Nitroaniline	--	--	µg/L	NA	NA	NA	< 25	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
2-Nitrophenol	20	--	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
3&4-Methylphenol	--	--	µg/L	NA	NA	NA	< 20	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
3,3'-Dichlorobenzidine	1.1	0.3	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
3-Nitroaniline	--	--	µg/L	NA	NA	NA	< 25	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
4,6-Dinitro-2-methylphenol	20	--	µg/L	NA	NA	NA	< 20	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
4-Bromophenyl phenyl ether	--	--	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
4-Chloro-3-methylphenol	150	7.4	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
4-Chloroaniline	--	--	µg/L	NA	NA	NA	< 10	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
4-Chlorophenyl phenyl ether	--	--	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
4-Nitroaniline	--	--	µg/L	NA	NA	NA	< 25	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
4-Nitrophenol	--	--	µg/L	NA	NA	NA	< 25	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
Acenaphthene	1,300	38	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
Acenaphthylene	52	--	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
Anthracene	43	--	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
Benzo(a)anthracene	2.1	--	µg/L	NA	NA	NA	< 1	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
Benzo(a)pyrene	5.0	--	µg/L	NA	NA	NA	< 1	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
Benzo(b)fluoranthene	1.5	--	µg/L	NA	NA	NA	< 1	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
Benzo(g,h,i)perylene	1.0	--	µg/L	NA	NA	NA	< 1	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
Benzo(k)fluoranthene	1.0	--	µg/L	NA	NA	NA	< 1	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
bis(2-Chloroethoxy)methane	--	--	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
bis(2-Chloroethyl)ether	2.0	1.0	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
bis(2-Ethylhexyl)phthalate (DEHP)	6.0	14	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
Butyl benzylphthalate (BBP)	1,200	67	µg/L	NA	NA	NA	< 5	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
Chrysene	1.6	--	µg/L	NA	NA	NA	< 1	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
Dibenz(a,h)anthracene	2.0	--	µg/L	NA	NA	NA	< 2	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
Dibenzofuran	--	4.0	µg/L	NA	NA	NA	< 4	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	
Diethyl phthalate	5,500	110	µg/L																						

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):		Part 201 Residential Drinking Water	Part 201 Groundwater Surface Water Interface		CH-14-RO 05/22/24 CH-14-RO 7-12	MW-01(2) 05/17/24 MW-01(2) 10-20	MW-02-02(3) 05/21/24 MW-02-02(3) 74-84	MW-02-02(6) 05/23/24 MW-02-02(6) 35-45	MW-02-04(3) 05/21/24 MW-02-04(3) 76-86	MW-03-05 05/23/24 MW-03-05 35-45	MW-03-06 05/23/24 MW-03-06 30-40	MW-04-01(6) 05/22/24 MW-04-01(6) 78-88	MW-04-04R 05/22/24 MW-04-04R 98-108	MW-04-05(6) 05/23/24 MW-04-05(6) 20-30	MW-04-06R 05/23/24 MW-04-06R 74-99.5	MW-05(3) 05/21/24 MW-05(3) 10-15	MW-12-01 05/24/24 MW-12-01 87-110	MW-12-02 05/24/24 MW-12-02 87-110	MW-12-05R 05/20/24 MW-12-05R 100-112	MW-12-06 05/24/24 MW-12-06 80.6-99.5	MW-12-09 05/16/24 MW-12-09 14-19	MW-12-10R 05/22/24 MW-12-10R 10-15	MW-12-11 05/22/24 MW-12-11 13-18	MW-12-12 05/22/24 MW-12-12 13-18	MW-12-13 05/23/24 MW-12-13 18.5-23.5	
Per- and Polyfluoroalkyl Substances (PFAS) (via EPA Method 537 Modified)																										
11CI-PF3OUdS (F-53B Minor)	--	--	--	ng/L	< 370	NA	NA	NA	NA	< 7.5	NA	NA [NA]	NA	< 6.7	< 7.5	< 6.7 [< 6.7]	NA	NA	NA	NA	NA	< 7.7 [< 7.7]	< 7.5	< 8.0	< 7.9	< 7.7
4:2 FTS	--	--	--	ng/L	< 370 Q	NA	NA	NA	NA	< 7.5	NA	NA [NA]	NA	< 6.7	< 7.5 Q	< 6.7 [< 6.7]	NA	NA	NA	NA	NA	< 7.7 Q [< 7.7 Q]	< 7.5 Q	< 8.0	< 7.9 Q	< 7.7 Q
6:2 FTS	--	--	--	ng/L	< 370 QS	NA	NA	NA	NA	< 7.5	NA	NA [NA]	NA	< 6.7	< 7.5 Q	< 6.7 [< 6.7]	NA	NA	NA	NA	NA	< 7.7 Q [< 7.7 Q]	< 7.5 Q	< 8.0	< 7.9 Q	< 7.7 Q
8:2 FTS	--	--	--	ng/L	< 370 S	NA	NA	NA	NA	< 7.5	NA	NA [NA]	NA	< 6.7	< 7.5	< 6.7 [< 6.7]	NA	NA	NA	NA	NA	< 7.7 [< 7.7]	< 7.5	< 8.0	< 7.9 Q	< 7.7
9CI-PF3ONS (F-53B Major)	--	--	--	ng/L	< 370	NA	NA	NA	NA	< 7.5	NA	NA [NA]	NA	< 6.7	< 7.5	< 6.7 [< 6.7]	NA	NA	NA	NA	NA	< 7.7 [< 7.7]	< 7.5	< 8.0	< 7.9	< 7.7
ADONA	--	--	--	ng/L	< 370	NA	NA	NA	NA	< 7.5	NA	NA [NA]	NA	< 6.7	< 7.5	< 6.7 [< 6.7]	NA	NA	NA	NA	NA	< 7.7 [< 7.7]	< 7.5	< 8.0	< 7.9	< 7.7
Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	370	--	--	ng/L	< 370	NA	NA	NA	NA	< 7.5	NA	NA [NA]	NA	< 6.7	< 7.5	< 6.7 [< 6.7]	NA	NA	NA	NA	NA	< 7.7 [< 7.7]	< 7.5	< 8.0	< 7.9	< 7.7
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	--	--	--	ng/L	< 370 S	NA	NA	NA	NA	< 7.5	NA	NA [NA]	NA	< 6.7	< 7.5	< 6.7 [< 6.7]	NA	NA	NA	NA	NA	< 7.7 [< 7.7]	< 7.5	< 8.0	< 7.9	< 7.7
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	--	--	--	ng/L	< 370 S	NA	NA	NA	NA	< 7.5	NA	NA [NA]	NA	< 6.7	< 7.5	< 6.7 [< 6.7]	NA	NA	NA	NA	NA	< 7.7 [< 7.7]	< 7.5	< 8.0	< 7.9	< 7.7
Perfluorobutanesulfonic acid (PFBS)	420	670,000	--	ng/L	120 J	NA	NA	NA	1.9 J	NA	NA	NA [NA]	NA	< 3.3	< 3.7	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	2.0 J [2.1 J]	< 3.7	< 4.0	< 4.0	3.4 J
Perfluorobutanoic acid (PFBA)	--	--	--	ng/L	< 180 S	NA	NA	NA	8.7	NA	NA	NA [NA]	NA	1.1 J	15	3.8 [3.4]	NA	NA	NA	NA	NA	12 [12]	7.0	6.8	43	25
Perfluorodecanesulfonic acid (PFDS)	--	--	--	ng/L	< 180 S	NA	NA	NA	< 3.7	NA	NA	NA [NA]	NA	< 3.3	< 3.7	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	< 3.8 [< 3.8]	< 3.7	< 4.0	< 4.0	< 3.8
Perfluorodecanoic acid (PFDA)	--	--	--	ng/L	< 180 S	NA	NA	NA	< 3.7	NA	NA	NA [NA]	NA	< 3.3	< 3.7	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	< 3.8 [< 3.8]	< 3.7	< 4.0	5.3	< 3.8
Perfluorododecanoic acid (PFDoA)	--	--	--	ng/L	< 180	NA	NA	NA	< 3.7	NA	NA	NA [NA]	NA	< 3.3	< 3.7	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	< 3.8 [< 3.8]	< 3.7	< 4.0	< 4.0	< 3.8
Perfluoroheptanesulfonic acid (PFHpS)	--	--	--	ng/L	400 S	NA	NA	NA	< 3.7	NA	NA	NA [NA]	NA	< 3.3	< 3.7	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	< 3.8 [< 3.8]	< 3.7	< 4.0	< 4.0	< 3.8
Perfluoroheptanoic acid (PFHpA)	--	--	--	ng/L	23 J	NA	NA	NA	< 3.7	NA	NA	NA [NA]	NA	< 3.3	21	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	8.5 [8.0]	3.5 J	< 4.0	43	25
Perfluorohexanesulfonic acid (PFHxS)	51	210	--	ng/L	1,900 S	NA	NA	NA	< 3.7	NA	NA	NA [NA]	NA	< 3.3	2.0 J	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	4.0 [3.8]	1.7 J	< 4.0	2.0 J	< 3.8
Perfluorohexanoic acid (PFHxA)	400,000	--	--	ng/L	49 JS	NA	NA	NA	5.0	NA	NA	NA [NA]	NA	< 3.3	29	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	11 [13]	< 3.7	< 4.0	140	60
Perfluorononanesulfonic acid (PFNS)	--	--	--	ng/L	< 180	NA	NA	NA	< 3.7	NA	NA	NA [NA]	NA	< 3.3	< 3.7	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	< 3.8 [< 3.8]	< 3.7	< 4.0	< 4.0	< 3.8
Perfluorononanoic acid (PFNA)	6.0	30	--	ng/L	< 180	NA	NA	NA	< 3.7	NA	NA	NA [NA]	NA	< 3.3	0.68 J	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	0.58 J [0.58 J]	0.66 J	< 4.0	3.9 J	< 3.8
Perfluorooctane Sulfonamide (PFOSA)	--	--	--	ng/L	< 180 S	NA	NA	NA	< 3.7	NA	NA	NA [NA]	NA	< 3.3	< 3.7	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	< 3.8 [< 3.8]	< 3.7	< 4.0	< 4.0	< 3.8
Perfluorooctane sulfonic acid (PFOS)	16	12	--	ng/L	11,000 S	NA	NA	NA	< 3.7	NA	NA	NA [NA]	NA	< 3.3	< 3.7	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	2.8 J [3.7 J]	8.7	< 4.0	19	< 3.8
Perfluorooctanoic acid (PFOA)	8.0	170	--	ng/L	130 JS	NA	NA	NA	< 3.7	NA	NA	NA [NA]	NA	< 3.3	32	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	19 [19]	7.6	< 4.0	98	8.6
Perfluoropentanesulfonic acid (PFPeS)	--	--	--	ng/L	390 S	NA	NA	NA	< 3.7	NA	NA	NA [NA]	NA	< 3.3	< 3.7	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	< 3.8 [0.66 J]	< 3.7	< 4.0	< 4.0	< 3.8
Perfluoropentanoic acid (PFPeA)	--	--	--	ng/L	< 180	NA	NA	NA	9.4	NA	NA	NA [NA]	NA	< 3.3	26	1.0 J [< 3.3]	NA	NA	NA	NA	NA	9.1 [9.7]	4.3	< 4.0	75	33
Perfluorotetradecanoic acid (PFTeA)	--	--	--	ng/L	< 180	NA	NA	NA	< 3.7	NA	NA	NA [NA]	NA	< 3.3	< 3.7	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	< 3.8 [< 3.8]	< 3.7	< 4.0	< 4.0	< 3.8
Perfluorotridecanoic acid (PFTriA)	--	--	--	ng/L	< 180	NA	NA	NA	< 3.7	NA	NA	NA [NA]	NA	< 3.3	< 3.7	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	< 3.8 [< 3.8]	< 3.7	< 4.0	< 4.0	< 3.8
Perfluoroundecanoic acid (PFUnA)	--	--	--	ng/L	< 180 S	NA	NA	NA	< 3.7	NA	NA	NA [NA]	NA	< 3.3	< 3.7	< 3.3 [< 3.3]	NA	NA	NA	NA	NA	< 3.8 [< 3.8]	< 3.7	< 4.0	< 4.0	< 3.8
Metals (EPA Method 200.8, Standard Methods 3500-Cr)																										
Arsenic	0.01	0.01	--	mg/L	< 0.002	NA	NA	NA	0.083	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	< 0.002
Arsenic (dissolved)	0.01	0.01	--	mg/L	NA	NA	NA	NA	0.014	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Chromium III (trivalent)	0.1	0.16	--	mg/L	8.75	NA	NA	NA	0.011	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	< 0.005
Chromium III (trivalent) (dissolved)	0.1	0.16	--	mg/L	NA	NA	NA	NA	< 0.005	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Chromium VI (hexavalent)	0.1	0.011	--	mg/L	8.35	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Copper	1.0	0.02	--	mg/L	< 0.005	NA	NA	NA	0.007	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	< 0.005
Copper (dissolved)	1.0	0.02	--	mg/L	NA	NA	NA	NA	< 0.005	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Lead	0.004	0.044	--	mg/L	< 0.003	NA	NA	NA	0.005	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	< 0.003
Lead (dissolved)	0.004	0.044	--	mg/L	NA	NA	NA	NA	< 0.003	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Nickel	0.1	0.12	--	mg/L	0.009	NA	NA	NA	0.022	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	< 0.005
Nickel (dissolved)	0.1	0.12	--	mg/L	NA	NA	NA	NA	0.009	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Vanadium	0.0045	0.027	--	mg/L	< 0.005	NA	NA	NA	0.009	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	< 0.005
Vanadium (dissolved)	0.0045	0.027	--	mg/L	NA	NA	NA	NA	< 0.005	NA	NA	NA [NA]	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA

See notes on last page.

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):		Part 201 Residential Drinking Water	Part 201 Groundwater Surface Water Interface		MW-12-18 05/16/24 28-33	MW-12-20 05/21/24 75-80	MW-12-21 02/13/24 70-75	MW-12-21 05/16/24 70-75	MW-12-22 02/13/24 89-94	MW-13-22 05/16/24 89-94	MW-13-23 05/21/24 69-74	MW-13-24 05/21/24 69-74	MW-13-25 05/21/24 67-72	MW-13-28 05/20/24 99-115.5	MW-13-29 05/16/24 68-73	MW-13-32 05/22/24 5-10	MW-13-34 02/13/24 74-79	MW-13-34 05/16/24 74-79	MW-13-36R 05/23/24 5.5-10.5	MW-13-37 05/20/24 97-112	MW-13-38 05/24/24 107-124	MW-13-41 05/21/24 77-82	MW-13-43 05/14/24 72-77	MW-13-44 05/20/24 96-115	MW-13-45 05/14/24 72-77
Field Parameters																									
pH	6.5 to 8.5	6.5 to 9.0	s.u.		6.96	6.97	6.93	6.71	6.92	6.77	6.52	6.75	6.41	6.84	6.40	6.89	7.07	6.84	12.17	8.71	7.16	7.23	6.85	7.11	6.67
Conductivity	--	--	mS/cm		2.778	1.444	1.879	1.799	1.457	2.092	1.7	1.049	1.506	1.787	2.757	0.909	1.824	2.484	1.609	0.635	2.99	3.348	2.798	1.678	1.504
Turbidity	--	--	NTU		30.5	186.67	32.42	14.85	109	155.95	7.59	110	3.93	169.86	65	8.29	635	104	4.03	10.28	22.12	45.51	245.72	387	36.58
Dissolved oxygen (DO)	--	--	mg/L		0.16	1.18	0.71	0.87	0	0.18	0.22	0.46	0.42	0.15	0.23	0.25	0	0.01	0.09	1.03	0.34	0.15	6.11	0.94	1.04
Temperature	--	--	Deg C		15.4	20	7.1	23.9	10.6	25.5	17.4	20.6	21.7	17.5	18.2	12.2	11	22.4	13.1	22.6	21	15.3	15.1	22.7	14.3
Oxidation reduction potential (ORP)	--	--	millivolts		30.3	-80.6	-118.1	-8.5	-49	-63.7	110.9	-61.2	-28	-83.4	-18.7	161.6	-73.4	-112.2	-88.1	-40.3	-130.2	39.8	157.1	-88.2	-17.6
Volatile Organics (via EPA Method SW5030C/8260C)																									
1,1-Dichloroethane	880	740	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
1,1-Dichloroethene	7.0	130	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
1,1,1-Trichloroethane	200	89	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
1,1,1,2-Tetrachloroethane	77	--	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
1,1,2-Trichloroethane	5.0	330	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
1,1,2,2-Tetrachloroethane	8.5	78	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
1,2-Dibromo-3-chloropropane (DBCP)	0.2	--	µg/L		< 5	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	NA	NA [NA]	NA	< 5	NA [NA]	NA	NA	< 5	NA	NA	NA
1,2-Dibromomethane (Ethylene dibromide)	0.05	5.7	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
1,2-Dichlorobenzene	600	13	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
1,2-Dichloroethane	5.0	360	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
1,2-Dichloropropane	5.0	230	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
1,2,3-Trichlorobenzene	--	--	µg/L		< 5	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	NA	NA [NA]	NA	< 5	NA [NA]	NA	NA	< 5	NA	NA	NA
1,2,3-Trichloropropane	42	--	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
1,2,3-Trimethylbenzene	--	--	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
1,2,4-Trichlorobenzene	70	99	µg/L		< 5	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	NA	NA [NA]	NA	< 5	NA [NA]	NA	NA	< 5	NA	NA	NA
1,2,4-Trimethylbenzene	63	17	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
1,3-Dichlorobenzene	6.6	28	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
1,3,5-Trimethylbenzene	72	45	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
1,4-Dichlorobenzene	75	17	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
1,4-Dioxane	7.2	280	µg/L		NA	< 1	145	157	79 [77]	124	< 1	< 1	< 1	4.0*	9	NA [NA]	97	114	NA [NA]	0.41*	0.83*	NA	3.0	3.6 *	28
2-Butanone (Methyl ethyl ketone) (MEK)	13,000	2,200	µg/L		< 25	NA	NA	< 25	NA [NA]	< 25	NA	NA	NA	NA	NA	NA [NA]	NA	< 25	NA [NA]	NA	NA	< 25	NA	NA	NA
2-Hexanone	1,000	--	µg/L		< 50	NA	NA	< 50	NA [NA]	< 50	NA	NA	NA	NA	NA	NA [NA]	NA	< 50	NA [NA]	NA	NA	< 50	NA	NA	NA
2-Methylnaphthalene	260	19	µg/L		< 5	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	NA	NA [NA]	NA	< 5	NA [NA]	NA	NA	< 5	NA	NA	NA
2-Phenylbutane (sec-Butylbenzene)	80	--	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1,800	--	µg/L		< 50	NA	NA	< 50	NA [NA]	< 50	NA	NA	NA	NA	NA	NA [NA]	NA	< 50	NA [NA]	NA	NA	< 50	NA	NA	NA
Acetone	730	1,700	µg/L		< 50	NA	NA	< 50	NA [NA]	< 50	NA	NA	NA	NA	NA	NA [NA]	NA	< 50	NA [NA]	NA	NA	< 50	NA	NA	NA
Acrylonitrile	2.6	2.0	µg/L		< 2	NA	NA	< 2	NA [NA]	< 2	NA	NA	NA	NA	NA	NA [NA]	NA	< 2	NA [NA]	NA	NA	< 2	NA	NA	NA
Benzene	5.0	200	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
Bromobenzene	18	--	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
Bromodichloromethane	80	--	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
Bromoform	80	--	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
Bromomethane (Methyl bromide)	10	5.0	µg/L		< 5	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	NA	NA [NA]	NA	< 5	NA [NA]	NA	NA	< 5	NA	NA	NA
Carbon disulfide	800	--	µg/L		< 5	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	NA	NA [NA]	NA	< 5	NA [NA]	NA	NA	< 5	NA	NA	NA
Carbon tetrachloride	5.0	38	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
Chlorobenzene	100	25	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
Chlorobromomethane	--	--	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
Chloroethane	430	1,100	µg/L		< 5	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	NA	NA [NA]	NA	< 5	NA [NA]	NA	NA	< 5	NA	NA	NA
Chloroform (Trichloromethane)	80	350	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
Chloromethane (Methyl chloride)	260	--	µg/L		< 5	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	NA	NA [NA]	NA	< 5	NA [NA]	NA	NA	< 5	NA	NA	NA
cis-1,2-Dichloroethene	70	620	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
cis-1,3-Dichloropropene	--	--	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
Cymene (p-Isopropyltoluene)	--	--	µg/L		< 5	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	NA	NA [NA]	NA	< 5	NA [NA]	NA	NA	< 5	NA	NA	NA
Dibromochloromethane	80	--	µg/L		< 5	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	NA	NA [NA]	NA	< 5	NA [NA]	NA	NA	< 5	NA	NA	NA
Dibromomethane	80	--	µg/L		< 5	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	NA	NA [NA]	NA	< 5	NA [NA]	NA	NA	< 5	NA	NA	NA
Dichlorodifluoromethane (CFC-12)	1,700	--	µg/L		< 5	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	NA	NA [NA]	NA	< 5	NA [NA]	NA	NA	< 5	NA	NA	NA
Ethyl ether	10	--	µg/L		< 10	NA	NA	< 10	NA [NA]	< 10	NA	NA	NA	NA	NA	NA [NA]	NA	< 10	NA [NA]	NA	NA	< 10	NA	NA	NA
Ethylbenzene	74	18	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
Hexachloroethane	7.3	6.7	µg/L		< 5	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	NA	NA [NA]	NA	< 5	NA [NA]	NA	NA	< 5	NA	NA	NA
Iodomethane	--	--	µg/L		< 1	NA	NA	< 1	NA [NA]	< 1	NA	NA	NA	NA	NA	NA [NA]	NA	< 1	NA [NA]	NA	NA	< 1	NA	NA	NA
Isopropyl benzene	800	28	µg/L		< 5	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	NA	NA [NA]	NA	< 5	NA [NA]	NA	NA	< 5	NA	NA	NA
Methyl tert butyl ether (MTBE)	40	7,100	µg/L		< 5	NA	NA	< 5	NA [NA]	< 5	NA	NA	NA	NA	NA	NA [NA]	NA	< 5	NA [NA]	NA	NA	< 5	NA	NA	NA
Methylene chloride	5.0	1,500	µg/L		< 5	NA	NA	< 5	NA [NA]	< 5	NA	NA													

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):	Part 201 Residential Drinking Water	Part 201 Groundwater Surface Water Interface	Units	MW-12-18 05/16/24 28-33	MW-12-20 05/21/24 75-80	MW-12-21 02/13/24 70-75	MW-12-21 05/16/24 70-75	MW-12-22 02/13/24 89-94	MW-12-22 05/16/24 89-94	MW-12-23 05/21/24 69-74	MW-12-24 05/21/24 69-74	MW-12-25 05/21/24 67-72	MW-12-28 05/20/24 99-115.5	MW-12-29 05/16/24 68-73	MW-12-32 05/22/24 5-10	MW-12-34 02/13/24 74-79	MW-12-34 05/16/24 74-79	MW-12-36R 05/23/24 5.5-10.5	MW-12-37 05/20/24 97-112	MW-12-38 05/24/24 107-124	MW-12-41 05/21/24 77-82	MW-12-43 05/14/24 72-77	MW-12-44 05/20/24 96-115	MW-12-45 05/14/24 72-77			
Semi-Volatile Organics (via EPA Method SW5030C/8270D)																											
1,2-Dichlorobenzene	600	13	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
1,2-Diphenylhydrazine	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
1,2,4-Trichlorobenzene	70	99	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
1,3-Dichlorobenzene	6.6	28	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1 [1]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
1,4-Dichlorobenzene	75	17	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1 [1]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
2,4-Dichlorophenol	73	11	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10 [10]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
2,4-Dimethylphenol	370	380	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
2,4-Dinitrophenol	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 25 [25]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
2,4-Dinitrotoluene	7.7	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
2,4,5-Trichlorophenol	730	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
2,4,6-Trichlorophenol	120	5.0	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 4 [4]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
2,6-Dinitrotoluene	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
2-Chloronaphthalene	1,800	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
2-Chlorophenol	45	18	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10 [10]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
2-Methylnaphthalene	260	19	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
2-Methylphenol	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10 [10]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
2-Nitroaniline	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 25 [25]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
2-Nitrophenol	20	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
3&4-Methylphenol	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 20 [20]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
3,3'-Dichlorobenzidine	1.1	0.3	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
3-Nitroaniline	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 25 [25]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
4,6-Dinitro-2-methylphenol	20	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 20 [20]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
4-Bromophenyl phenyl ether	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
4-Chloro-3-methylphenol	150	7.4	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
4-Chloroaniline	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10 [10]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
4-Chlorophenyl phenyl ether	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
4-Nitroaniline	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 25 [25]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
4-Nitrophenol	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 25 [25]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
Acenaphthene	1,300	38	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
Acenaphthylene	52	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
Anthracene	43	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
Benzo(a)anthracene	2.1	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1 [1]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
Benzo(a)pyrene	5.0	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1 [1]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
Benzo(b)fluoranthene	1.5	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1 [1]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
Benzo(g,h,i)perylene	1.0	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1 [1]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
Benzo(k)fluoranthene	1.0	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1 [1]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
bis(2-Chloroethoxy)methane	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
bis(2-Chloroethyl)ether	2.0	1.0	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
bis(2-Ethylhexyl)phthalate (DEHP)	6.0	14	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
Butyl benzylphthalate (BBP)	1,200	67	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
Chrysene	1.6	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1 [1]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
Dibenz(a,h)anthracene	2.0	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2 [2]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
Dibenzofuran	--	4.0	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 4 [4]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
Diethyl phthalate	5,500	110	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 [5]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA		
Dimethyl phthalate	73,000	--																									

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RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):		Part 201 Groundwater Surface Water Interface	Units	MW-12-18 05/16/24 MW-12-18_051624 28-33	MW-12-20 05/21/24 MW-12-20 75-80	MW-12-21 02/13/24 MW-12-21 70-75	MW-12-21 05/16/24 MW-12-21 70-75	MW-13-22 02/13/24 MW-13-22 89-94	MW-13-22 05/16/24 MW-13-22 89-94	MW-13-23 05/21/24 MW-13-23 69-74	MW-13-24 05/21/24 MW-13-24 69-74	MW-13-25 05/21/24 MW-13-25 67-72	MW-13-28 05/20/24 MW-13-28 99-115.5	MW-13-29 05/16/24 MW-13-29 68-73	MW-13-32 05/22/24 MW-13-32 5-10	MW-13-34 02/13/24 MW-13-34 74-79	MW-13-34 05/16/24 MW-13-34 74-79	MW-13-36R 05/23/24 MW-13-36R 5.5-10.5	MW-13-37 05/20/24 MW-13-37 97-112	MW-13-38 05/24/24 MW-13-38 107-124	MW-13-41 05/21/24 MW-13-41 77-82	MW-13-43 05/14/24 MW-13-43 72-77	MW-13-44 05/20/24 MW-13-44 96-115	MW-13-45 05/14/24 MW-13-45 72-77	
Per- and Polyfluoroalkyl Substances (PFAS) (via EPA Method 537 Modified)																									
11CI-PF3OUdS (F-53B Minor)	--	--	ng/L	< 7.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 7.6 [< 6.7 H]	NA	NA	NA	NA	NA	NA	NA
4:2 FTS	--	--	ng/L	< 7.7 Q	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 7.6 Q [< 6.7 HQ]	NA	NA	NA	NA	NA	NA	NA
6:2 FTS	--	--	ng/L	< 7.7 Q	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 7.6 Q [< 6.7 HQ]	NA	NA	NA	NA	NA	NA	NA
8:2 FTS	--	--	ng/L	< 7.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 7.6 Q [< 6.9 Q]	NA	NA	NA	NA	NA	NA	NA
9CI-PF3ONS (F-53B Major)	--	--	ng/L	< 7.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 7.6 [< 6.7 H]	NA	NA	NA	NA	NA	NA	NA
ADONA	--	--	ng/L	< 7.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 7.6 [< 6.7 H]	NA	NA	NA	NA	NA	NA	NA
Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	370	--	ng/L	< 7.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 7.6 [< 6.7 H]	NA	NA	NA	NA	NA	NA	NA
N-ethyl perfluorooctane sulfonamidoacetic acid (NEFOSAA)	--	--	ng/L	< 7.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	4.4 J [4.8 HJ]	NA	NA	NA	NA	NA	NA	NA
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	--	--	ng/L	< 7.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	3.0 J [2.9 HJ]	NA	NA	NA	NA	NA	NA	NA
Perfluorobutanesulfonic acid (PFBS)	420	670,000	ng/L	0.80 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	2.5 J [2.3 HJ]	NA	NA	NA	NA	NA	NA	NA
Perfluorobutanoic acid (PFBA)	--	--	ng/L	7.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 3.8 Q [200 HQ]	NA	NA	NA	NA	NA	NA	NA
Perfluorodecanesulfonic acid (PFDS)	--	--	ng/L	< 3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 3.8 [< 3.3 H]	NA	NA	NA	NA	NA	NA	NA
Perfluorodecanoic acid (PFDA)	--	--	ng/L	< 3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	20 [21 H]	NA	NA	NA	NA	NA	NA	NA
Perfluorododecanoic acid (PFDoA)	--	--	ng/L	< 3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 3.8 [0.46 HJ]	NA	NA	NA	NA	NA	NA	NA
Perfluoroheptanesulfonic acid (PFHpS)	--	--	ng/L	< 3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 3.8 [< 3.3 H]	NA	NA	NA	NA	NA	NA	NA
Perfluoroheptanoic acid (PFHpA)	--	--	ng/L	1.9 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	27 [31 H]	NA	NA	NA	NA	NA	NA	NA
Perfluorohexanesulfonic acid (PFHxS)	51	210	ng/L	0.69 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	1.7 J [2.0 HJ]	NA	NA	NA	NA	NA	NA	NA
Perfluorohexanoic acid (PFHxA)	400,000	--	ng/L	2.9 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	32 [31 H]	NA	NA	NA	NA	NA	NA	NA
Perfluorononanesulfonic acid (PFNS)	--	--	ng/L	< 3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 3.8 [< 3.3 H]	NA	NA	NA	NA	NA	NA	NA
Perfluorononanoic acid (PFNA)	6.0	30	ng/L	< 3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	11 [11 H]	NA	NA	NA	NA	NA	NA	NA
Perfluorooctane Sulfonamide (PFOSA)	--	--	ng/L	< 3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	2.6 J [2.5 HJ]	NA	NA	NA	NA	NA	NA	NA
Perfluorooctane sulfonic acid (PFOS)	16	12	ng/L	< 3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	35 [38 H]	NA	NA	NA	NA	NA	NA	NA
Perfluorooctanoic acid (PFOA)	8.0	170	ng/L	< 3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	56 [53 H]	NA	NA	NA	NA	NA	NA	NA
Perfluoropentanesulfonic acid (PFPeS)	--	--	ng/L	< 3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 3.8 [0.85 HJ]	NA	NA	NA	NA	NA	NA	NA
Perfluoropentanoic acid (PFPeA)	--	--	ng/L	3.5 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	28 Q [25 HQ]	NA	NA	NA	NA	NA	NA	NA
Perfluorotetradecanoic acid (PFTeA)	--	--	ng/L	< 3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 3.8 [< 3.3 H]	NA	NA	NA	NA	NA	NA	NA
Perfluorotridecanoic Acid (PFTriA)	--	--	ng/L	< 3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 3.8 [< 3.3 H]	NA	NA	NA	NA	NA	NA	NA
Perfluoroundecanoic acid (PFUnA)	--	--	ng/L	< 3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	0.77 J [0.64 HJ]	NA	NA	NA	NA	NA	NA	NA
Metals (EPA Method 200.8, Standard Methods 3500-Cr)																									
Arsenic	0.01	0.01	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.002 [< 0.002]	NA	NA	< 0.002 [< 0.002]	NA	NA	NA	NA	NA	NA	NA
Arsenic (dissolved)	0.01	0.01	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA
Chromium III (trivalent)	0.1	0.16	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.005 [< 0.005]	NA	NA	< 0.005 [< 0.005]	NA	NA	NA	NA	NA	NA	NA
Chromium III (trivalent) (dissolved)	0.1	0.16	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA
Chromium VI (hexavalent)	0.1	0.011	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA
Copper	1.0	0.02	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.005 [0.005]	NA	NA	< 0.005 [< 0.005]	NA	NA	NA	NA	NA	NA	NA
Copper (dissolved)	1.0	0.02	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA
Lead	0.004	0.044	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.003 [< 0.003]	NA	NA	< 0.003 [< 0.003]	NA	NA	NA	NA	NA	NA	NA
Lead (dissolved)	0.004	0.044	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.12	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.400 [0.409]	NA	NA	< 0.005 [< 0.005]	NA	NA	NA	NA	NA	NA	NA
Nickel (dissolved)	0.1	0.12	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA
Vanadium	0.0045	0.027	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.005 [< 0.005]	NA	NA	0.008 [0.009]	NA	NA	NA	NA	NA	NA	NA
Vanadium (dissolved)	0.0045	0.027	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA

See notes on last page.

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):		Part 201 Residential Drinking Water	Part 201 Groundwater Surface Water Interface	Units	MW-13-46 05/21/24 MW-13-46 68-73	MW-13-47 05/24/24 MW-13-47 99-119	MW-13-48 05/16/24 MW-13-48 65-70	MW-13-49 05/21/24 MW-13-49 73-78	MW-13-50 05/23/24 MW-13-50 85-107	MW-13-52 05/23/24 MW-13-52 70-80	MW-14-54 05/16/24 MW-14-54 14-19	MW-14-55 05/16/24 MW-14-55 13-18	MW-14-56 04/09/24 MW-14-56 71-76	MW-14-57 05/17/24 MW-14-57 15-20	MW-14-58R 04/08/24 MW-14-58R 22-27	MW-14-59 05/17/24 MW-14-59 12-17	MW-14-60 05/17/24 MW-14-60 15-20	MW-14-61 05/15/24 MW-14-61 70-75	MW-14-62 05/15/24 MW-14-62 12-17	MW-14-63 05/16/24 MW-14-63 68-73	MW-14-64 05/15/24 MW-14-64 98.6-103.6	MW-14-66 05/23/24 MW-14-66 14-19	MW-14-67 05/23/24 MW-14-67 13-18	MW-14-70 05/22/24 MW-14-70 16-21	MW-15-71 05/21/24 MW-15-71 110-115	
Field Parameters																										
pH	6.5 to 8.5	6.5 to 9.0	s.u.	6.78	6.94	6.52	6.91	6.75	6.92	8.13	7.17	6.77	7.36	6.98	7.1	7.41	6.91	11.5	6.88	6.96	7.55	7.29	7.14	7.05		
Conductivity	--	--	mS/cm	2.601	1.895	2.863	1.974	1.2	1.158	0.973	0.699	3.291	1.011	2.552	0.76	1.233	3.237	0.602	1.277	1.686	0.828	1.076	1.522	1.45		
Turbidity	--	--	NTU	58.37	89.11	133	121.11	43	31.91	28.84	5.15	7.09	28.9	10.94	8.44	28.64	28.11	9.76	123.93	33.24	52.48	3.73	27.64	82.43		
Dissolved oxygen (DO)	--	--	mg/L	3.15	2.54	0	1.11	0.33	0.38	0	7.04	0.44	4.09	0.24	0	0	0.53	0.25	0.39	0.25	0	0.08	0.4	0.22		
Temperature	--	--	Deg C	19.6	20.1	16.3	22.4	17.5	17.1	14.8	12.7	14.1	14	15	15.6	16	15	16.9	18.3	24.7	15.9	13.1	28.8	17		
Oxidation reduction potential (ORP)	--	--	millivolts	-36.9	-105	-86.1	-37.6	-76.2	-83	-189.4	133.7	-46.7	140.6	-65.4	3.4	-84.2	180.9	-346.8	-75.2	-96.6	-67.2	138.5	109.7	-82.6		
Volatile Organics (via EPA Method SW5030C/8260C)																										
1,1-Dichloroethane	880	740	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	2	< 1	< 1 [< 1]	140 Y	NA	NA	NA	NA	NA	NA		
1,1-Dichloroethene	7.0	130	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	16	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
1,1,1-Trichloroethane	200	89	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
1,1,1,2-Tetrachloroethane	77	--	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
1,1,2-Trichloroethane	5.0	330	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
1,1,2,2-Tetrachloroethane	8.5	78	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
1,2-Dibromo-3-chloropropane (DBCP)	0.2	--	µg/L	NA	NA	< 5 [< 5]	NA	NA	NA	< 50	< 5	NA	NA	< 5 [< 5]	< 5	< 5	< 5 [< 5]	< 50 Y	NA	NA	NA	NA	NA	NA		
1,2-Dibromomethane (Ethylene dibromide)	0.05	5.7	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
1,2-Dichlorobenzene	600	13	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
1,2-Dichloroethane	5.0	360	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
1,2-Dichloropropane	5.0	230	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
1,2,3-Trichlorobenzene	--	--	µg/L	NA	NA	< 5 [< 5]	NA	NA	NA	< 50	< 5	NA	NA	< 5 [< 5]	< 5	< 5	< 5 [< 5]	< 50 Y	NA	NA	NA	NA	NA	NA		
1,2,3-Trichloropropane	42	--	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
1,2,3-Trimethylbenzene	--	--	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
1,2,4-Trichlorobenzene	70	99	µg/L	NA	NA	< 5 [< 5]	NA	NA	NA	< 50	< 5	NA	NA	< 5 [< 5]	< 5	< 5	< 5 [< 5]	< 50 Y	NA	NA	NA	NA	NA	NA		
1,2,4-Trimethylbenzene	63	17	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	310	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
1,3-Dichlorobenzene	6.6	28	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
1,3,5-Trimethylbenzene	72	45	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	20	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
1,4-Dichlorobenzene	75	17	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
1,4-Dioxane	7.2	280	µg/L	< 1	1.2*	86 [91]	< 1	< 1	< 1	NA	NA	18	< 1	280 [270]	8	10	8 [8]	112	3	< 1	NA	NA	NA	< 1		
2-Butanone (Methyl ethyl ketone) (MEK)	13,000	2,200	µg/L	NA	NA	< 25 [< 25]	NA	NA	NA	< 250	< 25	NA	NA	< 25 [< 25]	< 25	< 25	< 25 [< 25]	< 250 Y	NA	NA	NA	NA	NA	NA		
2-Hexanone	1,000	--	µg/L	NA	NA	< 50 [< 50]	NA	NA	NA	< 500	< 50	NA	NA	< 50 [< 50]	< 50	< 50	< 50 [< 50]	< 500 Y	NA	NA	NA	NA	NA	NA		
2-Methylnaphthalene	260	19	µg/L	NA	NA	< 5 [< 5]	NA	NA	NA	< 50	< 5	NA	NA	< 5 [< 5]	< 5	< 5	< 5 [< 5]	< 50 Y	NA	NA	NA	NA	NA	NA		
2-Phenylbutane (sec-Butylbenzene)	80	--	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1,800	--	µg/L	NA	NA	< 50 [< 50]	NA	NA	NA	< 500	< 50	NA	NA	< 50 [< 50]	< 50	< 50	< 50 [< 50]	< 500 Y	NA	NA	NA	NA	NA	NA		
Acetone	730	1,700	µg/L	NA	NA	< 50 [< 50]	NA	NA	NA	< 500	< 50	NA	NA	< 50 [< 50]	< 50	< 50	< 50 [< 50]	< 500 Y	NA	NA	NA	NA	NA	NA		
Acrylonitrile	2.6	2.0	µg/L	NA	NA	< 2 [< 2]	NA	NA	NA	< 20	< 2	NA	NA	< 2 [< 2]	< 2	< 2	< 2 [< 2]	< 20 Y	NA	NA	NA	NA	NA	NA		
Benzene	5.0	200	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	460	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
Bromobenzene	18	--	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
Bromodichloromethane	80	--	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
Bromoform	80	--	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
Bromomethane (Methyl bromide)	10	5.0	µg/L	NA	NA	< 5 [< 5]	NA	NA	NA	< 50	< 5	NA	NA	< 5 [< 5]	< 5	< 5	< 5 [< 5]	< 50 Y	NA	NA	NA	NA	NA	NA		
Carbon disulfide	800	--	µg/L	NA	NA	< 5 [< 5]	NA	NA	NA	< 50	< 5	NA	NA	< 5 [< 5]	< 5	< 5	< 5 [< 5]	< 50 Y	NA	NA	NA	NA	NA	NA		
Carbon tetrachloride	5.0	38	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
Chlorobenzene	100	25	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
Chlorobromomethane	--	--	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
Chloroethane	430	1,100	µg/L	NA	NA	< 5 [< 5]	NA	NA	NA	< 50	< 5	NA	NA	< 5 [< 5]	< 5	< 5	< 5 [< 5]	< 50 Y	NA	NA	NA	NA	NA	NA		
Chloroform (Trichloromethane)	80	350	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
Chloromethane (Methyl chloride)	260	--	µg/L	NA	NA	< 5 [< 5]	NA	NA	NA	< 50	< 5	NA	NA	< 5 [< 5]	< 5	< 5	< 5 [< 5]	< 50 Y	NA	NA	NA	NA	NA	NA		
cis-1,2-Dichloroethene	70	620	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
cis-1,3-Dichloropropene	--	--	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	< 10	< 1	NA	NA	< 1 [< 1]	< 1	< 1	< 1 [< 1]	< 10 Y	NA	NA	NA	NA	NA	NA		
Cymene (p-Isopropyltoluene)	--	--	µg/L	NA	NA	< 5 [< 5]	NA	NA	NA	< 50	< 5	NA	NA	< 5 [< 5]	< 5	< 5	< 5 [< 5]	< 50 Y	NA	NA	NA	NA	NA	NA		
Dibromochloromethane	80	--	µg/L	NA	NA	< 5 [< 5]	NA	NA	NA	< 50	< 5	NA	NA	< 5 [< 5]	< 5	< 5	< 5 [< 5]	< 50 Y	NA	NA	NA	NA	NA	NA		
Dibromomethane	80	--	µg/L	NA	NA	< 5 [< 5]	NA	NA	NA	< 50	< 5	NA	NA	< 5 [< 5]	< 5	< 5	< 5 [< 5]	< 50 Y	NA	NA	NA	NA	NA	NA		
Dichlorodifluoromethane (CFC-12)	1,700	--	µg/L	NA	NA	< 5 [< 5]	NA	NA	NA	< 50	< 5	NA	NA	< 5 [< 5]	< 5	< 5	< 5 [< 5]	< 50 Y	NA	NA	NA	NA	NA	NA		
Ethyl ether	10	--	µg/L	NA	NA	< 10 [< 10]	NA	NA	NA	< 100	< 10	NA	NA	< 10 [< 10]	< 10	< 10	< 10 [< 10]	< 100 Y	NA	NA	NA	NA	NA	NA		
Ethylbenzene	74	18	µg/L	NA	NA	< 1 [< 1]	NA	NA	NA	690	< 1	NA														

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Part 201		Part 201			MW-13-46	MW-13-47	MW-13-48	MW-13-49	MW-13-50	MW-13-52	MW-14-54	MW-14-55	MW-14-56	MW-14-57	MW-14-58R	MW-14-59	MW-14-60	MW-14-61	MW-14-62	MW-14-63	MW-14-64	MW-14-66	MW-14-67	MW-14-70	MW-15-71		
Date Collected: Residential		Groundwater			05/21/24	05/24/24	05/16/24	05/21/24	05/23/24	05/23/24	05/16/24	05/16/24	04/09/24	05/17/24	04/08/24	05/17/24	05/17/24	05/15/24	05/15/24	05/16/24	05/21/24	05/23/24	05/23/24	05/22/24	05/21/24		
Sample Name: Drinking		Surface Water			MW-13-46	MW-13-47	MW-13-48	MW-13-49	MW-13-50	MW-13-52	MW-14-54	MW-14-55	MW-14-56	MW-14-57	MW-14-58R	MW-14-59	MW-14-60	MW-14-61	MW-14-62	MW-14-63	MW-14-64	MW-14-66	MW-14-67	MW-14-70	MW-15-71		
Sample Depth (ft. bgs): Water		Interface	Units		68-73	99-119	65-70	73-78	85-107	70-80	14-19	13-18	71-76	15-20	22-27	12-17	15-20	70-75	12-17	68-73	98.6-103.6	14-19	13-18	16-21	110-115		
Semi-Volatile Organics (via EPA Method SW5030C/8270D)																											
1,2-Dichlorobenzene	600	13	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1 [< 1]	< 1	NA	NA	NA	NA	NA	NA		
1,2-Diphenylhydrazine	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
1,2,4-Trichlorobenzene	70	99	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
1,3-Dichlorobenzene	6.6	28	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1 [< 1]	< 1	NA	NA	NA	NA	NA	NA		
1,4-Dichlorobenzene	75	17	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1 [< 1]	< 1	NA	NA	NA	NA	NA	NA		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
2,4-Dichlorophenol	73	11	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 10	< 10	< 10 [< 10]	< 10	NA	NA	NA	NA	NA	NA		
2,4-Dimethylphenol	370	380	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
2,4-Dinitrophenol	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 25	< 25	< 25 [< 25]	< 25	NA	NA	NA	NA	NA	NA		
2,4-Dinitrotoluene	7.7	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
2,4,5-Trichlorophenol	730	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
2,4,6-Trichlorophenol	120	5.0	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 4	< 4	< 4 [< 4]	< 4	NA	NA	NA	NA	NA	NA		
2,6-Dinitrotoluene	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
2-Chloronaphthalene	1,800	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
2-Chlorophenol	45	18	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 10	< 10	< 10 [< 10]	< 10	NA	NA	NA	NA	NA	NA		
2-Methylnaphthalene	260	19	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
2-Methylphenol	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 10	< 10	< 10 [< 10]	< 10	NA	NA	NA	NA	NA	NA		
2-Nitroaniline	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 25	< 25	< 25 [< 25]	< 25	NA	NA	NA	NA	NA	NA		
2-Nitrophenol	20	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
3&4-Methylphenol	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 20	< 20	< 20 [< 20]	< 20	NA	NA	NA	NA	NA	NA		
3,3'-Dichlorobenzidine	1.1	0.3	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
3-Nitroaniline	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 25	< 25	< 25 [< 25]	< 25	NA	NA	NA	NA	NA	NA		
4,6-Dinitro-2-methylphenol	20	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 20	< 20	< 20 [< 20]	< 20	NA	NA	NA	NA	NA	NA		
4-Bromophenyl phenyl ether	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
4-Chloro-3-methylphenol	150	7.4	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
4-Chloroaniline	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 10	< 10	< 10 [< 10]	< 10	NA	NA	NA	NA	NA	NA		
4-Chlorophenyl phenyl ether	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
4-Nitroaniline	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 25	< 25	< 25 [< 25]	< 25	NA	NA	NA	NA	NA	NA		
4-Nitrophenol	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 25	< 25	< 25 [< 25]	< 25	NA	NA	NA	NA	NA	NA		
Acenaphthene	1,300	38	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
Acenaphthylene	52	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
Anthracene	43	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
Benzo(a)anthracene	2.1	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1 [< 1]	< 1	NA	NA	NA	NA	NA	NA		
Benzo(a)pyrene	5.0	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1 [< 1]	< 1	NA	NA	NA	NA	NA	NA		
Benzo(b)fluoranthene	1.5	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1 [< 1]	< 1	NA	NA	NA	NA	NA	NA		
Benzo(g,h,i)perylene	1.0	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1 [< 1]	< 1	NA	NA	NA	NA	NA	NA		
Benzo(k)fluoranthene	1.0	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1 [< 1]	< 1	NA	NA	NA	NA	NA	NA		
bis(2-Chloroethoxy)methane	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
bis(2-Chloroethyl)ether	2.0	1.0	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	< 5	NA	NA	NA	NA	NA	NA		
bis(2-Ethylhexyl)phthalate (DEHP)	6.0	14	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5 [< 5]	<								

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Part 201			Units	MW-13-46	MW-13-47	MW-13-48	MW-13-49	MW-13-50	MW-13-52	MW-14-54	MW-14-55	MW-14-56	MW-14-57	MW-14-58R	MW-14-59	MW-14-60	MW-14-61	MW-14-62	MW-14-63	MW-14-64	MW-14-66	MW-14-67	MW-14-70	MW-15-71			
Date Collected: Residential		Groundwater		05/21/24	05/24/24	05/16/24	05/21/24	05/23/24	05/23/24	05/16/24	05/16/24	04/09/24	05/17/24	04/08/24	05/17/24	05/17/24	05/15/24	05/15/24	05/16/24	05/21/24	05/23/24	05/23/24	05/22/24	05/21/24			
Sample Name: Drinking		Surface Water		MW-13-46	MW-13-47	MW-13-48	MW-13-49	MW-13-50	MW-13-52	MW-14-54	MW-14-55	MW-14-56	MW-14-57	MW-14-58R	MW-14-59	MW-14-60	MW-14-61	MW-14-62	MW-14-63	MW-14-64	MW-14-66	MW-14-67	MW-14-70	MW-15-71			
Sample Depth (ft. bgs): Water		Interface		68-73	99-119	65-70	73-78	85-107	70-80	14-19	13-18	71-76	15-20	22-27	12-17	15-20	70-75	12-17	68-73	98.6-103.6	14-19	13-18	16-21	110-115			
Per- and Polyfluoroalkyl Substances (PFAS) (via EPA Method 537 Modified)																											
11CI-PF3OUdS (F-53B Minor)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 13 J	NA	< 6.8 [< 6.9]	< 7.4	< 7.5	< 7.4 [< 7.3]	< 6.6	NA	NA	NA	< 6.6	< 7.7	NA			
4:2 FTS	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 13	NA	< 6.8 [< 6.9]	< 7.4 Q	< 7.5 Q	< 7.4 [< 7.3]	< 6.6 Q	NA	NA	NA	< 6.6	< 7.7 Q	NA			
6:2 FTS	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 13 J	NA	< 6.8 [< 6.9]	< 7.4 Q	< 7.5 Q	< 7.4 [< 7.3]	15 Q	NA	NA	NA	< 6.6 Q	< 7.7 Q	NA			
8:2 FTS	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 13	NA	< 6.8 [< 6.9]	< 7.4	< 7.5 Q	< 7.4 [< 7.3]	3.0 JQ	NA	NA	NA	< 6.6	< 7.7	NA			
9CI-PF3ONS (F-53B Major)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 13	NA	< 6.8 [< 6.9]	< 7.4	< 7.5	< 7.4 [< 7.3]	< 6.6	NA	NA	NA	< 6.6	< 7.7	NA			
ADONA	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 13	NA	< 6.8 [< 6.9]	< 7.4	< 7.5	< 7.4 [< 7.3]	< 6.6	NA	NA	NA	< 6.6	< 7.7	NA			
Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	370	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 13	NA	< 6.8 [< 6.9]	< 7.4	< 7.5	< 7.4 [< 7.3]	< 6.6	NA	NA	NA	< 6.6	< 7.7	NA			
N-ethyl perfluorooctane sulfonamidoacetic acid (NEFOSAA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 13	NA	< 6.8 [< 6.9]	< 7.4	< 7.5	< 7.4 [< 7.3]	1.8 J	NA	NA	NA	< 6.6	< 7.7	NA			
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 13 J	NA	< 6.8 [< 6.9]	< 7.4	< 7.5	< 7.4 [< 7.3]	1.0 J	NA	NA	NA	< 6.6	< 7.7	NA			
Perfluorobutanesulfonic acid (PFBS)	420	670,000	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	0.82 J	NA	1.9 J [1.2 J]	< 3.7	< 3.8	< 3.7 [< 3.7]	1.7 J	NA	NA	NA	3.6	7.7	NA			
Perfluorobutanoic acid (PFBA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	14	NA	9.5 [8.7]	15	24	3.6 J [3.8]	40 Q	NA	NA	NA	38	56	NA			
Perfluorodecanesulfonic acid (PFDS)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 6.6	NA	< 3.4 [< 3.4]	< 3.7	< 3.8	< 3.7 [< 3.7]	< 3.3	NA	NA	NA	< 3.3	< 3.8	NA			
Perfluorodecanoic acid (PFDA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 6.6	NA	< 3.4 [< 3.4]	< 3.7	1.1 J	< 3.7 [< 3.7]	2.5 J	NA	NA	NA	1.3 J	< 3.8	NA			
Perfluorododecanoic acid (PFDoA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 6.6	NA	< 3.4 [< 3.4]	< 3.7	< 3.8	< 3.7 [< 3.7]	< 3.3	NA	NA	NA	< 3.3	< 3.8	NA			
Perfluoroheptanesulfonic acid (PFHpS)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 6.6	NA	< 3.4 [< 3.4]	< 3.7	< 3.8	< 3.7 [< 3.7]	0.90 J	NA	NA	NA	< 3.3	< 3.8	NA			
Perfluoroheptanoic acid (PFHpA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	2.3 J	NA	4.8 [4.6]	9.1	13	0.73 J [0.81 J]	23	NA	NA	NA	29	64	NA			
Perfluorohexanesulfonic acid (PFHxS)	51	210	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	1.6 J	NA	2.6 J [2.5 J]	2.8 J	7	< 3.7 [< 3.7]	7.9	NA	NA	NA	1.0 J	2.9 J	NA			
Perfluorohexanoic acid (PFHxA)	400,000	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	6.5 J	NA	7.1 [6.9]	21	20	< 3.7 [1.3 J]	25	NA	NA	NA	83	140	NA			
Perfluoronananesulfonic acid (PFNS)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 6.6	NA	< 3.4 [< 3.4]	< 3.7	< 3.8	< 3.7 [< 3.7]	< 3.3	NA	NA	NA	< 3.3	< 3.8	NA			
Perfluorononanoic acid (PFNA)	6.0	30	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	1.1 J	NA	0.67 J [0.77 J]	< 3.7	4.8	< 3.7 [< 3.7]	8.5	NA	NA	NA	0.59 J	< 3.8	NA			
Perfluorooctane Sulfonamide (PFOSA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 6.6 J	NA	< 3.4 [< 3.4]	< 3.7	< 3.8	< 3.7 [< 3.7]	3.9	NA	NA	NA	< 3.3	< 3.8	NA			
Perfluorooctane sulfonic acid (PFOS)	16	12	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	15	NA	5.4 [5.2]	< 3.7	50	< 3.7 [< 3.7]	48	NA	NA	NA	< 3.3	< 3.8	NA			
Perfluorooctanoic acid (PFOA)	8.0	170	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	8.2	NA	12 [14]	15	29	1.2 J [1.1 J]	62	NA	NA	NA	18	32	NA			
Perfluoropentanesulfonic acid (PFPeS)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 6.6 J	NA	< 3.4 [< 3.4]	< 3.7	< 3.8	< 3.7 [< 3.7]	1.3 J	NA	NA	NA	< 3.3	< 3.8	NA			
Perfluoropentanoic acid (PFPeA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	23	NA	6.9 [6.2]	13	15	3.5 J [3.4 J]	22 Q	NA	NA	NA	56	170	NA			
Perfluorotetradecanoic acid (PFTeA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 6.6 J	NA	< 3.4 [< 3.4]	< 3.7	< 3.8	< 3.7 [< 3.7]	< 3.3	NA	NA	NA	< 3.3	< 3.8	NA			
Perfluorotridecanoic acid (PFTriA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 6.6 J	NA	< 3.4 [< 3.4]	< 3.7	< 3.8	< 3.7 [< 3.7]	< 3.3	NA	NA	NA	< 3.3	< 3.8	NA			
Perfluoroundecanoic acid (PFUnA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 6.6	NA	< 3.4 [< 3.4]	< 3.7	< 3.8	< 3.7 [< 3.7]	< 3.3	NA	NA	NA	0.62 J	< 3.8	NA			
Metals (EPA Method 200.8, Standard Methods 3500-Cr)																											
Arsenic	0.01	0.01	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	0.003	< 0.002	NA	NA			
Arsenic (dissolved)	0.01	0.01	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	0.003	NA	NA	NA			
Chromium III (trivalent)	0.1	0.16	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	< 0.005	< 0.005	NA	NA			
Chromium III (trivalent) (dissolved)	0.1	0.16	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	< 0.005	NA	NA	NA			
Chromium VI (hexavalent)	0.1	0.011	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA			
Copper	1.0	0.02	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	< 0.005	< 0.005	NA	NA			
Copper (dissolved)	1.0	0.02	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	< 0.005	NA	NA	NA			
Lead	0.004	0.044	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	< 0.003	< 0.003	NA	NA			
Lead (dissolved)	0.004	0.044	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	< 0.003	NA	NA	NA			
Nickel	0.1	0.12	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	< 0.005	< 0.005	NA	NA			
Nickel (dissolved)	0.1	0.12	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	< 0.005	NA	NA	NA			
Vanadium	0.0045	0.027	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	< 0.005	< 0.005	NA	NA			
Vanadium (dissolved)	0.0045	0.027	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	< 0.005	NA	NA	NA			

See notes on last page.

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Field Parameters	Location ID:	Part 201	Part 201	Units	MW-15-72	MW-15-73	MW-16-74	MW-16-75	MW-16-76	MW-16-77	MW-16-78	MW-16-78	MW-16-80	MW-16-81	MW-16-82	MW-16-83	MW-16-84	MW-16-85	MW-17-86	MW-17-87	MW-18-88	MW-18-89	MW-18-90	MW-18-91	MW-18-92		
	Date Collected:	Residential	Groundwater		05/15/24	04/10/24	05/14/24	05/14/24	05/16/24	05/14/24	02/12/24	05/14/24	04/10/24	05/15/24	05/14/24	04/10/24	05/14/24	05/16/24	05/14/24	04/09/24	05/22/24	05/21/24	05/20/24	05/21/24	05/21/24		
	Sample Name:	Drinking	Surface Water		MW-15-72	MW-15-73	MW-16-74	MW-16-75	MW-16-76	MW-16-77	MW-16-78	MW-16-78	MW-16-80	MW-16-81	MW-16-82	MW-16-83	MW-16-84	MW-16-85	MW-17-86	MW-17-87	MW-18-88	MW-18-89	MW-18-90	MW-18-91	MW-18-92		
	Sample Depth (ft. bgs):	Water	Interface		63-68	78-83	66-71	66-71	70-75	66-71	68-73	68-73	68-73	70-75	70-75	71-76	72-77	74-79	73-78	100-112	6-11	7-12	15-20	7-12	23-28		
pH	6.5 to 8.5	6.5 to 9.0	s.u.	6.97	6.55	6.67	6.98	6.91	6.85	7.13	6.98	6.58	7.12	6.97	6.56	6.94	7.25	7.05	9.27	7.09	7.65	12.15	7.74	6.87			
Conductivity	--	--	mS/cm	1.627	3.462	2.311	1.963	3.161	2.983	1.117	1.569	2.918	3.011	1.304	3.361	2.327	0.929	2.784	1.981	0.681	0.861	1.884	0.569	1.018			
Turbidity	--	--	NTU	28.36	22.16	59.54	103.75	114.96	22.78	32	28.57	41.22	11.32	7.04	4.85	66.82	197.58	13.94	41.94	7.21	23.27	16	3.88	4.07			
Dissolved oxygen (DO)	--	--	mg/L	6.38	0.4	0.04	0.42	0.54	1.29	0	0	0.29	8.33	0.54	0.36	2.88	0.73	0.67	0.17	0.27	0.23	0	0.26	0.31			
Temperature	--	--	Deg C	15.6	13.3	14.3	17.8	17.3	13.5	11.3	13.8	12.2	16.4	15.2	13	15	18.4	14.9	14.8	16.9	17.9	16.7	14.8	13.3			
Oxidation reduction potential (ORP)	--	--	millivolts	-31.9	23.6	-30.7	-72.8	-48.6	-28.4	-55.4	28.22	-36.8	111.1	-82.1	-57.5	58.1	-89.1	-53.1	-176.8	58.6	-122.7	-89.9	58.8	138.8			
Volatile Organics (via EPA Method SW5030C/8260C)																											
1,1-Dichloroethane	880	740	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
1,1-Dichloroethene	7.0	130	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
1,1,1-Trichloroethane	200	89	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
1,1,1,2-Tetrachloroethane	77	--	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
1,1,2-Trichloroethane	5.0	330	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
1,1,2,2-Tetrachloroethane	8.5	78	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
1,2-Dibromo-3-chloropropane (DBCP)	0.2	--	µg/L	< 5	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA	NA	< 5	< 5	< 5	NA [NA]	< 5	NA	NA [NA]	NA	NA			
1,2-Dibromoethane (Ethylene dibromide)	0.05	5.7	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
1,2-Dichlorobenzene	600	13	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
1,2-Dichloroethane	5.0	360	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
1,2-Dichloropropane	5.0	230	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
1,2,3-Trichlorobenzene	--	--	µg/L	< 5	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA	NA	< 5	< 5	< 5	NA [NA]	< 5	NA	NA [NA]	NA	NA			
1,2,3-Trichloropropane	42	--	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
1,2,3-Trimethylbenzene	--	--	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
1,2,4-Trichlorobenzene	70	99	µg/L	< 5	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA	NA	< 5	< 5	< 5	NA [NA]	< 5	NA	NA [NA]	NA	NA			
1,2,4-Trimethylbenzene	63	17	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
1,3-Dichlorobenzene	6.6	28	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
1,3,5-Trimethylbenzene	72	45	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
1,4-Dichlorobenzene	75	17	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
1,4-Dioxane	7.2	280	µg/L	165	3	3	1	3	< 1	< 1	< 1	25	38	6	< 1	32	18	16	3.4* [3.4*]	NA	NA	NA [NA]	NA	NA			
2-Butanone (Methyl ethyl ketone) (MEK)	13,000	2,200	µg/L	< 25	NA	NA	NA	NA	NA	NA	NA	NA	< 25	NA	NA	< 25	< 25	< 25	NA [NA]	< 25	NA	NA [NA]	NA	NA			
2-Hexanone	1,000	--	µg/L	< 50	NA	NA	NA	NA	NA	NA	NA	NA	< 50	NA	NA	< 50	< 50	< 50	NA [NA]	< 50	NA	NA [NA]	NA	NA			
2-Methylnaphthalene	260	19	µg/L	< 5	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA	NA	< 5	< 5	< 5	NA [NA]	< 5	NA	NA [NA]	NA	NA			
2-Phenylbutane (sec-Butylbenzene)	80	--	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1,800	--	µg/L	< 50	NA	NA	NA	NA	NA	NA	NA	NA	< 50	NA	NA	< 50	< 50	< 50	NA [NA]	< 50	NA	NA [NA]	NA	NA			
Acetone	730	1,700	µg/L	< 50	NA	NA	NA	NA	NA	NA	NA	NA	< 50	NA	NA	< 50	< 50	< 50	NA [NA]	< 50	NA	NA [NA]	NA	NA			
Acrylonitrile	2.6	2.0	µg/L	< 2	NA	NA	NA	NA	NA	NA	NA	NA	< 2	NA	NA	< 2	< 2	< 2	NA [NA]	< 2	NA	NA [NA]	NA	NA			
Benzene	5.0	200	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
Bromobenzene	18	--	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
Bromodichloromethane	80	--	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
Bromoform	80	--	µg/L	< 1	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA	NA	< 1	< 1	< 1	NA [NA]	< 1	NA	NA [NA]	NA	NA			
Bromomethane (Methyl bromide)	10	5.0	µg/L	< 5	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA													

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Part 201		Units	MW-15-72	MW-15-73	MW-16-74	MW-16-75	MW-16-76	MW-16-77	MW-16-78	MW-16-78	MW-16-80	MW-16-81	MW-16-82	MW-16-83	MW-16-84	MW-16-85	MW-17-86	MW-17-87	MW-18-88	MW-18-89	MW-18-90	MW-18-91	MW-18-92	
Date Collected: Residential	Groundwater		05/15/24	04/10/24	05/14/24	05/14/24	05/16/24	05/14/24	02/12/24	05/14/24	04/10/24	05/15/24	05/14/24	04/10/24	05/14/24	05/16/24	05/14/24	04/09/24	05/22/24	05/21/24	05/20/24	05/21/24		
Sample Name: Drinking	Surface Water		MW-15-72	MW-15-73	MW-16-74	MW-16-75	MW-16-76	MW-16-77	MW-16-78	MW-16-78	MW-16-80	MW-16-81	MW-16-82	MW-16-83	MW-16-84	MW-16-85	MW-17-86	MW-17-87	MW-18-88	MW-18-89	MW-18-90	MW-18-91	MW-18-92	
Sample Depth (ft. bgs): Water	Interface		63-68	78-83	66-71	66-71	70-75	66-71	68-73	68-73	68-73	68-73	70-75	70-75	71-76	72-77	74-79	73-78	100-112	6-11	7-12	15-20	7-12	
Per- and Polyfluoroalkyl Substances (PFAS) (via EPA Method 537 Modified)																								
11CI-PF3OUdS (F-53B Minor)	--	--	ng/L	< 7.3	NA	NA	NA	NA	NA	NA	NA	NA	< 6.7	NA	NA	NA	NA	NA [NA]	< 7.1	< 7.7	< 37 [< 7.8]	< 6.6	< 6.7	
4:2 FTS	--	--	ng/L	< 7.3 Q	NA	NA	NA	NA	NA	NA	NA	NA	< 6.7 Q	NA	NA	NA	NA	NA [NA]	< 7.1 Q	< 7.7 Q	< 37 Q [< 7.8 Q]	< 6.6 Q	< 6.7 Q	
6:2 FTS	--	--	ng/L	< 7.3 Q	NA	NA	NA	NA	NA	NA	NA	NA	< 6.7 Q	NA	NA	NA	NA	NA [NA]	< 7.1 Q	< 7.7 Q	< 37 Q [< 7.8 Q]	< 6.6 Q	< 6.7 Q	
8:2 FTS	--	--	ng/L	< 7.3	NA	NA	NA	NA	NA	NA	NA	NA	< 6.7	NA	NA	NA	NA	NA [NA]	< 7.1 Q	< 7.7 Q	< 37 Q [< 7.8 Q]	< 6.6 Q	< 6.7	
9CI-PF3ONS (F-53B Major)	--	--	ng/L	< 7.3	NA	NA	NA	NA	NA	NA	NA	NA	< 6.7	NA	NA	NA	NA	NA [NA]	< 7.1	< 7.7	< 37 [< 7.8]	< 6.6	< 6.7	
ADONA	--	--	ng/L	< 7.3	NA	NA	NA	NA	NA	NA	NA	NA	< 6.7	NA	NA	NA	NA	NA [NA]	< 7.1	< 7.7	< 37 [< 7.8]	< 6.6	< 6.7	
Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	370	--	ng/L	< 7.3	NA	NA	NA	NA	NA	NA	NA	NA	< 6.7	NA	NA	NA	NA	NA [NA]	< 7.1	< 7.7	< 37 [< 7.8]	< 6.6	< 6.7	
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	--	--	ng/L	< 7.3	NA	NA	NA	NA	NA	NA	NA	NA	< 6.7	NA	NA	NA	NA	NA [NA]	< 7.1	< 7.7	< 37 [< 7.8]	< 6.6	< 6.7	
N-methyl perfluorooctane sulfonamidoacetic acid (NMMeFOSAA)	--	--	ng/L	< 7.3	NA	NA	NA	NA	NA	NA	NA	NA	< 6.7	NA	NA	NA	NA	NA [NA]	< 7.1	< 7.7	< 37 [< 7.8]	< 6.6	< 6.7	
Perfluorobutanesulfonic acid (PFBS)	420	670,000	ng/L	7.5	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	NA	NA	NA	NA	NA [NA]	2.4 J	1.5 J	2.1 J [< 3.9]	2.1 J	0.86 J	
Perfluorobutanoic acid (PFBA)	--	--	ng/L	5.5	NA	NA	NA	NA	NA	NA	NA	NA	8.1	NA	NA	NA	NA	NA [NA]	10	9.0	72 Q [< 3.9 Q]	8.6	1.3 J	
Perfluorodecanesulfonic acid (PFDS)	--	--	ng/L	< 3.6	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	NA	NA	NA	NA	NA [NA]	< 3.5	< 3.8	< 19 [< 3.9]	2.0 J	< 3.4	
Perfluorodecanoic acid (PFDA)	--	--	ng/L	< 3.6	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	NA	NA	NA	NA	NA [NA]	< 3.5	0.83 J	< 19 [2.0 J]	0.85 J	< 3.4	
Perfluorododecanoic acid (PFDoA)	--	--	ng/L	< 3.6	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	NA	NA	NA	NA	NA [NA]	< 3.5	< 3.8	< 19 [< 3.9]	< 3.3	< 3.4	
Perfluoroheptanesulfonic acid (PFHpS)	--	--	ng/L	< 3.6	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	NA	NA	NA	NA	NA [NA]	2.6 J	2.3 J	21 [18]	0.73 J	< 3.4	
Perfluoroheptanoic acid (PFHpA)	--	--	ng/L	< 3.6	NA	NA	NA	NA	NA	NA	NA	NA	2.8 J	NA	NA	NA	NA	NA [NA]	0.93 J	3.5 J	4.1 J [3.8 J]	2.3 J	< 3.4	
Perfluorohexanesulfonic acid (PFHxS)	51	210	ng/L	< 3.6	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	NA	NA	NA	NA	NA [NA]	4.5	5.2	16 J [16]	2.6 J	0.47 J	
Perfluorohexanoic acid (PFHxA)	400,000	--	ng/L	1.9 J	NA	NA	NA	NA	NA	NA	NA	NA	6.2	NA	NA	NA	NA	NA [NA]	< 3.5	5.4	5.4 J [4.8]	2.7 J	< 3.4	
Perfluorononanesulfonic acid (PFNS)	--	--	ng/L	< 3.6	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	NA	NA	NA	NA	NA [NA]	< 3.5	< 3.8	< 19 [< 3.9]	< 3.3	< 3.4	
Perfluorononanoic acid (PFNA)	6.0	30	ng/L	< 3.6	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	NA	NA	NA	NA	NA [NA]	0.50 J	1.6 J	< 19 [1.5 J]	1.2 J	< 3.4	
Perfluorooctane Sulfonamide (PFOSA)	--	--	ng/L	< 3.6	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	NA	NA	NA	NA	NA [NA]	< 3.5	< 3.8	< 19 [0.85 J]	< 3.3	< 3.4	
Perfluorooctane sulfonic acid (PFOS)	16	12	ng/L	< 3.6	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	NA	NA	NA	NA	NA [NA]	220	120	920 [1,100]	34	< 3.4	
Perfluorooctanoic acid (PFOA)	8.0	170	ng/L	< 3.6	NA	NA	NA	NA	NA	NA	NA	NA	0.70 J	NA	NA	NA	NA	NA [NA]	7.4	13	14 J [14]	5.8	1.2 J	
Perfluoropentanesulfonic acid (PFPeS)	--	--	ng/L	< 3.6	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	NA	NA	NA	NA	NA [NA]	< 3.5	< 3.8	< 19 [2.2 J]	< 3.3	< 3.4	
Perfluoropentanoic acid (PFPeA)	--	--	ng/L	3.7	NA	NA	NA	NA	NA	NA	NA	NA	9.6	NA	NA	NA	NA	NA [NA]	< 3.5	< 3.8	< 19 Q [< 3.9 Q]	3.5	< 3.4	
Perfluorotetradecanoic acid (PFTeA)	--	--	ng/L	< 3.6	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	NA	NA	NA	NA	NA [NA]	< 3.5	< 3.8	< 19 [< 3.9]	< 3.3	< 3.4	
Perfluorotridecanoic Acid (PFTriA)	--	--	ng/L	< 3.6	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	NA	NA	NA	NA	NA [NA]	< 3.5	< 3.8	< 19 [< 3.9]	< 3.3	< 3.4	
Perfluoroundecanoic acid (PFUnA)	--	--	ng/L	< 3.6	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	NA	NA	NA	NA	NA [NA]	< 3.5	< 3.8	< 19 [< 3.9]	< 3.3	< 3.4	
Metals (EPA Method 200.8, Standard Methods 3500-Cr)																								
Arsenic	0.01	0.01	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 0.002	NA	NA [NA]	NA	NA	
Arsenic (dissolved)	0.01	0.01	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	
Chromium III (trivalent)	0.1	0.16	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 0.005	NA	NA [NA]	NA	NA	
Chromium III (trivalent) (dissolved)	0.1	0.16	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	
Chromium VI (hexavalent)	0.1	0.011	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 0.01	NA	NA [NA]	NA	NA	
Copper	1.0	0.02	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 0.005	NA	NA [NA]	NA	NA	
Copper (dissolved)	1.0	0.02	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	
Lead	0.004	0.044	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 0.003	NA	NA [NA]	NA	NA	
Lead (dissolved)	0.004	0.044	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	
Nickel	0.1	0.12	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 0.005	NA	NA [NA]	NA	NA	
Nickel (dissolved)	0.1	0.12	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	
Vanadium	0.0045	0.027	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 0.005	NA	NA [NA]	NA	NA	
Vanadium (dissolved)	0.0045	0.027	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	

See notes on last page.

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):		Part 201 Residential Drinking Water	Part 201 Groundwater Surface Water Interface		MW-18-93 05/21/24 MW-18-93 77.5-82.5	MW-18-94 05/21/24 MW-18-94 72-77	MW-18-95 05/21/24 MW-18-95 4.5-9.5	MW-18-97 05/21/24 MW-18-97 85-90	MW-18-98 05/20/24 MW-18-98 7-12	MW-18-99 05/20/24 MW-18-99 9-14	MW-18-100 05/21/24 MW-18-100 8-13	MW-18-101 05/21/24 MW-18-101 80-85	MW-18-102 05/20/24 MW-18-102 10-15	MW-18-103 05/20/24 MW-18-103 5-10	MW-18-104 05/20/24 MW-18-104 5-10	MW-18-105 05/20/24 MW-18-105 6-11	MW-19-107 05/21/24 MW-19-107 23-28	MW-19-108 05/21/24 MW-19-108 23-28	MW-19-111 05/21/24 MW-19-111 20-25	MW-19-112 05/21/24 MW-19-112 9-14	MW-19-113 05/21/24 MW-19-113 16-21	MW-19-114 05/20/24 MW-19-114 6-11	MW-19-115 05/15/24 MW-19-115 72.5-77.5	MW-19-116 05/15/24 MW-19-116 65-70	MW-19-117 05/15/24 MW-19-117 54-59	
Field Parameters																										
pH	6.5 to 8.5	6.5 to 9.0	s.u.		7.34	6.86	7.33	6.9	7.39	8.06	7.54	6.91	7.15	7.04	7.672	6.96	6.71	6.67	6.67	6.37	NR	7.12	6.82	6.94	6.87	
Conductivity	--	--	mS/cm		0.7	6.067	0.475	1.502	0.996	1.121	1.38	4.424	0.666	0.739	0.672	0.621	0.993	1.3	1.254	8.532	NR	0.555	3.187	1.416	1.176	
Turbidity	--	--	NTU		252.56	566.35	3.59	621.38	14.3	6.78	5.04	234.83	17.5	6.23	13.02	3.81	50.93	2.42	3.87	9.95	NR	6.14	38.39	111.11	66.36	
Dissolved oxygen (DO)	--	--	mg/L		0.61	0	0.18	0	1.4	0.37	3.27	0	2.08	1.18	1.9	0	0.07	0.13	0.66	0	NR	0.02	0.5	0.11	0.11	
Temperature	--	--	Deg C		17.2	15.7	16.7	15.4	15.1	15.1	16.6	14.6	12.6	13.5	13.4	12	13.2	12.1	13.1	17	NR	12.1	21	17.4	16.7	
Oxidation reduction potential (ORP)	--	--	millivolts		-107	-95.5	182	-85	159.3	-117.4	147.2	-92.2	175.1	1.18	182.7	105.7	-15.6	121.2	159.6	-79.4	NR	177.7	-40.8	-86.5	-72.6	
Volatile Organics (via EPA Method SW5030C/8260C)																										
1,1-Dichloroethane	880	740	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,1-Dichloroethene	7.0	130	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,1,1-Trichloroethane	200	89	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,1,1,2-Tetrachloroethane	77	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,1,2-Trichloroethane	5.0	330	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,1,2,2-Tetrachloroethane	8.5	78	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,2-Dibromo-3-chloropropane (DBCP)	0.2	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,2-Dibromomethane (Ethylene dibromide)	0.05	5.7	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,2-Dichlorobenzene	600	13	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,2-Dichloroethane	5.0	360	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,2-Dichloropropane	5.0	230	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,2,3-Trichlorobenzene	--	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,2,3-Trichloropropane	42	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,2,3-Trimethylbenzene	--	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,2,4-Trichlorobenzene	70	99	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,2,4-Trimethylbenzene	63	17	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,3-Dichlorobenzene	6.6	28	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,3,5-Trimethylbenzene	72	45	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,4-Dichlorobenzene	75	17	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,4-Dioxane	7.2	280	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8	148	< 1	
2-Butanone (Methyl ethyl ketone) (MEK)	13,000	2,200	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2-Hexanone	1,000	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2-Methylnaphthalene	260	19	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2-Phenylbutane (sec-Butylbenzene)	80	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1,800	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Acetone	730	1,700	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Acrylonitrile	2.6	2.0	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Benzene	5.0	200	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Bromobenzene	18	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Bromodichloromethane	80	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Bromoform	80	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Bromomethane (Methyl bromide)	10	5.0	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Carbon disulfide	800	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Carbon tetrachloride	5.0	38	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Chlorobenzene	100	25	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Chlorobromomethane	--	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Chloroethane	430	1,100	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Chloroform (Trichloromethane)	80	350	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Chloromethane (Methyl chloride)	260	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
cis-1,2-Dichloroethene	70	620	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
cis-1,3-Dichloropropene	--	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Cymene (p-Isopropyltoluene)	--	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Dibromochloromethane	80	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Dibromomethane	80	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Dichlorodifluoromethane (CFC-12)	1,700	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ethyl ether	10	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ethylbenzene	74	18	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Hexachloroethane	7.3	6.7	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Iodomethane	--	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Isopropyl benzene	800	28	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Methyl tert butyl ether (MTBE)	40	7,100	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Methylene chloride	5.0	1,500	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Naphthalene	520	11	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
N-Butylbenzene	80	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
N-Propylbenzene	80	--	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Styrene	100	80	µg/L		NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
tert-Butylbenzene	80	--	µg/L		NA [NA]	NA	NA	NA	NA	NA																

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):	Part 201 Residential Drinking Water	Part 201 Groundwater Surface Water Interface	Units	MW-18-93 05/21/24 MW-18-93 77.5-82.5	MW-18-94 05/21/24 MW-18-94 72-77	MW-18-95 05/21/24 MW-18-95 4.5-9.5	MW-18-97 05/21/24 MW-18-97 85-90	MW-18-98 05/20/24 MW-18-98 7-12	MW-18-99 05/20/24 MW-18-99 9-14	MW-18-100 05/21/24 MW-18-100 8-13	MW-18-101 05/21/24 MW-18-101 80-85	MW-18-102 05/20/24 MW-18-102 10-15	MW-18-103 05/20/24 MW-18-103 5-10	MW-18-104 05/20/24 MW-18-104 5-10	MW-18-105 05/20/24 MW-18-105 6-11	MW-19-107 05/21/24 MW-19-107 23-28	MW-19-108 05/21/24 MW-19-108 23-28	MW-19-111 05/21/24 MW-19-111 20-25	MW-19-112 05/21/24 MW-19-112 9-14	MW-19-113 05/21/24 MW-19-113 16-21	MW-19-114 05/20/24 MW-19-114 6-11	MW-19-115 05/15/24 MW-19-115 72.5-77.5	MW-19-116 05/15/24 MW-19-116 65-70	MW-19-117 05/15/24 MW-19-117 54-59	
Semi-Volatile Organics (via EPA Method SW5030C/8270D)																									
1,2-Dichlorobenzene	600	13	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Diphenylhydrazine	--	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	99	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	6.6	28	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	17	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	--	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	73	11	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	370	380	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	--	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	7.7	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	730	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	120	5.0	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	--	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	1,800	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	45	18	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	260	19	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	--	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	--	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	20	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3&4-Methylphenol	--	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	1.1	0.3	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	--	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	20	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	--	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	150	7.4	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	--	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	--	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	--	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	--	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	1,300	38	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	52	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	43	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	2.1	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	5.0	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	1.5	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	1.0	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	1.0	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	--	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	2.0	1.0	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	6.0	14	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzylphthalate (BBP)	1,200	67	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	1.6	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	2.0	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	--	4.0	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	5,500	110	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	73,000	--	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate (DBP)	880	9.7	µg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate (Dnthal																									

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Part 201 Date Collected: Residential Sample Name: Drinking Sample Depth (ft. bgs): Water			Part 201 Groundwater Surface Water Interface	Units	MW-18-93 05/21/24 MW-18-93 77.5-82.5	MW-18-94 05/21/24 MW-18-94 72-77	MW-18-95 05/21/24 MW-18-95 4.5-9.5	MW-18-97 05/21/24 MW-18-97 85-90	MW-18-98 05/20/24 MW-18-98 7-12	MW-18-99 05/20/24 MW-18-99 9-14	MW-18-100 05/21/24 MW-18-100 8-13	MW-18-101 05/21/24 MW-18-101 80-85	MW-18-102 05/20/24 MW-18-102 10-15	MW-18-103 05/20/24 MW-18-103 5-10	MW-18-104 05/20/24 MW-18-104 5-10	MW-18-105 05/20/24 MW-18-105 6-11	MW-19-107 05/21/24 MW-19-107 23-28	MW-19-108 05/21/24 MW-19-108 23-28	MW-19-111 05/21/24 MW-19-111 20-25	MW-19-112 05/21/24 MW-19-112 9-14	MW-19-113 05/21/24 MW-19-113 16-21	MW-19-114 05/20/24 MW-19-114 6-11	MW-19-115 05/15/24 MW-19-115 72.5-77.5	MW-19-116 05/15/24 MW-19-116 65-70	MW-19-117 05/15/24 MW-19-117 54-59
Per- and Polyfluoroalkyl Substances (PFAS) (via EPA Method 537 Modified)																									
11CI-PF3OUdS (F-53B Minor)	--	--	ng/L	< 7.4 [7.4	< 7.1	< 7.5	< 7.1	< 7.7	< 7.5	< 7.4	< 7.9	< 7.8	< 7.5	< 7.7	< 7.3	< 6.7	< 6.9	< 6.8	< 80	< 8.1	< 7.4	NA	NA	NA	
4:2 FTS	--	--	ng/L	< 7.4 [7.4	< 7.1	< 7.5 Q	< 7.1 Q	< 7.7 Q	< 7.5 Q	< 7.4	< 7.9	< 7.8	< 7.5	< 7.7	< 7.3 Q	< 6.7 Q	< 6.9 Q	< 6.8 Q	< 80 Q	< 8.1 Q	< 7.4	NA	NA	NA	
6:2 FTS	--	--	ng/L	< 7.4 Q [7.4	< 7.1 Q	< 7.5 Q	< 7.1 Q	< 7.7 Q	< 7.5 Q	< 7.4 Q	< 7.9	< 7.8 Q	< 7.5 Q	< 7.7 Q	< 7.3 Q	< 6.7 Q	< 6.9 Q	< 6.8 Q	< 80 Q	< 8.1 Q	< 7.4 Q	NA	NA	NA	
8:2 FTS	--	--	ng/L	< 7.4 [7.4	< 7.1	< 7.5 Q	< 7.1	< 7.7	< 7.5	< 7.4	< 7.9	< 7.8	< 7.5	< 7.7	< 7.3	< 6.7	< 6.9	< 6.8	< 80	< 8.1	< 7.4	NA	NA	NA	
9CI-PF3ONS (F-53B Major)	--	--	ng/L	< 7.4 [7.4	< 7.1	< 7.5	< 7.1	< 7.7	< 7.5	< 7.4	< 7.9	< 7.8	< 7.5	< 7.7	< 7.3	< 6.7	< 6.9	< 6.8	< 80	< 8.1	< 7.4	NA	NA	NA	
ADONA	--	--	ng/L	< 7.4 [7.4	< 7.1	< 7.5	< 7.1	< 7.7	< 7.5	< 7.4	< 7.9	< 7.8	< 7.5	< 7.7	< 7.3	< 6.7	< 6.9	< 6.8	< 80	< 8.1	< 7.4	NA	NA	NA	
Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	370	--	ng/L	< 7.4 [7.4	< 7.1	< 7.5	< 7.1	< 7.7	< 7.5	< 7.4	< 7.9	< 7.8	< 7.5	< 7.7	< 7.3	< 6.7	< 6.9	< 6.8	< 80	< 8.1	< 7.4	NA	NA	NA	
N-ethyl perfluorooctane sulfonamidoacetic acid (NEFOSAA)	--	--	ng/L	< 7.4 [7.4	< 7.1	< 7.5	< 7.1	< 7.7	< 7.5	< 7.4	< 7.9	< 7.8	< 7.5	< 7.7	< 7.3	< 6.7	< 6.9	< 6.8	< 80	< 8.1	< 7.4	NA	NA	NA	
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	--	--	ng/L	< 7.4 [7.4	< 7.1	< 7.5	< 7.1	< 7.7	< 7.5	< 7.4	< 7.9	< 7.8	< 7.5	< 7.7	< 7.3	< 6.7	< 6.9	< 6.8	< 80	< 8.1	< 7.4	NA	NA	NA	
Perfluorobutanesulfonic acid (PFBS)	420	670,000	ng/L	< 3.7 [3.7	< 3.6	< 3.8	0.40 J	0.68 J	1.3 J	1.6 J	< 4.0	< 3.9	8.5	0.97 J	4.9	2.4 J	1.5 J	1.4 J	< 40	1.6 J	1.3 J	NA	NA	NA	
Perfluorobutanoic acid (PFBA)	--	--	ng/L	< 3.7 [3.7	< 3.6	7.2	8.4	1.8 J	8.7	12	11	4.6	< 3.9	2.8 J	< 3.8	1.9 J	2.9 J	1.4 J	2.2 J	< 40	2.3 J	5.5	NA	NA	NA
Perfluorodecanesulfonic acid (PFDS)	--	--	ng/L	< 3.7 [3.7	< 3.6	0.98 J	< 3.5	< 3.8	< 3.8	< 3.7	< 4.0	< 3.9	< 3.7	< 3.8	< 3.7	< 3.4	< 3.5	< 3.4	< 40	< 4.1	< 3.7	NA	NA	NA	
Perfluorodecanoic acid (PFDA)	--	--	ng/L	< 3.7 [3.7	< 3.6	1.2 J	< 3.5	< 3.8	0.84 J	< 3.7	< 4.0	< 3.9	< 3.7	< 3.8	< 3.7	< 3.4	< 3.5	< 3.4	< 40	< 4.1	< 3.7	NA	NA	NA	
Perfluorododecanoic acid (PFDoA)	--	--	ng/L	< 3.7 [3.7	< 3.6	< 3.8	< 3.5	< 3.8	< 3.8	< 3.7	< 4.0	< 3.9	< 3.7	< 3.8	< 3.7	< 3.4	< 3.5	< 3.4	< 40	< 4.1	< 3.7	NA	NA	NA	
Perfluoroheptanesulfonic acid (PFHpS)	--	--	ng/L	< 3.7 [3.7	< 3.6	< 3.8	< 3.5	< 3.8	0.64 J	< 3.7	< 4.0	< 3.9	< 3.7	< 3.8	< 3.7	< 3.4	< 3.5	< 3.4	< 40	< 4.1	< 3.7	NA	NA	NA	
Perfluoroheptanoic acid (PFHpA)	--	--	ng/L	< 3.7 [3.7	< 3.6	1.4 J	< 3.5	1.8 J	2.6 J	1.9 J	< 4.0	< 3.9	< 3.7	< 3.8	< 3.7	0.73 J	0.57 J	0.87 J	< 40	< 4.1	< 3.7	NA	NA	NA	
Perfluorohexanesulfonic acid (PFHxS)	51	210	ng/L	< 3.7 [3.7	< 3.6	0.79 J	< 3.5	0.60 J	1.6 J	2.4 J	< 4.0	< 3.9	63	0.61 J	1.7 J	3.9	1.2 J	1.6 J	< 40	1.2 J	0.81 J	NA	NA	NA	
Perfluorohexanoic acid (PFHxA)	400,000	--	ng/L	< 3.7 [3.7	< 3.6	< 3.8	< 3.5	2.7 J	4.6	4.8	< 4.0	< 3.9	< 3.7	< 3.8	< 3.7	< 3.4	< 3.5	1.9 J	< 40	< 4.1	< 3.7	NA	NA	NA	
Perfluorononanesulfonic acid (PFNS)	--	--	ng/L	< 3.7 [3.7	< 3.6	< 3.8	< 3.5	< 3.8	< 3.8	< 3.7	< 4.0	< 3.9	< 3.7	< 3.8	< 3.7	< 3.4	< 3.5	< 3.4	< 40	< 4.1	< 3.7	NA	NA	NA	
Perfluorononanoic acid (PFNA)	6.0	30	ng/L	< 3.7 [3.7	< 3.6	1.6 J	< 3.5	1.7 J	1.0 J	< 3.7	< 4.0	< 3.9	< 3.7	< 3.8	< 3.7	< 3.4	< 3.5	< 3.4	< 40	< 4.1	< 3.7	NA	NA	NA	
Perfluorooctane Sulfonamide (PFOSA)	--	--	ng/L	< 3.7 [3.7	< 3.6	< 3.8	< 3.5	< 3.8	< 3.8	< 3.7	< 4.0	< 3.9	< 3.7	< 3.8	< 3.7	< 3.4	< 3.5	< 3.4	< 40	< 4.1	< 3.7	NA	NA	NA	
Perfluorooctane sulfonic acid (PFOS)	16	12	ng/L	< 3.7 [3.7	< 3.6	56	< 3.5	140	47	< 3.7	< 4.0	< 3.9	3.4 J	3.6 J	6.5	3.2 J	4.5	< 3.4	< 40	3.5 J	2.6 J	NA	NA	NA	
Perfluorooctanoic acid (PFOA)	8.0	170	ng/L	< 3.7 [3.7	< 3.6	4.5	< 3.5	2.5 J	3.9	2.9 J	< 4.0	< 3.9	< 3.7	< 3.8	1.0 J	4.7	4.3	6.5	< 40	3.1 J	< 3.7	NA	NA	NA	
Perfluoropentanesulfonic acid (PFPeS)	--	--	ng/L	< 3.7 [3.7	< 3.6	< 3.8	< 3.5	< 3.8	< 3.8	< 3.7	< 4.0	< 3.9	6.4	< 3.8	< 3.7	0.53 J	< 3.5	< 3.4	< 40	< 4.1	< 3.7	NA	NA	NA	
Perfluoropentanoic acid (PFPeA)	--	--	ng/L	< 3.7 [3.7	< 3.6	1.6 J	2.2 J	0.56 J	1.5 J	3.6 J	3.0 J	0.94 J	< 3.9	0.72 J	< 3.8	< 3.7	1.2 J	0.49 J	0.84 J	< 40	< 4.1	< 3.7	NA	NA	NA
Perfluorotetradecanoic acid (PFTeA)	--	--	ng/L	< 3.7 [3.7	< 3.6	< 3.8	< 3.5	< 3.8	< 3.8	< 3.7	< 4.0	< 3.9	< 3.7	< 3.8	< 3.7	< 3.4	< 3.5	< 3.4	< 40	< 4.1	< 3.7	NA	NA	NA	
Perfluorotridecanoic Acid (PFTriA)	--	--	ng/L	< 3.7 [3.7	< 3.6	< 3.8	< 3.5	< 3.8	< 3.8	< 3.7	< 4.0	< 3.9	< 3.7	< 3.8	< 3.7	< 3.4	< 3.5	< 3.4	< 40	< 4.1	< 3.7	NA	NA	NA	
Perfluoroundecanoic acid (PFUnA)	--	--	ng/L	< 3.7 [3.7	< 3.6	< 3.8	< 3.5	< 3.8	< 3.8	< 3.7	< 4.0	< 3.9	< 3.7	< 3.8	< 3.7	< 3.4	< 3.5	< 3.4	< 40	< 4.1	< 3.7	NA	NA	NA	
Metals (EPA Method 200.8, Standard Methods 3500-Cr)																									
Arsenic	0.01	0.01	mg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic (dissolved)	0.01	0.01	mg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium III (trivalent)	0.1	0.16	mg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium III (trivalent) (dissolved)	0.1	0.16	mg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium VI (hexavalent)	0.1	0.011	mg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1.0	0.02	mg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper (dissolved)	1.0	0.02	mg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.004	0.044	mg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead (dissolved)	0.004	0.044	mg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.12	mg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel (dissolved)	0.1	0.12	mg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	0.0045	0.027	mg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium (dissolved)	0.0045	0.027	mg/L	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

See notes on last page.

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):	Part 201 Residential Drinking Water	Part 201 Groundwater Surface Water Interface	Units	MW-19-118D 05/20/24 MW-19-118D 175-190	MW-19-118S 04/09/24 MW-19-118S 145-160	MW-19-119D 05/20/24 MW-19-119D 180-195	MW-19-119S 05/20/24 MW-19-119S 145-160	MW-19-120 05/14/24 MW-19-120 66-71	MW-19-121 02/12/24 MW-19-121 66-71	MW-19-121 05/14/24 MW-19-121 66-71	MW-19-122 02/12/24 MW-19-122 59-64	MW-19-122 05/14/24 MW-19-122 59-64	MW-19-123 02/12/24 MW-19-123 66-71	MW-19-123 05/14/24 MW-19-123 66-71	MW-19-124 05/14/24 MW-19-124 65-70	MW-19-125 05/20/24 MW-19-125 100-115	MW-20-126 02/12/24 MW-20-126 69-74	MW-20-126 04/10/24 MW-20-126 69-74	MW-20-127 02/12/24 MW-20-127 72-77	MW-20-127 05/15/24 MW-20-127 72-77	MW-20-128 05/15/24 MW-20-128 65-70	MW-20-129 02/12/24 MW-20-129 64-69	MW-20-129 05/15/24 MW-20-129 64-69	MW-20-131 02/13/24 MW-20-131 5-10	
Semi-Volatile Organics (via EPA Method SW5030C/8270D)																									
1,2-Dichlorobenzene	600	13	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
1,2-Diphenylhydrazine	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	99	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
1,3-Dichlorobenzene	6.6	28	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
1,4-Dichlorobenzene	75	17	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
2,4-Dichlorophenol	73	11	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
2,4-Dimethylphenol	370	380	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
2,4-Dinitrophenol	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
2,4-Dinitrotoluene	7.7	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
2,4,5-Trichlorophenol	730	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
2,4,6-Trichlorophenol	120	5.0	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
2,6-Dinitrotoluene	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
2-Chloronaphthalene	1,800	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
2-Chlorophenol	45	18	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
2-Methylnaphthalene	260	19	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
2-Methylphenol	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
2-Nitroaniline	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
2-Nitrophenol	20	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
3&4-Methylphenol	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
3,3'-Dichlorobenzidine	1.1	0.3	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
3-Nitroaniline	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	20	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
4-Bromophenyl phenyl ether	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
4-Chloro-3-methylphenol	150	7.4	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
4-Chloroaniline	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
4-Nitroaniline	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
4-Nitrophenol	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Acenaphthene	1,300	38	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Acenaphthylene	52	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Anthracene	43	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Benzo(a)anthracene	2.1	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Benzo(a)pyrene	5.0	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Benzo(b)fluoranthene	1.5	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Benzo(g,h,i)perylene	1.0	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Benzo(k)fluoranthene	1.0	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	--	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
bis(2-Chloroethyl)ether	2.0	1.0	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	6.0	14	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Butyl benzylphthalate (BBP)	1,200	67	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Chrysene	1.6	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Dibenz(a,h)anthracene	2.0	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Dibenzofuran	--	4.0	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Diethyl phthalate	5,500	110	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Dimethyl phthalate	73,000	--	µg/L	NA	NA	NA [NA]	NA	NA	NA	NA															

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):	Part 201	Part 201	Units	MW-19-118D	MW-19-118S	MW-19-119D	MW-19-119S	MW-19-120	MW-19-121	MW-19-121	MW-19-122	MW-19-122	MW-19-123	MW-19-123	MW-19-124	MW-19-125	MW-20-126	MW-20-126	MW-20-127	MW-20-127	MW-20-128	MW-20-129	MW-20-129	MW-20-131		
	Residential	Groundwater		05/20/24	04/09/24	05/20/24	05/20/24	05/14/24	02/12/24	05/14/24	02/12/24	05/14/24	02/12/24	05/14/24	05/14/24	05/20/24	02/12/24	04/10/24	02/12/24	05/15/24	05/15/24	02/12/24	05/15/24	02/13/24		
	Drinking	Surface Water		MW-19-118D	MW-19-118S	MW-19-119D	MW-19-119S	MW-19-120	MW-19-121	MW-19-121	MW-19-122	MW-19-122	MW-19-123	MW-19-123	MW-19-124	MW-19-125	MW-20-126	MW-20-126	MW-20-127	MW-20-127	MW-20-128	MW-20-129	MW-20-129	MW-20-131		
Water	Interface	175-190	145-160	180-195	145-160	66-71	66-71	66-71	59-64	59-64	66-71	66-71	65-70	66-71	65-70	100-115	69-74	69-74	72-77	72-77	65-70	64-69	64-69	5-10		
Per- and Polyfluoroalkyl Substances (PFAS) (via EPA Method 537 Modified)																										
11CI-PF3OUdS (F-53B Minor)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
4:2 FTS	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
6:2 FTS	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
8:2 FTS	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
9CI-PF3ONS (F-53B Major)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
ADONA	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	370	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluorobutanesulfonic acid (PFBS)	420	670,000	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluorobutanoic acid (PFBA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluorodecanesulfonic acid (PFDS)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluorodecanoic acid (PFDA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluorododecanoic acid (PFDoA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluoroheptanesulfonic Acid (PFHpS)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluoroheptanoic acid (PFHpA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluorohexanesulfonic acid (PFHxS)	51	210	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluorohexanoic acid (PFHxA)	400,000	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluorononanesulfonic acid (PFNS)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluorononanoic acid (PFNA)	6.0	30	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluorooctane Sulfonamide (PFOSA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluorooctane sulfonic acid (PFOS)	16	12	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluorooctanoic acid (PFOA)	8.0	170	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluoropentanesulfonic acid (PFPeS)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluoropentanoic acid (PFPeA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluorotetradecanoic acid (PFTeA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluorotridecanoic Acid (PFTriA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Perfluoroundecanoic acid (PFUnA)	--	--	ng/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Metals (EPA Method 200.8, Standard Methods 3500-Cr)																										
Arsenic	0.01	0.01	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Arsenic (dissolved)	0.01	0.01	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Chromium III (trivalent)	0.1	0.16	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Chromium III (trivalent) (dissolved)	0.1	0.16	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Chromium VI (hexavalent)	0.1	0.011	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Copper	1.0	0.02	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Copper (dissolved)	1.0	0.02	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Lead	0.004	0.044	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Lead (dissolved)	0.004	0.044	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Nickel	0.1	0.12	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Nickel (dissolved)	0.1	0.12	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Vanadium	0.0045	0.027	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		
Vanadium (dissolved)	0.0045	0.027	mg/L	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA		

See notes on last page.

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):		Part 201 Residential Drinking Water	Part 201 Groundwater Surface Water Interface		MW-20-131 05/22/24 MW-20-131 5-10	MW-20-132 02/13/24 MW-20-132 6-11	MW-20-132 05/23/24 MW-20-132 6-11	MW-21-133 05/22/24 MW-21-133 10-15	MW-21-134 05/22/24 MW-21-134 11-16	MW-21-135 05/22/24 MW-21-135 22-27	MW-21-136 05/22/24 MW-21-136 9-14	MW-21-137 05/23/24 MW-21-137 7-12	MW-21-138 05/23/24 MW-21-138 24-29	MW-21-139 05/16/24 MW-21-139 7-12	MW-21-140 05/16/24 MW-21-140 67-72	MW-21-141 05/22/24 MW-21-141 72-77	MW-21-142 05/15/24 MW-21-142 71.5-76.5	MW-22-143 02/12/24 MW-22-143 26-31	MW-22-143 05/22/24 MW-22-143 26-31	MW-22-144 02/14/24 MW-22-144 19.5-24.5	MW-22-144 05/22/24 MW-22-144 19.5-24.5	MW-22-145 02/12/24 MW-22-145 10.5-15.5	MW-22-145 05/22/24 MW-22-145 10.5-15.5	MW-22-146 02/14/24 MW-22-146 5.5-10.5	MW-22-146 05/22/24 MW-22-146 5.5-10.5	
Field Parameters																										
pH	6.5 to 8.5	6.5 to 9.0	s.u.	6.99	7.14	7.03	6.78	6.9	7.14	7.18	6.68	6.85	7.55	6.92	6.81	6.64	7.04	7	7.12	7.14	7.04	7.06	7.41	7.27		
Conductivity	--	--	mS/cm	4.639	2.747	2.887	1.016	0.866	0.854	0.898	1.153	1.641	1.167	0.892	0.933	2.107	2.43	2.869	1.175	1.212	0.669	0.917	0.866	0.938		
Turbidity	--	--	NTU	95.91	3.02	60.14	1.89	4.68	3.4	3.71	3.11	2.45	3.83	77.79	9.32	320.75	23.96	8.09	9.06	15.63	25.03	7.28	16.78	8.75		
Dissolved oxygen (DO)	--	--	mg/L	0	0.07	0	0	0.67	0.38	0.52	2.33	0.76	0.25	0.38	0.29	0	0.21	0.44	0.46	0.53	1.77	2.33	7.93	3.58		
Temperature	--	--	Deg C	16.5	8.2	13.3	14.3	14.2	16.3	14.9	12.9	14.1	14.3	16.5	19.3	13.4	12.3	16.9	10.2	15.3	9.6	17.1	7.3	12.9		
Oxidation reduction potential (ORP)	--	--	millivolts	22.7	-16.8	-71	172.3	229.2	31.1	12.6	209.2	34	-87	-38.1	-88	1	-49.7	0.1	-93.7	48.4	103.6	115.3	-50	111.3		
Volatile Organics (via EPA Method SW5030C/8260C)																										
1,1-Dichloroethane	880	740	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,1-Dichloroethene	7.0	130	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,1,1-Trichloroethane	200	89	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,1,1,2-Tetrachloroethane	77	--	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,1,2-Trichloroethane	5.0	330	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,1,2,2-Tetrachloroethane	8.5	78	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,2-Dibromo-3-chloropropane (DBCP)	0.2	--	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,2-Dibromomethane (Ethylene dibromide)	0.05	5.7	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,2-Dichlorobenzene	600	13	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,2-Dichloroethane	5.0	360	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,2-Dichloropropane	5.0	230	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,2,3-Trichlorobenzene	--	--	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,2,3-Trichloropropane	42	--	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,2,3-Trimethylbenzene	--	--	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,2,4-Trichlorobenzene	70	99	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,2,4-Trimethylbenzene	63	17	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,3-Dichlorobenzene	6.6	28	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,3,5-Trimethylbenzene	72	45	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,4-Dichlorobenzene	75	17	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,4-Dioxane	7.2	280	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	112	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2-Butanone (Methyl ethyl ketone) (MEK)	13,000	2,200	µg/L	NA	< 25 [< 25]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2-Hexanone	1,000	--	µg/L	NA	< 50 [< 50]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2-Methylnaphthalene	260	19	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2-Phenylbutane (sec-Butylbenzene)	80	--	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1,800	--	µg/L	NA	< 50 [< 50]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Acetone	730	1,700	µg/L	NA	< 50 [< 50]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Acrylonitrile	2.6	2.0	µg/L	NA	< 2 [< 2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Benzene	5.0	200	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Bromobenzene	18	--	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Bromodichloromethane	80	--	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Bromoform	80	--	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Bromomethane (Methyl bromide)	10	5.0	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Carbon disulfide	800	--	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Carbon tetrachloride	5.0	38	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Chlorobenzene	100	25	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Chlorobromomethane	--	--	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Chloroethane	430	1,100	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Chloroform (Trichloromethane)	80	350	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Chloromethane (Methyl chloride)	260	--	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
cis-1,2-Dichloroethene	70	620	µg/L	NA	4[5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
cis-1,3-Dichloropropene	--	--	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Cymene (p-Isopropyltoluene)	--	--	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Dibromochloromethane	80	--	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Dibromomethane	80	--	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Dichlorodifluoromethane (CFC-12)	1,700	--	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Ethyl ether	10	--	µg/L	NA	< 10 [< 10]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Ethylbenzene	74	18	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Hexachloroethane	7.3	6.7	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Iodomethane	--	--	µg/L	NA	< 1 [< 1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Isopropyl benzene	800	28	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Methyl tert butyl ether (MTBE)	40	7,100	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Methylene chloride	5.0	1,500	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Naphthalene	520	11	µg/L	NA	< 5 [< 5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA				

Location ID: Part 201		Part 201	Part 201		MW-20-131	MW-20-132	MW-20-132	MW-21-133	MW-21-134	MW-21-135	MW-21-136	MW-21-137	MW-21-138	MW-21-139	MW-21-140	MW-21-141	MW-21-142	MW-22-143	MW-22-143	MW-22-144	MW-22-145	MW-22-145	MW-22-146	MW-22-146			
Date Collected: Residential		Residential	Groundwater		05/22/24	02/13/24	05/23/24	05/22/24	05/22/24	05/22/24	05/22/24	05/23/24	05/23/24	05/16/24	05/16/24	05/22/24	05/15/24	02/12/24	05/22/24	02/14/24	05/22/24	02/12/24	05/22/24	02/14/24	05/22/24		
Sample Name: Drinking		Drinking	Surface Water		MW-20-131	MW-20-132	MW-20-132	MW-21-133	MW-21-134	MW-21-135	MW-21-136	MW-21-137	MW-21-138	MW-21-139	MW-21-140	MW-21-141	MW-21-142	MW-22-143	MW-22-143	MW-22-144	MW-22-145	MW-22-145	MW-22-146	MW-22-146			
Sample Depth (ft. bgs): Water		Water	Interface	Units	5-10	6-11	6-11	10-15	11-16	22-27	9-14	7-12	24-29	7-12	67-72	72-77	71.5-76.5	26-31	26-31	19.5-24.5	19.5-24.5	10.5-15.5	10.5-15.5	5.5-10.5	5.5-10.5		
Semi-Volatile Organics (via EPA Method SW5030C/8270D)																											
1,2-Dichlorobenzene	600	13	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,2-Diphenylhydrazine	--	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,2,4-Trichlorobenzene	70	99	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,3-Dichlorobenzene	6.6	28	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
1,4-Dichlorobenzene	75	17	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	--	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2,4-Dichlorophenol	73	11	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2,4-Dimethylphenol	370	380	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2,4-Dinitrophenol	--	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2,4-Dinitrotoluene	7.7	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2,4,5-Trichlorophenol	730	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2,4,6-Trichlorophenol	120	5.0	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2,6-Dinitrotoluene	--	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2-Chloronaphthalene	1,800	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2-Chlorophenol	45	18	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2-Methylnaphthalene	260	19	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2-Methylphenol	--	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2-Nitroaniline	--	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
2-Nitrophenol	20	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
3&4-Methylphenol	--	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
3,3'-Dichlorobenzidine	1.1	0.3	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
3-Nitroaniline	--	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
4,6-Dinitro-2-methylphenol	20	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
4-Bromophenyl phenyl ether	--	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
4-Chloro-3-methylphenol	150	7.4	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
4-Chloroaniline	--	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
4-Chlorophenyl phenyl ether	--	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
4-Nitroaniline	--	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
4-Nitrophenol	--	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Acenaphthene	1,300	38	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Acenaphthylene	52	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Anthracene	43	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Benzo(a)anthracene	2.1	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Benzo(a)pyrene	5.0	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Benzo(b)fluoranthene	1.5	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Benzo(g,h,i)perylene	1.0	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Benzo(k)fluoranthene	1.0	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
bis(2-Chloroethoxy)methane	--	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
bis(2-Chloroethyl)ether	2.0	1.0	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
bis(2-Ethylhexyl)phthalate (DEHP)	6.0	14	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Butyl benzylphthalate (BBP)	1,200	67	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Chrysene	1.6	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Dibenz(a,h)anthracene	2.0	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Dibenzofuran	--	4.0	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Diethyl phthalate	5,500	110	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Dimethyl phthalate	73,000	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Di-n-butylphthalate (DBP)	880	9.7	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Di-n-octyl phthalate (DnOP)	130	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Fluoranthene	210	1.6	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Fluorene	880	12	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Hexachlorobenzene	1.0	0.2	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Hexachlorobutadiene	15	0.053	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Hexachlorocyclopentadiene	50	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Hexachloroethane	7.3	6.7	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Indeno(1,2,3-cd)pyrene	2.0	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Isophorone	770	1,300	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Naphthalene	520	11	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Nitrobenzene	3.4	180	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
N-Nitrosodi-n-propylamine	5.0	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
N-Nitrosodiphenylamine	270	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Pentachlorophenol	1.0	--	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Phenanthrene	52	2.0	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Phenol	4,400	450	µg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA		
Pyrene	140	--	µg/L	NA	NA [NA]	NA	NA	NA	NA</																		

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected:		Part 201 Residential	Part 201 Groundwater		MW-20-131 05/22/24	MW-20-132 02/13/24	MW-20-132 05/23/24	MW-21-133 05/22/24	MW-21-134 05/22/24	MW-21-135 05/22/24	MW-21-136 05/22/24	MW-21-137 05/23/24	MW-21-138 05/23/24	MW-21-139 05/16/24	MW-21-140 05/16/24	MW-21-141 05/22/24	MW-21-142 05/15/24	MW-22-143 02/12/24	MW-22-143 05/22/24	MW-22-144 02/14/24	MW-22-144 05/22/24	MW-22-145 02/12/24	MW-22-145 05/22/24	MW-22-146 02/14/24	MW-22-146 05/22/24
Sample Name: Sample Depth (ft. bgs):		Drinking Water	Surface Water Interface	Units	MW-20-131 5-10	MW-20-132 6-11	MW-20-132 6-11	MW-21-133 10-15	MW-21-134 11-16	MW-21-135 22-27	MW-21-136 9-14	MW-21-137 7-12	MW-21-138 24-29	MW-21-139 7-12	MW-21-140 67-72	MW-21-141 72-77	MW-21-142 71.5-76.5	MW-22-143 26-31	MW-22-143 26-31	MW-22-144 19.5-24.5	MW-22-144 19.5-24.5	MW-22-145 10.5-15.5	MW-22-145 10.5-15.5	MW-22-146 5.5-10.5	MW-22-146 5.5-10.5
Per- and Polyfluoroalkyl Substances (PFAS) (via EPA Method 537 Modified)																									
11CI-PF3OUdS (F-53B Minor)	--	--	--	ng/L	< 7.1	NA [NA]	< 7.1	< 7.6	< 7.8	< 8.0	< 7.4	< 7.9	< 7.8	< 7.6	NA	NA	NA	< 6.9 [< 6.7]	< 7.2	< 6.9	< 6.6 [< 6.6]	< 6.8	< 7.2	< 7.4	< 6.7
4:2 FTS	--	--	--	ng/L	< 7.1 Q	NA [NA]	< 7.1 Q	< 7.6 Q	< 7.8 Q	< 8.0 Q	< 7.4	< 7.9	< 7.8	< 7.6 Q	NA	NA	NA	< 6.9 Q [2.1 JQ]	< 7.2	< 6.9 Q	< 6.6 [< 6.6]	< 6.8	< 7.2	< 7.4 Q	< 6.7 Q
6:2 FTS	--	--	--	ng/L	< 7.1 Q	NA [NA]	< 7.1 Q	< 7.6 Q	< 7.8	< 8.0 Q	< 7.4	< 7.9	< 7.8	37 Q	NA	NA	NA	< 6.9 [4.0 J]	< 7.2	< 6.9	< 6.6 [< 6.6]	< 6.8	< 7.2	< 7.4 Q	< 6.7 Q
8:2 FTS	--	--	--	ng/L	< 7.1	NA [NA]	< 7.1	< 7.6	< 7.8	< 8.0	< 7.4	< 7.9	< 7.8	42	NA	NA	NA	< 6.9 [< 6.7]	< 7.2	< 6.9	< 6.6 [< 6.6]	< 6.8	< 7.2	< 7.4	< 6.7
9CI-PF3ONS (F-53B Major)	--	--	--	ng/L	< 7.1	NA [NA]	< 7.1	< 7.6	< 7.8	< 8.0	< 7.4	< 7.9	< 7.8	< 7.6	NA	NA	NA	< 6.9 [< 6.7]	< 7.2	< 6.9	< 6.6 [< 6.6]	< 6.8	< 7.2	< 7.4	< 6.7
ADONA	--	--	--	ng/L	< 7.1	NA [NA]	< 7.1	< 7.6	< 7.8	< 8.0	< 7.4	< 7.9	< 7.8	< 7.6	NA	NA	NA	< 6.9 [< 6.7]	< 7.2	< 6.9	< 6.6 [< 6.6]	< 6.8	< 7.2	< 7.4	< 6.7
Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	370	--	--	ng/L	< 7.1	NA [NA]	< 7.1	< 7.6	< 7.8	< 8.0	< 7.4	< 7.9	< 7.8	< 7.6	NA	NA	NA	< 6.9 [< 6.7]	< 7.2	< 6.9	< 6.6 [< 6.6]	< 6.8	< 7.2	< 7.4	< 6.7
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	--	--	--	ng/L	< 7.1	NA [NA]	< 7.1	< 7.6	< 7.8	< 8.0	< 7.4	< 7.9	< 7.8	< 7.6	NA	NA	NA	< 6.9 [< 6.7]	< 7.2	< 6.9	< 6.6 [< 6.6]	< 6.8	< 7.2	< 7.4	< 6.7
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	--	--	--	ng/L	< 7.1	NA [NA]	< 7.1	< 7.6	< 7.8	< 8.0	< 7.4	< 7.9	< 7.8	< 7.6	NA	NA	NA	< 6.9 [< 6.7]	< 7.2	< 6.9	< 6.6 [< 6.6]	< 6.8	< 7.2	< 7.4	< 6.7
Perfluorobutanesulfonic acid (PFBS)	420	670,000	--	ng/L	< 3.6	NA [NA]	< 3.5	2.0 J	2.6 J	1.7 J	0.59 J	< 3.9	< 3.9	14	NA	NA	NA	1.1 J [1.7 J]	1.5 J	2.5 J	2.7 J [2.5 J]	3.4	3.9	4.3	5.0
Perfluorobutanoic acid (PFBA)	--	--	--	ng/L	18	NA [NA]	14	17	11	9.3	1.2 J	< 3.9	< 3.9	36	NA	NA	NA	11 [13]	12	7.1	7.7 [6.9]	10	7.6	8.7	10
Perfluorodecanesulfonic acid (PFDS)	--	--	--	ng/L	< 3.6	NA [NA]	< 3.5	< 3.8	< 3.9	< 4.0	< 3.7	< 3.9	< 3.9	< 3.8	NA	NA	NA	< 3.5 [< 3.4]	< 3.6	< 3.4	< 3.3 [< 3.3]	< 3.4	< 3.6	< 3.7	< 3.4
Perfluorodecanoic acid (PFDA)	--	--	--	ng/L	< 3.6	NA [NA]	2.1 J	< 3.8	< 3.9	< 4.0	< 3.7	< 3.9	< 3.9	5.3	NA	NA	NA	< 3.5 [< 3.4]	< 3.6	< 3.4	< 3.3 [< 3.3]	< 3.4	< 3.6	< 3.7	< 3.4
Perfluorododecanoic acid (PFDoA)	--	--	--	ng/L	< 3.6	NA [NA]	< 3.5	< 3.8	< 3.9	< 4.0	< 3.7	< 3.9	< 3.9	< 3.8	NA	NA	NA	< 3.5 [< 3.4]	< 3.6	< 3.4	< 3.3 [< 3.3]	< 3.4	< 3.6	< 3.7	< 3.4
Perfluoroheptanesulfonic acid (PFHpS)	--	--	--	ng/L	< 3.6	NA [NA]	< 3.5	< 3.8	< 3.9	< 4.0	< 3.7	< 3.9	< 3.9	31	NA	NA	NA	< 3.5 [< 3.4]	< 3.6	< 3.4	< 3.3 [< 3.3]	0.74 J	0.91 J	< 3.7	< 3.4
Perfluoroheptanoic acid (PFHpA)	--	--	--	ng/L	20	NA [NA]	17	21	16	37	< 3.7	< 3.9	< 3.9	55	NA	NA	NA	5.0 [5.3]	7.4	8.0	7.7 [6.8]	14	9.4	0.55 J	1.0 J
Perfluorohexanesulfonic acid (PFHxS)	51	210	--	ng/L	2.4 J	NA [NA]	2.1 J	1.8 J	2.0 J	2.6 J	< 3.7	< 3.9	< 3.9	240	NA	NA	NA	< 3.5 [1.1 J]	0.62 J	4.4	4.2 [3.6]	3.3 J	3.1 J	0.81 J	0.98 J
Perfluorohexanoic acid (PFHxA)	400,000	--	--	ng/L	25	NA [NA]	16	24	17	23	< 3.7	< 3.9	< 3.9	66	NA	NA	NA	14 [16]	16	12	13 [12]	22	13	2.0 J	2.9 J
Perfluorononanesulfonic acid (PFNS)	--	--	--	ng/L	< 3.6	NA [NA]	< 3.5	< 3.8	< 3.9	< 4.0	< 3.7	< 3.9	< 3.9	< 3.8	NA	NA	NA	< 3.5 [< 3.4]	< 3.6	< 3.4	< 3.3 [< 3.3]	< 3.4	< 3.6	< 3.7	< 3.4
Perfluorononanoic acid (PFNA)	6.0	30	--	ng/L	1.1 J	NA [NA]	4.8	2.3 J	0.96 J	1.9 J	< 3.7	< 3.9	< 3.9	15	NA	NA	NA	< 3.5 [< 3.4]	< 3.6	< 3.4	0.73 J [0.66 J]	2.0 J	2.1 J	< 3.7	< 3.4
Perfluorooctane Sulfonamide (PFOSA)	--	--	--	ng/L	< 3.6	NA [NA]	< 3.5	< 3.8	< 3.9	< 4.0	< 3.7	< 3.9	< 3.9	0.92 J	NA	NA	NA	< 3.5 [< 3.4]	< 3.6	< 3.4	< 3.3 [< 3.3]	< 3.4	< 3.6	< 3.7	< 3.4
Perfluorooctane sulfonic acid (PFOS)	16	12	--	ng/L	2.9 J	NA [NA]	11	4.8	4.4	2.0 J	< 3.7	< 3.9	< 3.9	1700	NA	NA	NA	< 3.5 [< 3.4]	< 3.6	1.8 J	3.7 [3.3]	15	14	< 3.7	5.0
Perfluorooctanoic acid (PFOA)	8.0	170	--	ng/L	31	NA [NA]	24	55	32	57	< 3.7	< 3.9	< 3.9	79	NA	NA	NA	5.5 [5.6]	8.7	14	17 [15]	37	29	4.0	3.5
Perfluoropentanesulfonic acid (PFPeS)	--	--	--	ng/L	< 3.6	NA [NA]	< 3.5	0.67 J	0.64 J	1.2 J	< 3.7	< 3.9	< 3.9	17	NA	NA	NA	< 3.5 [< 3.4]	< 3.6	0.76 J	< 3.3 [< 3.3]	0.78 J	0.72 J	< 3.7	< 3.4
Perfluoropentanoic acid (PFPeA)	--	--	--	ng/L	29	NA [NA]	20	16	14	16	0.56 J	< 3.9	< 3.9	71	NA	NA	NA	12 [13]	11	12	13 [12]	19	13	1.9 J	2.1 J
Perfluorotetradecanoic acid (PFTeA)	--	--	--	ng/L	< 3.6	NA [NA]	< 3.5	< 3.8	< 3.9	< 4.0	< 3.7	< 3.9	< 3.9	< 3.8	NA	NA	NA	< 3.5 [< 3.4]	< 3.6	< 3.4	< 3.3 [< 3.3]	< 3.4	< 3.6	< 3.7	< 3.4
Perfluorotridecanoic acid (PFTriA)	--	--	--	ng/L	< 3.6	NA [NA]	< 3.5	< 3.8	< 3.9	< 4.0	< 3.7	< 3.9	< 3.9	< 3.8	NA	NA	NA	< 3.5 [< 3.4]	< 3.6	< 3.4	< 3.3 [< 3.3]	< 3.4	< 3.6	< 3.7	< 3.4
Perfluoroundecanoic acid (PFUnA)	--	--	--	ng/L	< 3.6	NA [NA]	< 3.5	< 3.8	< 3.9	< 4.0	< 3.7	< 3.9	< 3.9	< 3.8	NA	NA	NA	< 3.5 [< 3.4]	< 3.6	< 3.4	< 3.3 [< 3.3]	< 3.4	< 3.6	< 3.7	< 3.4
Metals (EPA Method 200.8, Standard Methods 3500-Cr)																									
Arsenic	0.01	0.01	--	mg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA
Arsenic (dissolved)	0.01	0.01	--	mg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA
Chromium III (trivalent)	0.1	0.16	--	mg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA
Chromium III (trivalent) (dissolved)	0.1	0.16	--	mg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA
Chromium VI (hexavalent)	0.1	0.011	--	mg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA
Copper	1.0	0.02	--	mg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA
Copper (dissolved)	1.0	0.02	--	mg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA
Lead	0.004	0.044	--	mg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA
Lead (dissolved)	0.004	0.044	--	mg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA
Nickel	0.1	0.12	--	mg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA
Nickel (dissolved)	0.1	0.12	--	mg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA
Vanadium	0.0045	0.027	--	mg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA
Vanadium (dissolved)	0.0045	0.027	--	mg/L	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA [NA]	NA	NA	NA	NA

See notes on last page.

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):		Part 201 Residential Drinking Water	Part 201 Groundwater Surface Water Interface		MW-22-147 02/14/24 MW-22-147 7.5-12.5	MW-22-147 05/23/24 MW-22-147 7.5-12.5	MW-22-148 02/14/24 MW-22-148 24.5-29.5	MW-22-148 05/23/24 MW-22-148 24.5-29.5	MW-22-149 02/14/24 MW-22-149 5.5-10.5	MW-22-149 05/23/24 MW-22-149 5.5-10.5	MW-22-150 02/14/24 MW-22-150 13-18	MW-22-150 05/23/24 MW-22-150 13-18	MW-22-151 02/14/24 MW-22-151 13-18	MW-22-151 05/23/24 MW-22-151 13-18	MW-22-152 02/14/24 MW-22-152 10-15	MW-22-152 05/23/24 MW-22-152 10-15	MW-22-153 04/08/24 MW-22-153 25-30	MW-22-154 02/13/24 MW-22-154 6-11	MW-22-154 05/23/24 MW-22-154 6-11	MW-22-155 04/08/24 MW-22-155 25.5-30.5	MW-22-156 04/08/24 MW-22-156 23-28	MW-22-157 04/08/24 MW-22-157 24-29	MW-22-158 02/14/24 MW-22-158 16-21	MW-22-158 05/23/24 MW-22-158 16-21	MW-22-160 02/14/24 MW-22-160 14-19	
Field Parameters				Units																						
pH	6.5 to 8.5	6.5 to 9.0	s.u.		7.15	7.11	7.21	6.94	7.3	7.35	7.31	7.29	6.84	6.87	7.03	7.12	7.13	7.09	6.93	6.99	7.25	7.09	7.08	7.05	6.91	
Conductivity	--	--	mS/cm		1.33	1.288	0.92	0.971	0.374	0.576	3.033	4.287	1.982	2.523	0.676	0.887	1.791	2.86	4.905	2.033	1.47	1.146	3.577	3.465	1.186	
Turbidity	--	--	NTU		9.09	8.41	9.42	19.8	4.03	3.92	5.47	6.71	132.94	18.15	7.07	4.49	13.42	3.81	3.47	144.21	31.93	9.22	8.86	9.74	7.21	
Dissolved oxygen (DO)	--	--	mg/L		4.34	4.39	1.06	1.68	7.86	6.9	0.09	0.1	0.09	0.01	0.2	0.01	0.12	0.1	0.01	0.22	0.53	0.12	0.23	0.46	0.04	
Temperature	--	--	Deg C		8.2	13	10.2	15.3	8	14.4	9.4	15	11	15.5	11.1	13.6	14.2	7.6	13.8	15.2	14.4	13.6	8.6	15.6	10.5	
Oxidation reduction potential (ORP)	--	--	millivolts		-55.9	160.8	-87.9	188.7	252.6	194.2	87.1	-68	-38.2	-63.8	57.8	-13.5	-77.2	69.1	44.6	-47.3	-82.3	-56	-100.9	-36.5	-112.6	
Volatile Organics (via EPA Method SW5030C/8260C)																										
1,1-Dichloroethane	880	740	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	119	< 1	< 1	< 1	250	< 1	NA	NA	NA	
1,1-Dichloroethene	7.0	130	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	2	< 1	< 1	< 1	20	< 1	NA	NA	NA	
1,1,1-Trichloroethane	200	89	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
1,1,1,2-Tetrachloroethane	77	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
1,1,2-Trichloroethane	5.0	330	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
1,1,2,2-Tetrachloroethane	8.5	78	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
1,2-Dibromo-3-chloropropane (DBCP)	0.2	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5	< 5	< 5	< 50	< 5	NA	NA	NA	
1,2-Dibromomethane (Ethylene dibromide)	0.05	5.7	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
1,2-Dichlorobenzene	600	13	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
1,2-Dichloroethane	5.0	360	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
1,2-Dichloropropane	5.0	230	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
1,2,3-Trichlorobenzene	--	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5	< 5	< 5	< 50	< 5	NA	NA	NA	
1,2,3-Trichloropropane	42	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
1,2,3-Trimethylbenzene	--	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
1,2,4-Trichlorobenzene	70	99	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5	< 5	< 5	< 50	< 5	NA	NA	NA	
1,2,4-Trimethylbenzene	63	17	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
1,3-Dichlorobenzene	6.6	28	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
1,3,5-Trimethylbenzene	72	45	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
1,4-Dichlorobenzene	75	17	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
1,4-Dioxane	7.2	280	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	79	NA	NA	153	116	61	NA	NA	NA	
2-Butanone (Methyl ethyl ketone) (MEK)	13,000	2,200	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 25	< 25	< 25	< 25	< 25	< 250	< 25	NA	NA	NA	
2-Hexanone	1,000	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 50	< 50	< 50	< 50	< 50	< 500	< 50	NA	NA	NA	
2-Methylnaphthalene	260	19	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5	< 5	< 5	< 50	< 5	NA	NA	NA	
2-Phenylbutane (sec-Butylbenzene)	80	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1,800	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 50	< 50	< 50	< 50	< 50	< 500	< 50	NA	NA	NA	
Acetone	730	1,700	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 50	< 50	< 50	< 50	< 50	< 500	< 50	NA	NA	NA	
Acrylonitrile	2.6	2.0	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 2	< 2	< 2	< 2	< 2	< 20	< 2	NA	NA	NA	
Benzene	5.0	200	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
Bromobenzene	18	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
Bromodichloromethane	80	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
Bromoform	80	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
Bromomethane (Methyl bromide)	10	5.0	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5	< 5	< 5	< 50	< 5	NA	NA	NA	
Carbon disulfide	800	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5	< 5	< 5	< 50	< 5	NA	NA	NA	
Carbon tetrachloride	5.0	38	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
Chlorobenzene	100	25	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
Chlorobromomethane	--	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
Chloroethane	430	1,100	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5	< 5	< 5	< 50	< 5	NA	NA	NA	
Chloroform (Trichloromethane)	80	350	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
Chloromethane (Methyl chloride)	260	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5	< 5	< 5	< 50	< 5	NA	NA	NA	
cis-1,2-Dichloroethene	70	620	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	1	2	< 1	< 10	< 1	NA	NA	NA	
cis-1,3-Dichloropropene	--	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
Cymene (p-Isopropyltoluene)	--	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5	< 5	< 5	< 50	< 5	NA	NA	NA	
Dibromochloromethane	80	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5	< 5	< 5	< 50	< 5	NA	NA	NA	
Dibromomethane	80	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5	< 5	< 5	< 50	< 5	NA	NA	NA	
Dichlorodifluoromethane (CFC-12)	1,700	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5	< 5	< 5	< 50	< 5	NA	NA	NA	
Ethyl ether	10	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 10	< 10	< 10	< 10	< 10	< 100	< 10	NA	NA	NA	
Ethylbenzene	74	18	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
Hexachloroethane	7.3	6.7	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5	< 5	< 5	< 50	< 5	NA	NA	NA	
Iodomethane	--	--	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 1	< 1	< 1	< 1	< 1	< 10	< 1	NA	NA	NA	
Isopropyl benzene	800	28	µg/L		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	< 5	< 5	< 5	<							

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):	Part 201 Residential Drinking Water	Part 201 Groundwater Surface Water Interface	Units	MW-22-147	MW-22-147	MW-22-148	MW-22-148	MW-22-149	MW-22-149	MW-22-150	MW-22-150	MW-22-151	MW-22-151	MW-22-152	MW-22-152	MW-22-153	MW-22-154	MW-22-154	MW-22-155	MW-22-156	MW-22-157	MW-22-158	MW-22-158	MW-22-160			
				02/14/24	05/23/24	02/14/24	05/23/24	02/14/24	05/23/24	02/14/24	05/23/24	02/14/24	05/23/24	02/14/24	05/23/24	02/14/24	05/23/24	04/08/24	02/13/24	05/23/24	04/08/24	04/08/24	04/08/24	04/08/24	02/14/24	05/22/24	02/14/24
				MW-22-147	MW-22-147	MW-22-148	MW-22-148	MW-22-149	MW-22-149	MW-22-150	MW-22-150	MW-22-151	MW-22-151	MW-22-152	MW-22-152	MW-22-153	MW-22-154	MW-22-154	MW-22-155	MW-22-156	MW-22-157	MW-22-158	MW-22-158	MW-22-160			
Semi-Volatile Organics (via EPA Method SW5030C/8270D)				7.5-12.5	7.5-12.5	24.5-29.5	24.5-29.5	5.5-10.5	5.5-10.5	13-18	13-18	13-18	13-18	10-15	10-15	25-30	6-11	6-11	25.5-30.5	23-28	24-29	16-21	16-21	14-19			
1,2-Dichlorobenzene	600	13	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
1,2-Diphenylhydrazine	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
1,2,4-Trichlorobenzene	70	99	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
1,3-Dichlorobenzene	6.6	28	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
1,4-Dichlorobenzene	75	17	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
2,4-Dichlorophenol	73	11	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
2,4-Dimethylphenol	370	380	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
2,4-Dinitrophenol	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
2,4-Dinitrotoluene	7.7	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
2,4,5-Trichlorophenol	730	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
2,4,6-Trichlorophenol	120	5.0	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
2,6-Dinitrotoluene	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
2-Chloronaphthalene	1,800	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
2-Chlorophenol	45	18	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
2-Methylnaphthalene	260	19	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
2-Methylphenol	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
2-Nitroaniline	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
2-Nitrophenol	20	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
3&4-Methylphenol	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
3,3'-Dichlorobenzidine	1.1	0.3	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
3-Nitroaniline	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
4,6-Dinitro-2-methylphenol	20	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
4-Bromophenyl phenyl ether	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
4-Chloro-3-methylphenol	150	7.4	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
4-Chloroaniline	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
4-Chlorophenyl phenyl ether	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
4-Nitroaniline	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
4-Nitrophenol	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Acenaphthene	1,300	38	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Acenaphthylene	52	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Anthracene	43	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Benzo(a)anthracene	2.1	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Benzo(a)pyrene	5.0	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Benzo(b)fluoranthene	1.5	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Benzo(g,h,i)perylene	1.0	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Benzo(k)fluoranthene	1.0	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
bis(2-Chloroethoxy)methane	--	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
bis(2-Chloroethyl)ether	2.0	1.0	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
bis(2-Ethylhexyl)phthalate (DEHP)	6.0	14	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Butyl benzylphthalate (BBP)	1,200	67	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Chrysene	1.6	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Dibenz(a,h)anthracene	2.0	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Dibenzofuran	--	4.0	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Diethyl phthalate	5,500	110	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Dimethyl phthalate	73,000	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Di-n-butylphthalate (DBP)	880	9.7	µg/L	NA	NA	NA	NA	NA																			

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):	Part 201 Residential Drinking Water	Part 201 Groundwater Surface Water Interface	Units	MW-22-147 02/14/24 MW-22-147 7.5-12.5	MW-22-147 05/23/24 MW-22-147 7.5-12.5	MW-22-148 02/14/24 MW-22-148 24.5-29.5	MW-22-148 05/23/24 MW-22-148 24.5-29.5	MW-22-149 02/14/24 MW-22-149 5.5-10.5	MW-22-149 05/23/24 MW-22-149 5.5-10.5	MW-22-150 02/14/24 MW-22-150 13-18	MW-22-150 05/23/24 MW-22-150 13-18	MW-22-151 02/14/24 MW-22-151 13-18	MW-22-151 05/23/24 MW-22-151 13-18	MW-22-152 02/14/24 MW-22-152 10-15	MW-22-152 05/23/24 MW-22-152 10-15	MW-22-153 04/08/24 MW-22-153 25-30	MW-22-154 02/13/24 MW-22-154 6-11	MW-22-154 05/23/24 MW-22-154 6-11	MW-22-155 04/08/24 MW-22-155 25.5-30.5	MW-22-156 04/08/24 MW-22-156 23-28	MW-22-157 04/08/24 MW-22-157 24-29	MW-22-158 02/14/24 MW-22-158 16-21	MW-22-158 05/22/24 MW-22-158 16-21	MW-22-160 02/14/24 MW-22-160 14-19			
	Per- and Polyfluoroalkyl Substances (PFAS) (via EPA Method 537 Modified)																										
	11CI-PF3OUdS (F-53B Minor)	--		--	ng/L	< 7.1	< 6.8	< 6.8	< 7.1	< 6.9	< 6.8	< 6.9	< 6.9 H	< 7.3	< 6.8	< 6.7 [< 7.0]	< 6.7	NA	NA	NA	NA	NA	NA	< 6.7	< 7.3	< 7.3	
4:2 FTS	--	--	ng/L	< 7.1 Q	< 6.8 Q	< 6.8	< 7.1	< 6.9	< 6.8	< 6.9 Q	< 6.9 HQ	< 7.3 Q	< 6.8 Q	< 6.7 Q [< 7.0]	< 6.7	NA	NA	NA	NA	NA	NA	< 6.7 Q	< 7.3	< 7.3			
6:2 FTS	--	--	ng/L	< 7.1 Q	< 6.8	< 6.8	< 7.1	< 6.9	< 6.8	< 6.9 Q	< 6.9 HQ	< 7.3 Q	< 6.8 Q	< 6.7 [< 7.0]	< 6.7	NA	NA	NA	NA	NA	NA	< 6.7	< 7.3	< 7.3			
8:2 FTS	--	--	ng/L	< 7.1	< 6.8	< 6.8	< 7.1	< 6.9	< 6.8	< 6.9	< 6.9 H	< 7.3 Q	< 6.8 Q	< 6.7 [< 7.0]	< 6.7	NA	NA	NA	NA	NA	NA	< 6.7	< 7.3	< 7.3			
9CI-PF3ONS (F-53B Major)	--	--	ng/L	< 7.1	< 6.8	< 6.8	< 7.1	< 6.9	< 6.8	< 6.9	< 6.9 H	< 7.3	< 6.8	< 6.7 [< 7.0]	< 6.7	NA	NA	NA	NA	NA	NA	< 6.7	< 7.3	< 7.3			
ADONA	--	--	ng/L	< 7.1	< 6.8	< 6.8	< 7.1	< 6.9	< 6.8	< 6.9	< 6.9 H	< 7.3	< 6.8	< 6.7 [< 7.0]	< 6.7	NA	NA	NA	NA	NA	NA	< 6.7	< 7.3	< 7.3			
Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	370	--	ng/L	< 7.1	< 6.8	< 6.8	< 7.1	< 6.9	< 6.8	< 6.9	< 6.9 H	< 7.3	< 6.8	< 6.7 [< 7.0]	< 6.7	NA	NA	NA	NA	NA	NA	< 6.7	< 7.3	< 7.3			
N-ethyl perfluorooctane sulfonamidoacetic acid (NEFOSAA)	--	--	ng/L	< 7.1	< 6.8	< 6.8	< 7.1	< 6.9	< 6.8	< 6.9	< 6.9 H	< 7.3	< 6.8	< 6.7 [< 7.0]	< 6.7	NA	NA	NA	NA	NA	NA	< 6.7	< 7.3	< 7.3			
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	--	--	ng/L	< 7.1	< 6.8	< 6.8	< 7.1	< 6.9	< 6.8	< 6.9	< 6.9 H	< 7.3	< 6.8	< 6.7 [< 7.0]	< 6.7	NA	NA	NA	NA	NA	NA	< 6.7	< 7.3	< 7.3			
Perfluorobutanesulfonic acid (PFBS)	420	670,000	ng/L	4.9	3.2 J	2.1 J	2.0 J	0.95 J	0.87 J	< 3.4	< 3.4 H	8.1	8.1	5.5 [5.6]	4.5	NA	NA	NA	NA	NA	NA	1.4 J	1.4 J	< 3.6			
Perfluorobutanoic acid (PFBA)	--	--	ng/L	7.4	5.4	0.63 J	< 3.6	< 3.4	0.65 J	2.7 J	2.1 HJ	9.9	9.7	5.6 [5.9]	4.6	NA	NA	NA	NA	NA	NA	5.1	4.9	1.1 J			
Perfluorodecanesulfonic acid (PFDS)	--	--	ng/L	< 3.6	< 3.4	< 3.4	< 3.6	< 3.4	< 3.4	< 3.4	< 3.4 H	< 3.6	< 3.4	< 3.3 [< 3.5]	< 3.4	NA	NA	NA	NA	NA	NA	< 3.4	< 3.6	< 3.6			
Perfluorodecanoic acid (PFDA)	--	--	ng/L	< 3.6	< 3.4	< 3.4	< 3.6	< 3.4	< 3.4	< 3.4	< 3.4 H	< 3.6	< 3.4	< 3.3 [< 3.5]	< 3.4	NA	NA	NA	NA	NA	NA	< 3.4	< 3.6	< 3.6			
Perfluorododecanoic acid (PFDoA)	--	--	ng/L	< 3.6	< 3.4	< 3.4	< 3.6	< 3.4	< 3.4	< 3.4	< 3.4 H	< 3.6	< 3.4	< 3.3 [< 3.5]	< 3.4	NA	NA	NA	NA	NA	NA	< 3.4	< 3.6	< 3.6			
Perfluoroheptanesulfonic acid (PFHpS)	--	--	ng/L	< 3.6	< 3.4	< 3.4	< 3.6	< 3.4	< 3.4	< 3.4	< 3.4 H	< 3.6	< 3.4	< 3.3 [< 3.5]	< 3.4	NA	NA	NA	NA	NA	NA	< 3.4	< 3.6	< 3.6			
Perfluoroheptanoic acid (PFHpA)	--	--	ng/L	0.75 J	1.1 J	< 3.4	< 3.6	< 3.4	0.63 J	< 3.4	< 3.4 H	3.2 J	3.7	1.4 J [1.4 J]	1.2 J	NA	NA	NA	NA	NA	NA	1.1 J	< 3.6	< 3.6			
Perfluorohexanesulfonic acid (PFHxS)	51	210	ng/L	1.7 J	1.9 J	< 3.4	< 3.6	0.52 J	0.61 J	< 3.4	< 3.4 H	1.8 J	1.6 J	3.2 J [3.4 J]	2.0 J	NA	NA	NA	NA	NA	NA	< 3.4	< 3.6	< 3.6			
Perfluorohexanoic acid (PFHxA)	400,000	--	ng/L	1.8 J	2.1 J	< 3.4	< 3.6	< 3.4	< 3.4	< 3.4	< 3.4 H	5.2	7.7	3.4 [3.1 J]	< 3.4	NA	NA	NA	NA	NA	NA	2.8 J	2.5 J	< 3.6			
Perfluorononanesulfonic acid (PFNS)	--	--	ng/L	< 3.6	< 3.4	< 3.4	< 3.6	< 3.4	< 3.4	< 3.4	< 3.4 H	< 3.6	< 3.4	< 3.3 [< 3.5]	< 3.4	NA	NA	NA	NA	NA	NA	< 3.4	< 3.6	< 3.6			
Perfluorononanoic acid (PFNA)	6.0	30	ng/L	< 3.6	< 3.4	< 3.4	< 3.6	0.57 J	1.1 J	< 3.4	< 3.4 H	0.57 J	0.50 J	< 3.3 [< 3.5]	< 3.4	NA	NA	NA	NA	NA	NA	< 3.4	< 3.6	< 3.6			
Perfluorooctane Sulfonamide (PFOSA)	--	--	ng/L	< 3.6	< 3.4	< 3.4	< 3.6	< 3.4	0.52 J	< 3.4	< 3.4 H	< 3.6	< 3.4	< 3.3 [< 3.5]	< 3.4	NA	NA	NA	NA	NA	NA	< 3.4	< 3.6	< 3.6			
Perfluorooctane sulfonic acid (PFOS)	16	12	ng/L	< 3.6	2.6 J	< 3.4	< 3.6	< 3.4	< 3.4	< 3.4	< 3.4 H	4.6	4.1	< 3.3 [1.8 J]	< 3.4	NA	NA	NA	NA	NA	NA	< 3.4	< 3.6	< 3.6			
Perfluorooctanoic acid (PFOA)	8.0	170	ng/L	2.3 J	3.4	< 3.4	< 3.6	1.4 J	2.1 J	< 3.4	0.72 HJ	6.9	7.6	4.0 [3.7]	2.9 J	NA	NA	NA	NA	NA	NA	0.86 J	1.2 J	< 3.6			
Perfluoropentanesulfonic acid (PFPeS)	--	--	ng/L	< 3.6	< 3.4	< 3.4	< 3.6	< 3.4	< 3.4	< 3.4	< 3.4 H	< 3.6	< 3.4	< 3.3 [< 3.5]	< 3.4	NA	NA	NA	NA	NA	NA	< 3.4	< 3.6	< 3.6			
Perfluoropentanoic acid (PFPeA)	--	--	ng/L	2.0 J	1.9 J	< 3.4	< 3.6	< 3.4	< 3.4	1.2 J	1.1 HJ	9.9	12	4.0 [4.2]	3.0 J	NA	NA	NA	NA	NA	NA	2.9 J	2.9 J	< 3.6			
Perfluorotetradecanoic acid (PFTeA)	--	--	ng/L	< 3.6	< 3.4	< 3.4	< 3.6	< 3.4	< 3.4	< 3.4	< 3.4 H	< 3.6	< 3.4	< 3.3 [< 3.5]	< 3.4	NA	NA	NA	NA	NA	NA	< 3.4	< 3.6	< 3.6			
Perfluorotridecanoic Acid (PFTriA)	--	--	ng/L	< 3.6	< 3.4	< 3.4	< 3.6	< 3.4	< 3.4	< 3.4	< 3.4 H	< 3.6	< 3.4	< 3.3 [< 3.5]	< 3.4	NA	NA	NA	NA	NA	NA	< 3.4	< 3.6	< 3.6			
Perfluoroundecanoic acid (PFUnA)	--	--	ng/L	< 3.6	< 3.4	< 3.4	< 3.6	< 3.4	< 3.4	< 3.4	< 3.4 H	< 3.6	< 3.4	< 3.3 [< 3.5]	< 3.4	NA	NA	NA	NA	NA	NA	< 3.4	< 3.6	< 3.6			
Metals (EPA Method 200.8, Standard Methods 3500-Cr)																											
Arsenic	0.01	0.01	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Arsenic (dissolved)	0.01	0.01	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Chromium III (trivalent)	0.1	0.16	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Chromium III (trivalent) (dissolved)	0.1	0.16	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Chromium VI (hexavalent)	0.1	0.011	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Copper	1.0	0.02	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Copper (dissolved)	1.0	0.02	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Lead	0.004	0.044	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Lead (dissolved)	0.004	0.044	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Nickel	0.1	0.12	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Nickel (dissolved)	0.1	0.12	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Vanadium	0.0045	0.027	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Vanadium (dissolved)	0.0045	0.027	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		

See notes on last page.

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Field Parameters	Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):	Part 201 Residential Drinking Water	Part 201 Groundwater Surface Water Interface	Units	MW-22-160 05/22/24 MW-22-160 14-19	MW-23 05/21/24 MW-23 52-62	MW-23-161 04/08/24 MW-23-161 20-25	MW-23-162 04/08/24 MW-23-162 29-34	MW-23-163 04/08/24 MW-23-163 20-25	MW-91-2R 05/22/24 MW-91-2R 68-78	MW-91-5 05/20/24 MW-91-5 112.5-128	MW-91-6 05/24/24 MW-91-6 82-98	MWBP-10-UST5-6 05/23/24 MWBP-10-UST5-6 28-38	MWBP-11-UST1-4 05/23/24 MWBP-11-UST1-4 9-19	MWBP-12-UST1-4 05/23/24 MWBP-12-UST1-4 15-25	P2-MW-02 05/16/24 P2-MW-02 31-41
	6.5 to 8.5	6.5 to 9.0	s.u.	6.91	7.44	7.16	6.92	7.15	7.07	6.94	6.57	7.07	8.97	7.66	6.82	
	mS/cm	1.178	1.212	1.293	2.433	1.097	1.757	0.16	2.471	3.475	1.425	0.805	1.166			
NTU	14.87	275.35	64.38	30.41	69.89	9.18	20.15	20.11	95.64	198.98	23.74	19.4				
mg/L	0.67	0.94	0.08	0.29	0.13	0.29	0.88	0.7	1.04	1.22	1.7	0.27				
Deg C	13.4	15.9	12.8	13.4	12.1	18.6	14.4	16.2	19.5	17	15.1	13.8				
millivolts	-54.3	-113.9	-67.5	-52.2	-73	-106.6	-87.4	-65	-78.6	112.2	190.3	78.7				
Volatile Organics (via EPA Method SW5030C/8260C)																
1,1-Dichloroethane	880	740	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
1,1-Dichloroethene	7.0	130	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
1,1,1-Trichloroethane	200	89	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
1,1,1,2-Tetrachloroethane	77	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
1,1,2-Trichloroethane	5.0	330	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
1,1,2,2-Tetrachloroethane	8.5	78	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
1,2-Dibromo-3-chloropropane (DBCP)	0.2	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
1,2-Dibromoethane (Ethylene dibromide)	0.05	5.7	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
1,2-Dichlorobenzene	600	13	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
1,2-Dichloroethane	5.0	360	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
1,2-Dichloropropane	5.0	230	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
1,2,3-Trichlorobenzene	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
1,2,3-Trichloropropane	42	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
1,2,3-Trimethylbenzene	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
1,2,4-Trichlorobenzene	70	99	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
1,2,4-Trimethylbenzene	63	17	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
1,3-Dichlorobenzene	6.6	28	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
1,3,5-Trimethylbenzene	72	45	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
1,4-Dichlorobenzene	75	17	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
1,4-Dioxane	7.2	280	µg/L	NA	NA	52	28	11	7 [7]	< 0.20*	0.70*	NA	NA	NA	NA	NA
2-Butanone (Methyl ethyl ketone) (MEK)	13,000	2,200	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 25	NA
2-Hexanone	1,000	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 50	NA
2-Methylnaphthalene	260	19	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
2-Phenylbutane (sec-Butylbenzene)	80	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1,800	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 50	NA
Acetone	730	1,700	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 50	NA
Acrylonitrile	2.6	2.0	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 2	NA
Benzene	5.0	200	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
Bromobenzene	18	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
Bromodichloromethane	80	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
Bromoform	80	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
Bromomethane (Methyl bromide)	10	5.0	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
Carbon disulfide	800	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
Carbon tetrachloride	5.0	38	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
Chlorobenzene	100	25	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
Chlorobromomethane	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
Chloroethane	430	1,100	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
Chloroform (Trichloromethane)	80	350	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
Chloromethane (Methyl chloride)	260	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
cis-1,2-Dichloroethene	70	620	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
cis-1,3-Dichloropropene	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
Cymene (p-Isopropyltoluene)	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
Dibromochloromethane	80	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
Dibromomethane	80	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
Dichlorodifluoromethane (CFC-12)	1,700	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
Ethyl ether	10	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 10	NA
Ethylbenzene	74	18	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
Hexachloroethane	7.3	6.7	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
Iodomethane	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
Isopropyl benzene	800	28	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
Methyl tert butyl ether (MTBE)	40	7,100	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
Methylene chloride	5.0	1,500	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
Naphthalene	520	11	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 5	NA
N-Butylbenzene	80	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
N-Propylbenzene	80	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
Styrene	100	80	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
tert-Butylbenzene	80	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
Tetrachloroethene	5.0	60	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	1	NA
Tetrahydrofuran	95	11,000	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 90	NA
Toluene	790	270	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
trans-1,2-Dichloroethene	100	1,500	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
trans-1,3-Dichloropropene	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
trans-1,4-Dichloro-2-butene	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
Trichloroethene	5.0	200	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	1	NA
Trichlorofluoromethane (CFC-11)	2,600	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
Vinyl chloride	2.0	13	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
m&p-Xylene	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 2	NA
o-Xylene	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 1	NA
Xylenes (total)	280	49	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	< 2	NA

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):	Part 201	Part 201	Units	MW-22-160	MW-23	MW-23-161	MW-23-162	MW-23-163	MW-91-2R	MW-91-5	MW-91-6	MWBP-10-UST5-6	MWBP-11-UST1-4	MWBP-12-UST1-4	P2-MW-02
	Residential	Groundwater		05/22/24	05/21/24	04/08/24	04/08/24	04/08/24	05/22/24	05/20/24	05/24/24	05/23/24	05/23/24	05/23/24	05/16/24
	Drinking	Surface Water		MW-22-160	MW-23	MW-23-161	MW-23-162	MW-23-163	MW-91-2R	MW-91-5	MW-91-6	MWBP-10-UST5-6	MWBP-11-UST1-4	MWBP-12-UST1-4	P2-MW-02
	Water	Interface		14-19	52-62	20-25	29-34	20-25	68-78	112.5-128	82-98	28-38	9-19	15-25	31-41
Semi-Volatile Organics (via EPA Method SW5030C/8270D)															
1,2-Dichlorobenzene	600	13	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 1	NA
1,2-Diphenylhydrazine	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
1,2,4-Trichlorobenzene	70	99	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
1,3-Dichlorobenzene	6.6	28	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 1	NA
1,4-Dichlorobenzene	75	17	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 1	NA
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
2,4-Dichlorophenol	73	11	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 10	NA
2,4-Dimethylphenol	370	380	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
2,4-Dinitrophenol	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 25	NA
2,4-Dinitrotoluene	7.7	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
2,4,5-Trichlorophenol	730	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
2,4,6-Trichlorophenol	120	5.0	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 4	NA
2,6-Dinitrotoluene	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
2-Chloronaphthalene	1,800	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
2-Chlorophenol	45	18	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 10	NA
2-Methylnaphthalene	260	19	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
2-Methylphenol	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 10	NA
2-Nitroaniline	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 25	NA
2-Nitrophenol	20	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
3&4-Methylphenol	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 20	NA
3,3'-Dichlorobenzidine	1.1	0.3	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
3-Nitroaniline	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 25	NA
4,6-Dinitro-2-methylphenol	20	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 20	NA
4-Bromophenyl phenyl ether	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
4-Chloro-3-methylphenol	150	7.4	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
4-Chloroaniline	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 10	NA
4-Chlorophenyl phenyl ether	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
4-Nitroaniline	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 25	NA
4-Nitrophenol	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 25	NA
Acenaphthene	1,300	38	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Acenaphthylene	52	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Anthracene	43	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Benzo(a)anthracene	2.1	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 1	NA
Benzo(a)pyrene	5.0	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 1	NA
Benzo(b)fluoranthene	1.5	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 1	NA
Benzo(g,h,i)perylene	1.0	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 1	NA
Benzo(k)fluoranthene	1.0	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 1	NA
bis(2-Chloroethoxy)methane	--	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
bis(2-Chloroethyl)ether	2.0	1.0	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
bis(2-Ethylhexyl)phthalate (DEHP)	6.0	14	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Butyl benzylphthalate (BBP)	1,200	67	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Chrysene	1.6	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 1	NA
Dibenz(a,h)anthracene	2.0	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 2	NA
Dibenzofuran	--	4.0	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 4	NA
Diethyl phthalate	5,500	110	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Dimethyl phthalate	73,000	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Di-n-butylphthalate (DBP)	880	9.7	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Di-n-octyl phthalate (DnOP)	130	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Fluoranthene	210	1.6	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 1	NA
Fluorene	880	12	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Hexachlorobenzene	1.0	0.2	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Hexachlorobutadiene	15	0.053	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 10	NA
Hexachlorocyclopentadiene	50	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Hexachloroethane	7.3	6.7	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Indeno(1,2,3-cd)pyrene	2.0	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 2	NA
Isophorone	770	1,300	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Naphthalene	520	11	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Nitrobenzene	3.4	180	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
N-Nitrosodi-n-propylamine	5.0	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
N-Nitrosodiphenylamine	270	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Pentachlorophenol	1.0	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Phenanthrene	52	2.0	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 2	NA
Phenol	4,400	450	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA
Pyrene	140	--	µg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	< 5	NA

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Part 201		Part 201 Groundwater Surface Water Interface	Units	MW-22-160	MW-23	MW-23-161	MW-23-162	MW-23-163	MW-91-2R	MW-91-5	MW-91-6	MWBP-10-UST5-6	MWBP-11-UST1-4	MWBP-12-UST1-4	P2-MW-02
Date Collected:	Residential			05/22/24	05/21/24	04/08/24	04/08/24	04/08/24	05/22/24	05/20/24	05/24/24	05/23/24	05/23/24	05/23/24	05/16/24
Sample Name:	Drinking			MW-22-160	MW-23	MW-23-161	MW-23-162	MW-23-163	MW-91-2R	MW-91-5	MW-91-6	MWBP-10-UST5-6	MWBP-11-UST1-4	MWBP-12-UST1-4	P2-MW-02
Sample Depth (ft. bgs):	Water			14-19	52-62	20-25	29-34	20-25	68-78	112.5-128	82-98	28-38	9-19	15-25	31-41
Per- and Polyfluoroalkyl Substances (PFAS) (via EPA Method 537 Modified)															
11CI-PF3OUdS (F-53B Minor)	--	--	ng/L	< 6.9	< 7.3	NA	NA	NA	< 6.9 [< 6.8]	NA	NA	NA	NA	NA	< 7.8
4:2 FTS	--	--	ng/L	< 6.9	< 7.3 Q	NA	NA	NA	< 6.9 Q [< 6.8 Q]	NA	NA	NA	NA	NA	< 7.8 Q
6:2 FTS	--	--	ng/L	< 6.9	< 7.3	NA	NA	NA	< 6.9 Q [< 6.8 Q]	NA	NA	NA	NA	NA	< 7.8 Q
8:2 FTS	--	--	ng/L	< 6.9	< 7.3	NA	NA	NA	< 6.9 [< 6.8 Q]	NA	NA	NA	NA	NA	< 7.8
9CI-PF3ONS (F-53B Major)	--	--	ng/L	< 6.9	< 7.3	NA	NA	NA	< 6.9 [< 6.8]	NA	NA	NA	NA	NA	< 7.8
ADONA	--	--	ng/L	< 6.9	< 7.3	NA	NA	NA	< 6.9 [< 6.8]	NA	NA	NA	NA	NA	< 7.8
Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	370	--	ng/L	< 6.9	< 7.3	NA	NA	NA	< 6.9 [< 6.8]	NA	NA	NA	NA	NA	< 7.8
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	--	--	ng/L	< 6.9	< 7.3	NA	NA	NA	< 6.9 [< 6.8]	NA	NA	NA	NA	NA	< 7.8
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	--	--	ng/L	< 6.9	< 7.3	NA	NA	NA	< 6.9 [< 6.8]	NA	NA	NA	NA	NA	< 7.8
Perfluorobutanesulfonic acid (PFBS)	420	670,000	ng/L	< 3.5	< 3.7	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	< 3.9
Perfluorobutanoic acid (PFBA)	--	--	ng/L	1.2 J	1.8 J	NA	NA	NA	7.4 [7.9]	NA	NA	NA	NA	NA	1.2 J
Perfluorodecanesulfonic acid (PFDS)	--	--	ng/L	< 3.5	< 3.7	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	< 3.9
Perfluorodecanoic acid (PFDA)	--	--	ng/L	< 3.5	< 3.7	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	0.68 J
Perfluorododecanoic acid (PFDoA)	--	--	ng/L	< 3.5	< 3.7	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	< 3.9
Perfluoroheptanesulfonic Acid (PFHpS)	--	--	ng/L	< 3.5	< 3.7	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	< 3.9
Perfluoroheptanoic acid (PFHpA)	--	--	ng/L	< 3.5	< 3.7	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	0.58 J
Perfluorohexanesulfonic acid (PFHxS)	51	210	ng/L	< 3.5	< 3.7	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	< 3.9
Perfluorohexanoic acid (PFHxA)	400,000	--	ng/L	< 3.5	< 3.7	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	1.7 J
Perfluorononanesulfonic acid (PFNS)	--	--	ng/L	< 3.5	< 3.7	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	< 3.9
Perfluorononanoic acid (PFNA)	6.0	30	ng/L	< 3.5	< 3.7	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	< 3.9
Perfluorooctane Sulfonamide (PFOSA)	--	--	ng/L	< 3.5	< 3.7	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	< 3.9
Perfluorooctane sulfonic acid (PFOS)	16	12	ng/L	< 3.5	2.5 J	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	1.9 J
Perfluorooctanoic acid (PFOA)	8.0	170	ng/L	< 3.5	0.85 J	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	< 3.9
Perfluoropentanesulfonic acid (PFPeS)	--	--	ng/L	< 3.5	< 3.7	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	< 3.9
Perfluoropentanoic acid (PFPeA)	--	--	ng/L	< 3.5	2.8 J	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	1.1 J
Perfluorotetradecanoic acid (PFTeA)	--	--	ng/L	< 3.5	< 3.7	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	< 3.9
Perfluorotridecanoic Acid (PFTriA)	--	--	ng/L	< 3.5	< 3.7	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	< 3.9
Perfluoroundecanoic acid (PFUnA)	--	--	ng/L	< 3.5	< 3.7	NA	NA	NA	< 3.4 [< 3.4]	NA	NA	NA	NA	NA	< 3.9
Metals (EPA Method 200.8, Standard Methods 3500-Cr)															
Arsenic	0.01	0.01	mg/L	NA	NA	NA	NA	NA	0.011 [0.010]	NA	NA	0.044	0.007	0.003	NA
Arsenic (dissolved)	0.01	0.01	mg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	0.006	0.006	0.003	NA
Chromium III (trivalent)	0.1	0.16	mg/L	NA	NA	NA	NA	NA	< 0.005 [< 0.005]	NA	NA	< 0.005	< 0.005	< 0.005	NA
Chromium III (trivalent) (dissolved)	0.1	0.16	mg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 0.005	< 0.005	< 0.005	NA
Chromium VI (hexavalent)	0.1	0.011	mg/L	NA	NA	NA	NA	NA	< 0.01 [< 0.01]	NA	NA	NA	NA	NA	NA
Copper	1.0	0.02	mg/L	NA	NA	NA	NA	NA	< 0.005 [< 0.005]	NA	NA	< 0.005	< 0.005	< 0.005	NA
Copper (dissolved)	1.0	0.02	mg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 0.005	< 0.005	< 0.005	NA
Lead	0.004	0.044	mg/L	NA	NA	NA	NA	NA	< 0.003 [< 0.003]	NA	NA	< 0.003	< 0.003	< 0.003	NA
Lead (dissolved)	0.004	0.044	mg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 0.003	< 0.003	< 0.003	NA
Nickel	0.1	0.12	mg/L	NA	NA	NA	NA	NA	< 0.005 [< 0.005]	NA	NA	< 0.005	< 0.005	< 0.005	NA
Nickel (dissolved)	0.1	0.12	mg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 0.005	< 0.005	< 0.005	NA
Vanadium	0.0045	0.027	mg/L	NA	NA	NA	NA	NA	< 0.005 [< 0.005]	NA	NA	< 0.005	< 0.005	< 0.005	NA
Vanadium (dissolved)	0.0045	0.027	mg/L	NA	NA	NA	NA	NA	NA [NA]	NA	NA	< 0.005	< 0.005	< 0.005	NA

See notes on last page.

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):	Part 201	Part 201	Units	P2-MW-04	P3-SB-28	P6-SB-07	PW-14-01	PW-14-02	PW-14-02	PW-14-03R	PW-14-03R	TW-14-02	TW-14-02	TW-15-11	TW-15-11	TW-15-12	TW-15-12	UNK-11	UNK-15
	Residential	Groundwater		05/16/24	05/22/24	05/23/24	05/15/24	02/13/24	05/15/24	02/13/24	05/17/24	02/12/24	05/15/24	02/13/24	05/17/24	02/13/24	05/16/24	05/22/24	05/21/24
	Drinking	Surface Water		P2-MW-04	P3-SB-28	P6-SB-07	PW-14-01	PW-14-02	PW-14-03R	PW-14-03R	TW-14-02	TW-14-02	TW-15-11	TW-15-11	TW-15-12	TW-15-12	UNK-11	UNK-15	
Water				26-36	8-13	15-20	71.6-76.8	75-80	75-80	85-90	85-90	67-72	67-72	85-90	85-90	73-78	73-78	6.5-11.5	11-16
Field Parameters																			
pH	6.5 to 8.5	6.5 to 9.0	s.u.	7.2	7.53	7.3	6.98	7.03	6.79	5.19	6.14	7.69	6.61	6.98	6.68	7.73	6.87	10.22	7.96
Conductivity	--	--	mS/cm	1.33	0.446	0.683	2.804	2.443	1.848	3.908	2.991	4.887	3.916	2.577	2.728	2.926	2.821	0.211	0.568
Turbidity	--	--	NTU	18.5	4.63	353.31	314.75	147.69	98.55	135.65	248	31.92	207.57	38	271	114.25	11.9	30.11	3.51
Dissolved oxygen (DO)	--	--	mg/L	0	0.13	0	5.56	0.87	1.41	2.92	0.38	10.44	0.92	9.78	0.03	11.02	6.75	2.25	0.12
Temperature	--	--	Deg C	13.2	16.9	13.9	15.4	8.4	17	7.2	21.7	8.7	15.1	11.2	17.9	6.4	16.7	19.6	15.8
Oxidation reduction potential (ORP)	--	--	millivolts	-100	133	-98.3	-10.6	-140.6	52.6	49.3	213.8	-39.3	123.9	281	137.5	-60.2	190.4	39.9	69.4
Volatile Organics (via EPA Method SW5030C/8260C)																			
1,1-Dichloroethane	880	740	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	7.0	130	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	200	89	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
1,1,1,2-Tetrachloroethane	77	--	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	5.0	330	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	8.5	78	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane (DBCP)	0.2	--	µg/L	NA	NA	NA	NA	NA [NA]	< 5	NA	NA	NA	< 5	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromide)	0.05	5.7	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	13	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	5.0	360	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	5.0	230	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	--	--	µg/L	NA	NA	NA	NA	NA [NA]	< 5	NA	NA	NA	< 5	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	42	--	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
1,2,3-Trimethylbenzene	--	--	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	70	99	µg/L	NA	NA	NA	NA	NA [NA]	< 5	NA	NA	NA	< 5	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	63	17	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	6.6	28	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	72	45	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	17	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
1,4-Dioxane	7.2	280	µg/L	29	NA	NA	< 1	55 [51]	84	6.0	13	4.0	161	115	197	< 1	< 1	NA	NA
2-Butanone (Methyl ethyl ketone) (MEK)	13,000	2,200	µg/L	NA	NA	NA	NA	NA [NA]	< 25	NA	NA	NA	< 25	NA	NA	NA	NA	NA	NA
2-Hexanone	1,000	--	µg/L	NA	NA	NA	NA	NA [NA]	< 50	NA	NA	NA	< 50	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	260	19	µg/L	NA	NA	NA	NA	NA [NA]	< 5	NA	NA	NA	< 5	NA	NA	NA	NA	NA	NA
2-Phenylbutane (sec-Butylbenzene)	80	--	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1,800	--	µg/L	NA	NA	NA	NA	NA [NA]	< 50	NA	NA	NA	< 50	NA	NA	NA	NA	NA	NA
Acetone	730	1,700	µg/L	NA	NA	NA	NA	NA [NA]	< 50	NA	NA	NA	< 50	NA	NA	NA	NA	NA	NA
Acrylonitrile	2.6	2.0	µg/L	NA	NA	NA	NA	NA [NA]	< 2	NA	NA	NA	< 2	NA	NA	NA	NA	NA	NA
Benzene	5.0	200	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
Bromobenzene	18	--	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
Bromodichloromethane	80	--	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
Bromoform	80	--	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
Bromomethane (Methyl bromide)	10	5.0	µg/L	NA	NA	NA	NA	NA [NA]	< 5	NA	NA	NA	< 5	NA	NA	NA	NA	NA	NA
Carbon disulfide	800	--	µg/L	NA	NA	NA	NA	NA [NA]	< 5	NA	NA	NA	< 5	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	5.0	38	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
Chlorobenzene	100	25	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
Chlorobromomethane	--	--	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
Chloroethane	430	1,100	µg/L	NA	NA	NA	NA	NA [NA]	< 5	NA	NA	NA	< 5	NA	NA	NA	NA	NA	NA
Chloroform (Trichloromethane)	80	350	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
Chloromethane (Methyl chloride)	260	--	µg/L	NA	NA	NA	NA	NA [NA]	< 5	NA	NA	NA	< 5	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	70	620	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	--	--	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
Cymene (p-Isopropyltoluene)	--	--	µg/L	NA	NA	NA	NA	NA [NA]	< 5	NA	NA	NA	< 5	NA	NA	NA	NA	NA	NA
Dibromochloromethane	80	--	µg/L	NA	NA	NA	NA	NA [NA]	< 5	NA	NA	NA	< 5	NA	NA	NA	NA	NA	NA
Dibromomethane	80	--	µg/L	NA	NA	NA	NA	NA [NA]	< 5	NA	NA	NA	< 5	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane (CFC-12)	1,700	--	µg/L	NA	NA	NA	NA	NA [NA]	< 5	NA	NA	NA	< 5	NA	NA	NA	NA	NA	NA
Ethyl ether	10	--	µg/L	NA	NA	NA	NA	NA [NA]	< 10	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA
Ethylbenzene	74	18	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
Hexachloroethane	7.3	6.7	µg/L	NA	NA	NA	NA	NA [NA]	< 5	NA	NA	NA	< 5	NA	NA	NA	NA	NA	NA
Iodomethane	--	--	µg/L	NA	NA	NA	NA	NA [NA]	< 1	NA	NA	NA	< 1	NA	NA	NA	NA	NA	NA
Is																			

See notes on last page.

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Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Date Collected: Sample Name: Sample Depth (ft. bgs):	Part 201 Residential Drinking Water	Part 201 Groundwater Surface Water Interface	Units	P2-MW-04	P3-SB-28	P6-SB-07	PW-14-01	PW-14-02	PW-14-02	P3-14-03R	PW-14-03R	PW-14-03R	TW-14-02	TW-14-02	TW-15-11	TW-15-11	TW-15-12	TW-15-12	UNK-11	UNK-15
				05/16/24	05/22/24	05/23/24	05/15/24	02/13/24	05/15/24	02/13/24	05/17/24	02/13/24	05/17/24	02/13/24	05/17/24	02/13/24	05/16/24	05/22/24	05/21/24	
				P2-MW-04	P3-SB-28	P6-SB-07	PW-14-01	PW-14-02	PW-14-02	PW-14-03R	PW-14-03R	PW-14-03R	TW-14-02	TW-14-02	TW-15-11	TW-15-11	TW-15-12	TW-15-12	UNK-11	UNK-15
				26-36	8-13	15-20	71.6-76.8	75-80	75-80	85-90	85-90	85-90	67-72	67-72	85-90	85-90	73-78	73-78	6.5-11.5	11-16
Semi-Volatile Organics (via EPA Method SW5030C/8270D)																				
1,2-Dichlorobenzene	600	13	µg/L	< 1	< 1	< 1	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA
1,2-Diphenylhydrazine	--	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
1,2,4-Trichlorobenzene	70	99	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
1,3-Dichlorobenzene	6.6	28	µg/L	< 1	< 1	< 1	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA
1,4-Dichlorobenzene	75	17	µg/L	< 1	< 1	< 1	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	--	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
2,4-Dichlorophenol	73	11	µg/L	< 10	< 10	< 10	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10	NA
2,4-Dimethylphenol	370	380	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
2,4-Dinitrophenol	--	--	µg/L	< 25	< 25	< 25	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 25	NA
2,4-Dinitrotoluene	7.7	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
2,4,5-Trichlorophenol	730	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
2,4,6-Trichlorophenol	120	5.0	µg/L	< 4	< 4	< 4	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 4	NA
2,6-Dinitrotoluene	--	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
2-Chloronaphthalene	1,800	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
2-Chlorophenol	45	18	µg/L	< 10	< 10	< 10	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10	NA
2-Methylnaphthalene	260	19	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
2-Methylphenol	--	--	µg/L	< 10	< 10	< 10	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10	NA
2-Nitroaniline	--	--	µg/L	< 25	< 25	< 25	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 25	NA
2-Nitrophenol	20	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
3&4-Methylphenol	--	--	µg/L	< 20	< 20	< 20	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 20	NA
3,3'-Dichlorobenzidine	1.1	0.3	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
3-Nitroaniline	--	--	µg/L	< 25	< 25	< 25	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 25	NA
4,6-Dinitro-2-methylphenol	20	--	µg/L	< 20	< 20	< 20	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 20	NA
4-Bromophenyl phenyl ether	--	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
4-Chloro-3-methylphenol	150	7.4	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
4-Chloroaniline	--	--	µg/L	< 10	< 10	< 10	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10	NA
4-Chlorophenyl phenyl ether	--	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
4-Nitroaniline	--	--	µg/L	< 25	< 25	< 25	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 25	NA
4-Nitrophenol	--	--	µg/L	< 25	< 25	< 25	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 25	NA
Acenaphthene	1,300	38	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
Acenaphthylene	52	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
Anthracene	43	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
Benzo(a)anthracene	2.1	--	µg/L	< 1	< 1	< 1	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA
Benzo(a)pyrene	5.0	--	µg/L	< 1	< 1	< 1	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA
Benzo(b)fluoranthene	1.5	--	µg/L	< 1	< 1	< 1	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA
Benzo(g,h,i)perylene	1.0	--	µg/L	< 1	< 1	< 1	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA
Benzo(k)fluoranthene	1.0	--	µg/L	< 1	< 1	< 1	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA
bis(2-Chloroethoxy)methane	--	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
bis(2-Chloroethyl)ether	2.0	1.0	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
bis(2-Ethylhexyl)phthalate (DEHP)	6.0	14	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
Butyl benzylphthalate (BBP)	1,200	67	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
Chrysene	1.6	--	µg/L	< 1	< 1	< 1	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA
Dibenz(a,h)anthracene	2.0	--	µg/L	< 2	< 2	< 2	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2	NA
Dibenzofuran	--	4.0	µg/L	< 4	< 4	< 4	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 4	NA
Diethyl phthalate	5,500	110	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
Dimethyl phthalate	73,000	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
Di-n-butylphthalate (DBP)	880	9.7	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
Di-n-octyl phthalate (DnOP)	130	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
Fluoranthene	210	1.6	µg/L	< 1	< 1	< 1	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1	NA
Fluorene	880	12	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
Hexachlorobenzene	1.0	0.2	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
Hexachlorobutadiene	15	0.053	µg/L	< 10	< 10	< 10	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10	NA
Hexachlorocyclopentadiene	50	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
Hexachloroethane	7.3	6.7	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
Indeno(1,2,3-cd)pyrene	2.0	--	µg/L	< 2	< 2	< 2	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2	NA
Isophorone	770	1,300	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
Naphthalene	520	11	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
Nitrobenzene	3.4	180	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
N-Nitrosodi-n-propylamine	5.0	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA
N-Nitrosodiphenylamine	270	--	µg/L	< 5	< 5	< 5	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5	NA

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan



Location ID: Part 201 Date Collected: Residential Sample Name: Drinking Sample Depth (ft. bgs): Water			Part 201 Groundwater Surface Water Interface		Units	P2-MW-04	P3-SB-28	P6-SB-07	PW-14-01	PW-14-02	PW-14-02	PW-14-03R	PW-14-03R	TW-14-02	TW-14-02	TW-15-11	TW-15-11	TW-15-12	TW-15-12	UNK-11	UNK-15
						P2-MW-04	P3-SB-28	P6-SB-07	PW-14-01	PW-14-02	PW-14-02	PW-14-03R	PW-14-03R	TW-14-02	TW-14-02	TW-15-11	TW-15-11	TW-15-12	TW-15-12	UNK-11	UNK-15
Sample Depth (ft. bgs):			Water			26-36	8-13	15-20	71.6-76.8	75-80	75-80	85-90	85-90	67-72	67-72	85-90	85-90	73-78	73-78	6.5-11.5	11-16
Per- and Polyfluoroalkyl Substances (PFAS) (via EPA Method 537 Modified)																					
11CI-PF3OUdS (F-53B Minor)	--	--	ng/L	< 7.6	NA	< 7.4	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 68
4:2 FTS	--	--	ng/L	< 7.6 Q	NA	< 7.4 Q	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 68 Q
6:2 FTS	--	--	ng/L	< 7.6 Q	NA	< 7.4 Q	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 68 Q
8:2 FTS	--	--	ng/L	< 7.6 Q	NA	< 7.4	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 68
9CI-PF3ONS (F-53B Major)	--	--	ng/L	< 7.6	NA	< 7.4	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 68
ADONA	--	--	ng/L	< 7.6	NA	< 7.4	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 68
Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	370	--	ng/L	< 7.6	NA	< 7.4	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 68
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	--	--	ng/L	< 7.6 Q	NA	< 7.4	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 68
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	--	--	ng/L	< 7.6	NA	< 7.4	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 68
Perfluorobutanesulfonic acid (PFBS)	420	670,000	ng/L	5	NA	3.0 J	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 34
Perfluorobutanoic acid (PFBA)	--	--	ng/L	12	NA	190	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	14 J
Perfluorodecanesulfonic acid (PFDS)	--	--	ng/L	< 3.8	NA	< 3.7	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 34
Perfluorodecanoic acid (PFDA)	--	--	ng/L	2.0 J	NA	18	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 34
Perfluorododecanoic acid (PFDoA)	--	--	ng/L	< 3.8	NA	< 3.7	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 34
Perfluoroheptanesulfonic acid (PFHpS)	--	--	ng/L	< 3.8	NA	< 3.7	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 J
Perfluoroheptanoic acid (PFHpA)	--	--	ng/L	10	NA	480	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.2 J
Perfluorohexanesulfonic acid (PFHxS)	51	210	ng/L	3.7 J	NA	2.8 J	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	14 J
Perfluorohexanoic acid (PFHxA)	400,000	--	ng/L	10	NA	600	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.1 J
Perfluorononanesulfonic acid (PFNS)	--	--	ng/L	< 3.8	NA	< 3.7	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 34
Perfluorononanoic acid (PFNA)	6.0	30	ng/L	2.4 J	NA	81	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.4 J
Perfluorooctane Sulfonamide (PFOSA)	--	--	ng/L	< 3.8	NA	< 3.7	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 34
Perfluorooctane sulfonic acid (PFOS)	16	12	ng/L	24	NA	30	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,000
Perfluorooctanoic acid (PFOA)	8.0	170	ng/L	19	NA	610	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	26 J
Perfluoropentanesulfonic acid (PFPeS)	--	--	ng/L	< 3.8	NA	0.93 J	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 34
Perfluoropentanoic acid (PFPeA)	--	--	ng/L	13	NA	580	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.9 J
Perfluorotetradecanoic acid (PFTeA)	--	--	ng/L	< 3.8	NA	< 3.7	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 34
Perfluorotridecanoic acid (PFTriA)	--	--	ng/L	< 3.8	NA	< 3.7	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 34
Perfluoroundecanoic acid (PFUnA)	--	--	ng/L	< 3.8	NA	< 3.7	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 34
Metals (EPA Method 200.8, Standard Methods 3500-Cr)																					
Arsenic	0.01	0.01	mg/L	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic (dissolved)	0.01	0.01	mg/L	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium III (trivalent)	0.1	0.16	mg/L	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium III (trivalent) (dissolved)	0.1	0.16	mg/L	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium VI (hexavalent)	0.1	0.011	mg/L	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1.0	0.02	mg/L	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper (dissolved)	1.0	0.02	mg/L	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.004	0.044	mg/L	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead (dissolved)	0.004	0.044	mg/L	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.12	mg/L	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel (dissolved)	0.1	0.12	mg/L	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	0.0045	0.027	mg/L	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium (dissolved)	0.0045	0.027	mg/L	NA	NA	NA	NA	NA [NA]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
See notes on last page.																					

See notes on last page.

Table 4
Summary of Groundwater Analytical Results - January through June 2024
RACER Trust Plants 2, 3, and 6
Lansing, Michigan

Data Flagging:

Bold font represents data where detections were noted above the laboratory method detection limit.

Gray shading represents result exceeding either or both the EGLE Part 201 Generic Cleanup Criteria and Screening Levels or the EGLE GSI Criteria (Updated October 12, 2023)

1. EGLE Part 201 Residential Drinking Water Criteria and Groundwater Surface Water Interface Criteria from the Generic Cleanup Criteria and Screening Levels (dated January 10, 2018) are used for comparison with all VOC and Inorganic data and revised criteria values (dated October 12, 2023) are used for comparison with all PFAS data.
2. 1,4-Dioxane is compared to a drinking water criteria of 7.2 µg/L per the EGLE (formerly MDEQ) Establishment of Cleanup Criteria for 1,4 -Dioxane: Emergency Rules dated October 27, 2016.

Abbreviations:

-- = Not listed in the EGLE Criteria Tables

* = Analyzed for low-level 1,4-Dioxane via EPA Method 522

Deg. C. = degrees Celsius

EGLE = Michigan Department of Environment, Great Lakes, and Energy

ft. bgs = feet below ground surface

mg/L = milligrams per liter

NA = Not Analyzed

NR = Not Recorded

NTU = Nephelometric Turbidity Unit

s.u. = standard unit

ug/L = micrograms per liter

µS/cm = microSiemens per centimeter

Lab and Validation Data Qualifiers:

< = The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

B = Indicates an estimated value between the instrument detection limit and the Reporting Limit (RL).

E = Analyte exceeded calibration range. Serial dilution results not within 10%. Applicable only if analyte concentration is at least 50X the IDL in original sample.

F1 = Matrix spike and/or matrix spike duplicate recovery is outside acceptance limits.

J = The compound was positively identified, but the associated numerical value is an estimated concentration only.

Q = Surrogate failure

S = Surrogate recovery outside of control limits

X = Elevated reporting limit due to matrix interference.

Y = Elevated reporting limit due to high target concentration.

H = Out of hold time

Table 5
Summary of Plant 2 Storm Sewer Sampling Results
RACER Trust - Plant 2 Industrial Land, Lansing, Michigan

Location ID: Date Collected:	Units	MI Rule 57 SW (EGLE 2017)	P2-MH-2 2/8/2024	P2-MH-2 4/10/2024	P2-MH-W 2/8/2024	P2-MH-W 4/10/2024
Results						
Perfluorooctanesulfonic acid (PFOS)	ng/L	12	10.0	8.4	<4.2	<4.1
Perfluorooctanoic acid (PFOA)	ng/L	170	11.0	10.0	<4.2	<4.1
Perfluorobutanesulfonic acid (PFBS)	ng/L	670,000	<4.6	2.9 J	1.0 J	<4.1
Perfluorohexanesulfonic acid (PFHxS)	ng/L	210	3.1 J	3.2 J	1.8 J	1.3 J
Perfluorononanoic acid (PFNA)	ng/L	30	1.3 J	1.2 J	<4.2	<4.1
Other PFAS	ng/L	NC	21.2	21.7	4.7	3.5

Notes:

Shaded Exceeds Rule 57 Human Non-Cancer Screening
Value for Surface Water from a Non-Drinking Water
Source for PFOS or PFOA

NC = No criteria

ng/L = Nanograms per liter

PFAS = Per- and polyfluoroalkyl substances

J = Indicates an estimated value below laboratory reporting limit

< = The compound was analyzed for but not detected.

All samples analyzed using USEPA Method 537M, Michigan List of 28

Table 6
Summary of Plant 3 Storm Sewer Sampling Results
RACER Trust - Plant 3 Industrial Land, Lansing, Michigan



Location ID: Date Collected:	Units	MI Rule 57 SW (EGLE 2017)	P3-MH-284 2/8/2024	P3-MH-284 4/10/2024
Results				
Perfluorooctanesulfonic acid (PFOS)	ng/L	12	6.2	2.6 J
Perfluorooctanoic acid (PFOA)	ng/L	170	<4.1	<4.2
Perfluorobutanesulfonic acid (PFBS)	ng/L	670,000	2.8 J	1.7 J
Perfluorohexanesulfonic acid (PFHxS)	ng/L	210	<4.1	<4.2
Perfluorononanoic acid (PFNA)	ng/L	30	<4.1	<4.2
Other PFAS	ng/L	NC	12.8	0.0

Notes:

Shaded Exceeds Rule 57 Human Non-Cancer Screening
Value for Surface Water from a Non-Drinking Water
Source for PFOS or PFOA

NC = No criteria
ng/L = Nanograms per liter
PFAS = Per- and polyfluoroalkyl substances
J = Indicates an estimated value below laboratory reporting limit
< = The compound was analyzed for but not detected.
All samples analyzed using USEPA Method 537M, Michigan List of 28

Table 7
Summary of Plant 6 Storm Sewer Sampling Results
RACER Trust - Plant 6 Industrial Land, Lansing, Michigan

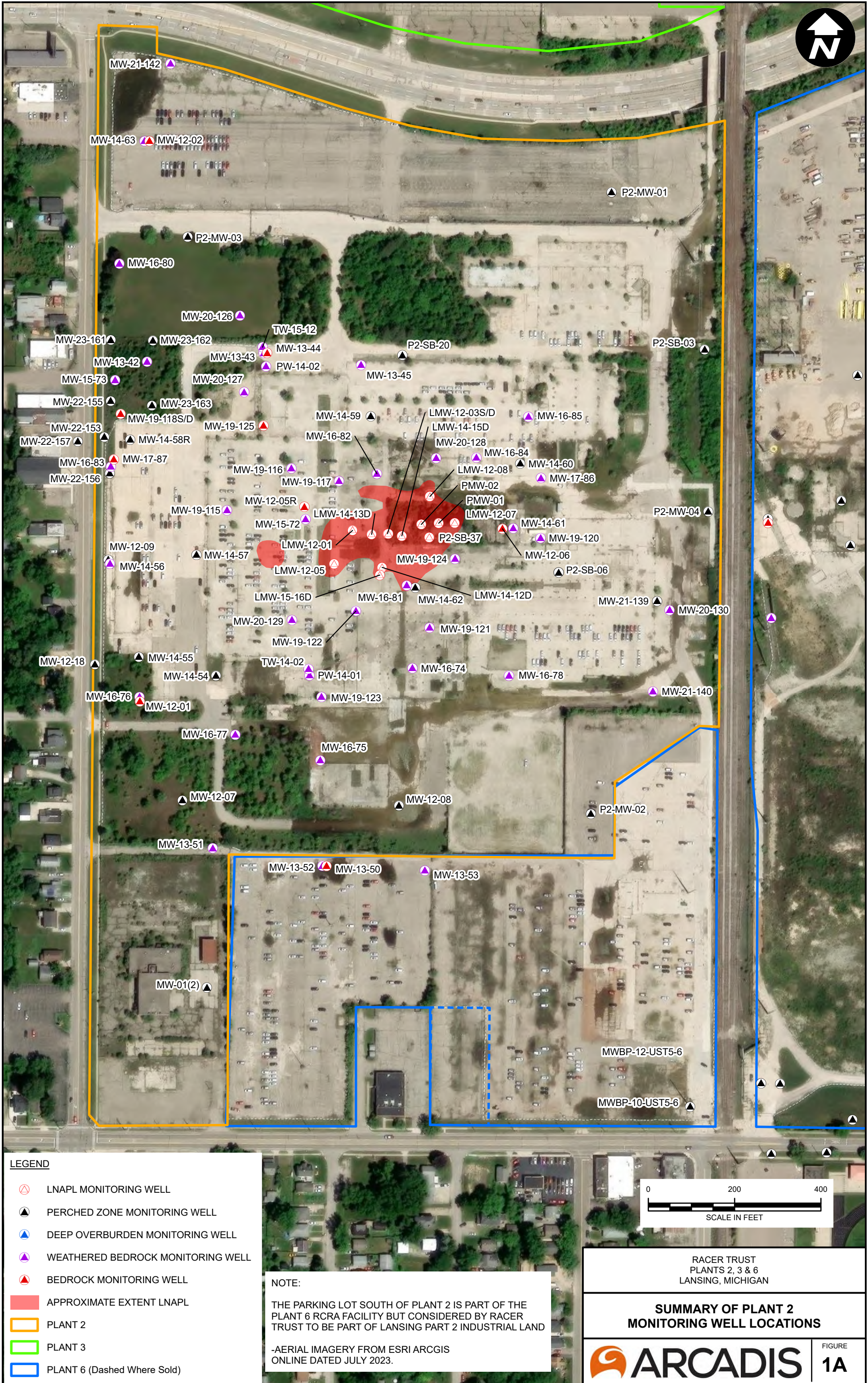


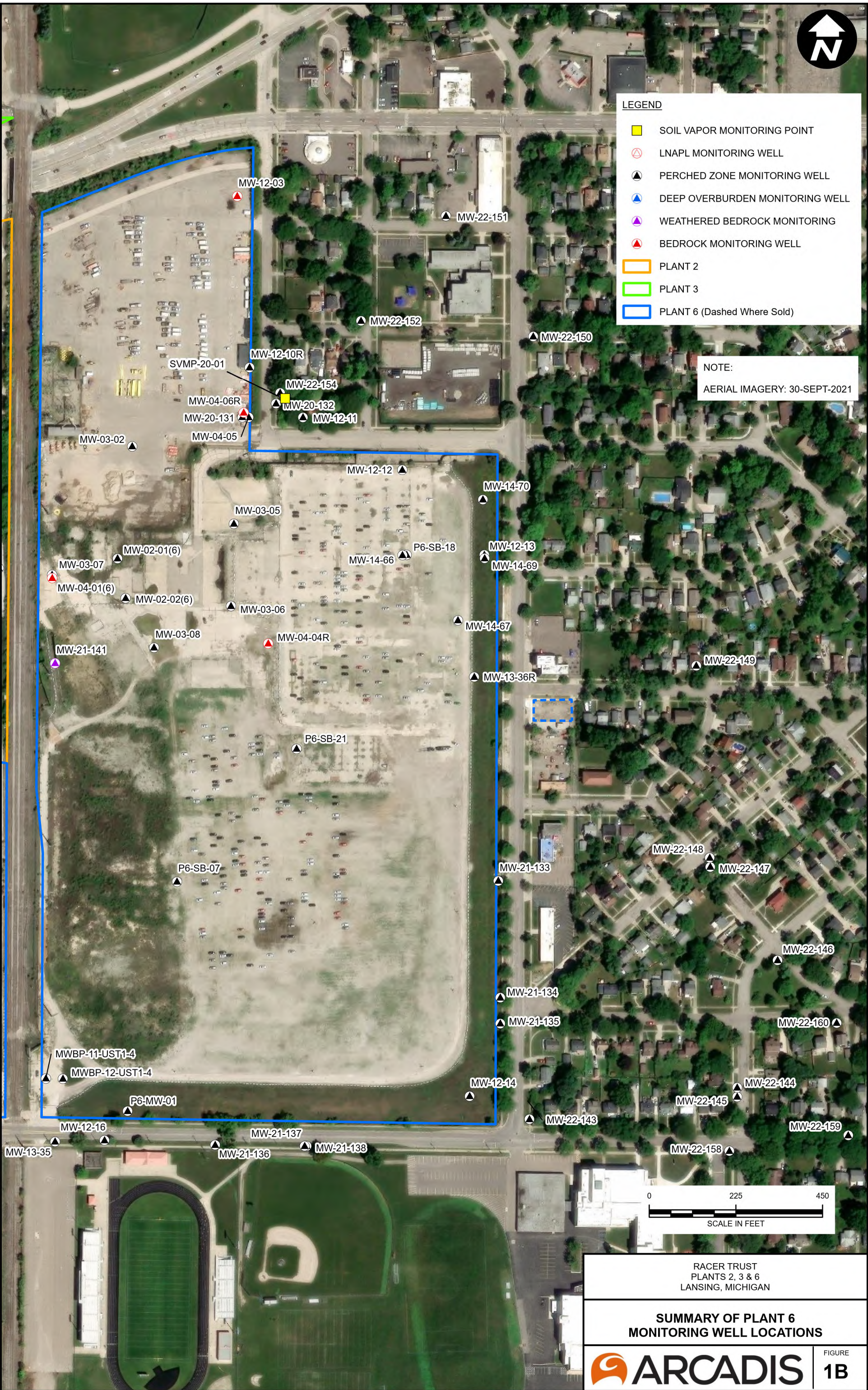
Location ID: Date Collected:	Units	MI Rule 57 SW (EGLE 2017)	MichAve-MH-3 2/8/2024	MichAve-MH-3 4/10/2024	Verlinden-MH-5 2/8/2024	Verlinden-MH-5 4/10/2024	Osborn-MH-1 2/8/2024	Osborn-MH-1 4/10/2024
Results								
Perfluorooctanesulfonic acid (PFOS)	ng/L	12	1.3 J	2.5 J	8.6	6.7	16.0 [18.0]	17.0 [15.0]
Perfluorooctanoic acid (PFOA)	ng/L	170	2.6 J	5.1	27.0	27.0	24.0 [24.0]	28.0 [28.0]
Perfluorobutanesulfonic acid (PFBS)	ng/L	670,000	2.4 J	3.2 J	3.7 J	4.3	<4.3 [2.4 J]	1.7 J [1.2 J]
Perfluorohexanesulfonic acid (PFHxS)	ng/L	210	1.9 J	3.5 J	1.8 J	1.9 J	2.5 J [2.8 J]	2.0 J [2.2 J]
Perfluorononanoic acid (PFNA)	ng/L	30	<4.2	<4.2	2.7 J	2.0 J	4.5 [4.0]	5.4 [4.5]
Other PFAS	ng/L	NC	10.5	13.8	63	55.3	67.1 [65.9]	62.7 [63.0]

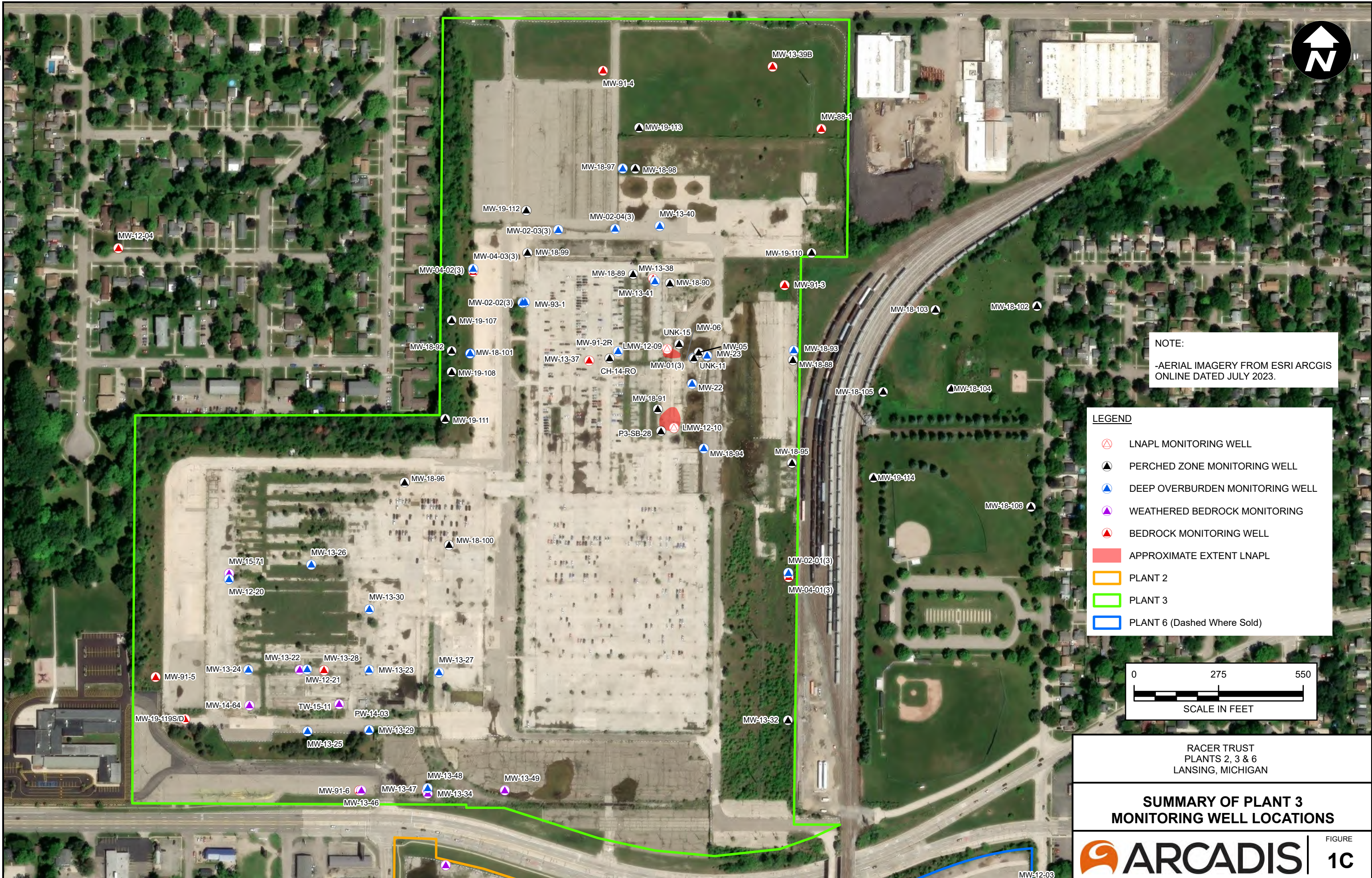
Notes:
 Shaded Exceeds Rule 57 Human Non-Cancer Screening
 Value for Surface Water from a Non-Drinking Water
 Source for PFOS or PFOA
 NC = No criteria
 ng/L = Nanograms per liter
 PFAS = Per- and polyfluoroalkyl substances
 [] Indicates duplicate sample
 J = Indicates an estimated value below laboratory reporting limit
 < = The compound was analyzed for but not detected.
 All samples analyzed using USEPA Method 537M, Michigan List of 28

Figures

CITY: Novi DIV: ENV PIC: J. BARRETT PM: T. LINDER TM: K. HUNT TR: PROJECT NUMBER: 30214036 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl T:\ENV\RACER\Lansing_BuffaloData\MXDs\2024 Annual Groundwater Monitoring Report.aprx PLOTTED: 10/22/2024 11:20 AM BY: AKENS







CITY: Novi DIV: ENV PIC: J. BARRETT PM: T. LINDER TM: K. HUNT TR: PROJECT NUMBER: 30214036 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
T:_ENV\RACER\Lansing_BuffaloData\MXD\2024 Annual Groundwater Monitoring Report.aprx PLOTTED: 10/22/2024 11:20 AM BY: AKENS

NOTES:

APPROXIMATE EXTENT OF PERCHED 1,4-DIOXANE PLUME IS BASED ON THE ANALYTICAL DATA FROM THE MOST RECENT SAMPLING EVENT.

ANALYTICAL DATA FROM THE FIRST AND SECOND QUARTER OF 2024 ARE POSTED.

SAMPLES ANALYZED VIA EPA METHOD 8260B SIM.

ALL ANALYTICAL DATA IS IN ug/L.

DW: EGLE Part 201 RESIDENTIAL DRINKING WATER CRITERIA.

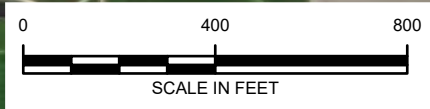
EGLE: MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

EPA: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

ug/L: MICROGRAMS PER LITER.

-AERIAL IMAGERY FROM ESRI ARCGIS ONLINE DATED JULY 2023.

- LEGEND
- ▲ PERCHED ZONE MONITORING WELL
 - WELLS SAMPLED AND 1,4-DIOXANE EXCEEDS DW CRITERIA (7.2 ug/L)
 - WELLS SAMPLED AND 1,4-DIOXANE DOES NOT EXCEED DW CRITERIA
 - PERCHED 1,4-DIOXANE IMPACTS > DW CRITERIA (7.2 ug/L)
 - ▭ PLANT 2
 - ▭ PLANT 3
 - ▭ PLANT 6 (Dashed Where Sold)

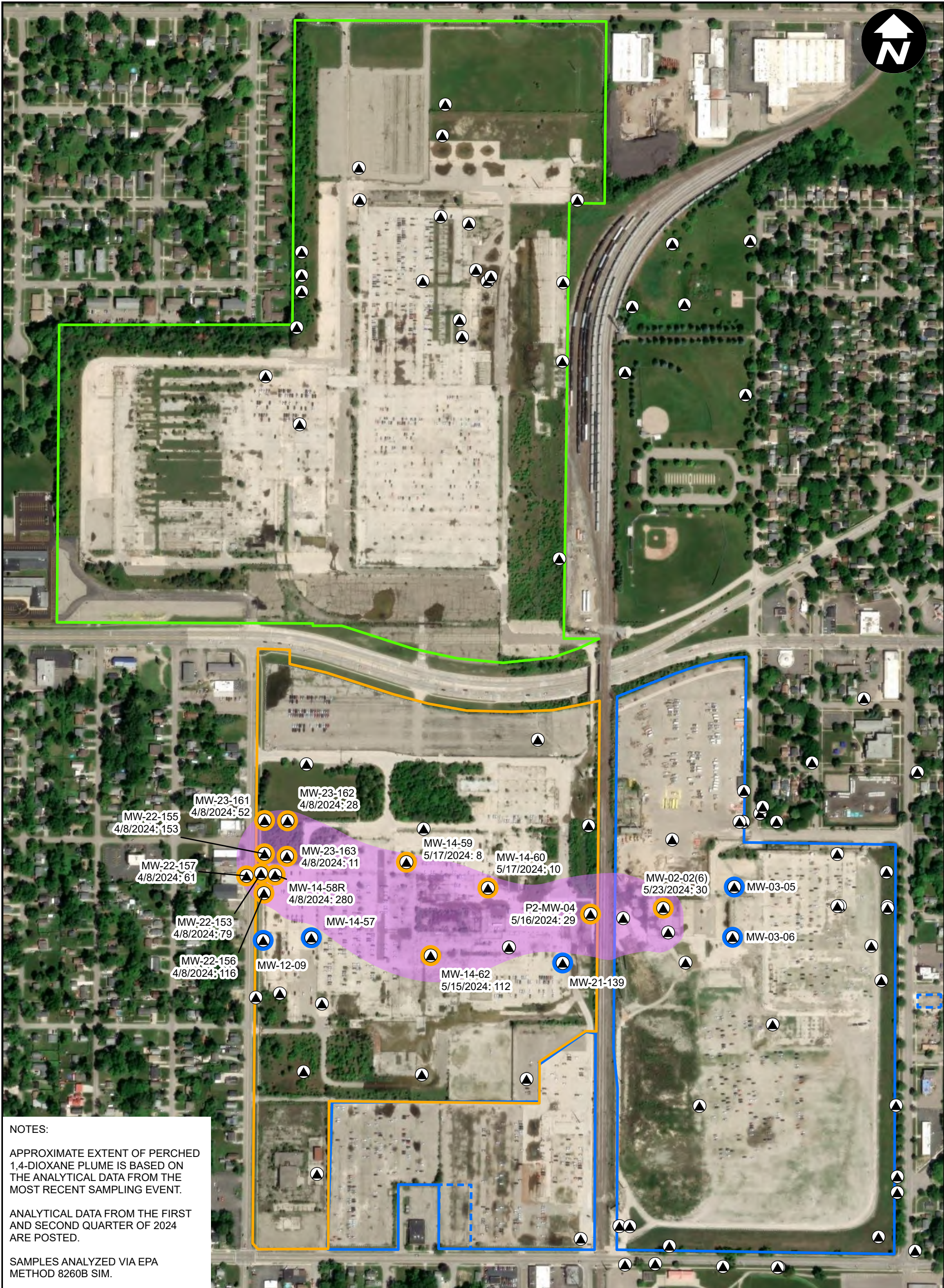


RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

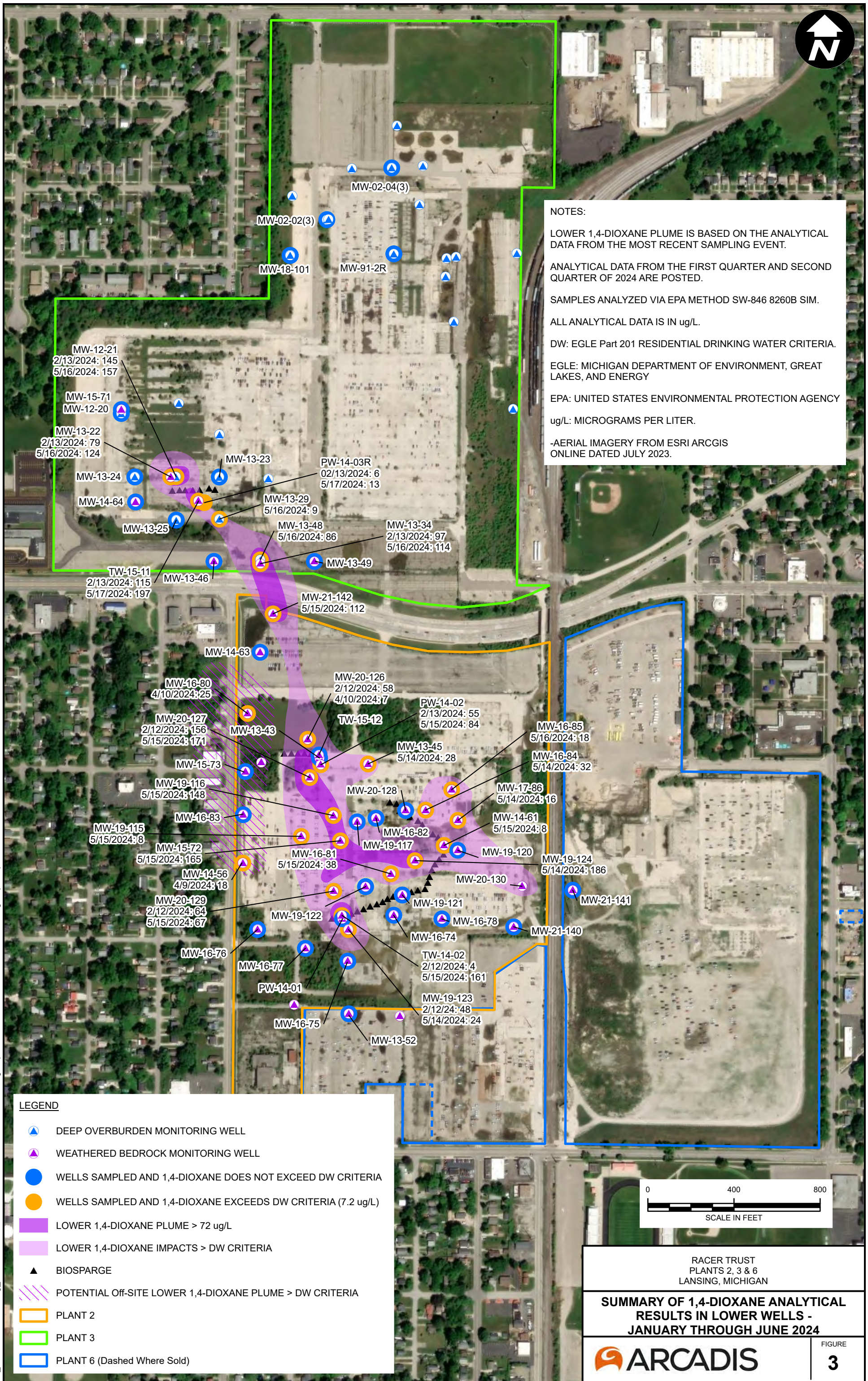
SUMMARY OF 1,4-DIOXANE ANALYTICAL RESULTS PERCHED WELLS - JANUARY THROUGH JUNE 2024

ARCADIS

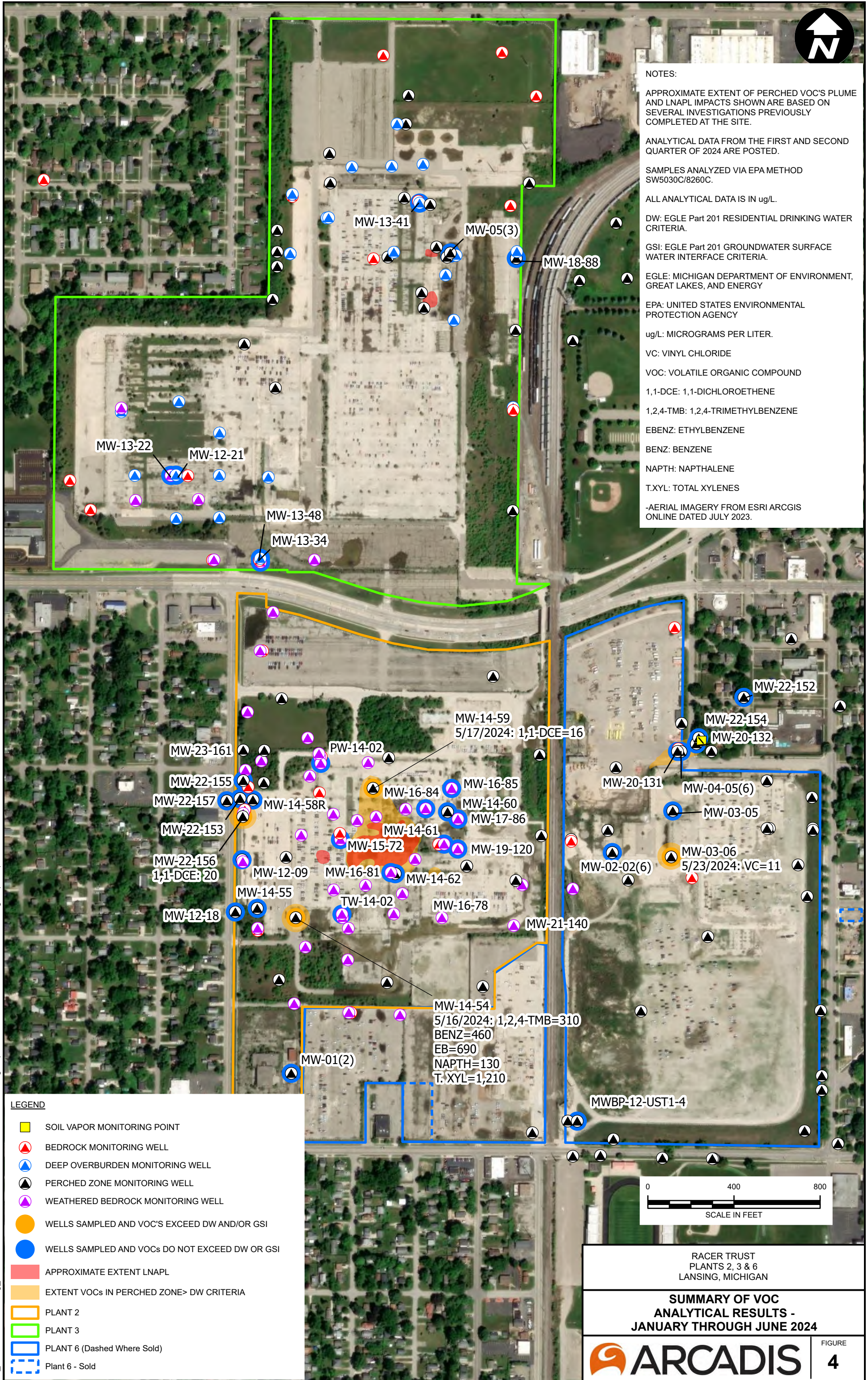
FIGURE
2



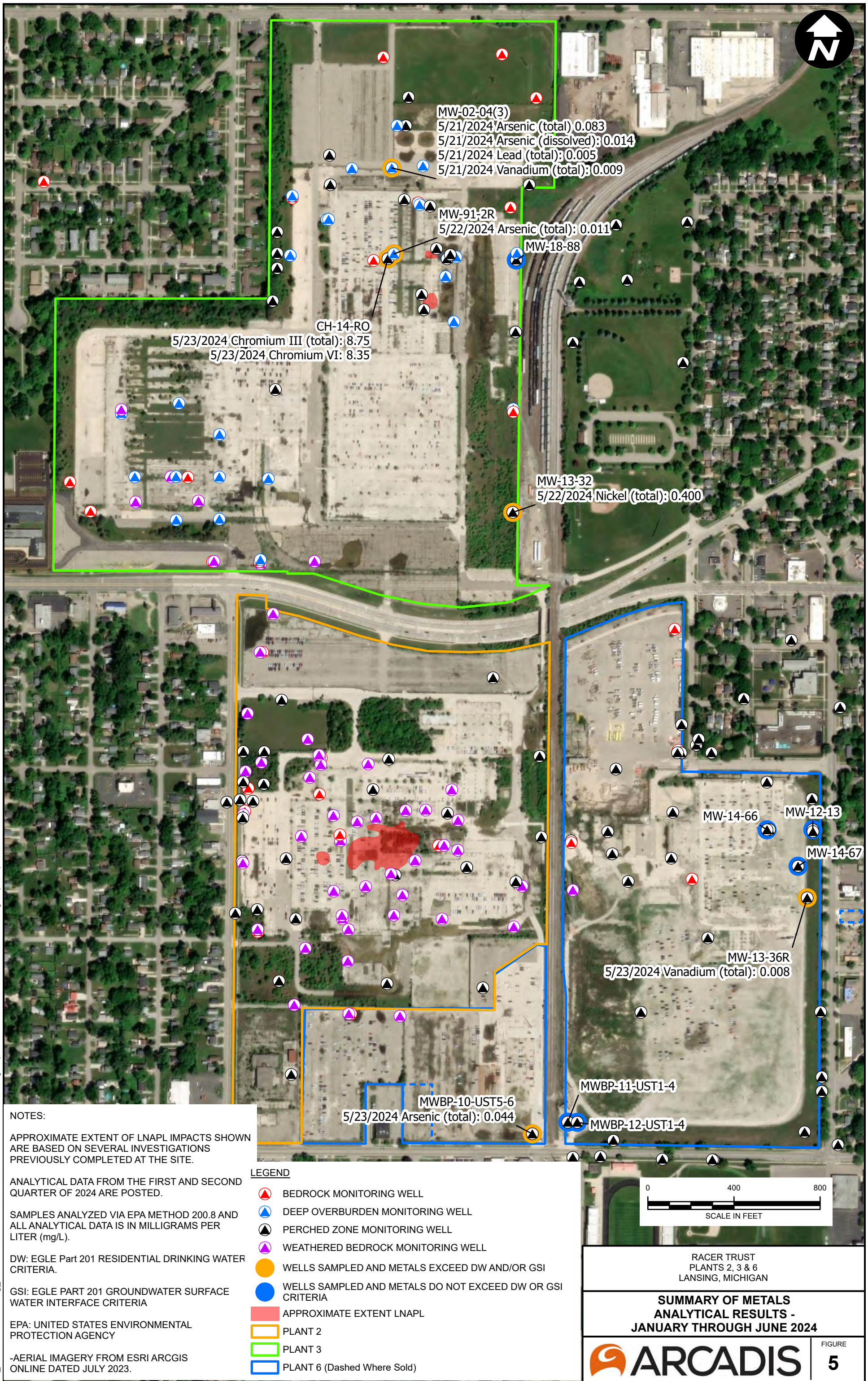
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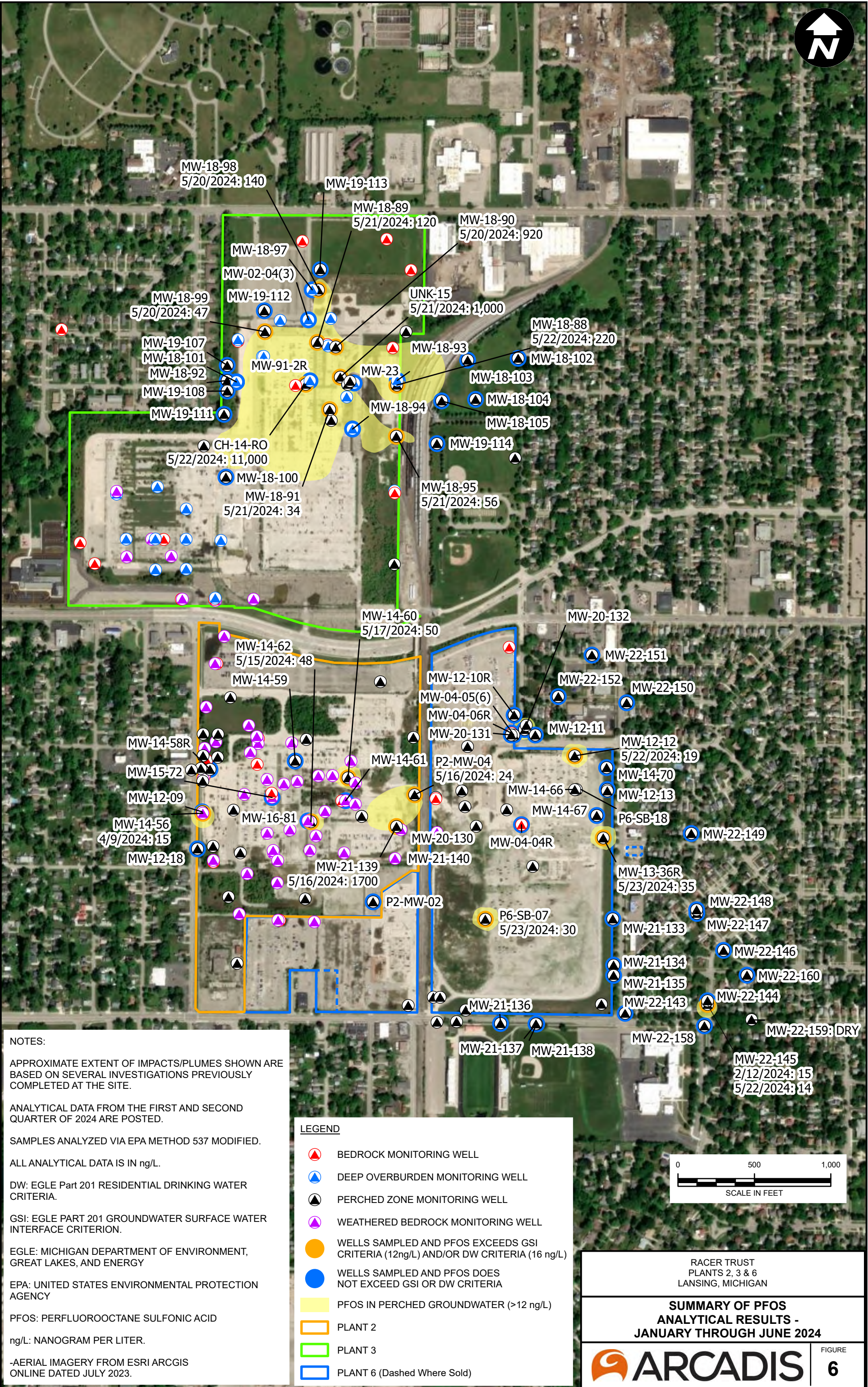


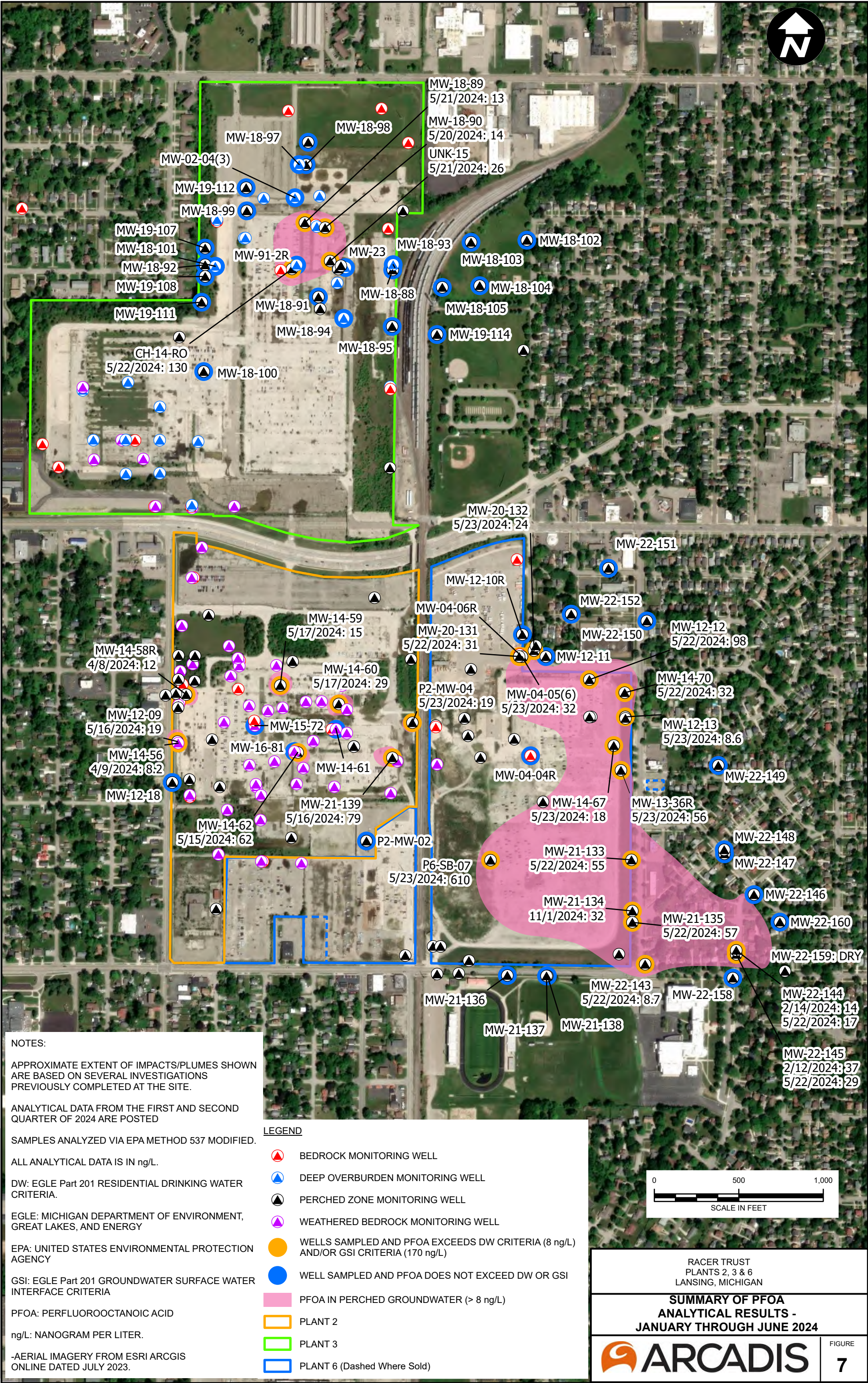
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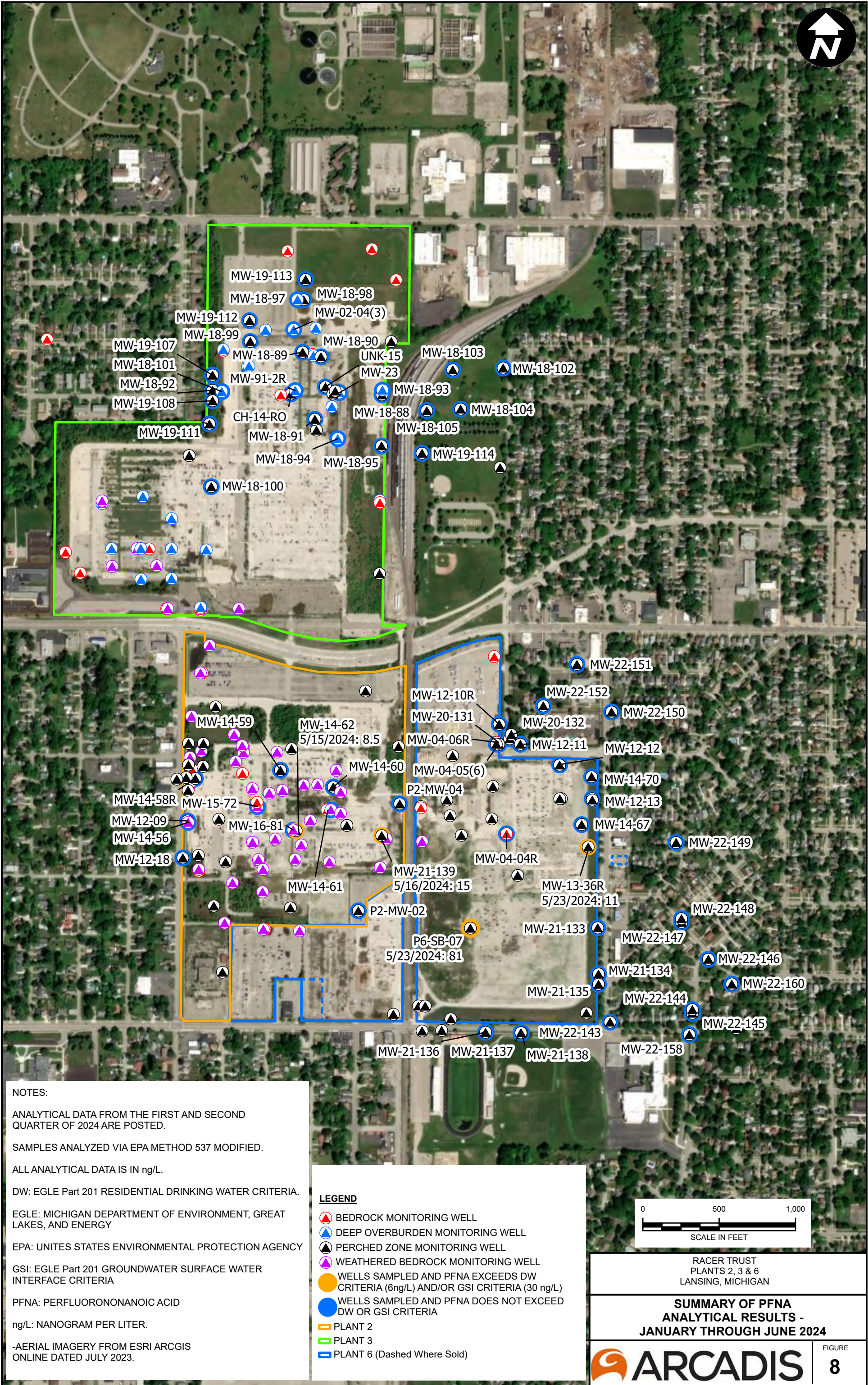


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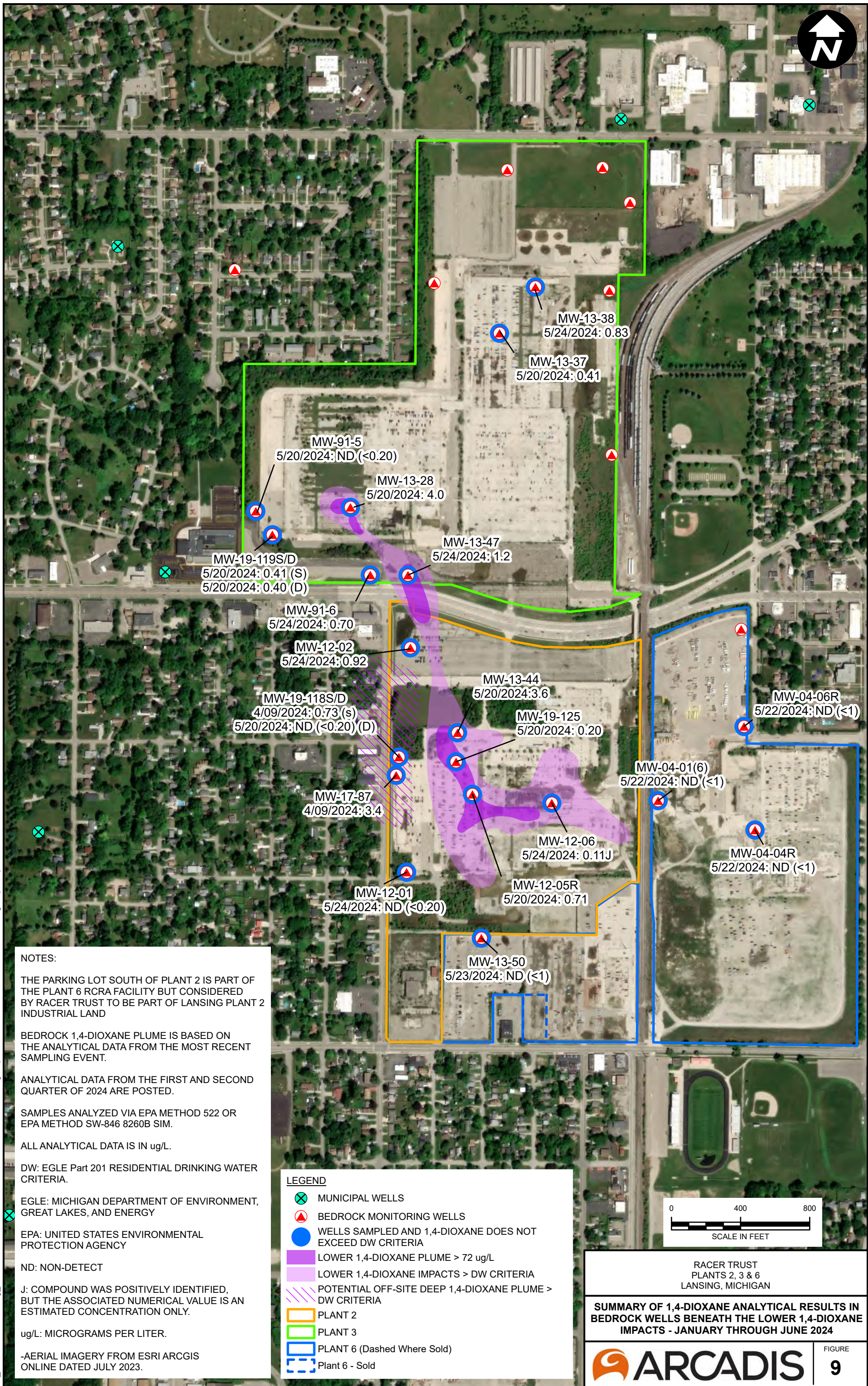




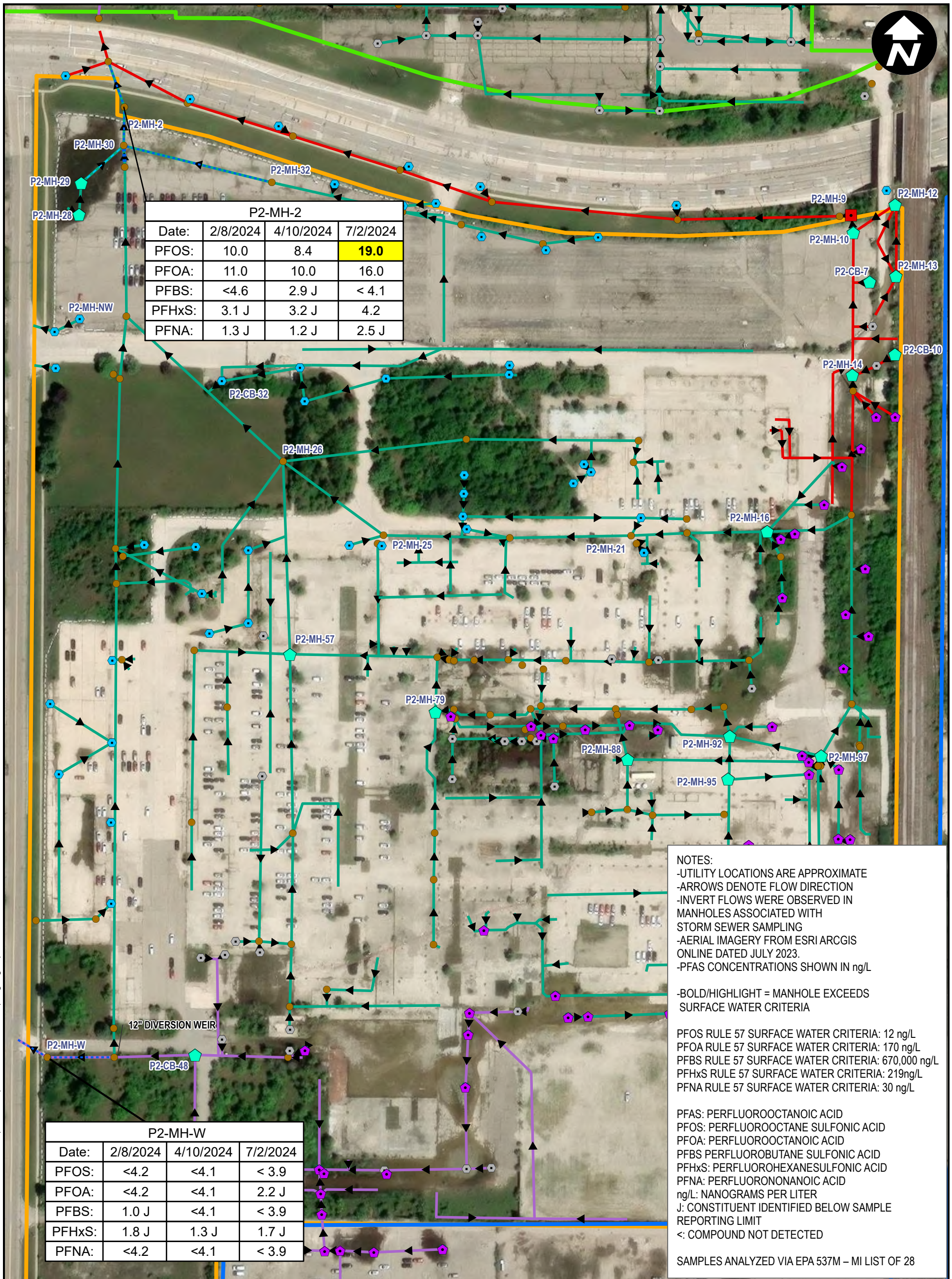




CITY: Novi DIV: ENV PIC: J. BARRETT PM: T. LINDER TM: K. HUNT TR: PROJECT NUMBER: 30214036 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl T:\ENV\RACER\Lansing_BuffaloData\MXDs\2024 Annual Groundwater Monitoring Report.aprx PLOTTED: 10/22/2024 11:20 AM BY: AKENS



CITY: Novi DIV: ENV PIC: J. BARRETT PM: T. LINDER TR: J. SALING PROJECT NUMBER: 30214036 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl T:\ENV\RACER\Lansing_BuffaloData\MXDs\2024 P2 P3 P6 Storm Sewer Modifications Completion Report\2024 PFAS Sampling Figs.aprx PLOTTED: 10/22/2024 11:10 AM BY: AKENS





P3-MH-284			
Date:	2/8/2024	4/10/2024	7/2/2024
PFOS:	6.2	2.6 J	8.8
PFOA:	<4.1	<4.2	1.7 J
PFBS:	2.8 J	1.7 J	< 4.0
PFHxS:	<4.1	<4.2	1.5 J
PFNA:	<4.1	<4.2	< 4.0

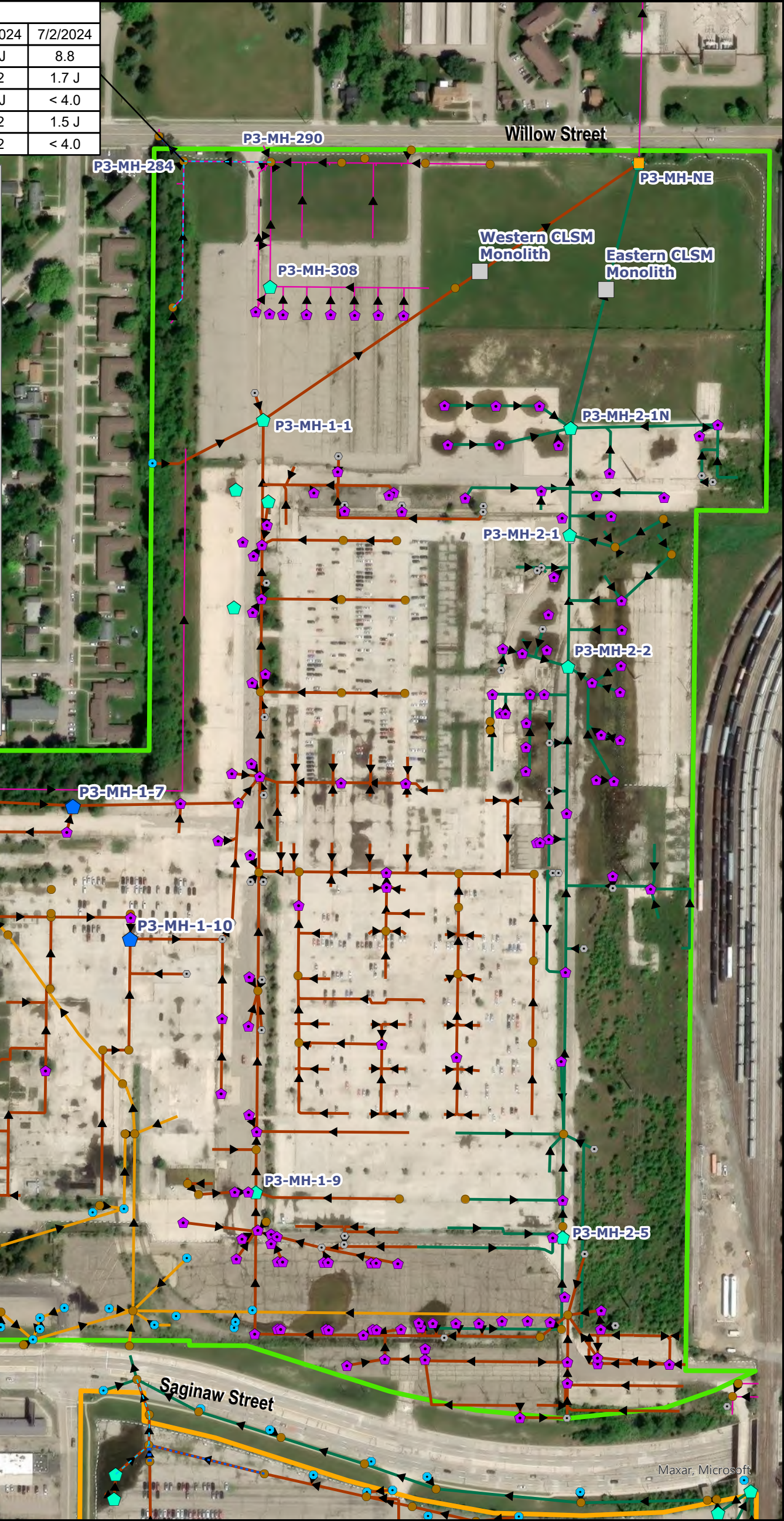
NOTES:
-UTILITY LOCATIONS ARE APPROXIMATE
-ARROWS DENOTE FLOW DIRECTION
-INVERT FLOWS WERE OBSERVED IN MANHOLES ASSOCIATED WITH STORM SEWER SAMPLING
-AERIAL IMAGERY FROM ESRI ARCGIS ONLINE DATED JULY 2023.
-PFAS CONCENTRATIONS SHOWN IN ng/L

-BOLD/HIGHLIGHT = MANHOLE EXCEEDS SURFACE WATER CRITERIA

PFOS SURFACE WATER CRITERIA: 12 ng/L
PFOA SURFACE WATER CRITERIA: 170 ng/L
PFBS SURFACE WATER CRITERIA: 670,000 ng/L
PFHxS SURFACE WATER CRITERIA: 219ng/L
PFNA SURFACE WATER CRITERIA: 30 ng/L

PFAS: PERFLUOROOCTANOIC ACID
PFOS: PERFLUOROOCTANE SULFONIC ACID
PFOA: PERFLUOROOCTANOIC ACID
PFBS: PERFLUOROBUTANE SULFONIC ACID
PFHxS: PERFLUOROHXANESULFONIC ACID
PFNA: PERFLUORONONANOIC ACID
ng/L: NANOGRAMS PER LITER
J: CONSTITUENT IDENTIFIED BELOW SAMPLE REPORTING LIMIT
<: COMPOUND NOT DETECTED

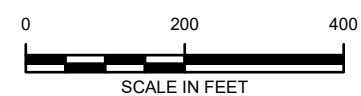
SAMPLES ANALYZED VIA EPA 537M – MI LIST OF 28



- FILLED STRUCTURE
 - CAPPED STRUCTURE
 - CLSM MONOLITH
 - BULKHEAD
 - DISCHARGE OPEN WITH CUSTOM POUR
- STRUCTURES & SAMPLE POINTS**
- MANHOLE
 - MANHOLE COULD NOT BE LOCATED
 - CATCH BASIN REMAINING OPEN
 - CATCH BASIN COULD NOT BE LOCATED

- PLANT 3 DRAINAGE NETWORKS**
- COUNTY MAIN (ACTIVE)
 - EAST MAIN (ABANDONED)
 - WEST MAIN (ABANDONED)
 - OTHER (ACTIVE)
- OBSERVED FLOW (July 2024)**
- NO FLOW
 - TRICKLE (~1 GPM OR LESS)
 - LITTLE (~1-3 GPM)
 - MODERATE (~3 GPM OR GREATER)

- PLANT BOUNDARIES**
- PLANT 2
 - PLANT 3

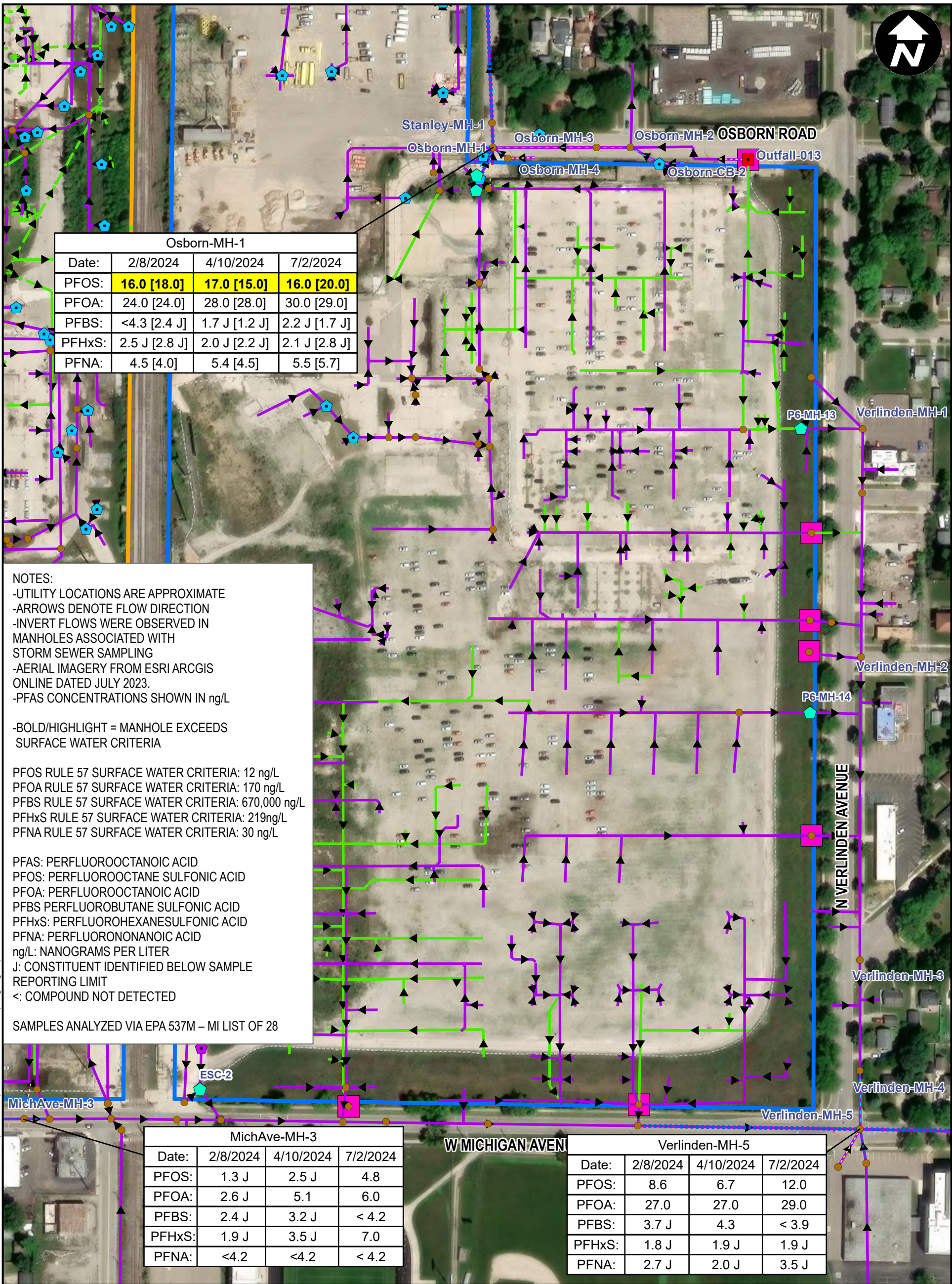


RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

**PLANT 3 PFAS STORM SEWER
SAMPLING ANALYTICAL RESULTS**



CITY: Novi DIV: ENV PIC: J. BARRETT PM: T. LINDER TR: J. SALING PROJECT NUMBER: 30214036 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl T:\ENV\RACER\Lansing_BuffaloData\MXDs\2024 P2 P3 P6 Storm Sewer Modifications Completion Report\2024 PFAS Sampling Figs.aprx PLOTTED: 10/22/2024 11:10 AM BY: AKENS



Osborn-MH-1			
Date:	2/8/2024	4/10/2024	7/2/2024
PFOS:	16.0 [18.0]	17.0 [15.0]	16.0 [20.0]
PFOA:	24.0 [24.0]	28.0 [28.0]	30.0 [29.0]
PFBS:	<4.3 [2.4 J]	1.7 J [1.2 J]	2.2 J [1.7 J]
PFHxS:	2.5 J [2.8 J]	2.0 J [2.2 J]	2.1 J [2.8 J]
PFNA:	4.5 [4.0]	5.4 [4.5]	5.5 [5.7]

NOTES:
-UTILITY LOCATIONS ARE APPROXIMATE
-ARROWS DENOTE FLOW DIRECTION
-INVERT FLOWS WERE OBSERVED IN MANHOLES ASSOCIATED WITH STORM SEWER SAMPLING
-AERIAL IMAGERY FROM ESRI ARCGIS ONLINE DATED JULY 2023.
-PFAS CONCENTRATIONS SHOWN IN ng/L

-BOLD/HIGHLIGHT = MANHOLE EXCEEDS SURFACE WATER CRITERIA

PFOS RULE 57 SURFACE WATER CRITERIA: 12 ng/L
PFOA RULE 57 SURFACE WATER CRITERIA: 170 ng/L
PFBS RULE 57 SURFACE WATER CRITERIA: 670,000 ng/L
PFHxS RULE 57 SURFACE WATER CRITERIA: 219ng/L
PFNA RULE 57 SURFACE WATER CRITERIA: 30 ng/L

PFAS: PERFLUOROOCTANOIC ACID
PFOS: PERFLUOROOCTANE SULFONIC ACID
PFOA: PERFLUOROOCTANOIC ACID
PFBS PERFLUOROBUTANE SULFONIC ACID
PFHxS: PERFLUOROHXANESULFONIC ACID
PFNA: PERFLUORONONANOIC ACID
ng/L: NANOGRAMS PER LITER
J: CONSTITUENT IDENTIFIED BELOW SAMPLE REPORTING LIMIT
<: COMPOUND NOT DETECTED

SAMPLES ANALYZED VIA EPA 537M – MI LIST OF 28

MichAve-MH-3			
Date:	2/8/2024	4/10/2024	7/2/2024
PFOS:	1.3 J	2.5 J	4.8
PFOA:	2.6 J	5.1	6.0
PFBS:	2.4 J	3.2 J	< 4.2
PFHxS:	1.9 J	3.5 J	7.0
PFNA:	<4.2	<4.2	< 4.2

Verlinden-MH-5			
Date:	2/8/2024	4/10/2024	7/2/2024
PFOS:	8.6	6.7	12.0
PFOA:	27.0	27.0	29.0
PFBS:	3.7 J	4.3	< 3.9
PFHxS:	1.8 J	1.9 J	1.9 J
PFNA:	2.7 J	2.0 J	3.5 J

- BULKHEAD
- FILLED STRUCTURE
- CAPPED STRUCTURE

STRUCTURES & SAMPLE POINTS

- MANHOLE
- MANHOLE COULD NOT BE LOCATED
- CATCH BASIN REMAINING OPEN
- DRY MANHOLE

PLANT BOUNDARIES

- PLANT 2
- PLANT 6

PLANT 6 DRAINAGE NETWORKS

- STORM LINE
- SANITARY LINE

OBSERVED FLOW (July 2024)

- NO FLOW
- TRICKLE (~1 GPM OR LESS)
- LITTLE (~1-3 GPM)
- MODERATE (~3 GPM OR GREATER)

SEWER LINE CUT AND CAPPED AT PROPERTY LINE DURING 2014 DEMOLITION

0 150 300
SCALE IN FEET

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

PLANT 6 PFAS STORM SEWER
SAMPLING ANALYTICAL RESULTS

ARCADIS

FIGURE
3

Attachment 1

Low-Flow Groundwater Sampling Logs – January to June 2024

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-12-21	Date	2/13/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	35.1 degrees F and Cloudy. The wind is blowing at 6.9 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	65.84	Total Depth (ft-bmp)	78.1	Water Column (ft)	12.26	Gallons in Well	1.99
Purge Start	13:35	Pump Intake (ft-bmp)	75.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	14:30	Volumes Purged	0.73	Sample ID	MW-12-21_021324	Sampled by	Billy Cobern
Sample Time	14:30	Gallons Purged	1.452946	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:35	0	0	100	65.84	0.00	0	0	0	0	0	0	Clear	None
13:40	5	5	100	66.15	0.13	7.28	1.944	686.67	9.24	6.6	-83.9	Clear	None
13:45	5	10	100	66.15	0.26	6.95	1.903	521.96	1.83	9.1	-99.4	Clear	None
13:50	5	15	100	66.15	0.40	6.93	1.904	145.93	1.35	9	-101.9	Clear	None
13:55	5	20	100	66.15	0.53	6.92	1.909	69.73	0.49	7.6	-110.8	Clear	None
14:00	5	25	100	66.15	0.66	6.92	1.885	56.83	0.52	7	-113.8	Clear	None
14:05	5	30	100	66.15	0.79	6.92	1.883	48.82	0.59	6.9	-115.2	Clear	None
14:10	5	35	100	66.15	0.92	6.92	1.875	42.18	0.64	7.3	-116.9	Clear	None
14:15	5	40	100	66.15	1.06	6.92	1.876	36.35	0.68	7.4	-116.9	Clear	None
14:20	5	45	100	66.15	1.19	6.93	1.879	32.84	0.7	7.3	-117.2	Clear	None
14:25	5	50	100	66.15	1.32	6.93	1.878	31.55	0.71	7.2	-117.6	Clear	None
14:30	5	55	100	66.15	1.45	6.93	1.879	32.41	0.71	7.1	-118.1	Clear	None

Constituent Sampled	Container	Number	Preservative
SERDP	1L Plastic	2	None
1,4-Dioxane 8270D SIM	40 mL Glass	3	None

Comments: Collect SERDP sample after 1,4 dioxane. Lowered pump to bottom of well for SERDP sample.

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-22	Date	2/13/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	32 degrees F/ Overcast			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	69.62	Total Depth (ft-bmp)	96.1	Water Column (ft)	26.48	Gallons in Well	4.30
Purge Start	11:40	Pump Intake (ft-bmp)	93.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	12:45	Volumes Purged	0.68	Sample ID	MW-13-22_021324	Sampled by	Donald Richmond
Sample Time	12:40	Gallons Purged	2.9058926	Replicate/ Code No.	DUP-02_021324	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
11:50	0	0	200	69.62	0.53	6.87	1.347	34	0.46	9.8	250.7	Clear	None
11:55	5	5	200	69.62	0.79	6.89	1.363	27	0.08	9.9	220	Clear	None
12:00	5	10	200	69.62	1.06	6.9	1.392	29	0	10	94	Clear	None
12:05	5	15	200	69.62	1.32	6.91	1.404	30	0	10.4	28	Clear	None
12:10	5	20	200	69.62	1.59	6.91	1.4	28	0	10.3	-22	Clear	None
12:15	5	25	200	69.62	1.85	6.91	1.41	31	0	10.3	-32	Clear	None
12:20	5	30	200	69.62	2.11	6.91	1.411	31	0	10	-39	Clear	None
12:25	5	35	200	69.62	2.38	6.91	1.452	109	0	10.1	-42	Clear	None
12:30	5	40	200	69.62	2.64	6.91	1.465	116	0	10.5	-48.1	Clear	None
12:35	5	45	200	69.62	2.91	6.92	1.457	109	0	10.6	-49	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	6	HCL

Comments:

Well Casing Volume Conversion

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

Well Information

Well Location: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-34	Date	2/13/2024
Project Name/Location	RACER Lansing 2024	Weather(°F)	32 degrees F/ Overcast		
Measuring Pt. Description	Top of Inner Casing	MP Elevation		Casing Diameter (in)	2
				Well Casing Material	PVC
Static Water Level (ft-bmp)	65.57	Total Depth (ft-bmp)	79.96	Water Column (ft)	14.39
				Gallons in Well	2.34
Purge Start	15:10	Pump Intake (ft-bmp)	76.5	Purge Method	Low-Flow
				Purge Equipment	Bladder
Purge End	16:00	Volumes Purged	0.90	Sample ID	MW-13-34_021324
				Sampled by	Donald Richmond
Sample Time	15:55	Gallons Purged	2.113376	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:20	0	0	200	65.57	0.53	7.15	1.746	279	0.46	11.2	-46.8	Clear	None
15:25	5	5	200	65.57	0.79	7.08	1.818	350	0.02	11.2	-66.8	Clear	None
15:30	5	10	200	65.57	1.06	7.07	1.818	395	0	11.1	-68.7	Clear	None
15:35	5	15	200	65.57	1.32	7.07	1.838	535	0	11.1	-70.6	Clear	None
15:40	5	20	200	65.57	1.59	7.07	1.835	633	0	11.2	-72.1	Clear	None
15:45	5	25	200	65.57	1.85	7.07	1.824	635	0	11	-72.9	Clear	None
15:50	5	30	200	65.57	2.11	7.07	1.824	635	0	11	-73.4	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-16-78	Date	2/12/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	27 degrees F / Sunny			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	64.79	Total Depth (ft-bmp)	76.17	Water Column (ft)	11.38	Gallons in Well	1.85
Purge Start	15:20	Pump Intake (ft-bmp)	73.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	15:55	Volumes Purged	0.71	Sample ID	MW-16-78_021224	Sampled by	Donald Richmond
Sample Time	15:50	Gallons Purged	1.32086	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:30	0	0	200	65.09	0.53	7.14	1.129	40	0.09	11.7	-47.1	Clear	None
15:35	5	5	200	65.09	0.79	7.13	1.117	32	0	11.4	-53.1	Clear	None
15:40	5	10	200	65.09	1.06	7.13	1.117	32	0	11.3	-54.7	Clear	None
15:45	5	15	200	65.09	1.32	7.13	1.117	32	0	11.3	-55.4	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-121	Date	2/12/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	27 degrees F / Sunny			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	65.09	Total Depth (ft-bmp)	73.6	Water Column (ft)	8.51	Gallons in Well	1.38
Purge Start	14:10	Pump Intake (ft-bmp)	70	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	15:00	Volumes Purged	1.34	Sample ID	MW-19-121_021224	Sampled by	Donald Richmond
Sample Time	14:50	Gallons Purged	1.849204	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:15	0	0	200	65.09	0.26	7.91	2.051	19	9.71	13.4	110	Clear	None
14:20	5	5	200	65.09	0.53	7.88	1.969	10.64	9.46	13.7	167.8	Clear	None
14:25	5	10	200	65.09	0.79	7.75	1.973	7.7	8.94	13.9	191.4	Clear	None
14:30	5	15	200	65.09	1.06	7.69	1.984	6.71	8.52	13.7	208.7	Clear	None
14:35	5	20	200	65.09	1.32	7.67	1.967	6.57	8.33	13.8	218.9	Clear	None
14:40	5	25	200	65.09	1.59	7.66	1.975	6.2	8.21	13.9	223	Clear	None
14:45	5	30	200	65.09	1.85	7.65	1.964	5.9	8.08	13.8	229.5	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-122	Date	2/12/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	39.0 degrees F and Clear. The wind is blowing W at 6.9 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	63.70	Total Depth (ft-bmp)	66.8	Water Column (ft)	3.10	Gallons in Well	0.50
Purge Start	14:55	Pump Intake (ft-bmp)	66	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	15:35	Volumes Purged	2.11	Sample ID	MW-19-122_021224	Sampled by	Billy Cobern
Sample Time	15:35	Gallons Purged	1.056688	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
14:55	0	0	100	63.70	0.00	0	0	0	0	0	0	Clear	None
15:00	5	5	100	64.00	0.13	6.69	5.345	1487.96	4.61	12.4	-30.3	Clear	None
15:05	5	10	100	64.00	0.26	6.67	5.309	989.42	2.83	12.6	-38.2	Clear	None
15:10	5	15	100	64.00	0.40	6.67	5.191	364.41	2.47	13.4	-38.2	Clear	None
15:15	5	20	100	64.00	0.53	6.69	5.158	84.62	3.51	12.6	-35.3	Clear	None
15:20	5	25	100	64.00	0.66	6.67	5.128	59.26	2.95	12.2	-39.2	Clear	None
15:25	5	30	100	64.00	0.79	6.65	5.104	44.28	2.87	12.8	-38.3	Clear	None
15:30	5	35	100	64.00	0.92	6.65	5.123	44.39	2.85	12.8	-36.6	Clear	None
15:35	5	40	100	64.00	1.06	6.65	5.125	43.47	2.88	12.9	-35.2	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-123	Date	2/12/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	30.9 degrees F and Clear. The wind is blowing S at 6.9 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	63.67	Total Depth (ft-bmp)	73.8	Water Column (ft)	10.13	Gallons in Well	1.65
Purge Start	11:10	Pump Intake (ft-bmp)	71	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	11:40	Volumes Purged	0.48	Sample ID	MW-19-123_021224	Sampled by	Billy Cobern
Sample Time	11:40	Gallons Purged	0.7925162	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
11:10	0	0	100	63.67	0.00	0	0	0	0	0	0	Clear	None
11:15	5	5	100	64.00	0.13	6.81	2.246	30.55	6.7	12.2	-31.4	Clear	None
11:20	5	10	100	64.00	0.26	6.8	2.207	20.58	6.6	12	-27	Clear	None
11:25	5	15	100	64.00	0.40	6.8	2.176	11.11	6.59	11.8	-21.5	Clear	None
11:30	5	20	100	64.00	0.53	6.79	2.174	10.35	6.54	12.1	-19.4	Clear	None
11:35	5	25	100	64.00	0.66	6.79	2.201	9.4	6.49	12	-19.7	Clear	None
11:40	5	30	100	64.00	0.79	6.78	2.21	9.56	6.44	12.1	-18.9	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-20-126	Date	2/12/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	27 degrees F / Sunny			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	72.60	Total Depth (ft-bmp)	75.43	Water Column (ft)	2.83	Gallons in Well	0.46
Purge Start	11:00	Pump Intake (ft-bmp)	72.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	11:50	Volumes Purged	4.59	Sample ID	MW-20-126_021224	Sampled by	Donald Richmond
Sample Time	11:40	Gallons Purged	2.113376	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:15	0	0	200	72.60	0.79	6.95	3.146	116	2.79	12.5	187	Brown	None
11:20	5	5	200	72.60	1.06	6.97	3.071	47	2.46	12.2	186.1	Brown	None
11:25	5	10	200	72.60	1.32	6.97	3.111	45	2.5	12.6	185.7	Brown	None
11:30	5	15	200	72.60	1.59	6.97	3.084	36	2.49	12.3	185.9	Brown	None
11:35	5	20	200	72.60	1.85	6.96	3.095	35	2.41	12.6	184.2	Brown	None
11:40	5	25	200	72.60	2.11	6.96	3.089	34	2.4	12.9	183.5	Brown	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-20-127	Date	2/12/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	27 degrees F / Sunny			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	65.70	Total Depth (ft-bmp)	78.66	Water Column (ft)	12.96	Gallons in Well	2.11
Purge Start	12:40	Pump Intake (ft-bmp)	76.1	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	13:45	Volumes Purged	1.38	Sample ID	MW-20-127_021224	Sampled by	Donald Richmond
Sample Time	13:40	Gallons Purged	2.9058926	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
12:45	0	0	200	65.70	0.26	6.87	2.471	10.06	2.16	12.2	179.1	Clear	None
12:50	5	5	200	65.70	0.53	6.79	2.527	7.54	1.52	12.4	162.6	Clear	None
12:55	5	10	200	65.70	0.79	6.74	2.567	6.88	1.02	12.3	120.7	Clear	None
13:00	5	15	200	65.70	1.06	6.72	2.574	6.75	0.58	12.1	87.5	Clear	None
13:05	5	20	200	65.70	1.32	6.71	2.615	6.38	0.33	12.4	68.2	Clear	None
13:10	5	25	200	65.70	1.59	6.71	2.614	5.94	0.25	12.3	60.2	Clear	None
13:15	5	30	200	65.70	1.85	6.7	2.64	5.88	0.13	12.4	50.6	Clear	None
13:20	5	35	200	65.70	2.11	6.7	2.637	5.62	0.06	12.3	43.9	Clear	None
13:25	5	40	200	65.70	2.38	6.7	2.63	5.61	0	12.1	39.1	Clear	None
13:30	5	45	200	65.70	2.64	6.7	2.665	5.64	0	12.3	36	Clear	None
13:35	5	50	200	65.70	2.91	6.7	2.665	5.48	0	12.1	34	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-20-129	Date	2/12/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	37.9 degrees F and Mostly Clear. The wind is blowing SW at 6.9 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	60.88	Total Depth (ft-bmp)	71	Water Column (ft)	10.12	Gallons in Well	1.64
Purge Start	13:30	Pump Intake (ft-bmp)	68.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	14:25	Volumes Purged	0.89	Sample ID	MW-20-129_021224	Sampled by	Billy Cobern
Sample Time	14:25	Gallons Purged	1.452946	Replicate/ Code No.	MW-20-129_021224	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:30	0	0	100	60.88	0.00	0	0	0	0	0	0	Clear	None
13:35	5	5	100	61.75	0.13	7.34	1.425	114.85	9.73	8.6	-70.6	Clear	None
13:40	5	10	100	62.35	0.26	7.08	1.792	122.96	4.28	9.1	-86.8	Clear	None
13:45	5	15	100	62.99	0.40	7.04	1.864	117.42	1.12	8.5	-108.4	Clear	None
13:50	5	20	100	63.55	0.53	7.03	1.851	104.37	0.72	8.7	-111.4	Clear	None
13:55	5	25	100	64.05	0.66	7.03	1.8	86.57	0.58	8.9	-111.8	Clear	None
14:00	5	30	100	64.51	0.79	7.02	1.732	69.04	0.65	9.6	-107.1	Clear	None
14:05	5	35	100	64.94	0.92	7.02	1.684	54.31	0.75	9.4	-102.6	Clear	None
14:10	5	40	100	65.41	1.06	7.01	1.628	50.38	0.91	9.6	-96.6	Clear	None
14:15	5	45	100	65.80	1.19	7.01	1.601	50.41	1.03	9.8	-93.7	Clear	None
14:20	5	50	100	66.21	1.32	7.01	1.597	48.91	1.08	9.8	-92.5	Clear	None
14:25	5	55	100	66.57	1.45	7.01	1.594	46.85	1.09	9.8	-92	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	9	HCL

Comments: Didn't meet drawdown requirements

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-20-131	Date	2/13/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	35.1 degrees F and Cloudy. The wind is blowing W/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)	4.53	Total Depth (ft-bmp)	8.63	Water Column (ft)	4.10	Gallons in Well	0.67
Purge Start	15:20	Pump Intake (ft-bmp)	7.63	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:55	Volumes Purged	2.76	Sample ID	MW-20-131_021324	Sampled by	Austin Westhuis
Sample Time	15:50	Gallons Purged	1.849204	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:25	0	0	200	5.15	0.26	7.06	3.841	25.04	0.17	7.2	93.5	Clear	None
15:30	5	5	200	5.15	0.53	7.07	3.858	11.81	0.11	7.3	85.3	Clear	None
15:35	5	10	200	5.15	0.79	7.07	3.878	4.78	0.09	7.4	81.2	Clear	None
15:40	5	15	200	5.15	1.06	7.07	3.897	3.18	0.09	7.4	78.8	Clear	None
15:45	5	20	200	5.15	1.32	7.07	3.893	2.78	0.09	7.5	77.3	Clear	None
15:50	5	25	200	5.15	1.59	7.07	3.879	2.43	0.09	7.5	74.3	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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: 10G200

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-20-132	Date	2/13/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	35.1 degrees F and Cloudy. The wind is blowing W/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)	4.68	Total Depth (ft-bmp)	10.8	Water Column (ft)	6.12	Gallons in Well	0.99
Purge Start	14:20	Pump Intake (ft-bmp)	8.3	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:00	Volumes Purged	2.13	Sample ID	MW-20-132_021324	Sampled by	Austin Westhuis
Sample Time	14:55	Gallons Purged	2.113376	Replicate/ Code No.	DUP-03_021324	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
14:25	0	0	200	5.00	0.26	7.15	2.752	48.31	0.09	8.2	26.7	Clear	None
14:30	5	5	200	5.00	0.53	7.15	2.753	23.68	0.09	8.1	17.8	Clear	None
14:35	5	10	200	5.00	0.79	7.15	2.754	12.76	0.08	8.1	3.9	Clear	None
14:40	5	15	200	5.00	1.06	7.14	2.756	5.58	0.08	8.2	-5.1	Clear	None
14:45	5	20	200	5.00	1.32	7.14	2.762	3.91	0.07	8.3	-8.2	Clear	None
14:50	5	25	200	5.00	1.59	7.14	2.753	3.62	0.07	8.2	-12.6	Clear	None
14:55	5	30	200	5.00	1.85	7.14	2.747	3.02	0.07	8.2	-16.8	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	6	HCL

Comments:

Well Casing Volume Conversion

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

Well Information

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

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-143	Date	2/12/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	39.0 degrees F and Clear. The wind is blowing W at 6.9 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	16.85	Total Depth (ft-bmp)	31.05	Water Column (ft)	14.20	Gallons in Well	2.31
Purge Start	14:15	Pump Intake (ft-bmp)	28.55	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:05	Volumes Purged	1.14	Sample ID	MW-22-143_021224	Sampled by	Austin Westhuis
Sample Time	15:00	Gallons Purged	2.641721	Replicate/ Code No.	DUP-04_021224	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
14:20	0	0	200	17.06	0.26	7.04	2.225	253.1	0.31	12.2	75.3	Clear	None
14:25	5	5	200	17.06	0.53	7.05	2.216	141.61	0.24	12.4	16.7	Clear	None
14:30	5	10	200	17.06	0.79	7.05	2.26	55.25	0.26	12.4	-20.7	Clear	None
14:35	5	15	200	17.06	1.06	7.05	2.282	51.22	0.24	12.4	-36.6	Clear	None
14:40	5	20	200	17.06	1.32	7.04	2.358	46.82	0.22	12.4	-37.6	Clear	None
14:45	5	25	200	17.06	1.59	7.05	2.37	27.63	0.21	12.4	-41.5	Clear	None
14:50	5	30	200	17.06	1.85	7.05	2.391	25.15	0.21	12.4	-43.7	Clear	None
14:55	5	35	200	17.06	2.11	7.04	2.412	24.56	0.21	12.4	-47.2	Clear	None
15:00	5	40	200	17.06	2.38	7.04	2.43	23.96	0.21	12.3	-49.7	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	4	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-144	Date	2/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	30.0 degrees F and Cloudy. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	11.53	Total Depth (ft-bmp)	24.5	Water Column (ft)	12.97	Gallons in Well	2.11
Purge Start	10:50	Pump Intake (ft-bmp)	22	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	11:35	Volumes Purged	0.56	Sample ID	MW-22-144_021424	Sampled by	Billy Cobern
Sample Time	11:35	Gallons Purged	1.188774	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:50	0	0	100	11.53	0.00	0	0	0	0	0	0	Clear	None
10:55	5	5	100	11.89	0.13	7.25	1.221	314.25	2.01	9.8	-71.6	Clear	None
11:00	5	10	100	11.85	0.26	7.23	1.197	188.78	1.41	9.9	-76.2	Clear	None
11:05	5	15	100	11.85	0.40	7.18	1.183	35.51	0.85	10.1	-83.8	Clear	None
11:10	5	20	100	11.85	0.53	7.18	1.184	15.98	2.54	9.8	-66.1	Clear	None
11:15	5	25	100	11.85	0.66	7.13	1.184	17.69	0.83	9.9	-84	Clear	None
11:20	5	30	100	11.85	0.79	7.12	1.176	17.68	0.6	10.1	-88.7	Clear	None
11:25	5	35	100	11.85	0.92	7.12	1.177	9.65	0.47	10.2	-92.6	Clear	None
11:30	5	40	100	11.85	1.06	7.12	1.176	9.31	0.44	10.2	-93	Clear	None
11:35	5	45	100	11.85	1.19	7.12	1.175	9.06	0.46	10.2	-93.7	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	2	None

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

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-145	Date	2/12/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	39.9 degrees F and Clear. The wind is blowing W at 6.9 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	11.72	Total Depth (ft-bmp)	14.85	Water Column (ft)	3.13	Gallons in Well	0.51
Purge Start	15:35	Pump Intake (ft-bmp)	13.85	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	16:25	Volumes Purged	5.18	Sample ID	MW-22-145_021224	Sampled by	Austin Westhuis
Sample Time	16:20	Gallons Purged	2.641721	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:40	0	0	200	11.75	0.26	7.15	0.703	168.42	2.3	10	60.3	Clear	None
15:45	5	5	200	11.75	0.53	7.1	0.684	92.9	2.08	9.8	67.2	Clear	None
15:50	5	10	200	11.75	0.79	7.07	0.674	65.73	1.98	9.8	84.2	Clear	None
15:55	5	15	200	11.75	1.06	7.07	0.669	54.14	1.9	9.6	92.8	Clear	None
16:00	5	20	200	11.75	1.32	7.05	0.668	40.6	1.88	9.6	95.1	Clear	None
16:05	5	25	200	11.75	1.59	7.05	0.667	35.08	1.83	9.7	96.7	Clear	None
16:10	5	30	200	11.75	1.85	7.04	0.667	27.66	1.83	9.7	97.2	Clear	None
16:15	5	35	200	11.75	2.11	7.04	0.668	25.58	1.77	9.6	102.6	Clear	None
16:20	5	40	200	11.75	2.38	7.04	0.669	25.03	1.77	9.6	103.6	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-146	Date	2/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	36.0 degrees F and Mostly Cloudy. The wind is blowing N at 4.7 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	4.17	Total Depth (ft-bmp)	10.5	Water Column (ft)	6.33	Gallons in Well	1.03
Purge Start	13:15	Pump Intake (ft-bmp)	8	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	14:05	Volumes Purged	1.28	Sample ID	MW-22-146_021424	Sampled by	Billy Cobern
Sample Time	14:05	Gallons Purged	1.32086	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:15	0	0	100	4.17	0.00	0	0	0	0	0	0	Clear	None
13:20	5	5	100	4.48	0.13	7.5	0.879	332.32	8.63	7.9	-53.4	Clear	None
13:25	5	10	100	4.48	0.26	7.43	0.869	83.74	8.15	7.7	-51.5	Clear	None
13:30	5	15	100	4.48	0.40	7.42	0.868	46.57	8.1	7.6	-49.6	Clear	None
13:35	5	20	100	4.48	0.53	7.41	0.868	38.41	8.07	7.5	-49.4	Clear	None
13:40	5	25	100	4.48	0.66	7.41	0.868	27.58	8.05	7.4	-49.7	Clear	None
13:45	5	30	100	4.48	0.79	7.41	0.868	22.22	7.99	7.4	-49.6	Clear	None
13:50	5	35	100	4.48	0.92	7.41	0.868	18.53	7.95	7.2	-50.1	Clear	None
13:55	5	40	100	4.48	1.06	7.41	0.866	16.19	7.95	7.3	-49.8	Clear	None
14:00	5	45	100	4.48	1.19	7.41	0.868	17.05	7.95	7.2	-50.1	Clear	None
14:05	5	50	100	4.48	1.32	7.41	0.866	16.78	7.93	7.3	-50	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	2	None

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

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-147	Date	2/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	37.9 degrees F and Clear. The wind is blowing W/NW 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)	7.83	Total Depth (ft-bmp)	12.2	Water Column (ft)	4.37	Gallons in Well	0.71
Purge Start	15:30	Pump Intake (ft-bmp)	11	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	16:00	Volumes Purged	1.12	Sample ID	MW-22-147_021424	Sampled by	Billy Cobern
Sample Time	16:00	Gallons Purged	0.7925162	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:30	0	0	100	7.83	0.00	0	0	0	0	0	0	Clear	None
15:35	5	5	100	7.99	0.13	7.14	1.321	23.43	4.73	8.1	-41.3	Clear	None
15:40	5	10	100	8.04	0.26	7.16	1.323	16.42	4.62	8.2	-52.4	Clear	None
15:45	5	15	100	8.04	0.40	7.15	1.322	11.39	4.52	8.3	-53.5	Clear	None
15:50	5	20	100	8.04	0.53	7.15	1.328	9.41	4.36	8.2	-55.3	Clear	None
15:55	5	25	100	8.04	0.66	7.15	1.33	9.13	4.35	8.2	-55.6	Clear	None
16:00	5	30	100	8.04	0.79	7.15	1.33	9.09	4.34	8.2	-55.9	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	2	None

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

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-148	Date	2/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	37.0 degrees F and Mostly Clear.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	25.05	Total Depth (ft-bmp)	29.3	Water Column (ft)	4.25	Gallons in Well	0.69
Purge Start	14:30	Pump Intake (ft-bmp)	28	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:15	Volumes Purged	1.72	Sample ID	MW-22-148_021424	Sampled by	Billy Cobern
Sample Time	15:15	Gallons Purged	1.188774	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
14:30	0	0	100	25.05	0.00	0	0	0	0	0	0	Clear	None
14:35	5	5	100	25.55	0.13	7.28	0.891	51.55	4.01	9.3	-64.6	Clear	None
14:40	5	10	100	25.95	0.26	7.22	0.882	37.28	2.67	10.1	-70.3	Clear	None
14:45	5	15	100	26.29	0.40	7.21	0.888	25.21	1.85	10.4	-74.4	Clear	None
14:50	5	20	100	26.59	0.53	7.2	0.91	16.26	1.38	10.8	-80.1	Clear	None
14:55	5	25	100	26.86	0.66	7.2	9.18	12.46	1.26	10.6	-82.2	Clear	None
15:00	5	30	100	27.09	0.79	7.2	0.919	9.89	1.11	10.4	-84.1	Clear	None
15:05	5	35	100	27.32	0.92	7.2	0.92	9.35	1.08	10.3	-85.8	Clear	None
15:10	5	40	100	27.53	1.06	7.2	0.92	9.63	1.04	10.2	-87.1	Clear	None
15:15	5	45	100	27.73	1.19	7.21	0.92	9.42	1.06	10.2	-87.9	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	2	None

Comments: Didn't meet drawdown requirements

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

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-149	Date	2/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	30.0 degrees F and Cloudy. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	5.47	Total Depth (ft-bmp)	9.91	Water Column (ft)	4.44	Gallons in Well	0.72
Purge Start	10:15	Pump Intake (ft-bmp)	8.91	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	10:45	Volumes Purged	2.20	Sample ID	MW-22-149_021424	Sampled by	Austin Westhuis
Sample Time	10:40	Gallons Purged	1.585032	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
10:20	0	0	200	5.47	0.26	7.31	0.371	5.68	7.8	8.1	244.7	Clear	None
10:25	5	5	200	5.47	0.53	7.3	0.371	5.11	7.78	8	247.2	Clear	None
10:30	5	10	200	5.47	0.79	7.29	0.371	4.94	7.81	8	249	Clear	None
10:35	5	15	200	5.47	1.06	7.3	0.372	4.43	7.85	8	251.4	Clear	None
10:40	5	20	200	5.47	1.32	7.3	0.374	4.03	7.86	8	252.6	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: 2035

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-150	Date	2/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	30.0 degrees F and Cloudy. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	5.38	Total Depth (ft-bmp)	17.94	Water Column (ft)	12.56	Gallons in Well	2.04
Purge Start	11:10	Pump Intake (ft-bmp)	15.44	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	11:50	Volumes Purged	1.04	Sample ID	MW-22-150_021424	Sampled by	Austin Westhuis
Sample Time	11:45	Gallons Purged	2.113376	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:15	0	0	200	6.89	0.26	7.29	2.996	35.16	0.11	9.4	234.6	Clear	None
11:20	5	5	200	6.94	0.53	7.3	2.998	13.52	0.09	9.2	200.2	Clear	None
11:25	5	10	200	6.98	0.79	7.31	2.998	7.64	0.09	9.2	143	Clear	None
11:30	5	15	200	7.00	1.06	7.31	3.009	6.69	0.09	9.2	108.6	Clear	None
11:35	5	20	200	7.00	1.32	7.31	3.009	6.23	0.09	9.2	96.6	Clear	None
11:40	5	25	200	7.00	1.59	7.31	3.013	5.89	0.09	9.3	91.9	Clear	None
11:45	5	30	200	7.01	1.85	7.31	3.033	5.47	0.09	9.4	87.1	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: 2035

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-151	Date	2/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	33.1 degrees F and Cloudy. 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)	6.18	Total Depth (ft-bmp)	14.92	Water Column (ft)	8.74	Gallons in Well	1.42
Purge Start	12:15	Pump Intake (ft-bmp)	12.42	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	13:05	Volumes Purged	1.86	Sample ID	MW-22-151_021424	Sampled by	Austin Westhuis
Sample Time	13:00	Gallons Purged	2.641721	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
12:20	0	0	200	6.88	0.26	6.81	2	492.59	0.29	10.9	-16.1	Clear	None
12:25	5	5	200	6.97	0.53	6.81	2	357.11	0.19	11	-18.9	Clear	None
12:30	5	10	200	7.05	0.79	6.82	1.982	290.37	0.12	10.8	-23.7	Clear	None
12:35	5	15	200	7.08	1.06	6.82	1.987	219.44	0.1	10.9	-28	Clear	None
12:40	5	20	200	7.09	1.32	6.83	1.985	187.49	0.09	10.9	-31	Clear	None
12:45	5	25	200	7.09	1.59	6.83	1.991	164.04	0.09	10.9	-32.9	Clear	None
12:50	5	30	200	7.09	1.85	6.83	1.982	138.59	0.09	10.9	-35.3	Clear	None
12:55	5	35	200	7.09	2.11	6.83	1.991	137.96	0.09	11	-36.5	Clear	None
13:00	5	40	200	7.09	2.38	6.84	1.982	132.94	0.09	11	-38.2	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: 2035

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-152	Date	2/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	36.0 degrees F and Mostly Cloudy. The wind is blowing N at 4.7 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	7.57	Total Depth (ft-bmp)	14.9	Water Column (ft)	7.33	Gallons in Well	1.19
Purge Start	13:25	Pump Intake (ft-bmp)	12.4	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	14:00	Volumes Purged	1.55	Sample ID	MW-22-152_021424	Sampled by	Austin Westhuis
Sample Time	13:50	Gallons Purged	1.849204	Replicate/ Code No.	DUP-05_021424	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:30	0	0	200	7.57	0.26	7.04	0.674	14.08	0.49	11	91.3	Clear	None
13:35	5	5	200	7.57	0.53	7.03	0.676	8.94	0.23	11.1	73.3	Clear	None
13:40	5	10	200	7.57	0.79	7.03	0.675	7.85	0.21	11.1	65.7	Clear	None
13:45	5	15	200	7.57	1.06	7.03	0.676	7.13	0.21	11.1	61	Clear	None
13:50	5	20	200	7.57	1.32	7.03	0.676	7.07	0.2	11.1	57.8	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	4	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: 2035

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-154	Date	2/13/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	35.1 degrees F and Cloudy. The wind is blowing at 6.9 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	4.76	Total Depth (ft-bmp)	10.58	Water Column (ft)	5.82	Gallons in Well	0.95
Purge Start	13:20	Pump Intake (ft-bmp)	8.08	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	13:55	Volumes Purged	1.95	Sample ID	MW-22-154_021324	Sampled by	Austin Westhuis
Sample Time	13:45	Gallons Purged	1.849204	Replicate/ Code No.	MW-22-154_021324	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:25	0	0	200	4.76	0.26	7.05	2.886	7.94	0.16	8.1	41.1	Clear	None
13:30	5	5	200	4.76	0.53	7.06	2.874	5.38	0.12	7.9	43.6	Clear	None
13:35	5	10	200	4.76	0.79	7.08	2.863	4.23	0.11	7.7	60.9	Clear	None
13:40	5	15	200	4.76	1.06	7.08	2.856	4.09	0.11	7.6	67.2	Clear	None
13:45	5	20	200	4.76	1.32	7.09	2.86	3.81	0.1	7.6	69.1	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	9	HCL

Comments:

Well Casing Volume Conversion

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

Well Information

Well Location: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: 2035

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-158	Date	2/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	28.0 degrees F and Cloudy. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	13.27	Total Depth (ft-bmp)	21	Water Column (ft)	7.73	Gallons in Well	1.26
Purge Start	09:30	Pump Intake (ft-bmp)	18.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	10:15	Volumes Purged	0.94	Sample ID	MW-22-158_021424	Sampled by	Billy Cobern
Sample Time	10:15	Gallons Purged	1.188774	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
09:30	0	0	100	13.27	0.00	0	0	0	0	0	0	Clear	None
09:35	5	5	100	13.37	0.13	7.1	3.541	23.55	2.32	9.7	-32.9	Clear	None
09:40	5	10	100	13.37	0.26	7.1	3.514	32.04	1.76	9.5	-45.9	Clear	None
09:45	5	15	100	13.39	0.40	7.1	3.497	9.13	0.96	9.4	-68.8	Clear	None
09:50	5	20	100	13.41	0.53	7.09	3.513	10.09	0.56	9	-82	Clear	None
09:55	5	25	100	13.42	0.66	7.09	3.529	9.54	0.49	8.5	-89.6	Clear	None
10:00	5	30	100	13.42	0.79	7.08	3.533	9.05	0.27	8.6	-95.5	Clear	None
10:05	5	35	100	13.42	0.92	7.08	3.558	9.04	0.25	8.7	-99.7	Clear	None
10:10	5	40	100	13.42	1.06	7.08	3.559	8.97	0.24	8.7	-100	Clear	None
10:15	5	45	100	13.42	1.19	7.08	3.577	8.86	0.23	8.6	-100.9	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	2	None

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

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-160	Date	2/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	32.0 degrees F and Cloudy. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	13.98	Total Depth (ft-bmp)	19	Water Column (ft)	5.02	Gallons in Well	0.82
Purge Start	12:00	Pump Intake (ft-bmp)	16.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	12:45	Volumes Purged	1.45	Sample ID	MW-22-160_021424	Sampled by	Billy Cobern
Sample Time	12:45	Gallons Purged	1.188774	Replicate/ Code No.	MW-22-160_021424	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
12:00	0	0	100	13.98	0.00	0	0	0	0	0	0	Clear	None
12:05	5	5	100	14.09	0.13	7.01	1.186	23.18	2.16	8.8	-65.5	Clear	None
12:10	5	10	100	14.09	0.26	6.95	1.181	21.59	1.15	9	-83	Clear	None
12:15	5	15	100	14.09	0.40	6.92	1.186	22.08	0.41	9.7	-94.5	Clear	None
12:20	5	20	100	14.09	0.53	6.92	1.191	17.67	0.17	9.4	-101	Clear	None
12:25	5	25	100	14.09	0.66	6.91	1.187	11.88	0.04	9.8	-106.2	Clear	None
12:30	5	30	100	14.09	0.79	6.91	1.185	9.08	0.04	10.3	-108.6	Clear	None
12:35	5	35	100	14.09	0.92	6.91	1.184	7.75	0.04	10.3	-110.5	Clear	None
12:40	5	40	100	14.09	1.06	6.91	1.188	7.79	0.04	10.5	-112.5	Clear	None
12:45	5	45	100	14.09	1.19	6.91	1.186	7.21	0.04	10.5	-112.6	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	6	None

Comments: MS/MSD collected here

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

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	PW-14-02	Date	2/13/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	30.0 degrees F and Cloudy. The wind is blowing W/NW at 8.1 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	6	Well Casing Material	PVC	
Static Water Level (ft-bmp)	66.74	Total Depth (ft-bmp)	85.2	Water Column (ft)	18.46	Gallons in Well	27.00
Purge Start	10:05	Pump Intake (ft-bmp)	83	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	10:55	Volumes Purged	0.05	Sample ID	PW-14-02_021324	Sampled by	Billy Cobern
Sample Time	10:55	Gallons Purged	1.32086	Replicate/ Code No.	DUP-01_021324	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
10:05	0	0	100	66.74	0.00	0	0	0	0	0	0	Clear	None
10:10	5	5	100	67.05	0.13	7.09	2.466	198.63	3.64	10.9	-144	Clear	None
10:15	5	10	100	67.05	0.26	7.08	2.406	167.96	2.63	10.9	-145.2	Clear	None
10:20	5	15	100	67.05	0.40	7.07	2.457	156.74	1.67	10.9	-145.7	Clear	None
10:25	5	20	100	67.05	0.53	7.06	2.455	151.53	1.56	10.8	-145.74	Clear	None
10:30	5	25	100	67.05	0.66	7.06	2.454	152.85	1.47	10.8	-146	Clear	None
10:35	5	30	100	67.05	0.79	7.06	2.472	141.55	1.11	9	-146.24	Clear	None
10:40	5	35	100	67.05	0.92	7.04	2.431	150.32	0.99	8.6	-143.4	Clear	None
10:45	5	40	100	67.05	1.06	7.03	2.434	149.99	0.91	8.5	-141.2	Clear	None
10:50	5	45	100	67.05	1.19	7.03	2.435	146.89	0.88	8.5	-140.4	Clear	None
10:55	5	50	100	67.05	1.32	7.03	2.443	147.69	0.87	8.4	-140.6	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	PW-14-03R	Date	2/13/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	35.1 degrees F and Cloudy. The wind is blowing W/NW at 9.2 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	6	Well Casing Material	PVC	
Static Water Level (ft-bmp)	73.49	Total Depth (ft-bmp)	95.5	Water Column (ft)	22.01	Gallons in Well	32.19
Purge Start	15:10	Pump Intake (ft-bmp)	93	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	16:05	Volumes Purged	0.05	Sample ID	PW-14-03R_021324	Sampled by	Billy Cobern
Sample Time	16:05	Gallons Purged	1.452946	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:10	0	0	100	73.49	0.00	0	0	0	0	0	0	Clear	None
15:15	5	5	100	73.80	0.13	5.63	1.851	873.57	9.43	7.5	24	Clear	None
15:20	5	10	100	73.80	0.26	5.52	3.806	978.47	8.94	7.3	42.5	Clear	None
15:25	5	15	100	73.80	0.40	5.31	3.901	808.78	7.15	7.1	43.4	Clear	None
15:30	5	20	100	73.80	0.53	5.28	3.929	368.26	6.94	6.7	30.1	Clear	None
15:35	5	25	100	73.80	0.66	5.2	3.916	274.99	3.74	6.8	33.3	Clear	None
15:40	5	30	100	73.80	0.79	5.2	3.925	207.51	3.32	6.7	35.4	Clear	None
15:45	5	35	100	73.80	0.92	5.19	3.91	182.48	3.14	6.9	39.1	Clear	None
15:50	5	40	100	73.80	1.06	5.19	3.924	154.33	3.03	7	44	Clear	None
15:55	5	45	100	73.80	1.19	5.19	3.91	139.74	2.95	7.1	47.8	Clear	None
16:00	5	50	100	73.80	1.32	5.19	3.911	134.75	2.93	7.2	48.7	Clear	None
16:05	5	55	100	73.80	1.45	5.19	3.908	135.65	2.92	7.2	49.3	Clear	None

Constituent Sampled	Container	Number	Preservative
SERDP	1L Plastic	2	None
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL

Comments: Collected SERDP sample after sampling for 1,4 dioxane. Lowered pump to bottom of well before collecting SERDP sample.

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	TW-14-02		Date	2/12/2024	
Project Name/Location	RACER Lansing 2024		Weather(°F)	37.9 degrees F and Mostly Clear. The wind is blowing S/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)	62.71	Total Depth (ft-bmp)	70.5	Water Column (ft)	7.79	Gallons in Well	1.27
Purge Start	12:15	Pump Intake (ft-bmp)	68	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	13:05	Volumes Purged	1.04	Sample ID	TW-14-02_021224	Sampled by	Billy Cobern
Sample Time	13:05	Gallons Purged	1.32086	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:15	0	0	100	62.71	0.00	0	0	0	0	0	0	Clear	None
12:20	5	5	100	62.75	0.13	7.8	4.85	194.75	10.5	10.7	-42.2	Clear	None
12:25	5	10	100	62.75	0.26	7.82	4.866	97	10.64	9	-45.3	Clear	None
12:30	5	15	100	62.75	0.40	7.81	4.858	76.34	10.6	8.8	-44.1	Clear	None
12:35	5	20	100	62.75	0.53	7.78	4.839	72.85	10.53	9.2	-41.8	Clear	None
12:40	5	25	100	62.75	0.66	7.76	4.865	55.21	10.49	9.2	-40.3	Clear	None
12:45	5	30	100	62.75	0.79	7.74	4.875	45.47	10.5	9	-40.1	Clear	None
12:50	5	35	100	62.75	0.92	7.72	4.86	36.31	10.49	9.3	-38.9	Clear	None
12:55	5	40	100	62.75	1.06	7.69	4.881	31.05	10.45	8.9	-38.9	Clear	None
13:00	5	45	100	62.75	1.19	7.69	4.892	31.06	10.44	8.7	-39.2	Clear	None
13:05	5	50	100	62.75	1.32	7.69	4.887	31.92	10.44	8.7	-39.3	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	TW-15-11		Date	2/13/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	32 degrees F / Overcast				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC		
Static Water Level (ft-bmp)	73.39	Total Depth (ft-bmp)	87.97	Water Column (ft)	14.58	Gallons in Well	2.37	
Purge Start	13:15	Pump Intake (ft-bmp)	85.47	Purge Method	Low-Flow	Purge Equipment	Bladder	
Purge End	14:20	Volumes Purged	1.23	Sample ID	TW-15-11_021324		Sampled by	Donald Richmond
Sample Time	14:15	Gallons Purged	2.9058926	Replicate/ Code No.	NA		Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:25	0	0	200	73.39	0.53	7.06	2.387	25	10.09	11	185.8	Clear	None
13:30	5	5	200	73.39	0.79	7.04	2.423	67.69	10.01	11.2	227.8	Clear	None
13:35	5	10	200	73.39	1.06	7.03	2.427	86	9.72	11.1	249	Clear	None
13:40	5	15	200	73.39	1.32	7.01	2.449	84	9.68	11	261.9	Clear	None
13:45	5	20	200	73.39	1.59	7	2.479	77	9.71	11.1	269	Clear	None
13:50	5	25	200	73.39	1.85	7	2.483	64	9.72	10.8	273.3	Clear	None
13:55	5	30	200	73.39	2.11	6.99	2.525	58	9.75	11	277	Clear	None
14:00	5	35	200	73.39	2.38	6.99	2.531	53	9.76	10.8	279.7	Clear	None
14:05	5	40	200	73.39	2.64	6.99	2.542	46	9.82	10.9	280.6	Clear	None
14:10	5	45	200	73.39	2.91	6.98	2.577	38	9.78	11.2	281	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	TW-15-12		Date	2/13/2024	
Project Name/Location	RACER Lansing 2024		Weather(°F)	33.1 degrees F and Light Snow. The wind is blowing N/NW at 9.2 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation		Casing Diameter (in)	4	Well Casing Material	PVC
Static Water Level (ft-bmp)	62.98	Total Depth (ft-bmp)	76.8	Water Column (ft)	13.82	Gallons in Well	8.98
Purge Start	11:40	Pump Intake (ft-bmp)	74	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	12:40	Volumes Purged	0.18	Sample ID	TW-15-12_021324	Sampled by	Billy Cobern
Sample Time	12:40	Gallons Purged	1.585032	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:40	0	0	100	62.98	0.00	0	0	0	0	0	0	Clear	None
11:45	5	5	100	63.39	0.13	7.74	2.903	174.97	10.94	11.7	-56.7	Clear	None
11:50	5	10	100	63.60	0.26	7.76	2.952	131.27	10.95	9.8	-56.8	Clear	None
11:55	5	15	100	63.81	0.40	7.78	2.954	128.47	11.19	7	-67.3	Clear	None
12:00	5	20	100	64.02	0.53	7.88	1.405	124.75	11	6.2	-73.3	Clear	None
12:05	5	25	100	64.22	0.66	7.75	2.902	148.88	11.05	7.5	-68.3	Clear	None
12:10	5	30	100	64.22	0.79	7.73	2.936	117.97	11.04	6.8	-65.1	Clear	None
12:15	5	35	100	64.41	0.92	7.73	2.934	120.75	11.06	6.3	-65.7	Clear	None
12:20	5	40	100	64.60	1.06	7.73	2.929	129.1	11.05	11.05	-64.6	Clear	None
12:25	5	45	100	64.79	1.19	7.73	2.926	114.37	11.05	6.1	-65	Clear	None
12:30	5	50	100	64.97	1.32	7.73	2.922	116.26	11	6.4	-63.8	Clear	None
12:35	5	55	100	65.15	1.45	7.77	2.924	111.98	11.02	6.4	-62.7	Clear	None
12:40	5	60	100	65.29	1.59	7.73	2.926	114.25	11.02	6.4	-60.2	Clear	None

Constituent Sampled	Container	Number	Preservative
SERDP	1L Plastic	2	None
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL

Comments: SERDP collected after sampling 1,4 dioxane. Lowered pump to the bottom of the well for the SERDP sample. Didn't meet drawdown requirements.

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: Plant 2	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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-14-56	Date	4/9/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	70.0 degrees F and Clear. The wind is blowing W/SW at 16.1 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material PVC
Static Water Level (ft-bmp)	65.99	Total Depth (ft-bmp)	75.7	Water Column (ft)	9.71
				Gallons in Well	1.58
Purge Start	13:10	Pump Intake (ft-bmp)	73.2	Purge Method	Low-Flow
				Purge Equipment	Bladder
Purge End	14:05	Volumes Purged	1.84	Sample ID	MW-14-56_040924
				Sampled by	Austin Westhuis
Sample Time	13:50	Gallons Purged	2.91	Replicate/ Code No.	MS/MSD
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:15	0	0	200	67.22	0.26	6.84	2.94	14.59	2.12	14.3	-37.3	Clear	None
13:20	5	5	200	67.22	0.53	6.8	3.124	10.7	1.42	14.2	-41.8	Clear	None
13:25	5	10	200	67.22	0.79	6.78	3.219	8.31	0.85	14.3	-44.6	Clear	None
13:30	5	15	200	67.22	1.06	6.77	3.263	8.27	0.64	14.3	-45.8	Clear	None
13:35	5	20	200	67.22	1.32	6.77	3.276	8.13	0.52	14.3	-46.4	Clear	None
13:40	5	25	200	67.22	1.59	6.77	3.271	7.67	0.47	14.1	-46.5	Clear	None
13:45	5	30	200	67.22	1.85	6.77	3.295	7.42	0.46	14.1	-46.9	Clear	None
13:50	5	35	200	67.22	2.11	6.77	3.291	7.09	0.44	14.1	-46.7	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8260 SIMS	40 mL Glass	9	HCL
PFAS	250mL HDPE Plastic	6	None

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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-14-58R	Date	4/8/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	62.1 degrees F and Clear. The wind is blowing S/SE 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)	12.75	Total Depth (ft-bmp)	29.61	Water Column (ft)	16.86
				Gallons in Well	2.74
Purge Start	13:00	Pump Intake (ft-bmp)	27.11	Purge Method	Low-Flow
				Purge Equipment	Peristaltic
Purge End	13:40	Volumes Purged	0.77	Sample ID	MW-14-58R_040824
				Sampled by	Austin Westhuis
Sample Time	13:35	Gallons Purged	2.11	Replicate/ Code No.	DUP-01_040824
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:05	0	0	200	12.75	0.26	6.98	2.504	81.98	0.35	14.7	-41.4	Clear	None
13:10	5	5	200	12.75	0.53	6.98	2.512	53.62	0.4	14.8	-47.2	Clear	None
13:15	5	10	200	12.75	0.79	6.98	2.523	17.69	0.33	14.8	-58.8	Clear	None
13:20	5	15	200	12.75	1.06	6.98	2.547	15.29	0.36	14.9	-61.2	Clear	None
13:25	5	20	200	12.75	1.32	6.98	2.545	11.61	0.26	15	-62.8	Clear	None
13:30	5	25	200	12.75	1.59	6.98	2.543	11.21	0.24	15	-64.3	Clear	None
13:35	5	30	200	12.75	1.85	6.98	2.552	10.94	0.24	15	-65.4	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8260 SIMS and VOC 8260 SIMS	40 mL Glass	6	HCL
PFAS	250mL HDPE Plastic	4	None

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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-15-73	Date	4/10/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	It is Clear. The wind is blowing S/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)	73.56	Total Depth (ft-bmp)	80.98	Water Column (ft)	7.42
				Gallons in Well	1.21
Purge Start	10:50	Pump Intake (ft-bmp)	78.48	Purge Method	Low-Flow
				Purge Equipment	Bladder
Purge End	11:40	Volumes Purged	2.18	Sample ID	MW-15-73_041024
				Sampled by	Austin Westhuis
Sample Time	11:35	Gallons Purged	2.64	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
10:55	0	0	200	73.56	0.26	6.56	3.504	148.58	0.9	13.5	26.9	Clear	None
11:00	5	5	200	73.97	0.53	6.56	3.413	84.38	0.65	13.3	26.3	Clear	None
11:05	5	10	200	73.97	0.79	6.56	3.384	59.92	0.59	13.1	25.6	Clear	None
11:10	5	15	200	73.97	1.06	6.56	3.374	42.18	0.53	13.1	25	Clear	None
11:15	5	20	200	73.97	1.32	6.55	3.39	28.12	0.45	13.2	24.3	Clear	None
11:20	5	25	200	73.97	1.59	6.55	3.398	26.16	0.44	13.2	24.3	Clear	None
11:25	5	30	200	73.97	1.85	6.55	3.429	23.39	0.42	13.3	24.2	Clear	None
11:30	5	35	200	73.97	2.11	6.55	3.446	23.03	0.42	13.3	23.9	Clear	None
11:35	5	40	200	73.97	2.38	6.55	3.462	22.16	0.4	13.3	23.6	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-16-80	Date	4/10/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	61.0 degrees F and Clear. The wind is blowing W at 4.7 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material PVC
Static Water Level (ft-bmp)	65.26	Total Depth (ft-bmp)	73.3	Water Column (ft)	8.04
Purge Start	14:15	Pump Intake (ft-bmp)	71.3	Purge Method	Low-Flow
Purge End	14:50	Volumes Purged	1.41	Sample ID	MW-16-80_041024
Sample Time	14:45	Gallons Purged	1.85	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
14:20	0	0	200	66.28	0.26	6.55	2.99	82.11	1.42	12.7	-28.7	Clear	None
14:25	5	5	200	66.41	0.53	6.57	2.955	59.76	0.65	12.5	-31.8	Clear	None
14:30	5	10	200	66.50	0.79	6.57	2.943	46.22	0.4	12.3	-33.5	Clear	None
14:35	5	15	200	66.55	1.06	6.57	2.934	43.14	0.3	12.3	-35.6	Clear	None
14:40	5	20	200	66.55	1.32	6.58	2.922	41.88	0.29	12.3	-36.4	Clear	None
14:45	5	25	200	66.55	1.59	6.58	2.918	41.22	0.29	12.2	-36.8	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: 6000B

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-16-83	Date	4/10/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	It is Clear. The wind is blowing S/SW at 3.4 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material PVC
Static Water Level (ft-bmp)	73.74	Total Depth (ft-bmp)	79.8	Water Column (ft)	6.06
Purge Start	09:40	Pump Intake (ft-bmp)	77.08	Purge Method	Low-Flow
Purge End	10:15	Volumes Purged	1.89	Sample ID	MW-16-83_041024
Sample Time	10:10	Gallons Purged	1.85	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
09:45	0	0	200	75.80	0.26	6.57	3.315	12.71	0.8	12.7	-57.6	Clear	None
09:50	5	5	200	76.33	0.53	6.55	3.318	11.32	0.53	12.7	-55.5	Clear	None
09:55	5	10	200	76.33	0.79	6.55	3.32	9.29	0.48	12.8	-55.4	Clear	None
10:00	5	15	200	76.33	1.06	6.55	3.337	5.61	0.39	12.9	-56.3	Clear	None
10:05	5	20	200	76.33	1.32	6.56	3.348	5.34	0.36	13	-56.9	Clear	None
10:10	5	25	200	76.33	1.59	6.56	3.361	4.85	0.36	13	-57.5	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-17-87	Date	4/9/2024		
Project Name/Location	RACER Lansing 2024	Weather(°F)	64.9 degrees F and Partly Cloudy and Windy. The wind is blowing SW at 19.7 mph.				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	76.53	Total Depth (ft-bmp)	113.86	Water Column (ft)	37.33	Gallons in Well	6.07
Purge Start	11:55	Pump Intake (ft-bmp)	108.86	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	12:35	Volumes Purged	0.35	Sample ID	MW-17-87_040924	Sampled by	Austin Westhuis
Sample Time	12:30	Gallons Purged	2.11	Replicate/ Code No.	DUP-02_040924	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
12:00	0	0	200	77.71	0.26	9.07	2.009	62.99	0.23	14.5	-276.1	Clear	None
12:05	5	5	200	78.20	0.53	9.07	2.026	57.38	0.17	14.7	-259.2	Clear	None
12:10	5	10	200	78.33	0.79	9.12	2.012	51.38	0.17	14.8	-227.3	Clear	None
12:15	5	15	200	78.37	1.06	9.2	1.999	45.59	0.17	14.8	-197	Clear	None
12:20	5	20	200	78.41	1.32	9.23	1.991	44.78	0.17	14.8	-181.3	Clear	None
12:25	5	25	200	78.43	1.59	9.25	1.985	43.53	0.17	14.8	-177.8	Clear	None
12:30	5	30	200	78.45	1.85	9.27	1.981	41.94	0.17	14.8	-176.8	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Amber	4	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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-118S	Date	4/9/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	64.0 degrees F and Mostly Clear.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material PVC
Static Water Level (ft-bmp)	77.41	Total Depth (ft-bmp)	162.89	Water Column (ft)	85.48
				Gallons in Well	13.89
Purge Start	10:45	Pump Intake (ft-bmp)	157.89	Purge Method	Low-Flow
				Purge Equipment	Bladder
Purge End	11:25	Volumes Purged	0.15	Sample ID	MW-19-118S_040924
				Sampled by	Austin Westhuis
Sample Time	11:20	Gallons Purged	2.11	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:50	0	0	200	77.44	0.26	7.55	2.198	104.24	5.82	15.3	-32	Clear	None
10:55	5	5	200	77.44	0.53	7.56	2.196	91.66	5.89	15.3	10.9	Clear	None
11:00	5	10	200	77.44	0.79	7.55	2.245	89.73	5.96	15.4	52.1	Clear	None
11:05	5	15	200	77.44	1.06	7.54	2.281	86.33	5.91	15.4	59.2	Clear	None
11:10	5	20	200	77.44	1.32	7.54	2.294	82.84	5.92	15.4	69.5	Clear	None
11:15	5	25	200	77.44	1.59	7.54	2.306	80.11	5.91	15.4	77.1	Clear	None
11:20	5	30	200	77.44	1.85	7.54	2.282	77.69	5.91	15.4	79.2	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Amber	2	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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-20-126	Date	4/10/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	61.0 degrees F and Clear. The wind is blowing W at 4.7 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	68.10	Total Depth (ft-bmp)	75.47	Water Column (ft)	7.37	Gallons in Well	1.20
Purge Start	13:25	Pump Intake (ft-bmp)	72.97	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	13:55	Volumes Purged	1.32	Sample ID	MW-20-126_041024	Sampled by	Austin Westhuis
Sample Time	13:50	Gallons Purged	1.58	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:30	0	0	200	68.10	0.26	7.2	2.633	59.29	9.13	13.8	102.1	Clear	None
13:35	5	5	200	68.10	0.53	7.18	2.694	43.32	8.64	13.8	107.3	Clear	None
13:40	5	10	200	68.10	0.79	7.18	2.757	32.02	7.69	13.8	110.6	Clear	None
13:45	5	15	200	68.10	1.06	7.19	2.788	30.61	7.72	13.9	112.4	Clear	None
13:50	5	20	200	68.10	1.32	7.21	2.801	29.36	7.78	13.9	113.8	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: See figure.	Well Locked at Arrival: yes
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Stick-up</u>	Key Number To Well: <u>6000B</u>

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-153	Date	4/8/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	66.0 degrees F and Clear. The wind is blowing S/SE at 10.3 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation		Casing Diameter (in)	2
				Well Casing Material	PVC
Static Water Level (ft-bmp)	10.23	Total Depth (ft-bmp)	31.18	Water Column (ft)	20.95
				Gallons in Well	3.40
Purge Start	14:00	Pump Intake (ft-bmp)	28.68	Purge Method	Low-Flow
				Purge Equipment	Peristaltic
Purge End	14:40	Volumes Purged	0.62	Sample ID	MW-22-153_040824
				Sampled by	Austin Westhuis
Sample Time	14:35	Gallons Purged	2.11	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:05	0	0	200	10.23	0.26	7.12	1.872	20.05	0.75	15	-70.8	Clear	None
14:10	5	5	200	10.23	0.53	7.12	1.852	16.99	0.32	14.8	-72.9	Clear	None
14:15	5	10	200	10.23	0.79	7.13	1.837	15.12	0.22	14.6	-74.1	Clear	None
14:20	5	15	200	10.23	1.06	7.13	1.825	14.77	0.18	14.6	-75.1	Clear	None
14:25	5	20	200	10.23	1.32	7.13	1.803	14.02	0.13	14.3	-76.2	Clear	None
14:30	5	25	200	10.23	1.59	7.13	1.796	13.68	0.12	14.4	-76.7	Clear	None
14:35	5	30	200	10.23	1.85	7.13	1.791	13.42	0.12	14.2	-77.2	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-155	Date	4/8/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	71.1 degrees F and Mostly Clear.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation		Casing Diameter (in)	2
				Well Casing Material	PVC
Static Water Level (ft-bmp)	11.52	Total Depth (ft-bmp)	31.51	Water Column (ft)	19.99
				Gallons in Well	3.25
Purge Start	15:00	Pump Intake (ft-bmp)	30.01	Purge Method	Low-Flow
				Purge Equipment	Peristaltic
Purge End	15:35	Volumes Purged	0.57	Sample ID	MW-22-155_040824
				Sampled by	Austin Westhuis
Sample Time	15:30	Gallons Purged	1.85	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:05	0	0	200	11.57	0.26	6.98	1.894	261.82	0.44	14.9	-15.7	Clear	None
15:10	5	5	200	11.57	0.53	6.98	1.959	190.47	0.29	15	-29.6	Clear	None
15:15	5	10	200	11.57	0.79	6.98	1.977	162.4	0.28	15.1	-34.8	Clear	None
15:20	5	15	200	11.57	1.06	6.98	2.017	147.89	0.24	15.2	-42.6	Clear	None
15:25	5	20	200	11.57	1.32	6.98	2.035	147.82	0.22	15.2	-44.8	Clear	None
15:30	5	25	200	11.57	1.59	6.99	2.033	144.21	0.22	15.2	-47.3	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-156	Date	4/8/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	70.0 degrees F and Cloudy. The wind is blowing SW at 17.2 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation		Casing Diameter (in)	2
				Well Casing Material	PVC
Static Water Level (ft-bmp)	12.68	Total Depth (ft-bmp)	31.04	Water Column (ft)	18.36
				Gallons in Well	2.98
Purge Start	16:00	Pump Intake (ft-bmp)	27.51	Purge Method	Low-Flow
				Purge Equipment	Peristaltic
Purge End	16:40	Volumes Purged	0.71	Sample ID	MW-22-156_040824
				Sampled by	Austin Westhuis
Sample Time	16:35	Gallons Purged	2.11	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
16:05	0	0	200	12.74	0.26	7.22	1.598	44.04	0.51	14.1	-74.8	Clear	None
16:10	5	5	200	12.74	0.53	7.23	1.547	41.18	0.25	14.2	-80.7	Clear	None
16:15	5	10	200	12.74	0.79	7.24	1.497	37.47	0.63	14.3	-80.9	Clear	None
16:20	5	15	200	12.74	1.06	7.25	1.477	35.69	0.58	14.2	-80.3	Clear	None
16:25	5	20	200	12.74	1.32	7.25	1.474	35.16	0.58	14.4	-80.4	Clear	None
16:30	5	25	200	12.74	1.59	7.25	1.473	34.33	0.54	14.4	-81.5	Clear	None
16:35	5	30	200	12.74	1.85	7.25	1.47	31.93	0.53	14.4	-82.3	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-157	Date	4/8/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	71.1 degrees F and Clear. The wind is blowing W/SW at 15.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material PVC		
Static Water Level (ft-bmp)	2.20	Total Depth (ft-bmp)	27.61	Water Column (ft)	25.41	Gallons in Well	4.13
Purge Start	19:30	Pump Intake (ft-bmp)	25.11	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	20:05	Volumes Purged	0.58	Sample ID	MW-22-157_040824	Sampled by	Austin Westhuis
Sample Time	20:00	Gallons Purged	2.38	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
19:35	0	0	200	2.20	0.26	7.09	1.159	22.51	0.66	13.5	-38.7	Clear	None
19:40	5	5	200	2.20	0.53	7.09	1.157	15.01	0.27	13.6	-45.5	Clear	None
19:45	5	10	200	2.20	0.79	7.1	1.143	10.99	0.13	13.5	-50.4	Clear	None
19:50	5	15	200	2.20	1.06	7.1	1.143	10.18	0.12	13.7	-53.2	Clear	None
19:55	5	20	200	2.20	1.32	7.09	1.142	9.56	0.12	13.7	-54.8	Clear	None
20:00	5	25	200	2.20	1.59	7.09	1.146	9.22	0.12	13.6	-56	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: 6000B

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-23-161	Date	4/8/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	70.0 degrees F and Mostly Cloudy. The wind is blowing SW at 12.8 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	10.31	Total Depth (ft-bmp)	27.58	Water Column (ft)	17.27	Gallons in Well	2.81
Purge Start	17:00	Pump Intake (ft-bmp)	22.08	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	17:40	Volumes Purged	0.75	Sample ID	MW-23-161_040824	Sampled by	Austin Westhuis
Sample Time	17:35	Gallons Purged	2.11	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
17:05	0	0	200	10.31	0.26	7.04	1.784	113.63	0.54	13	-41.1	Clear	None
17:10	5	5	200	10.31	0.53	7.1	1.716	108.22	0.32	13.1	-49.3	Clear	None
17:15	5	10	200	10.31	0.79	7.15	1.488	102.23	0.19	13.1	-51.2	Clear	None
17:20	5	15	200	10.31	1.06	7.16	1.361	99.96	0.13	12.9	-59.2	Clear	None
17:25	5	20	200	10.31	1.32	7.17	1.294	67.37	0.08	12.7	-63.5	Clear	None
17:30	5	25	200	10.31	1.59	7.17	1.292	65.22	0.08	12.6	-65.2	Clear	None
17:35	5	30	200	10.31	1.85	7.16	1.293	64.38	0.08	12.8	-67.5	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-23-162	Date	4/8/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	73.0 degrees F and Partly Cloudy. The wind is blowing SW at 16.1 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material PVC		
Static Water Level (ft-bmp)	13.77	Total Depth (ft-bmp)	36.63	Water Column (ft)	22.86	Gallons in Well	3.71
Purge Start	17:50	Pump Intake (ft-bmp)	34.13	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	18:25	Volumes Purged	0.50	Sample ID	MW-23-162_040824	Sampled by	Austin Westhuis
Sample Time	18:20	Gallons Purged	1.85	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
17:55	0	0	200	14.50	0.26	6.83	2.477	90.15	2.24	13.5	-52.2	Clear	None
18:00	5	5	200	15.02	0.53	6.86	2.47	85.7	0.36	13.5	-49.5	Clear	None
18:05	5	10	200	15.24	0.79	6.88	2.444	41.87	0.29	13.3	-47.9	Clear	None
18:10	5	15	200	15.41	1.06	6.89	2.444	32.34	0.32	13.3	-48.5	Clear	None
18:15	5	20	200	15.41	1.32	6.91	2.443	31.69	0.31	13.4	-50.5	Clear	None
18:20	5	25	200	15.41	1.59	6.92	2.433	30.41	0.29	13.4	-52.2	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-23-163	Date	4/8/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	72.0 degrees F and Clear. The wind is blowing SW at 16.1 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation		Casing Diameter (in)	2
				Well Casing Material	PVC
Static Water Level (ft-bmp)	13.25	Total Depth (ft-bmp)	27.22	Water Column (ft)	13.97
				Gallons in Well	2.27
Purge Start	18:35	Pump Intake (ft-bmp)	25.72	Purge Method	Low-Flow
				Purge Equipment	Peristaltic
Purge End	19:15	Volumes Purged	0.93	Sample ID	MW-23-163_040824
				Sampled by	Austin Westhuis
Sample Time	19:10	Gallons Purged	2.11	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
18:40	0	0	200	13.80	0.26	7.17	1.072	283.29	0.92	12.1	-45	Clear	None
18:45	5	5	200	13.80	0.53	7.15	1.086	115.02	0.21	12	-62.5	Clear	None
18:50	5	10	200	13.80	0.79	7.15	1.096	94.12	0.17	12.1	-64.8	Clear	None
18:55	5	15	200	13.80	1.06	7.15	1.098	81.26	0.15	12.1	-68.9	Clear	None
19:00	5	20	200	13.80	1.32	7.14	1.1	75.09	0.14	12.1	-72.3	Clear	None
19:05	5	25	200	13.80	1.59	7.15	1.098	73.48	0.14	12.1	-72.6	Clear	None
19:10	5	30	200	13.80	1.85	7.15	1.097	69.89	0.13	12.1	-73	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: See figure.	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	CH-14-RO	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	75.0 degrees F and Mostly Cloudy.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	6.95	Total Depth (ft-bmp)	14.85	Water Column (ft)	7.90	Gallons in Well	1.28
Purge Start	10:05	Pump Intake (ft-bmp)	12	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	10:40	Volumes Purged	0.72	Sample ID	CH-14-RO_052224	Sampled by	Billy Cobern
Sample Time	10:40	Gallons Purged	0.9246022	Replicate/ Code No.	CH-14-RO_052224	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
10:10	0	0	100	7.15	0.13	7.24	1.059	6.55	2.74	16.8	65.1	Green	None
10:15	5	5	100	7.19	0.26	7.23	1.032	10.32	0.97	16.5	70.5	Green	None
10:20	5	10	100	7.20	0.40	7.23	1.026	13.26	0.41	16.2	71.6	Green	None
10:25	5	15	100	7.20	0.53	7.22	1.023	10.68	0.18	16.3	73.5	Green	None
10:30	5	20	100	7.20	0.66	7.22	1.023	8.73	0.16	16.2	73.5	Green	None
10:35	5	25	100	7.20	0.79	7.22	1.024	8.23	0.15	16.2	73.6	Green	None
10:40	5	30	100	7.20	0.92	7.22	1.024	8.11	0.15	16.1	73.9	Green	None

Constituent Sampled	Container	Number	Preservative
Hexavalent Chromium SW-846 7196	250 mL Plastic	3	None
PFAS	250 mL Plastic	6	None
Total Metals	125 mL Plastic	3	HNO3

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-01(2)	Date	5/17/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	66.0 degrees F and Clear. The wind is blowing S at 6.9 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	7.25	Total Depth (ft-bmp)	15.97	Water Column (ft)	8.72	Gallons in Well	1.42
Purge Start	10:35	Pump Intake (ft-bmp)	13.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	11:45	Volumes Purged	1.51	Sample ID	MW-01(2)_051724	Sampled by	Ellen Redner
Sample Time	11:40	Gallons Purged	2.15	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate gal/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
10:40	0	0	0.04	8.00	0.2	6.62	3.013	10.5	1.3	14.7	189.2	Clear	None
10:45	5	5	0.03	8.55	0.35	6.7	3.187	14.9	1.01	14.9	184.4	Clear	None
10:50	5	10	0.03	8.65	0.5	6.71	3.291	18.5	0.85	14.9	182.5	Clear	None
10:55	5	15	0.03	8.75	0.65	6.74	3.432	28.5	0.62	14.7	178.6	Clear	None
11:00	5	20	0.03	8.90	0.8	6.76	3.477	5.46	0.57	14.5	174.1	Clear	None
11:05	5	25	0.03	9.10	0.95	6.76	3.493	5.16	0.56	14.5	169.3	Clear	None
11:10	5	30	0.03	9.10	1.1	6.75	3.685	3.82	0.28	14.4	162.8	Clear	None
11:15	5	35	0.03	9.00	1.25	6.77	3.731	4.42	0.03	14.4	137	Clear	None
11:20	5	40	0.03	9.00	1.4	6.77	3.733	4.78	0.01	14.4	124.5	Clear	None
11:25	5	45	0.03	9.00	1.55	6.77	3.737	4.81	0.01	14.3	118.4	Clear	None
11:30	5	50	0.03	9.00	1.7	6.77	3.726	5.16	0	14.3	108.4	Clear	None
11:35	5	55	0.03	9.00	1.85	6.78	3.725	5.23	0	14.1	79.2	Clear	None
11:40	5	60	0.03	9.00	2	6.78	3.719	5.62	0	14.3	77.8	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: ORP did not stabilize.

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:	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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-02-02(3)	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	61.86	Total Depth (ft-bmp)	83.7	Water Column (ft)	21.84	Gallons in Well	3.55
Purge Start	11:35	Pump Intake (ft-bmp)	81.2	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	12:35	Volumes Purged	0.82	Sample ID	MW-02-02(3)_052124	Sampled by	Donald Richmond
Sample Time	12:35	Gallons Purged	2.91	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	200	61.86	0.53	6.9	1.382	25	1.57	17.9	159.1	Clear	None
11:50	5	5	200	61.86	0.79	6.86	1.376	25	1.33	17.9	160.5	Clear	None
11:55	5	10	200	61.86	1.06	6.82	1.374	55	1.05	17.8	157.1	Clear	None
12:00	5	15	200	61.86	1.32	6.81	1.381	70	0.9	18	152.7	Clear	None
12:05	5	20	200	61.86	1.59	6.8	1.425	83	0.83	18.2	147	Clear	None
12:10	5	25	200	61.86	1.85	6.77	1.635	114	0.65	18.6	2.4	Clear	None
12:15	5	30	200	61.86	2.11	6.75	1.769	140	0.53	18.8	-28.3	Clear	None
12:20	5	35	200	61.86	2.38	6.74	1.798	189	0.51	18.5	-36.2	Clear	None
12:25	5	40	200	61.86	2.64	6.74	1.818	219	0.51	18.5	-39	Clear	None
12:30	5	45	200	61.86	2.91	6.74	1.832	219	0.5	18.5	-40.9	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-02-02(6)	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	28.64	Total Depth (ft-bmp)	43.38	Water Column (ft)	14.74	Gallons in Well	2.40
Purge Start	14:40	Pump Intake (ft-bmp)	40.88	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	16:00	Volumes Purged	1.21	Sample ID	MW-02-02(6)_052324	Sampled by	Donald Richmond
Sample Time	15:40	Gallons Purged	2.91	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
14:55	0	0	200	28.64	0.79	6.74	6.536	23.19	1.13	23.8	-27.4	Clear	None
15:00	5	5	200	28.64	1.06	6.75	6.98	18.89	0.9	24.4	-43.4	Clear	None
15:05	5	10	200	28.64	1.32	6.76	7.254	20.15	0.64	23.9	-58.6	Clear	None
15:10	5	15	200	28.64	1.59	6.78	7.5	31	0.45	23.8	-68.5	Clear	None
15:15	5	20	200	28.64	1.85	6.78	7.574	40	0.38	23.9	-71	Clear	None
15:20	5	25	200	28.64	2.11	6.78	7.603	38	0.33	23.6	-72.7	Clear	None
15:25	5	30	200	28.64	2.38	6.78	7.597	50.86	0.29	23.8	-74.4	Clear	None
15:30	5	35	200	28.64	2.64	6.79	7.487	61	0.25	23	-76.2	Clear	None
15:35	5	40	200	28.64	2.91	6.79	7.583	19	0.24	23.6	-77.4	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,VOCs SW-846	40 mL Glass	3	HCL
SVOCs SW-846 8270C	1L Amber	2	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-02-04(3)	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	61.0 degrees F and Cloudy. The wind is blowing W at 4.7 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	60.83	Total Depth (ft-bmp)	84.55	Water Column (ft)	23.72	Gallons in Well	3.85
Purge Start	09:50	Pump Intake (ft-bmp)	83.55	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	11:05	Volumes Purged	1.01	Sample ID	MW-02-04(3)_052124	Sampled by	Jarrett Humpala
Sample Time	11:00	Gallons Purged	3.9	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
09:54	0	0	150	60.83	0.16	7.16	3.873	1191.14	9.31	16.8	284	Brown	None
09:59	5	5	150	61.64	0.36	7.11	3.7	995.36	7.41	14.7	186.7	Brown	None
10:04	5	10	150	61.64	0.55	7.04	3.701	863.45	7.17	14.9	112.7	Brown	None
10:09	5	15	150	61.64	0.75	6.94	3.714	626.72	5.18	15	-1	Brown	None
10:14	5	20	150	61.64	0.95	6.92	3.694	752.73	4.27	14.8	-18.2	Brown	None
10:19	5	25	150	61.64	1.12	6.91	3.688	710.54	3.84	14.8	-23.5	Brown	None
10:24	5	30	150	61.64	1.35	6.89	3.69	826.05	3.34	14.8	-29.3	Brown	None
10:29	5	35	150	61.64	1.55	6.88	3.687	823.1	2.78	15	-33.5	Brown	None
10:34	5	40	150	61.64	1.74	6.86	3.7	768.8	2.37	14.9	-39.8	Brown	None
10:39	5	45	150	61.64	1.94	6.86	3.73	699.87	2.1	15.1	-42.7	Brown	None
10:44	5	50	150	61.64	2.14	6.86	3.727	776.52	1.85	15.1	-45.2	Brown	None
10:49	5	55	150	61.64	2.34	6.86	3.75	861.27	1.51	15.3	-48.6	Brown	None
10:54	5	60	150	61.64	2.54	6.92	3.762	749.82	1.41	15.4	-50.2	Brown	None
10:59	5	65	150	61.64	2.73	6.86	3.767	695.67	1.24	15.4	-51.8	Brown	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL
Dissolved Metals, Total Metals	250 mL Plastic	2	HNO3
PFAS	250mL HDPE Plastic	2	None

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-03-05	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	22.00	Total Depth (ft-bmp)	48.04	Water Column (ft)	26.04	Gallons in Well	4.23
Purge Start	13:45	Pump Intake (ft-bmp)	45.54	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	14:25	Volumes Purged	0.38	Sample ID	MW-03-05_052324	Sampled by	Donald Richmond
Sample Time	14:20	Gallons Purged	1.59	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:50	0	0	200	22.00	0.26	7.92	1.6	47	0.66	19.3	30.7	Clear	None
13:55	5	5	200	22.00	0.53	7.86	1.6	64	0.62	19.3	5.3	Clear	None
14:00	5	10	200	22.00	0.79	7.84	1.593	56	0.66	19.2	-19.5	Clear	None
14:05	5	15	200	22.00	1.06	7.83	1.609	47	0.69	19.7	-32.6	Clear	None
14:10	5	20	200	22.00	1.32	7.82	1.601	45	0.7	19.3	-39.4	Clear	None
14:15	5	25	200	22.00	1.59	7.82	1.591	49	0.73	19.1	-42.5	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs,1,4-Dioxane 8270D SIM	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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-03-06	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	35.79	Total Depth (ft-bmp)	40.58	Water Column (ft)	4.79	Gallons in Well	0.78
Purge Start	12:05	Pump Intake (ft-bmp)	38.08	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	13:15	Volumes Purged	4.06	Sample ID	MW-03-06_052324	Sampled by	Donald Richmond
Sample Time	13:10	Gallons Purged	3.17	Replicate/ Code No.	DUP-11_052324	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
12:20	0	0	200	35.79	0.79	6.72	8.523	65	0.59	18.7	-36.2	Clear	None
12:25	5	5	200	35.79	1.06	6.73	8.473	66	0.42	18.5	-46.7	Clear	None
12:30	5	10	200	35.79	1.32	6.73	8.508	58	0.31	18.7	-51.4	Clear	None
12:35	5	15	200	35.79	1.59	6.73	8.515	54.44	0.28	18.7	-52.5	Clear	None
12:40	5	20	200	35.79	1.85	6.73	8.537	31	0.26	18.7	-54	Clear	None
12:45	5	25	200	35.79	2.11	6.73	8.524	19.63	0.25	18.8	-54.5	Clear	None
12:50	5	30	200	35.79	2.38	6.73	8.514	17.52	0.22	18.9	-55.1	Clear	None
12:55	5	35	200	35.79	2.64	6.73	8.503	14.93	0.24	18.6	-55.2	Clear	None
13:00	5	40	200	35.79	2.91	6.73	8.582	15	0.21	19.1	-56	Clear	None
13:05	5	45	200	35.79	3.17	6.73	8.646	14	0.2	19.5	-56.6	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs,1,4-Dioxane 8270D SIM	40 mL Glass	6	HCL

Comments:

Well Casing Volume Conversion

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

Well Information

Well Location: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-04-01(6)	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	70.38	Total Depth (ft-bmp)	87.97	Water Column (ft)	17.59	Gallons in Well	2.86
Purge Start	12:05	Pump Intake (ft-bmp)	85.47	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	13:15	Volumes Purged	1.11	Sample ID	MW-04-01(6)_052224	Sampled by	Donald Richmond
Sample Time	13:05	Gallons Purged	3.17	Replicate/ Code No.	MW-04-01(6)_052224	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
12:20	0	0	200	70.38	0.79	6.86	0.905	71.72	0.62	19.7	-40	Clear	None
12:25	5	5	200	70.38	1.06	6.83	0.916	57.37	0.45	19.7	-47	Clear	None
12:30	5	10	200	70.38	1.32	6.83	0.916	60	0.41	19.5	-48.7	Clear	None
12:35	5	15	200	70.38	1.59	6.81	0.921	73.83	0.35	19.5	-50.4	Clear	None
12:40	5	20	200	70.38	1.85	6.81	0.924	76	0.34	19.7	-50.9	Clear	None
12:45	5	25	200	70.38	2.11	6.8	0.927	81	0.32	19.6	-51.7	Clear	None
12:50	5	30	200	70.38	2.38	6.79	0.93	93	0.29	19.7	-52.3	Clear	None
12:55	5	35	200	70.38	2.64	6.79	0.937	98	0.29	20	-52.2	Clear	None
13:00	5	40	200	70.38	2.91	6.79	0.934	106	0.27	19.9	-52.7	Clear	None
13:05	5	45	200	70.38	3.17	6.79	0.934	111	0.26	19.9	-52.8	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	9	HCL

Comments:

Well Casing Volume Conversion

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

Well Information

Well Location: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-04-04R	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	4	Well Casing Material	Steel	
Static Water Level (ft-bmp)	76.03	Total Depth (ft-bmp)	111.05	Water Column (ft)	35.02	Gallons in Well	22.76
Purge Start	14:00	Pump Intake (ft-bmp)	108.55	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	15:15	Volumes Purged	0.13	Sample ID	MW-04-04R_052224	Sampled by	Donald Richmond
Sample Time	15:00	Gallons Purged	2.91	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
14:10	0	0	200	76.03	0.53	6.95	1.104	75	1.12	20.7	-74.6	Clear	None
14:15	5	5	200	76.03	0.79	6.92	1.077	90	0.47	20.1	-81.6	Clear	None
14:20	5	10	200	76.03	1.06	6.91	1.082	90	0.45	20.3	-83	Clear	None
14:25	5	15	200	76.03	1.32	6.91	1.065	110	0.4	19.9	-87.4	Clear	None
14:30	5	20	200	76.03	1.59	6.93	1.047	122	0.43	20.1	-92	Clear	None
14:35	5	25	200	76.03	1.85	6.93	1.031	130	0.51	19.9	-97.2	Clear	None
14:40	5	30	200	76.03	2.11	6.91	1.037	138.67	0.5	19.9	-94.4	Clear	None
14:45	5	35	200	76.03	2.38	6.9	1.042	155	0.44	19.8	-91.3	Clear	None
14:50	5	40	200	76.03	2.64	6.89	1.047	169	0.38	19.7	-88.8	Clear	None
14:55	5	45	200	76.03	2.91	6.88	1.054	177	0.35	19.9	-88.1	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL
PFAS	250mL HDPE Plastic	2	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-04-05(6)	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	71.1 degrees F and Clear. 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)	9.00	Total Depth (ft-bmp)	30	Water Column (ft)	21.00	Gallons in Well	3.41
Purge Start	12:20	Pump Intake (ft-bmp)	25	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	13:15	Volumes Purged	0.43	Sample ID	MW-04-05(6)_052324	Sampled by	Jackie Schulte
Sample Time	13:05	Gallons Purged	1.45	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:25	0	0	100	9.78	0.13	7.4	2.593	2.25	0.46	14.6	25.6	Clear	None
12:30	5	5	100	10.34	0.26	7.42	2.597	3.44	0.27	14.7	-24.5	Clear	None
12:35	5	10	100	10.39	0.40	7.39	2.59	2.65	0.31	16.7	-50.3	Clear	None
12:40	5	15	100	10.72	0.53	7.41	2.598	5.26	0.18	14.8	-65.3	Clear	None
12:45	5	20	100	10.99	0.66	7.4	2.6	3.5	0.07	14.8	-76.2	Clear	None
12:50	5	25	100	11.17	0.79	7.39	2.6	4.25	0.03	15	-82.7	Clear	None
12:55	5	30	100	11.30	0.92	7.39	2.597	4.22	0.01	15.2	-86.7	Clear	None
13:00	5	35	100	11.40	1.06	7.38	2.594	4.18	0	15.2	-90	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None
VOCs	40 mL Glass	3	HCL

Comments: Bolts are stripped.

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-04-06R	Date	5/22/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)		
Measuring Pt. Description	Top of Inner Casing	MP Elevation		Casing Diameter (in)	4
Static Water Level (ft-bmp)	65.40	Total Depth (ft-bmp)	77.79	Water Column (ft)	12.39
Purge Start	10:10	Pump Intake (ft-bmp)	75.29	Purge Method	Low-Flow
Purge End	11:25	Volumes Purged	0.39	Sample ID	MW-04-06R_052224
Sample Time	11:15	Gallons Purged	3.17	Replicate/ Code No.	DUP-13_052224
				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
10:25	0	0	200	65.40	0.79	7.18	5.526	33	0.5	19.4	-116.8	Clear	None
10:30	5	5	200	65.40	1.06	7.1	5.634	57	0.41	19.7	-127.5	Clear	None
10:35	5	10	200	65.40	1.32	7.12	5.751	155	0.32	20	-134.6	Clear	None
10:40	5	15	200	65.40	1.59	7.19	5.743	296	0.27	19.3	-146.7	Clear	None
10:45	5	20	200	65.40	1.85	7.22	5.741	287	0.26	19	-157.6	Clear	None
10:50	5	25	200	65.40	2.11	7.3	5.716	113	0.23	18	-177.1	Clear	None
10:55	5	30	200	65.40	2.38	7.29	5.822	133	0.22	17.8	-175.3	Clear	None
11:00	5	35	200	65.40	2.64	7.28	5.878	180	0.22	18.5	-171	Clear	None
11:05	5	40	200	65.40	2.91	7.26	6.08	273	0.22	19.1	-172	Clear	None
11:10	5	45	200	65.40	3.17	7.23	6.21	221	0.2	19.5	-171.6	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	6	HCL
PFAS	250mL HDPE Plastic	4	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-05(3)	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	82.0 degrees F and Mostly Clear. The wind is blowing S 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)	4.06	Total Depth (ft-bmp)	19.53	Water Column (ft)	15.47	Gallons in Well	2.51
Purge Start	17:25	Pump Intake (ft-bmp)	17.03	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	17:55	Volumes Purged	0.63	Sample ID	MW-05(3)_052124	Sampled by	Austin Westhuis
Sample Time	17:50	Gallons Purged	1.59	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
17:30	0	0	200	5.17	0.26	7.86	0.563	13.89	3.24	15.8	95.2	Clear	None
17:35	5	5	200	5.47	0.53	7.86	0.557	13.52	3.29	15.6	98.3	Clear	None
17:40	5	10	200	5.82	0.79	7.86	0.559	12.97	3.23	15.6	99	Clear	None
17:45	5	15	200	6.09	1.06	7.86	0.561	12.24	3.21	15.8	99.8	Clear	None
17:50	5	20	200	6.27	1.32	7.86	0.561	12.02	3.19	15.8	100.4	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: Water level did not stabilize. Did not meet drawdown requirements.

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 2035

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-12-01	Date	5/24/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	4	Well Casing Material	Steel	
Static Water Level (ft-bmp)	79.75	Total Depth (ft-bmp)	90.95	Water Column (ft)	11.20	Gallons in Well	7.28
Purge Start	08:30	Pump Intake (ft-bmp)	88.45	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	09:30	Volumes Purged	0.33	Sample ID	MW-12-01_052424	Sampled by	Donald Richmond
Sample Time	09:20	Gallons Purged	2.38	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
08:50	0	0	200	79.75	1.06	7.18	1.478	149.49	0.74	13.9	-125.2	Clear	None
08:55	5	5	200	79.75	1.32	7.25	1.481	145	0.53	14	-139	Clear	None
09:00	5	10	200	79.75	1.59	7.27	1.483	147	0.43	14	-148.2	Clear	None
09:05	5	15	200	79.75	1.85	7.28	1.486	141	0.37	14.1	-154.6	Clear	None
09:10	5	20	200	79.75	2.11	7.29	1.498	133	0.33	14.4	-160.6	Clear	None
09:15	5	25	200	79.75	2.38	7.29	1.492	141	0.29	14.1	-163.7	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Glass	2	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-12-02	Date	5/24/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	4	Well Casing Material	Steel	
Static Water Level (ft-bmp)	68.61	Total Depth (ft-bmp)	93.3	Water Column (ft)	24.69	Gallons in Well	16.05
Purge Start	10:05	Pump Intake (ft-bmp)	90.8	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	11:00	Volumes Purged	0.15	Sample ID	MW-12-02_052424	Sampled by	Donald Richmond
Sample Time	10:55	Gallons Purged	2.38	Replicate/ Code No.	DUP-04_052424	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
10:20	0	0	200	68.61	0.79	8.04	0.67	34.13	0.47	16.6	-175.7	Clear	None
10:25	5	5	200	68.61	1.06	8.01	0.674	31	0.37	16.8	-193.6	Clear	None
10:30	5	10	200	68.61	1.32	7.98	0.678	40	0.33	16.8	-199	Clear	None
10:35	5	15	200	68.61	1.59	7.97	0.683	41	0.28	16.7	-202.5	Clear	None
10:40	5	20	200	68.61	1.85	7.97	0.681	26	0.27	16.5	-203	Clear	None
10:45	5	25	200	68.61	2.11	7.95	0.687	26.36	0.24	16.7	-202	Clear	None
10:50	5	30	200	68.61	2.38	7.93	0.692	24.72	0.22	16.8	-203	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Glass	4	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-12-05R	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	4	Well Casing Material	Steel	
Static Water Level (ft-bmp)	74.60	Total Depth (ft-bmp)	109.3	Water Column (ft)	34.70	Gallons in Well	22.55
Purge Start	16:15	Pump Intake (ft-bmp)	106.8	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	16:50	Volumes Purged	0.06	Sample ID	MW-12-05R_052024	Sampled by	Donald Richmond
Sample Time	16:45	Gallons Purged	1.32	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
16:25	0	0	200	74.60	0.53	10.33	0.444	37.35	1.82	20.4	47	Clear	None
16:30	5	5	200	74.60	0.79	10.35	0.445	34	1.93	20.8	40.8	Clear	None
16:35	5	10	200	74.60	1.06	10.37	0.449	33	2.02	21.1	37.4	Clear	None
16:40	5	15	200	74.60	1.32	10.28	0.449	33.14	2.19	20.8	41	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Glass	2	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-12-06	Date	5/24/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	61.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	74.10	Total Depth (ft-bmp)	103.62	Water Column (ft)	29.52	Gallons in Well	4.80
Purge Start	09:30	Pump Intake (ft-bmp)	101.12	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	10:35	Volumes Purged	0.71	Sample ID	MW-12-06_052424	Sampled by	Austin Westhuis
Sample Time	10:30	Gallons Purged	3.43	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
09:35	0	0	200	74.10	0.26	7.26	0.749	73.86	3.27	16.5	-32.9	Clear	None
09:40	5	5	200	74.10	0.53	7.28	0.753	95.44	4.93	17	3.8	Clear	None
09:45	5	10	200	74.10	0.79	7.29	0.758	158.41	5.62	17.4	16.4	Clear	None
09:50	5	15	200	74.10	1.06	7.3	0.757	198.22	6.26	17.4	32.5	Clear	None
09:55	5	20	200	74.10	1.32	7.33	0.753	213.45	6.95	17.4	43.7	Clear	None
10:00	5	25	200	74.10	1.59	7.35	0.75	239.01	7.72	17.4	51.3	Clear	None
10:05	5	30	200	74.10	1.85	7.38	0.755	294.51	8.2	17.7	64.3	Clear	None
10:10	5	35	200	74.10	2.11	7.4	0.753	112.85	8.89	17.8	71.66	Clear	None
10:15	5	40	200	74.10	2.38	7.43	0.754	98.61	9.11	18	80.1	Clear	None
10:20	5	45	200	74.10	2.64	7.44	0.759	122.11	9.6	18.3	84.7	Clear	None
10:25	5	50	200	74.10	2.91	7.47	0.761	125.21	10.09	18.5	92.5	Clear	None
10:30	5	55	200	74.10	3.17	7.49	0.762	132.63	9.93	18.6	96.4	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Amber	2	HCL

Comments: ORP did not meet stabilization criteria. All other groundwater monitoring criteria stable.

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-12-09	Date	5/16/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	54.0 degrees F and Clear. The wind is blowing E at 3.4 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	11.93	Total Depth (ft-bmp)	19	Water Column (ft)	7.07	Gallons in Well	1.15
Purge Start	09:52	Pump Intake (ft-bmp)	14.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	11:11	Volumes Purged	1.82	Sample ID	MW-12-09_051424	Sampled by	Jackie Schulte
Sample Time	10:55	Gallons Purged	2.09	Replicate/ Code No.	DUP-01_051624	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
09:55	0	0	100	11.94	0.08	7.05	1.626	17.65	1.1	13.4	232.1	Clear	None
10:00	5	5	100	11.94	0.21	7.08	1.623	21.17	0.69	15.4	208.3	Clear	None
10:05	5	10	100	11.94	0.34	7.12	1.617	8.57	0.31	13.4	177.4	Clear	None
10:10	5	15	100	11.94	0.00	7.12	1.614	6.8	0.22	13.2	147.5	Clear	None
10:15	5	20	100	11.94	0.61	7.12	1.611	8.08	0.1	13.2	120.9	Clear	None
10:20	5	25	100	11.94	0.74	7.12	1.616	9.06	0	13.1	101.1	Clear	None
10:25	5	30	100	11.94	0.87	7.11	1.636	8.12	0	12.9	83.6	Clear	None
10:30	5	35	100	11.94	1.00	7.1	1.733	4.63	0	13	64	Clear	None
10:35	5	40	100	11.94	1.14	7.08	1.812	5.88	0	13	49.1	Clear	None
10:40	5	45	100	11.94	1.27	7.07	1.891	3.42	0	13	34.6	Clear	None
10:45	5	50	100	11.94	1.40	7.06	1.924	4.75	0	13.4	22.3	Clear	None
10:50	5	55	100	11.94	1.53	7.06	1.946	4.99	0	13.7	12.9	Clear	None
10:55	5	60	100	11.94	1.66	7.06	1.967	3.64	0	13.5	4.7	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,VOCs SW-846	40 mL Glass	6	HCL
PFAS	250 mL Glass	4	None

Comments: Well did not stabilize after 65 minutes of purging.

Well Casing Volume Conversion

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

Well Information

Well Location: _____	Well Locked at Arrival: yes _____
Condition of Well: Good condition _____	Well Locked at Departure: yes _____
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-12-10R	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	73.0 degrees F and Partly Cloudy. The wind is blowing SW at 15.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	11.24	Total Depth (ft-bmp)	17.96	Water Column (ft)	6.72	Gallons in Well	1.09
Purge Start	09:30	Pump Intake (ft-bmp)	17	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	10:38	Volumes Purged	2.29	Sample ID	MW-12-10R_052224	Sampled by	Jarrett Humpala
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
09:33	0	0	150	11.24	0.12	6.9	2.223	56.93	1.45	15.8	203	Clear	None
09:38	5	5	150	11.65	0.32	6.88	2.197	53.51	0.19	15.5	20.7	Clear	None
09:43	5	10	150	11.68	0.52	6.88	2.11	37.02	0	14.9	-5.1	Clear	None
09:48	5	15	150	11.70	0.71	6.86	2.117	40.86	0	15	-7.2	Clear	None
09:53	5	20	150	11.70	0.91	6.85	2.172	55.11	0	15.1	-8.7	Clear	None
09:58	5	25	150	11.70	1.11	6.84	2.217	67.84	0	15.2	-9.5	Clear	None
10:03	5	30	150	11.70	1.31	6.84	2.257	90	0	15.2	-10	Clear	None
10:08	5	35	150	11.70	1.51	6.84	2.288	110.19	0	15.2	-11	Clear	None
10:13	5	40	150	11.70	1.70	6.84	2.328	138.39	0	15.1	-9.4	Clear	None
10:18	5	45	150	11.70	1.90	6.84	2.337	152.1	0	15	-8.8	Clear	None
10:23	5	50	150	11.70	2.10	6.85	2.364	158.67	0	15.2	-7.6	Clear	None
10:28	5	55	150	11.70	2.30	6.85	2.353	167.31	0	14.8	-6.2	Clear	None
10:33	5	60	150	11.70	2.50	6.85	2.395	192.83	0	15.5	-6.5	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-12-11	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	75.9 degrees F and Mostly Cloudy. The wind is blowing W/SW 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)	3.80	Total Depth (ft-bmp)	16.6	Water Column (ft)	12.80	Gallons in Well	2.08
Purge Start	10:50	Pump Intake (ft-bmp)	16	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	12:02	Volumes Purged	1.15	Sample ID	MW-12-11_052224	Sampled by	Jarrett Humpala
Sample Time	12:00	Gallons Purged	2.4	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:55	0	0	150	4.57	0.20	6.59	4.17	64.99	0.54	13.9	-49.6	Clear	None
11:00	5	5	150	5.14	0.40	6.61	4.05	100.2	0	13.7	-56.7	Clear	None
11:05	5	10	150	5.40	0.59	6.63	3.897	129.19	0	14.1	-59.7	Clear	None
11:10	5	15	150	5.55	0.79	6.65	3.698	196.9	0	14.1	-58.5	Clear	None
11:15	5	20	150	5.68	0.99	6.65	3.641	253.42	0	14.1	-57.3	Clear	None
11:20	5	25	150	5.73	1.19	6.65	3.591	300.36	0	14	-56.6	Clear	None
11:25	5	30	150	5.75	1.39	6.66	3.569	359.77	0	14.1	-56.4	Clear	None
11:30	5	35	150	5.77	1.59	6.66	3.508	355.83	0	14	-56	Clear	None
11:35	5	40	150	5.77	1.78	6.67	3.466	372.06	0	14	-55.9	Clear	None
11:40	5	45	150	5.77	1.98	6.67	3.442	415.87	0	14.2	-56	Clear	None
11:45	5	50	150	5.77	2.18	6.67	3.459	451.28	0	14.2	-56	Clear	None
11:50	5	55	150	5.77	2.38	6.68	3.413	507.92	0	14.2	-56.1	Clear	None
11:55	5	60	150	5.77	2.58	6.69	3.383	550.98	0	14	-56.4	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: Park outside plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-12-12	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	77.0 degrees F and Clear. The wind is blowing W/SW at 17.2 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	7.33	Total Depth (ft-bmp)	17.2	Water Column (ft)	9.87	Gallons in Well	1.60
Purge Start	12:28	Pump Intake (ft-bmp)	16.2	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	13:37	Volumes Purged	1.25	Sample ID	MW-12-12_052224	Sampled by	Jarrett Humpala
Sample Time	13:35	Gallons Purged	2	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:32	0	0	150	7.97	0.16	7.32	1.504	205.85	2.18	17.8	148	Clear	None
12:37	5	5	150	8.74	0.36	7.3	1.44	175.56	0.24	18	-22.6	Clear	None
12:41	4	9	150	9.08	0.52	7.35	1.411	136.41	0.11	17.8	-36	Clear	None
12:46	5	14	150	9.58	0.71	7.37	1.392	114.54	0.03	17.6	-24.6	Clear	None
12:51	5	19	150	10.03	0.91	7.37	1.381	103.67	0	17.4	-15.5	Clear	None
12:56	5	24	150	10.37	1.11	7.38	1.367	85.45	0	17.4	-8.3	Clear	None
13:01	5	29	150	10.75	1.31	7.37	1.337	73.59	0	17.1	1.5	Clear	None
13:06	5	34	150	11.02	1.51	7.37	1.322	86.97	0.03	17.1	12	Clear	None
13:11	5	39	150	11.37	1.70	7.37	1.306	98.8	0.07	17.2	21.1	Clear	None
13:16	5	44	150	11.62	1.90	7.37	1.28	121.78	0.05	17	28.2	Clear	None
13:21	5	49	150	11.91	2.10	7.37	1.26	164.23	0.03	16.8	35.7	Clear	None
13:26	5	54	150	12.23	2.30	7.36	1.24	203.14	0	17	42.5	Clear	None
13:31	5	59	150	12.41	2.50	7.36	1.228	221.52	0	16.8	44.2	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-12-13	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	71.1 degrees F and Clear. 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)	10.86	Total Depth (ft-bmp)	25.48	Water Column (ft)	14.62	Gallons in Well	2.38
Purge Start	12:15	Pump Intake (ft-bmp)	21.98	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	12:50	Volumes Purged	0.78	Sample ID	MW-12-13_052324	Sampled by	Austin Westhuis
Sample Time	12:45	Gallons Purged	1.85	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
12:20	0	0	200	12.51	0.26	7.43	0.565	12.38	0.88	12	149.2	Clear	None
12:25	5	5	200	12.62	0.53	7.43	0.561	8.98	0.79	12.1	148.1	Clear	None
12:30	5	10	200	12.68	0.79	7.42	0.556	5.37	0.75	12.1	145	Clear	None
12:35	5	15	200	12.72	1.06	7.42	0.553	4.88	0.72	12	145	Clear	None
12:40	5	20	200	12.74	1.32	7.42	0.551	4.61	0.7	12	141.9	Clear	None
12:45	5	25	200	12.75	1.59	7.42	0.55	4.24	0.67	12	141.1	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS - Method 537 mod.	250mL HDPE Plastic	2	None
Total Metals	125 mL Plastic	1	HNO3

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-12-18	Date	5/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	60.1 degrees F and 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)	21.71	Total Depth (ft-bmp)	33	Water Column (ft)	11.29	Gallons in Well	1.83
Purge Start	11:36	Pump Intake (ft-bmp)	30	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	00:45	Volumes Purged	0.99	Sample ID	MW-12-18_051424	Sampled by	Jackie Schulte
Sample Time	12:40	Gallons Purged	1.82	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:40	0	0	100	22.19	0.11	7.15	2.777	12.54	1.38	15.8	163.3	Clear	Mild
11:45	5	5	100	22.54	0.24	7	2.747	13.99	0.57	15.2	141.4	Clear	Mild
11:50	5	10	100	22.60	0.37	6.98	2.754	6.41	0.43	15.6	123.7	Clear	Mild
11:55	5	15	100	22.60	0.50	6.96	2.735	11.96	0.36	17.2	101.6	Clear	Mild
12:00	5	20	100	22.74	0.63	6.98	2.75	9.3	0.26	14.7	87.5	Clear	Mild
12:05	5	25	100	22.74	0.77	6.96	2.726	20	0.22	16.3	71.7	Clear	Mild
12:10	5	30	100	22.94	0.90	6.97	2.744	16.6	0.11	14.4	60.6	Clear	Mild
12:15	5	35	100	22.97	1.03	6.96	2.747	8.75	0.12	15.1	54.2	Clear	Mild
12:20	5	40	100	22.97	1.16	6.95	2.752	8.11	0.12	15.7	45.6	Clear	Mild
12:25	5	45	100	22.97	1.29	6.95	2.76	7.73	0.14	16.3	39.8	Clear	Mild
12:30	5	50	100	23.10	1.43	6.96	2.777	26.57	0.03	14.5	33.5	Clear	Mild
12:35	5	55	100	23.10	1.56	6.96	2.778	30.5	0.16	15.4	30.3	Clear	Mild

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None
VOCs	40 mL Glass	3	HCL

Comments: Well did not stabilize after 60 minutes of purging.

Well Casing Volume Conversion

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

Well Information

Well Location:	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-12-20	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	82.0 degrees F and Mostly Clear. The wind is blowing S 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)	66.50	Total Depth (ft-bmp)	79.45	Water Column (ft)	12.95	Gallons in Well	2.10
Purge Start	17:05	Pump Intake (ft-bmp)	77	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	17:45	Volumes Purged	0.50	Sample ID	MW-12-20_052124	Sampled by	Billy Cobern
Sample Time	17:45	Gallons Purged	1.06	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
17:10	0	0	100	66.82	0.13	7.13	1.525	456.78	5.95	25.8	-67.3	Clear	None
17:15	5	5	100	67.05	0.26	6.99	1.571	543.86	5.36	23.5	-72.8	Clear	None
17:20	5	10	100	67.28	0.40	6.96	1.46	248.84	1.41	20.4	-84.9	Clear	None
17:25	5	15	100	67.50	0.53	6.97	1.454	115.48	0.99	19.7	-85.2	Clear	None
17:30	5	20	100	67.71	0.66	6.97	1.451	132.2	1.09	20.5	-84	Clear	None
17:35	5	25	100	67.92	0.79	6.97	1.447	182.65	1.13	20.1	-81.4	Clear	None
17:40	5	30	100	68.12	0.92	6.96	1.445	189.98	1.17	20	-81	Clear	None
17:45	5	35	100	68.31	1.06	6.97	1.444	186.67	1.18	20	-80.6	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL

Comments: Didn't meet drawdown requirements.

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-12-21	Date	5/16/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	66.74	Total Depth (ft-bmp)	78.04	Water Column (ft)	11.30	Gallons in Well	1.84
Purge Start	14:40	Pump Intake (ft-bmp)	75.54	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	15:10	Volumes Purged	0.58	Sample ID	MW-12-21_051624	Sampled by	Donald Richmond
Sample Time	15:05	Gallons Purged	1.06	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
14:50	0	0	200	66.74	0.53	6.68	1.951	11.74	0.96	26.5	-18.5	Clear	None
14:55	5	5	200	66.74	0.79	6.68	1.845	11.79	0.89	24	-14.6	Clear	None
15:00	5	10	200	66.74	1.06	6.71	1.799	14.85	0.87	23.9	-8.5	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-22	Date	5/16/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	69.23	Total Depth (ft-bmp)	96.1	Water Column (ft)	26.87	Gallons in Well	4.37
Purge Start	13:20	Pump Intake (ft-bmp)	93.7	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	14:25	Volumes Purged	0.67	Sample ID	MW-13-22_051624	Sampled by	Donald Richmond
Sample Time	14:20	Gallons Purged	2.91	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:30	0	0	200	69.23	0.53	6.79	2.193	18.07	1.42	25.9	-28.2	Clear	None
13:35	5	5	200	69.23	0.79	6.78	2.16	26	0.47	26.4	-45.7	Clear	None
13:40	5	10	200	69.23	1.06	6.77	2.134	42	0.43	24.9	-47.5	Clear	None
13:45	5	15	200	69.23	1.32	6.77	2.133	46	0.36	26	-49.5	Clear	None
13:50	5	20	200	69.23	1.59	6.78	2.085	63	0.25	25.2	-51.2	Clear	None
13:55	5	25	200	69.23	1.85	6.77	2.16	105.66	0.25	27	-54.9	Clear	None
14:00	5	30	200	69.23	2.11	6.76	2.183	125	0.24	27.2	-56.2	Clear	None
14:05	5	35	200	69.23	2.38	6.76	2.179	144	0.22	27.2	-58	Clear	None
14:10	5	40	200	69.23	2.64	6.76	2.114	156	0.2	25.5	-61.3	Clear	None
14:15	5	45	200	69.23	2.91	6.77	2.092	155.95	0.18	25.5	-63.7	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-23	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	66.66	Total Depth (ft-bmp)	77.5	Water Column (ft)	10.84	Gallons in Well	1.76
Purge Start	09:20	Pump Intake (ft-bmp)	75.0	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	10:55	Volumes Purged	2.55	Sample ID	MW-13-23_052124	Sampled by	Donald Richmond
Sample Time	10:50	Gallons Purged	4.49	Replicate/ Code No.	MW-13-23_052124	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
09:30	0	0	200	66.66	0.53	6.33	1.668	75	1.1	16	180	Clear	None
09:35	5	5	200	66.66	0.79	6.43	1.676	45	0.61	16.1	176.6	Clear	None
09:40	5	10	200	66.66	1.06	6.5	1.666	25	0.44	16.1	172.9	Clear	None
09:45	5	15	200	66.66	1.32	6.52	1.665	19.77	0.44	16	171.4	Clear	None
09:50	5	20	200	66.66	1.59	6.66	1.688	16.85	0.47	16.6	78.7	Clear	None
10:30	40	60	200	66.66	3.70	6.58	1.681	8.07	0.65	16.9	122.1	Clear	None
10:35	5	65	200	66.66	3.96	6.52	1.691	6.91	0.3	17.4	117.1	Clear	None
10:40	5	70	200	66.66	4.23	6.52	1.7	7.96	0.25	17.4	114	Clear	None
10:45	5	75	200	66.66	4.49	6.52	1.7	7.59	0.22	17.4	110.9	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	9	HCL

Comments:

Well Casing Volume Conversion

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

Well Information

Well Location: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-24	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	65.49	Total Depth (ft-bmp)	77.33	Water Column (ft)	11.84	Gallons in Well	1.92
Purge Start	14:15	Pump Intake (ft-bmp)	74.83	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	15:20	Volumes Purged	1.52	Sample ID	MW-13-24_052124	Sampled by	Donald Richmond
Sample Time	15:15	Gallons Purged	2.91	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
14:25	0	0	200	65.49	0.53	10.15	0.575	9.43	8.6	20.5	62.5	Clear	None
14:30	5	5	200	65.49	0.79	6.91	0.877	14	3.23	20	-37.8	Clear	None
14:35	5	10	200	65.49	1.06	6.79	0.942	22	2.04	20	-43.9	Clear	None
14:40	5	15	200	65.49	1.32	6.78	0.973	29.92	1.6	20.3	-47.3	Clear	None
14:45	5	20	200	65.49	1.59	6.76	0.995	39	1.25	20.5	-50.2	Clear	None
14:50	5	25	200	65.49	1.85	6.75	1.015	51	0.97	20.5	-53.3	Clear	None
14:55	5	30	200	65.49	2.11	6.75	1.012	66	0.8	20	-54.8	Clear	None
15:00	5	35	200	65.49	2.38	6.74	1.025	91	0.58	20.2	-57.6	Clear	None
15:05	5	40	200	65.49	2.64	6.75	1.026	101	0.51	20.4	-59.6	Clear	None
15:10	5	45	200	65.49	2.91	6.75	1.049	110	0.46	20.6	-61.2	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-25	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	65.52	Total Depth (ft-bmp)	75	Water Column (ft)	9.48	Gallons in Well	1.54
Purge Start	13:15	Pump Intake (ft-bmp)	72.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	13:55	Volumes Purged	1.03	Sample ID	MW-13-25_052124	Sampled by	Donald Richmond
Sample Time	13:50	Gallons Purged	1.59	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:30	0	0	200	65.52	0.79	6.41	1.509	3.28	0.4	21	-19.3	Clear	None
13:35	5	5	200	65.52	1.06	6.4	1.526	3.73	0.46	21.2	-24.4	Clear	None
13:40	5	10	200	65.52	1.32	6.4	1.511	4.05	0.44	21.7	-26.1	Clear	None
13:45	5	15	200	65.52	1.59	6.41	1.506	3.93	0.42	21.7	-28	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-28	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	77.0 degrees F and Partly Cloudy.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	4	Well Casing Material	Carbon Steel	
Static Water Level (ft-bmp)	69.94	Total Depth (ft-bmp)	114.75	Water Column (ft)	44.81	Gallons in Well	29.12
Purge Start	13:30	Pump Intake (ft-bmp)	112	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	14:30	Volumes Purged	0.05	Sample ID	MW-13-28_052024	Sampled by	Billy Cobern
Sample Time	14:30	Gallons Purged	1.59	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:35	0	0	100	70.25	0.13	6.83	1.738	376.96	5.79	16.7	-61.3	Clear	None
13:40	5	5	100	70.25	0.26	6.84	1.786	114.86	1.24	16.4	-73.8	Clear	None
13:45	5	10	100	70.25	0.40	6.84	1.785	330.58	0.54	16.4	-77.3	Clear	None
13:50	5	15	100	70.25	0.53	6.84	1.786	336.37	0.27	16.5	-78.9	Clear	None
13:55	5	20	100	70.25	0.66	6.83	1.785	149.47	0.19	16.9	-80.5	Clear	None
14:00	5	25	100	70.25	0.79	6.83	1.79	302.23	0.16	17.6	-82.1	Clear	None
14:05	5	30	100	70.25	0.92	6.83	1.79	240.76	0.15	17.8	-82.7	Clear	None
14:10	5	35	100	70.25	1.06	6.83	1.788	135.34	0.15	17.6	-83.2	Clear	None
14:15	5	40	100	70.25	1.19	6.83	1.793	105.48	0.15	17.7	-83.9	Clear	None
14:20	5	45	100	70.25	1.32	6.83	1.795	66.85	0.14	17.5	-83.1	Clear	None
14:25	5	50	100	70.25	1.45	6.91	1.784	161.98	0.15	17.3	-83.9	Clear	None
14:30	5	55	100	70.25	1.59	6.84	1.787	169.86	0.15	17.5	-83.4	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Amber	2	HCL

Comments: Turbidity didn't stabilize within 60 minutes

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-29	Date	5/16/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	65.30	Total Depth (ft-bmp)	76.3	Water Column (ft)	11.00	Gallons in Well	1.79
Purge Start	15:40	Pump Intake (ft-bmp)	73.8	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	16:40	Volumes Purged	1.47	Sample ID	MW-13-29_051624	Sampled by	Donald Richmond
Sample Time	16:35	Gallons Purged	2.64	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:55	0	0	200	65.30	0.79	6.39	2.686	14.87	0.88	18.6	7.7	Clear	None
16:00	5	5	200	65.30	1.06	6.4	2.704	17.82	0.65	19	-8.1	Clear	None
16:05	5	10	200	65.30	1.32	6.41	2.727	20.22	0.65	19.3	-16.6	Clear	None
16:10	5	15	200	65.30	1.59	6.41	2.71	23	0.52	18	-19.9	Clear	None
16:15	5	20	200	65.30	1.85	6.41	2.753	30.52	0.42	18.7	-20.8	Clear	None
16:20	5	25	200	65.30	2.11	6.4	2.81	42.5	0.33	19.3	-21	Clear	None
16:25	5	30	200	65.30	2.38	6.4	2.778	50.78	0.3	18.8	-19.7	Clear	None
16:30	5	35	200	65.30	2.64	6.4	2.757	65	0.23	18.2	-18.7	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-32	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	75.0 degrees F and Mostly Cloudy.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	6.60	Total Depth (ft-bmp)	12.65	Water Column (ft)	6.05	Gallons in Well	0.98
Purge Start	10:30	Pump Intake (ft-bmp)	10.15	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	11:20	Volumes Purged	2.69	Sample ID	MW-13-32_052224	Sampled by	Austin Westhuis
Sample Time	11:00	Gallons Purged	2.64	Replicate/ Code No.	DUP-05_052224	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
10:35	0	0	200	6.92	0.26	6.76	1.092	115.22	0.54	12.5	172	Clear	None
10:40	5	5	200	6.92	0.53	6.8	1.055	51.49	0.31	12.4	169.3	Clear	None
10:45	5	10	200	6.92	0.79	6.84	1.005	22.71	0.27	12.3	167	Clear	None
10:50	5	15	200	6.92	1.06	6.86	0.93	9.14	0.26	12.2	165.4	Clear	None
10:55	5	20	200	6.92	1.32	6.87	0.917	8.56	0.26	12.2	164.6	Clear	None
11:00	5	25	200	6.92	1.59	6.89	0.909	8.29	0.25	12.2	161.6	Clear	None

Constituent Sampled	Container	Number	Preservative
SVOCs	1L Amber	4	None
Total Metals	125 mL Plastic	2	HNO3

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 2035

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-34	Date	5/16/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	66.45	Total Depth (ft-bmp)	79.71	Water Column (ft)	13.26	Gallons in Well	2.15
Purge Start	11:25	Pump Intake (ft-bmp)	77.21	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	12:35	Volumes Purged	1.60	Sample ID	MW-13-34_051624	Sampled by	Donald Richmond
Sample Time	12:30	Gallons Purged	3.43	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
12:10	0	0	200	66.45	2.38	6.87	2.46	79	0.35	22.1	-106.1	Clear	None
12:15	5	5	200	66.45	2.64	6.87	2.461	67.44	0.19	22	-108.5	Clear	None
12:20	5	10	200	66.45	2.91	6.85	2.455	80	0.06	21.9	-110.6	Clear	None
12:25	5	15	200	66.45	3.17	6.85	2.461	83	0.03	22	-111	Clear	None
12:30	5	20	200	66.45	3.43	6.84	2.484	104	0.01	22.4	-112.2	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-36R	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	72.0 degrees F and Clear. The wind is blowing W at 12.8 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	6.41	Total Depth (ft-bmp)	12.61	Water Column (ft)	6.20	Gallons in Well	1.01
Purge Start	13:25	Pump Intake (ft-bmp)	10.11	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	14:10	Volumes Purged	2.36	Sample ID	MW-13-36R_052324	Sampled by	Austin Westhuis
Sample Time	14:05	Gallons Purged	2.38	Replicate/ Code No.	DUP-12_052324	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:30	0	0	200	6.41	0.26	12	1.716	11.35	0.34	13.4	-30.5	Clear	None
13:35	5	5	200	6.41	0.53	12.06	1.708	9.93	0.21	13.3	-44.8	Clear	None
13:40	5	10	200	6.41	0.79	12.12	1.695	8.24	0.11	13.2	-61.9	Clear	None
13:45	5	15	200	6.41	1.06	12.14	1.673	7.58	0.09	13.3	-79.2	Clear	None
13:50	5	20	200	6.41	1.32	12.15	1.646	5.51	0.09	13.2	-88.9	Clear	None
13:55	5	25	200	6.41	1.59	12.16	1.62	4.91	0.09	13.1	-90.6	Clear	None
14:00	5	30	200	6.41	1.85	12.16	1.613	4.22	0.09	13.1	-88.1	Clear	None
14:05	5	35	200	6.41	2.11	12.17	1.609	4.03	0.09	13.1	-88.1	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS - Method 537 mod.	250mL HDPE Plastic	4	None
Total Metals	125 mL Plastic	2	HNO3

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-37	Date	5/20/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	77.0 degrees F and Clear. The wind is blowing NE at 9.2 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	4	Well Casing Material Carbon Steel
Static Water Level (ft-bmp)	69.89	Total Depth (ft-bmp)	114.35	Water Column (ft)	44.46 Gallons in Well 28.90
Purge Start	15:45	Pump Intake (ft-bmp)	112	Purge Method	Low-Flow Purge Equipment Bladder
Purge End	16:45	Volumes Purged	0.06	Sample ID	MW-13-37_052024 Sampled by Billy Cobern
Sample Time	16:45	Gallons Purged	1.59	Replicate/ Code No.	NA Sample Type Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:50	0	0	100	70.20	0.13	8.82	0.67	190.68	4.35	22.2	26	Clear	None
15:55	5	5	100	70.20	0.26	8.83	0.665	187.57	4.58	22.3	23.8	Clear	None
16:00	5	10	100	70.20	0.40	8.83	0.663	176.91	4.8	22.3	22.4	Clear	None
16:05	5	15	100	70.20	0.53	8.83	0.661	127.43	4.9	22.3	20.9	Clear	None
16:10	5	20	100	70.20	0.66	8.83	0.659	98.76	4.93	22.3	19.7	Clear	None
16:15	5	25	100	70.20	0.79	8.83	0.656	76.54	4.94	22.2	17.9	Clear	None
16:20	5	30	100	70.20	0.92	8.83	0.655	47.47	4.87	22.1	15.7	Clear	None
16:25	5	35	100	70.20	1.06	8.83	0.646	24.86	4.25	22	8.3	Clear	None
16:30	5	40	100	70.20	1.19	8.82	0.637	12.27	2.5	21.8	-11.7	Clear	None
16:35	5	45	100	70.20	1.32	8.73	0.635	11.12	1.11	22.3	-32.4	Clear	None
16:40	5	50	100	70.20	1.45	8.73	0.635	10.09	1.08	22.5	-37.7	Clear	None
16:45	5	55	100	70.20	1.59	8.71	0.635	10.28	1.03	22.6	-40.3	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Amber	2	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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-38	Date	5/24/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	68.0 degrees F and Clear. The wind is blowing E/NE at 5.8 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	4	Well Casing Material Carbon Steel
Static Water Level (ft-bmp)	70.58	Total Depth (ft-bmp)	126.5	Water Column (ft)	55.92
Gallons in Well	36.35	Purge Start	10:45	Pump Intake (ft-bmp)	124
Purge Method	Low-Flow	Purge Equipment	Bladder	Purge End	11:40
Volumes Purged	0.04	Sample ID	MW-13-38_052424	Sampled by	Billy Cobern
Sample Time	11:40	Gallons Purged	1.45	Replicate/ Code No.	NA
Sample Type	Grab				

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:50	0	0	100	70.65	0.13	9.51	2.42	96.78	3.25	21.2	3.9	Clear	None
10:55	5	5	100	70.65	0.26	9.38	2.462	78.72	3.11	21.9	-56	Clear	None
11:00	5	10	100	70.65	0.40	8.1	2.627	62.61	3.84	21.4	-76.5	Clear	None
11:05	5	15	100	70.65	0.53	7.16	2.938	121	3.38	20.6	-111.1	Clear	None
11:10	5	20	100	70.65	0.66	7.14	2.971	50.94	1.99	20.4	-120.1	Clear	None
11:15	5	25	100	70.65	0.79	7.15	2.981	28.31	1.17	19.9	-126.4	Clear	None
11:20	5	30	100	70.65	0.92	7.16	2.973	34.17	0.7	20.3	-129	Clear	None
11:25	5	35	100	70.65	1.06	7.16	2.971	89.57	0.92	20.6	-131.2	Clear	None
11:30	5	40	100	70.65	1.19	7.16	2.993	23.62	0.35	20.8	-129.3	Clear	None
11:35	5	45	100	70.65	1.32	7.16	2.99	21.89	0.34	20.9	-129.9	Clear	None
11:40	5	50	100	70.65	1.45	7.16	2.99	22.12	0.34	21	-130.2	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Amber	2	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: Plant 3	Well Locked at Arrival: no
Condition of Well: Good condition	Well Locked at Departure: no
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-41	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	63.0 degrees F and Cloudy. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	55.29	Total Depth (ft-bmp)	81.5	Water Column (ft)	26.21	Gallons in Well	4.26
Purge Start	10:35	Pump Intake (ft-bmp)	79	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	11:15	Volumes Purged	0.25	Sample ID	MW-13-41_052125	Sampled by	Billy Cobern
Sample Time	11:15	Gallons Purged	1.06	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
10:40	0	0	100	55.69	0.13	7.22	2.922	24.41	4.02	16.4	73.5	Clear	None
10:45	5	5	100	55.45	0.26	7.23	2.964	20.21	3.51	16.5	72	Clear	None
10:50	5	10	100	55.35	0.40	7.25	3.19	15.64	1	15.8	64.8	Clear	None
10:55	5	15	100	55.35	0.53	7.24	3.272	21.6	0.5	15.5	59.4	Clear	None
11:00	5	20	100	55.35	0.66	7.24	3.323	28.04	0.28	15.4	55.8	Clear	None
11:05	5	25	100	55.35	0.79	7.24	3.351	42.51	0.16	15.3	48.2	Clear	None
11:10	5	30	100	55.35	0.92	7.23	3.351	44.07	0.16	15.3	42.1	Clear	None
11:15	5	35	100	55.35	1.06	7.23	3.348	45.51	0.15	15.3	39.8	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: Plant 3	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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-43	Date	5/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	57.0 degrees F and Light Rain. The wind is blowing NE at 10.3 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	68.06	Total Depth (ft-bmp)	77.2	Water Column (ft)	9.14	Gallons in Well	1.49
Purge Start	09:30	Pump Intake (ft-bmp)	75	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	10:25	Volumes Purged	0.97	Sample ID	MW-13-43_051424	Sampled by	Billy Cobern
Sample Time	10:25	Gallons Purged	1.45	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
09:35	0	0	100	68.45	0.13	6.86	2.833	299.68	7.03	15	142.9	Gray	None
09:40	5	5	100	68.80	0.26	6.86	2.834	286.42	6.99	15	144.3	Gray	None
09:45	5	10	100	69.22	0.40	6.86	2.83	247.56	7.03	14.9	145.9	Gray	None
09:50	5	15	100	69.51	0.53	6.87	2.82	224.86	7.15	14.9	147.9	Gray	None
09:55	5	20	100	69.79	0.66	6.87	2.805	196.85	7.23	14.9	149.5	Gray	None
10:00	5	25	100	70.05	0.79	6.87	2.793	219.68	7.16	14.9	151.9	Gray	None
10:05	5	30	100	70.24	0.92	6.87	2.793	237.97	7.01	14.8	152.6	Gray	None
10:10	5	35	100	70.44	1.06	6.87	2.792	291.55	6.68	15	153.9	Gray	None
10:15	5	40	100	70.65	1.19	6.86	2.793	248.86	6.37	15	155.6	Gray	None
10:20	5	45	100	70.86	1.32	6.86	2.797	251.86	6.17	15.1	156.9	Gray	None
10:25	5	50	100	77.05	1.45	6.85	2.798	245.72	6.11	15.1	157.1	Gray	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL

Comments: Didn't meet drawdown requirements

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-44	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	4	Well Casing Material	Steel	
Static Water Level (ft-bmp)	78.86	Total Depth (ft-bmp)	118.95	Water Column (ft)	40.09	Gallons in Well	26.06
Purge Start	14:40	Pump Intake (ft-bmp)	116.45	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	15:50	Volumes Purged	0.11	Sample ID	MW-13-44_052024	Sampled by	Donald Richmond
Sample Time	15:40	Gallons Purged	2.91	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:00	0	0	200	78.86	1.06	8.51	2.01	98	4.31	36.9	106.9	Clear	None
15:10	10	10	200	78.86	1.59	8.03	2.104	134	3.88	38.5	113.3	Clear	None
15:15	5	15	200	78.86	1.85	8.05	2.134	165	3.68	39	107.1	Clear	None
15:20	5	20	200	78.86	2.11	8.01	2.152	165	3.61	39.3	106.9	Clear	None
15:25	5	25	200	78.86	2.38	7.27	2.283	137	2.87	39	93	Clear	None
15:30	5	30	200	78.86	2.64	7.08	1.709	82	1.09	22.8	-87.6	Clear	None
15:35	5	35	200	78.86	2.91	7.11	1.678	387	0.94	22.7	-88.2	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Glass	2	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-45	Date	5/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	57.0 degrees F and Cloudy. The wind is blowing NE 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)	66.93	Total Depth (ft-bmp)	78.3	Water Column (ft)	11.37	Gallons in Well	1.85
Purge Start	10:55	Pump Intake (ft-bmp)	76	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	11:45	Volumes Purged	0.71	Sample ID	MW-13-45_051424	Sampled by	Billy Cobern
Sample Time	11:45	Gallons Purged	1.32	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:00	0	0	100	66.99	0.13	6.89	1.428	498.98	8.36	16	-4.1	Clear	None
11:05	5	5	100	67.03	0.26	6.62	1.587	250.11	1.51	14.8	-18.4	Clear	None
11:10	5	10	100	67.03	0.40	6.63	1.562	154.36	0.72	14.5	-24.5	Clear	None
11:15	5	15	100	67.03	0.53	6.65	1.514	118.86	0.65	14.4	-23.3	Clear	None
11:20	5	20	100	67.03	0.66	6.67	1.492	78.03	0.74	14.3	-20.6	Clear	None
11:25	5	25	100	67.03	0.79	6.67	1.487	55.09	0.88	14.3	-19	Clear	None
11:30	5	30	100	67.03	0.92	6.67	1.495	45.95	0.99	14.3	-18.1	Clear	None
11:35	5	35	100	67.03	1.06	6.67	1.502	40.08	1.03	14.2	-17.7	Clear	None
11:40	5	40	100	67.03	1.19	6.67	1.503	36.89	1.04	14.3	-17.6	Clear	None
11:45	5	45	100	67.03	1.32	6.67	1.504	36.58	1.04	14.3	-17.6	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-46	Date	5/21/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	81.0 degrees F and Clear. The wind is blowing SW at 6.9 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation		Casing Diameter (in)	2
				Well Casing Material	PVC
Static Water Level (ft-bmp)	64.05	Total Depth (ft-bmp)	74.65	Water Column (ft)	10.60
				Gallons in Well	1.72
Purge Start	15:55	Pump Intake (ft-bmp)	72	Purge Method	Low-Flow
				Purge Equipment	Bladder
Purge End	16:40	Volumes Purged	0.69	Sample ID	MW-13-46_052124
				Sampled by	Billy Cobern
Sample Time	16:40	Gallons Purged	1.19	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
16:00	0	0	100	64.30	0.13							Clear	None
16:05	5	5	100	64.55	0.26	6.65	2.603	370.89	1.4	20.4	-65.7	Clear	None
16:10	5	10	100	64.75	0.40	6.7	2.604	173.69	1.29	20	-59.8	Clear	None
16:15	5	15	100	64.93	0.53	6.75	2.584	115.05	2.07	19.2	-50.6	Clear	None
16:20	5	20	100	65.07	0.66	6.77	2.593	78.91	2.85	19	-42.7	Clear	None
16:25	5	25	100	65.21	0.79	6.78	2.601	66.57	3.02	19.3	-38.4	Clear	None
16:30	5	30	100	65.28	0.92	6.78	2.603	57.57	3.14	19.4	-36.9	Clear	None
16:35	5	35	100	65.35	1.06	6.78	2.602	59.36	3.15	19.5	-36.9	Clear	None
16:40	5	40	100	65.41	1.19	6.78	2.601	58.37	3.15	19.6	-36.9	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL

Comments: Didn't meet drawdown requirements

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-47	Date	5/24/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	61.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	65.05	Total Depth (ft-bmp)	113.65	Water Column (ft)	48.60	Gallons in Well	7.90
Purge Start	09:30	Pump Intake (ft-bmp)	111	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	10:15	Volumes Purged	0.15	Sample ID	MW-13-47_052424	Sampled by	Billy Cobern
Sample Time	10:15	Gallons Purged	1.19	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
09:35	0	0	100	65.36	0.13	7.12	1.713	18.19	4.32	20.5	-35.6	Clear	None
09:40	5	5	100	65.36	0.26	7.02	1.774	39.25	5.02	20	-65.8	Clear	None
09:45	5	10	100	65.36	0.40	6.94	1.808	65.1	3.18	19.6	-78	Clear	None
09:50	5	15	100	65.36	0.53	6.94	1.816	100.25	2.03	19.6	-84.7	Clear	None
09:55	5	20	100	65.36	0.66	6.94	1.828	121.98	2.41	19.7	-90.2	Clear	None
10:00	5	25	100	65.36	0.79	6.94	1.843	164.75	2.98	19.9	-96	Clear	None
10:05	5	30	100	65.36	0.92	6.94	1.864	87.14	2.73	20	-100.1	Clear	None
10:10	5	35	100	65.36	1.06	6.94	1.885	81.23	2.61	20.2	-103.4	Clear	None
10:15	5	40	100	65.36	1.19	6.94	1.895	89.11	2.54	20.1	-105	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Amber	2	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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-48	Date	5/16/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	56.52	Total Depth (ft-bmp)	73.1	Water Column (ft)	16.58	Gallons in Well	2.69
Purge Start	10:05	Pump Intake (ft-bmp)	70.6	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	11:10	Volumes Purged	1.08	Sample ID	MW-13-48_051624	Sampled by	Donald Richmond
Sample Time	11:05	Gallons Purged	2.91	Replicate/ Code No.	DUP-07_051624	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
10:20	0	0	200	56.52	0.79	6.63	2.261	2.52	0.1	15.6	189.9	Clear	None
10:25	5	5	200	56.52	1.06	6.6	2.323	29	0	15.6	160.7	Clear	None
10:30	5	10	200	56.52	1.32	6.59	2.408	62	0	15.7	-45	Clear	None
10:35	5	15	200	56.52	1.59	6.57	2.46	93	0	15.7	-63.7	Clear	None
10:40	5	20	200	56.52	1.85	6.52	2.654	130	0	16	-79.2	Clear	None
10:45	5	25	200	56.52	2.11	6.52	2.707	193.85	0	15.9	-82.5	Clear	None
10:50	5	30	200	56.52	2.38	6.52	2.794	214	0	16	-84.6	Clear	None
10:55	5	35	200	56.52	2.64	6.52	2.853	115	0	16.4	-85.9	Clear	None
11:00	5	40	200	56.52	2.91	6.52	2.863	133	0	16.3	-86.1	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,VOCs	40 mL Glass	6	HCL

Comments:

Well Casing Volume Conversion

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

Well Information

Well Location: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-49	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	79.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	65.63	Total Depth (ft-bmp)	81.65	Water Column (ft)	16.02	Gallons in Well	2.60
Purge Start	14:30	Pump Intake (ft-bmp)	79	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	15:30	Volumes Purged	0.61	Sample ID	MW-13-49_052124	Sampled by	Billy Cobern
Sample Time	15:30	Gallons Purged	1.59	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:35	0	0	100	65.96	0.13	6.97	0.108	48.94	5.95	25.1	-25.9	Clear	None
14:40	5	5	100	66.26	0.03	7.03	1.938	75.78	5.85	25.3	-30.9	Clear	None
14:45	5	10	100	66.37	0.40	6.86	2.047	84.48	2.81	23	-38	Clear	None
14:50	5	15	100	66.45	0.53	6.86	2.028	71.85	1.14	22.3	-43.3	Clear	None
14:55	5	20	100	66.53	0.66	6.87	2.023	76.56	0.84	22	-45	Clear	None
15:00	5	25	100	66.61	0.79	6.88	2.012	81.02	0.74	22.1	-45.7	Clear	None
15:05	5	30	100	66.69	0.92	6.9	1.993	101.96	0.82	22.9	-44.1	Clear	None
15:10	5	35	100	66.69	1.06	6.9	1.992	117.57	0.88	23	-43.7	Clear	None
15:15	5	40	100	66.69	1.19	6.9	1.977	129.47	0.99	22	-39.5	Clear	None
15:20	5	45	100	66.69	1.32	6.91	1.974	134.78	1.08	22.4	-37.9	Clear	None
15:25	5	50	100	66.69	1.45	6.91	1.975	147.68	1.09	22.4	-37.7	Clear	None
15:30	5	55	100	66.69	1.59	6.91	1.974	121.11	1.11	22.4	-37.6	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL

Comments: Didn't meet drawdown requirements. Turbidity didn't stabilize within 60 minutes.

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-50	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	4	Well Casing Material	Steel	
Static Water Level (ft-bmp)	83.70	Total Depth (ft-bmp)	109.85	Water Column (ft)	26.15	Gallons in Well	17.00
Purge Start	09:15	Pump Intake (ft-bmp)	107.35	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	10:00	Volumes Purged	0.11	Sample ID	MW-13-50_052324	Sampled by	Donald Richmond
Sample Time	09:55	Gallons Purged	1.85	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
09:25	0	0	200	83.70	0.53	6.8	1.376	34.88	4.38	18.8	111.7	Clear	None
09:30	5	5	200	83.70	0.79	6.68	1.209	28.27	0.92	17.2	-24.1	Clear	None
09:35	5	10	200	83.70	1.06	6.7	1.201	38	0.5	17	-59.2	Clear	None
09:40	5	15	200	83.70	1.32	6.73	1.193	41	0.39	17.1	-68.9	Clear	None
09:45	5	20	200	83.70	1.59	6.74	1.196	42.82	0.35	17.3	-73.2	Clear	None
09:50	5	25	200	83.70	1.85	6.75	1.2	43	0.33	17.5	-76.2	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-13-52	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	4	Well Casing Material	Steel	
Static Water Level (ft-bmp)	70.04	Total Depth (ft-bmp)	81.42	Water Column (ft)	11.38	Gallons in Well	7.40
Purge Start	10:20	Pump Intake (ft-bmp)	78.92	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	11:25	Volumes Purged	0.39	Sample ID	MW-13-52_052324	Sampled by	Donald Richmond
Sample Time	11:20	Gallons Purged	2.91	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
10:25	0	0	200	70.04	0.26	7.07	1.318	818	2.71	21.8	5.1	Clear	None
10:30	5	5	200	70.04	0.53	6.98	1.246	695	1.02	19.4	-31.9	Clear	None
10:35	5	10	200	70.04	0.79	6.98	1.179	334	0.8	17.8	-41.4	Clear	None
10:40	5	15	200	70.04	1.06	6.96	1.16	119	0.68	17.1	-40.7	Clear	None
10:45	5	20	200	70.04	1.32	6.93	1.158	61	0.5	17.1	-51.1	Clear	None
10:50	5	25	200	70.04	1.59	6.93	1.15	47	0.44	16.9	-64.8	Clear	None
10:55	5	30	200	70.04	1.85	6.93	1.154	76	0.42	17	-73.1	Clear	None
11:00	5	35	200	70.04	2.11	6.93	1.176	87	0.66	17.6	-78	Clear	None
11:05	5	40	200	70.04	2.38	6.93	1.161	30	0.37	17.2	-81	Clear	None
11:10	5	45	200	70.04	2.64	6.92	1.159	37	0.35	17	-82.1	Clear	None
11:15	5	50	200	70.04	2.91	6.92	1.158	31.91	0.38	17.1	-83	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-14-54	Date	5/16/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	66.9 degrees F and Clear. The wind is blowing W/SW at 4.7 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	7.82	Total Depth (ft-bmp)	19	Water Column (ft)	11.18	Gallons in Well	1.82
Purge Start	13:19	Pump Intake (ft-bmp)	15	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	14:29	Volumes Purged	1.02	Sample ID	MW-14-54_051424	Sampled by	Jackie Schulte
Sample Time	14:25	Gallons Purged	1.85	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:25	0	0	100	7.99	0.16	8.28	1.278	2.25	0.21	14.1	-71.8	Clear	Medium
13:30	5	5	100	8.01	0.29	8.21	1.2	3.66	0	14	-100	Clear	Medium
13:35	5	10	100	7.98	0.42	8.19	1.156	5.56	0	14.2	-117.6	Clear	Medium
13:40	5	15	100	7.98	0.55	8.18	1.117	7.9	0	14.3	-132.4	Clear	Medium
13:45	5	20	100	7.98	0.69	8.16	1.088	8.9	0	14.3	-145	Clear	Medium
13:50	5	25	100	7.98	0.82	8.14	1.052	10.42	0	14.1	-156.1	Clear	Medium
13:55	5	30	100	7.98	0.95	8.14	1.024	12.88	0	14	-163.6	Clear	Medium
14:00	5	35	100	7.98	1.08	8.13	1.007	17.19	0	13.9	-170.2	Clear	Medium
14:05	5	40	100	7.98	1.22	8.12	0.996	19.75	0	14.6	-176.3	Clear	Medium
14:10	5	45	100	7.98	1.35	8.12	0.991	23.18	0	14.3	-181.1	Clear	Medium
14:15	5	50	100	7.98	1.48	8.11	0.974	28.42	0	14.3	-185.3	Clear	Medium
14:20	5	55	100	7.98	1.61	8.13	0.973	28.84	0	14.8	-189.4	Clear	Medium

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: Suspended debris was present in purge water. Well stabilized except for turbidity. Sample taken after 60 minutes of purging.

Well Casing Volume Conversion

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

Well Information

Well Location:	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-14-55	Date	5/16/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	73.9 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	14.20	Total Depth (ft-bmp)	18	Water Column (ft)	3.80	Gallons in Well	0.62
Purge Start	14:45	Pump Intake (ft-bmp)	16	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:48	Volumes Purged	2.68	Sample ID	MW-14-55_051524	Sampled by	Jackie Schulte
Sample Time	15:45	Gallons Purged	1.66	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:50	0	0	100	14.34	0.13	7.38	0.667	3.47	7.33	15.6	45	Clear	Mild
14:55	5	5	100	14.41	0.26	7.26	0.683	2.4	7.26	12.9	66.5	Clear	Mild
15:00	5	10	100	14.46	0.40	7.23	0.696	2.33	7.18	12.4	78.5	Clear	Mild
15:05	5	15	100	14.46	0.53	7.21	0.7	2.09	7.14	12.3	89.1	Clear	Mild
15:10	5	20	100	14.46	0.66	7.2	0.7	2.48	7.11	12.5	97.1	Clear	Mild
15:15	5	25	100	14.46	0.79	7.19	0.7	2.78	7.07	12.2	105.8	Clear	Mild
15:20	5	30	100	14.46	0.92	7.18	0.685	3.33	7.09	12.4	113	Clear	Mild
15:25	5	35	100	14.46	1.06	7.17	0.703	3.82	7.08	12.5	118.8	Clear	Mild
15:30	5	40	100	14.46	1.19	7.17	0.704	4.48	6.97	12.8	124.4	Clear	Mild
15:35	5	45	100	14.46	1.32	7.17	0.705	4.36	6.94	12.7	129.9	Clear	Mild
15:40	5	50	100	14.46	1.45	7.17	0.699	5.15	7.04	12.7	133.7	Clear	Mild

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

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

Well Information

Well Location:	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-14-57	Date	5/17/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	63.0 degrees F and Partly Cloudy. The wind is blowing S at 4.7 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	9.68	Total Depth (ft-bmp)	21.36	Water Column (ft)	11.68	Gallons in Well	1.90
Purge Start	08:50	Pump Intake (ft-bmp)	19	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	10:00	Volumes Purged	1.47	Sample ID	MW-14-57_051724	Sampled by	Ellen Redner
Sample Time	09:55	Gallons Purged	2.8	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate gal/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
08:55	0	0	0.04	9.75	0.2	7.31	1.067	76.6	4.88	13.4	158.9	Clear	None
09:00	5	5	0.04	9.75	0.4	7.38	1.058	73.1	4.86	13.4	155.1	Clear	None
09:05	5	10	0.04	9.75	0.6	7.39	1.049	86.59	4.78	13.4	154.6	Clear	None
09:10	5	15	0.04	9.75	0.8	7.36	1.036	77.2	4.73	13.5	155.4	Clear	None
09:15	5	20	0.04	9.75	1	7.35	1.028	65.4	4.56	13.4	155.5	Clear	None
09:20	5	25	0.04	9.76	9.75	7.36	1.022	42.7	4.38	13.5	155.1	Clear	None
09:25	5	30	0.04	9.76	1.4	7.37	1.017	66.5	4.33	13.5	154.5	Clear	None
09:30	5	35	0.04	9.77	1.6	7.36	1.016	54.9	4.3	13.6	154.6	Clear	None
09:35	5	40	0.04	9.78	1.8	7.35	1.014	47.3	4.29	13.6	155.4	Clear	None
09:40	5	45	0.04	9.79	2	7.35	1.015	36.9	4.31	13.8	121.2	Clear	None
09:45	5	50	0.04	9.79	2.2	7.35	1.012	27.3	4.14	14	133.8	Clear	None
09:50	5	55	0.04	9.80	2.4	7.36	1.01	27	4.14	14	139	Clear	None
09:55	5	60	0.04	9.80	2.6	7.36	1.011	28.9	4.09	14	140.6	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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:	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-14-59	Date	5/17/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	63.0 degrees F and Partly Cloudy. The wind is blowing S at 4.7 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	5.19	Total Depth (ft-bmp)	17	Water Column (ft)	11.81	Gallons in Well	1.92
Purge Start	08:44	Pump Intake (ft-bmp)	14.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	10:15	Volumes Purged	1.24	Sample ID	MW-14-59_051724	Sampled by	Jackie Schulte
Sample Time	09:45	Gallons Purged	2.38	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
08:50	0	0	100	5.57	0.16	7.22	0.733	2.82	1.05	16	242.7	Clear	None
08:55	5	5	100	5.36	0.29	7.16	0.725	2.73	0.69	18.3	190.5	Clear	None
09:00	5	10	100	5.55	0.42	7.18	0.734	2.55	0.37	16	147.6	Clear	None
09:05	5	15	100	5.55	0.55	7.16	0.733	2.42	0.15	16.1	111	Clear	None
09:10	5	20	100	5.60	0.69	7.16	0.733	2.54	0.06	15.5	83	Clear	None
09:15	5	25	100	5.60	0.82	7.15	0.732	3.62	0.04	15.7	59.6	Clear	None
09:20	5	30	100	5.60	0.95	7.13	0.738	3.79	0	15.5	45.2	Clear	None
09:25	5	35	100	5.60	1.08	7.12	0.737	5.54	0.03	17.2	30.5	Clear	None
09:30	5	40	100	5.60	1.22	7.1	0.752	6.26	0.08	16.7	22.8	Clear	None
09:35	5	45	100	5.60	1.35	7.12	0.753	6.89	0.03	15.4	15.3	Clear	None
09:40	5	50	100	5.60	1.48	7.1	0.752	7.95	0.01	16	8.3	Clear	None
09:45	5	55	100	5.60	1.61	7.1	0.76	8.44	0	15.6	3.4	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,VOCs	40 mL Glass	3	HCL
PFAS	250mL HDPE Plastic	2	None
SVOCs	1L Amber	2	None

Comments: Well did not stabilize after 60 minute purge.

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-14-60	Date	5/17/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	68.0 degrees F and Cloudy. The wind is blowing N at 10.3 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	9.09	Total Depth (ft-bmp)	20	Water Column (ft)	10.91	Gallons in Well	1.77
Purge Start	10:35	Pump Intake (ft-bmp)	17.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	12:05	Volumes Purged	1.34	Sample ID	MW-14-60_051724	Sampled by	Jackie Schulte
Sample Time	11:40	Gallons Purged	2.38	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
10:40	0	0	100	9.11	0.13	7.53	1.235	2.21	0.49	15.1	62.5	Clear	None
10:45	5	5	100	9.11	0.26	7.48	1.237	2.68	0.19	15.4	10.4	Clear	None
10:50	5	10	100	9.11	0.40	7.46	1.237	3.47	0.08	14.9	-17.4	Clear	None
10:55	5	15	100	9.11	0.53	7.45	1.235	5.34	0	14.8	-35.6	Clear	None
11:00	5	20	100	9.11	0.66	7.44	1.235	8.88	0	14.7	-47.4	Clear	None
11:05	5	25	100	9.11	0.79	7.44	1.236	11.99	0	14.7	-56.8	Clear	None
11:10	5	30	100	9.11	0.92	7.43	1.235	14.37	0	15.3	-63.7	Clear	None
11:15	5	35	100	9.11	1.06	7.43	1.236	15.1	0	15.7	-69.3	Clear	None
11:20	5	40	100	9.11	1.19	7.42	1.245	22.47	0.12	16.1	-74	Clear	None
11:25	5	45	100	9.11	1.32	7.43	1.234	28.38	0	15.6	-77.9	Clear	None
11:30	5	50	100	9.11	1.45	7.42	1.236	30.7	0	16.1	-82.1	Clear	None
11:35	5	55	100	9.11	1.59	7.41	1.233	28.64	0	16	-84.2	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,VOCs	40 mL Glass	3	HCL
PFAS	250mL HDPE Plastic	2	None
SVOCs	1L Amber	2	None

Comments: Temperature variance is due to intermittent direct sunlight due to cloudy conditions. Well did not stabilize after 60 minute purge.

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-14-61	Date	5/15/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	54.0 degrees F and Mostly Clear. The wind is blowing N/NE at 10.3 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	68.01	Total Depth (ft-bmp)	77.32	Water Column (ft)	9.31	Gallons in Well	1.51
Purge Start	09:50	Pump Intake (ft-bmp)	74.83	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	11:10	Volumes Purged	2.80	Sample ID	MW-14-61_051524	Sampled by	Austin Westhuis
Sample Time	10:35	Gallons Purged	4.23	Replicate/ Code No.	DUP-02_051524	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
09:55	0	0	200	68.08	0.26	6.95	3.249	113.6	2.45	14.9	199.3	Clear	None
10:00	5	5	200	68.08	0.53	6.94	3.247	67.47	1.86	14.8	196.7	Clear	None
10:05	5	10	200	68.08	0.79	6.94	3.239	43.05	1.35	14.8	193	Clear	None
10:10	5	15	200	68.08	1.06	6.93	3.236	38.77	0.91	14.9	189.3	Clear	None
10:15	5	20	200	68.08	1.32	6.92	3.241	31.58	0.77	14.9	187.3	Clear	None
10:20	5	25	200	68.08	1.59	6.92	3.236	30.79	0.65	15	186.3	Clear	None
10:25	5	30	200	68.08	1.85	6.92	3.236	30.44	0.58	15	184.3	Clear	None
10:30	5	35	200	68.08	2.11	6.92	3.234	30.09	0.56	15	182.3	Clear	None
10:35	5	40	200	68.08	2.38	6.91	3.237	28.11	0.53	15	180.9	Clear	None

Constituent Sampled	Container	Number	Preservative
SVOC - 8270 SIMS	1L Amber	4	None
PFAS - Method 537 mod.	250mL HDPE Plastic	4	None
1,4-Dioxane 8270D SIM,VOCS	40 mL Glass	6	HCL

Comments:

Well Casing Volume Conversion

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

Well Information

Well Location: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-14-62	Date	5/15/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	69.1 degrees F and Clear. The wind is blowing NE at 12.8 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	3.68	Total Depth (ft-bmp)	19.65	Water Column (ft)	15.97	Gallons in Well	2.59
Purge Start	16:50	Pump Intake (ft-bmp)	17	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	17:40	Volumes Purged	0.51	Sample ID	MW-14-62_051525	Sampled by	Billy Cobern
Sample Time	17:40	Gallons Purged	1.32	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
16:55	0	0	100	3.76	0.13	11.4	0.492	5.57	0.48	16.6	-224.3	Clear	None
17:00	5	5	100	3.76	0.26	11.41	0.5	6.36	0.33	16.6	-238.9	Clear	None
17:05	5	10	100	3.76	0.40	11.41	0.502	6.18	0.3	16.6	-243.8	Clear	None
17:10	5	15	100	3.76	0.53	11.42	0.516	9.24	0.11	16.4	-278.4	Clear	None
17:15	5	20	100	3.76	0.66	11.48	0.574	15.66	0.25	16.7	-318.3	Clear	None
17:20	5	25	100	3.76	0.79	11.5	0.598	14.35	0.27	16.8	-339.4	Clear	None
17:25	5	30	100	3.76	0.92	11.5	0.598	12.64	0.29	16.9	-341.8	Clear	None
17:30	5	35	100	3.76	1.06	11.5	0.599	10.21	0.27	16.9	-343.7	Clear	None
17:35	5	40	100	3.76	1.19	11.51	0.602	9.86	0.26	16.9	-345	Clear	None
17:40	5	45	100	3.76	1.32	11.5	0.602	9.76	0.25	16.9	-346.8	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,VOCs	40 mL Glass	3	HCL
PFAS	250 mL Plastic	2	None
SVOCs	1L Amber	2	None

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-14-63	Date	5/16/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	73.9 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	67.94	Total Depth (ft-bmp)	76.75	Water Column (ft)	8.81	Gallons in Well	1.43
Purge Start	14:50	Pump Intake (ft-bmp)	74	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	15:50	Volumes Purged	1.11	Sample ID	MW-14-63_051624	Sampled by	Billy Cobern
Sample Time	15:50	Gallons Purged	1.59	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
14:55	0	0	100	68.25	0.13	7.01	1.296	1126.67	4.86	18.7	-14.7	Clear	None
15:00	5	5	100	68.42	0.26	6.92	1.277	775.39	1.48	19.2	-54	Clear	None
15:05	5	10	100	68.57	0.40	6.89	1.278	541.47	0.7	18.5	-66.5	Clear	None
15:10	5	15	100	68.73	0.53	6.89	1.288	622.56	0.68	19.1	-70.8	Clear	None
15:15	5	20	100	68.89	0.66	6.89	1.281	527.47	2.24	18.8	-62.4	Clear	None
15:20	5	25	100	68.89	0.79	6.88	1.281	365.47	0.8	18.4	-68.5	Clear	None
15:25	5	30	100	69.05	0.92	6.88	1.281	282.68	0.6	18.7	-71.3	Clear	None
15:30	5	35	100	69.21	1.06	6.88	1.275	228.32	0.5	18.1	-72.7	Clear	None
15:35	5	40	100	69.29	1.19	6.88	1.276	174.47	0.42	18.1	-73.7	Clear	None
15:40	5	45	100	69.29	1.32	6.88	1.277	170.36	0.39	18.2	-75	Clear	None
15:45	5	50	100	69.37	1.45	6.88	1.276	148.68	0.39	18.2	-77.7	Clear	None
15:50	5	55	100	69.45	1.59	6.88	1.277	123.93	0.39	18.3	-75.2	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL

Comments: Didn't meet drawdown requirements. Turbidity didn't stabilize within 60 minutes.

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-14-64	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	70.0 degrees F and . The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	69.89	Total Depth (ft-bmp)	106.3	Water Column (ft)	36.41	Gallons in Well	5.92
Purge Start	13:00	Pump Intake (ft-bmp)	104	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	14:00	Volumes Purged	0.27	Sample ID	MW-14-64_052124	Sampled by	Billy Cobern
Sample Time	14:00	Gallons Purged	1.59	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:05	0	0	100	70.21	0.13	6.98	1.668	34.64	2.12	21.8	-78.4	Clear	None
13:10	5	5	100	70.21	0.26	6.98	1.671	70.73	0.99	22.4	-84.2	Clear	None
13:15	5	10	100	70.21	0.40	6.97	1.678	13.51	0.68	24.7	-91.9	Clear	None
13:20	5	15	100	70.21	0.53	6.96	1.652	40.53	0.7	27.3	-95.7	Clear	None
13:25	5	20	100	70.21	0.66	6.94	1.696	47.65	0.6	28.4	-96.8	Clear	None
13:30	5	25	100	70.21	0.79	6.93	1.706	26.53	0.57	27.3	-97.1	Clear	None
13:35	5	30	100	70.21	0.92	6.95	1.694	11.55	0.47	25.1	-94.5	Clear	None
13:40	5	35	100	70.21	1.06	6.95	1.688	35.98	0.34	24.3	-94.8	Clear	None
13:45	5	40	100	70.21	1.19	6.96	1.681	45.04	0.28	23.8	-95.2	Clear	None
13:50	5	45	100	70.21	1.32	6.96	1.675	22.78	0.26	24.7	-96.7	Clear	None
13:55	5	50	100	70.21	1.45	6.96	1.682	22.65	0.25	24.7	-96.6	Clear	None
14:00	5	55	100	70.21	1.59	6.96	1.686	33.24	0.25	24.7	-96.6	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL

Comments: Turbidity didn't stabilize within 60 minutes

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-14-66	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	73.9 degrees F and Clear. The wind is blowing W at 12.8 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	5.40	Total Depth (ft-bmp)	15	Water Column (ft)	9.60	Gallons in Well	1.56
Purge Start	13:50	Pump Intake (ft-bmp)	14	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	14:00	Volumes Purged	1.19	Sample ID	MW-14-66_052324	Sampled by	Jackie Schulte
Sample Time	14:50	Gallons Purged	1.85	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:55	0	0	100	6.07	0.13	7.67	0.833	3.88	0.66	17.7	34	Clear	None
14:00	5	5	100	6.11	0.26	7.6	0.833	6.53	0.44	19.6	18.7	Clear	None
14:05	5	10	100	6.11	0.40	7.57	0.831	12.06	0.41	21	11.2	Clear	None
14:10	5	15	100	6.18	0.53	7.59	0.836	15.2	0.27	17.9	0.9	Clear	None
14:15	5	20	100	6.35	0.66	7.58	0.829	19	0.09	17.1	-16.6	Clear	None
14:20	5	25	100	6.43	0.79	7.57	0.828	30.78	0.06	17.1	-32.5	Clear	None
14:25	5	30	100	6.56	0.92	7.58	0.826	48.22	0.04	17	-41.4	Clear	None
14:30	5	35	100	6.59	1.06	7.57	0.829	67	0	16.5	-48.9	Clear	None
14:35	5	40	100	6.62	1.19	7.57	0.832	74.99	0	16.4	-55	Clear	None
14:40	5	45	100	6.70	1.32	7.56	0.83	51.15	0	16.1	-60.9	Clear	None
14:45	5	50	100	6.77	1.45	7.55	0.829	21.66	0	16.2	-64.5	Clear	None
14:50	5	55	100	6.81	1.59	7.55	0.828	52.48	0	15.9	-67.2	Clear	None

Constituent Sampled	Container	Number	Preservative
Dissolved Metals, Total Metals	125 mL Plastic	2	HNO3

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-14-67	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	75.0 degrees F and Clear. The wind is blowing W/SW at 17.2 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	5.84	Total Depth (ft-bmp)	20.84	Water Column (ft)	15.00	Gallons in Well	2.44
Purge Start	14:40	Pump Intake (ft-bmp)	18.34	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:20	Volumes Purged	0.86	Sample ID	MW-14-67_052324	Sampled by	Austin Westhuis
Sample Time	15:15	Gallons Purged	2.11	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:45	0	0	200	6.45	0.26	7.37	1.062	32.3	0.33	13.4	141.5	Clear	None
14:50	5	5	200	6.45	0.53	7.34	1.06	12.86	0.19	13.2	143.9	Clear	None
14:55	5	10	200	6.45	0.79	7.33	1.061	6.88	0.15	13.1	144.4	Clear	None
15:00	5	15	200	6.45	1.06	7.31	1.067	4.69	0.09	13.3	143.8	Clear	None
15:05	5	20	200	6.45	1.32	7.3	1.067	4.11	0.08	13.2	141.7	Clear	None
15:10	5	25	200	6.45	1.59	7.29	1.071	3.96	0.08	13	140.1	Clear	None
15:15	5	30	200	6.45	1.85	7.29	1.076	3.73	0.08	13.1	138.5	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS - Method 537 mod.	250mL HDPE Plastic	2	None
Total Metals	125 mL Plastic	1	HNO3

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-14-70	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	77.0 degrees F and Mostly Clear.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	10.81	Total Depth (ft-bmp)	23.05	Water Column (ft)	12.24	Gallons in Well	1.99
Purge Start	13:47	Pump Intake (ft-bmp)	22	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	14:55	Volumes Purged	1.26	Sample ID	MW-14-70_52224	Sampled by	Jarrett Humpala
Sample Time	14:55	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
13:50	0	0	150	10.81	0.12	7.26	1.228	62.52	2.35	17.3	229.1	Clear	None
13:55	5	5	150	10.89	0.32	7.25	1.284	24.02	0.81	19.8	214.5	Clear	None
14:00	5	10	150	10.89	0.52	7.28	1.335	51.34	0.61	22.1	138.3	Clear	None
14:10	10	20	150	10.89	0.91	7.29	1.421	47.32	0.44	22.2	78.2	Clear	None
14:15	5	25	150	10.89	1.11	7.23	1.232	31.69	0.44	19.4	143.2	Clear	None
14:20	5	30	150	10.89	1.31	7.23	1.284	26.89	0.33	21	137.3	Clear	None
14:25	5	35	150	10.89	1.51	7.21	1.289	25.8	0.33	21.2	136.8	Clear	None
14:30	5	40	150	10.89	1.70	7.19	1.34	29.3	0.35	22.9	131.1	Clear	None
14:35	5	45	150	10.89	1.90	7.18	1.399	18.34	0.33	24.8	122.9	Clear	None
14:40	5	50	150	10.89	2.10	7.16	1.443	20.73	0.35	26.2	116.8	Clear	None
14:45	5	55	150	10.89	2.30	7.15	1.492	21.05	0.37	27.8	111.5	Clear	None
14:50	5	60	150	10.89	2.50	7.14	1.522	27.64	0.4	28.8	109.7	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-15-71	Date	5/21/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	66.0 degrees F and Cloudy. The wind is blowing undefined at 0.0 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation		Casing Diameter (in)	2
				Well Casing Material	PVC
Static Water Level (ft-bmp)	66.58	Total Depth (ft-bmp)	119.1	Water Column (ft)	52.52
				Gallons in Well	8.53
Purge Start	11:40	Pump Intake (ft-bmp)	116.5	Purge Method	Low-Flow
				Purge Equipment	Bladder
Purge End	12:35	Volumes Purged	0.17	Sample ID	MW-15-71_052124
				Sampled by	Billy Cobern
Sample Time	12:35	Gallons Purged	1.45	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:45	0	0	100	66.65	0.13	7.16	1.644	17.11	4.46	18	37.1	Clear	None
11:50	5	5	100	66.65	0.26	7.04	1.48	15.73	3.14	17.7	19.9	Clear	None
11:55	5	10	100	66.65	0.40	7.03	1.461	8.46	3.71	17	7.6	Clear	None
12:00	5	15	100	66.65	0.53	7.02	1.448	15.21	1.79	16.7	-27.8	Clear	None
12:05	5	20	100	66.65	0.66	7.03	1.448	26.07	0.68	16.9	-57.6	Clear	None
12:10	5	25	100	66.65	0.79	7.04	1.449	41.45	0.41	16.7	-69.6	Clear	None
12:15	5	30	100	66.65	0.92	7.05	1.447	59.06	0.29	17.1	-78	Clear	None
12:20	5	35	100	66.65	1.06	7.05	1.448	60.15	0.26	17.3	-80.5	Clear	None
12:25	5	40	100	66.65	1.19	7.05	1.447	76.67	0.23	17.2	-82.2	Clear	None
12:30	5	45	100	66.65	1.32	7.05	1.45	80.14	0.22	17	-82.5	Clear	None
12:35	5	50	100	66.65	1.45	7.05	1.45	82.43	0.22	17	-82.6	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-15-72	Date	5/15/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	60.1 degrees F and Mostly Clear. The wind is blowing NE 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)	56.42	Total Depth (ft-bmp)	70.27	Water Column (ft)	13.85	Gallons in Well	2.25
Purge Start	11:30	Pump Intake (ft-bmp)	67.87	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	12:30	Volumes Purged	1.41	Sample ID	MW-15-72_051524	Sampled by	Austin Westhuis
Sample Time	12:15	Gallons Purged	3.17	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:35	0	0	200	58.00	0.26	6.84	1.506	141.49	3.99	15.4	24.1	Clear	None
11:40	5	5	200	58.09	0.53	6.89	1.52	76.34	5.68	15.5	22.5	Clear	None
11:45	5	10	200	58.09	0.79	6.91	1.552	49.14	6.5	15.4	13.9	Clear	None
11:50	5	15	200	58.09	1.06	6.91	1.559	44.72	6.29	15.4	-2.9	Clear	None
11:55	5	20	200	58.09	1.32	6.9	1.588	39.42	6.15	15.4	-15.9	Clear	None
12:00	5	25	200	58.09	1.59	6.91	1.602	36.11	6.23	15.5	-27.7	Clear	None
12:05	5	30	200	58.09	1.85	6.93	1.618	30.95	6.29	15.6	-30.5	Clear	None
12:10	5	35	200	58.09	2.11	6.95	1.623	29.11	6.33	15.6	-31.7	Clear	None
12:15	5	40	200	58.09	2.38	6.97	1.627	28.36	6.38	15.6	-31.9	Clear	None

Constituent Sampled	Container	Number	Preservative
SVOC - 8270 SIMS	1L Amber	2	HCL
PFAS - Method 537 mod.	250mL HDPE Plastic	2	None
1,4-Dioxane 8270D SIM,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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-16-74	Date	5/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	54.0 degrees F and Fog/Mist. The wind is blowing E/NE 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)	66.45	Total Depth (ft-bmp)	75.08	Water Column (ft)	8.63	Gallons in Well	1.40
Purge Start	09:45	Pump Intake (ft-bmp)	73.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	11:35	Volumes Purged	3.21	Sample ID	MW-16-74_051424	Sampled by	Jarrett Humpala
Sample Time	11:30	Gallons Purged	4.5	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
09:51	0	0	150	66.60	0.20	6.68	2.311	481.2	2.73	14.4	-2.7	Clear	None
09:56	5	5	150	66.62	0.40	6.69	2.295	163.65	1.54	14.3	-9.7	Clear	None
10:01	5	10	150	66.62	0.63	6.69	2.298	89.17	1.24	14.3	-14.6	Clear	None
10:05	4	14	150	66.62	0.79	6.69	2.303	62.13	1.07	14.3	-19.5	Clear	None
10:11	6	20	150	66.62	10.30	6.68	2.307	52.51	0.84	14.3	-23.6	Clear	None
10:16	5	25	150	66.62	1.23	6.68	2.311	54.95	0.78	14.4	-25.3	Clear	None
10:21	5	30	150	66.62	1.43	6.68	2.314	53.63	0.61	14.4	-27.7	Clear	None
10:26	5	35	150	66.62	1.62	6.68	2.317	50.28	0.51	14.4	-29.9	Clear	None
10:31	5	40	150	66.62	1.82	6.67	2.317	52.35	0.42	14.4	-30.6	Clear	None
10:36	5	45	150	66.62	2.02	6.67	2.318	54.09	0.44	14.4	-30.7	Clear	None
10:41	5	50	150	66.62	2.22	6.67	2.317	55.07	0.33	14.4	-30.9	Clear	None
10:46	5	55	150	66.62	2.42	6.67	2.32	55.74	0.3	14.3	-30.6	Clear	None
10:51	5	60	150	66.62	2.62	6.72	2.316	54.88	0.23	14.4	-30.6	Clear	None
10:56	5	65	150	66.62	2.81	6.67	2.318	65.97	0.19	14.4	-30.4	Clear	None
11:01	5	70	150	66.62	3.01	6.67	2.316	59.02	0.14	14.3	-30.5	Clear	None
11:06	5	75	150	66.62	3.21	6.67	2.316	58.76	0.12	14.3	-30.7	Clear	None
11:11	5	80	150	66.62	3.41	6.67	2.315	55.94	0.09	14.3	-30.7	Clear	None
11:16	5	85	150	66.62	3.61	6.67	2.313	56.78	0.06	14.3	-31	Clear	None
11:21	5	90	150	66.62	3.80	6.67	2.312	56.02	0.05	14.3	-30.8	Clear	None
11:26	5	95	150	66.62	4.00	6.67	2.311	59.54	0.04	14.3	-30.7	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-16-75	Date	5/14/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	57.0 degrees F and Cloudy. The wind is blowing NE at 10.3 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation		Casing Diameter (in)	2
				Well Casing Material	PVC
Static Water Level (ft-bmp)	62.25	Total Depth (ft-bmp)	74.1	Water Column (ft)	11.85
				Gallons in Well	1.93
Purge Start	15:50	Pump Intake (ft-bmp)	72	Purge Method	Low-Flow
				Purge Equipment	Bladder
Purge End	16:45	Volumes Purged	0.75	Sample ID	MW-16-75_051424
				Sampled by	Billy Cobern
Sample Time	16:45	Gallons Purged	1.45	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:55	0	0	100	62.75	0.13	7	1.933	53.47	1.52	15.2	-77.1	Clear	None
16:00	5	5	100	62.85	0.26	7.01	1.92	64.85	0.7	15.6	-79.8	Clear	None
16:05	5	10	100	62.89	0.40	6.99	1.939	110.96	0.36	16.2	-78.6	Clear	None
16:10	5	15	100	62.94	0.53	6.99	1.955	101.95	0.3	16.2	-78	Clear	None
16:15	5	20	100	62.99	0.66	6.99	1.955	104.55	0.28	16.5	-77.6	Clear	None
16:20	5	25	100	63.05	0.79	6.99	1.949	193.11	0.3	17.3	-77.1	Clear	None
16:25	5	30	100	63.11	0.92	6.98	1.954	111.95	0.34	17.9	-76.3	Clear	None
16:30	5	35	100	63.16	1.06	6.98	1.958	100.03	0.36	18.1	-75.1	Clear	None
16:35	5	40	100	63.20	1.19	6.98	1.962	103.46	0.41	17.9	-73.3	Clear	None
16:40	5	45	100	63.25	1.32	6.98	1.965	104.96	0.42	17.7	-73.1	Clear	None
16:45	5	50	100	63.29	1.45	6.98	1.963	103.75	0.42	17.8	-72.8	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL

Comments: Didn't meet drawdown requirements

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-16-76	Date	5/16/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	66.9 degrees F and Clear. The wind is blowing W/SW at 4.7 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	65.73	Total Depth (ft-bmp)	82.1	Water Column (ft)	16.37	Gallons in Well	2.66
Purge Start	13:25	Pump Intake (ft-bmp)	79.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	14:20	Volumes Purged	0.55	Sample ID	MW-16-76_051624	Sampled by	Billy Cobern
Sample Time	14:20	Gallons Purged	1.45	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:30	0	0	100	66.29	0.13	6.99	2.941	30.36	3.94	15.1	83	Clear	None
13:35	5	5	100	66.58	0.26	6.97	2.927	33.86	3.51	15.1	68.4	Clear	None
13:40	5	10	100	66.75	0.40	6.96	2.896	34.32	1.85	16	13.6	Clear	None
13:45	5	15	100	66.89	0.53	6.96	2.867	41.58	1.02	16.8	-25.8	Clear	None
13:50	5	20	100	67.12	0.66	6.95	2.88	49.38	0.95	17.3	-34.8	Clear	None
13:55	5	25	100	67.37	0.79	6.93	2.921	60.76	0.83	17.5	-40.7	Clear	None
14:00	5	30	100	67.61	0.92	6.93	2.959	66.81	0.74	17.8	-43.6	Clear	None
14:05	5	35	100	67.87	1.06	6.92	3.03	79.99	0.68	17.3	-45.3	Clear	None
14:10	5	40	100	68.07	1.19	6.91	3.134	104.58	0.55	17.5	-48.1	Clear	None
14:15	5	45	100	68.34	1.32	6.91	3.137	106.79	0.55	17.4	-48.2	Clear	None
14:20	5	50	100	68.61	1.45	6.91	3.161	114.96	0.54	17.3	-48.6	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL

Comments: Didn't meet drawdown requirements

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-16-77	Date	5/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	57.0 degrees F and Cloudy. The wind is blowing NE 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)	61.33	Total Depth (ft-bmp)	75.2	Water Column (ft)	13.87	Gallons in Well	2.25
Purge Start	12:10	Pump Intake (ft-bmp)	73.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	13:20	Volumes Purged	1.11	Sample ID	MW-16-77_051424	Sampled by	Jarrett Humpala
Sample Time	13:15	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
12:12	0	0	150	61.33	0.08	6.92	2.934	589.64	6.92	13.9	-2.8	Clear	None
12:17	5	5	150	61.33	0.28	6.8	3.127	278.07	3.25	13.2	-24	Clear	None
12:22	5	10	150	61.33	0.48	6.79	3.118	59.13	0.72	12.9	-37.3	Clear	None
12:27	5	15	150	61.33	0.67	6.79	3.08	34.5	0.51	12.9	-40.2	Clear	None
12:32	5	20	150	61.33	0.87	6.81	3.037	31.16	0.51	12.9	-40.8	Clear	None
12:37	5	25	150	61.33	1.07	6.81	3.03	30.06	0.55	12.8	-40.6	Clear	None
12:42	5	30	150	61.33	1.27	6.82	3.012	24.41	0.65	12.9	-39.4	Clear	None
12:47	5	35	150	61.33	1.47	6.83	2.999	20.79	0.82	12.8	-36.9	Clear	None
12:52	5	40	150	61.33	1.66	6.84	2.986	19.44	0.97	12.9	-33.9	Clear	None
12:57	5	45	150	61.33	1.86	6.84	2.982	24.2	1.11	12.9	25.41	Clear	None
13:02	5	50	150	61.33	2.06	6.84	2.985	24.32	1.21	12.9	-29.3	Clear	None
13:07	5	55	150	61.33	2.26	6.85	2.984	23.3	1.23	13.1	-28.9	Clear	None
13:12	5	60	150	61.33	2.46	6.85	2.983	22.78	1.29	13.5	-28.4	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-16-78	Date	5/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	54.0 degrees F and Cloudy. The wind is blowing N/NE 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)	65.34	Total Depth (ft-bmp)	77.22	Water Column (ft)	11.88	Gallons in Well	1.93
Purge Start	13:52	Pump Intake (ft-bmp)	76	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	15:02	Volumes Purged	1.55	Sample ID	MW-16-78_051424	Sampled by	Jarrett Humpala
Sample Time	15:00	Gallons Purged	3.0	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:54	0	0	150	65.34	0.08	7.31	1.544	235.76	4.89	14.8	-39.6	Clear	None
13:59	5	5	150	65.34	0.28	7.04	1.561	126.62	0.52	14	-61.6	Clear	None
14:04	5	10	150	65.34	0.48	7	1.557	41.85	0.03	13.8	-67.7	Clear	None
14:09	5	15	150	65.34	0.67	7	1.556	31.78	0.02	13.8	-68.1	Clear	None
14:14	5	20	150	65.34	0.87	6.99	1.559	28.37	0	13.8	-69.4	Clear	None
14:19	5	25	150	65.34	1.07	6.99	1.56	23.71	0	13.7	-70.5	Clear	None
14:24	5	30	150	65.34	1.27	6.98	1.563	19.97	0	13.7	-71.4	Clear	None
14:29	5	35	150	65.34	1.47	6.98	1.565	16.93	0	13.7	-72.2	Clear	None
14:34	5	40	150	65.34	1.66	6.98	1.562	18.14	0	13.7	-72.9	Clear	None
14:39	5	45	150	65.34	1.86	6.98	1.559	20.57	0	13.7	-73.6	Clear	None
14:44	5	50	150	65.34	2.06	6.98	1.559	21.17	0	13.8	-74.2	Clear	None
14:49	5	55	150	65.34	2.26	6.98	1.556	23.69	0	13.8	-74.8	Clear	None
14:54	5	60	150	65.34	2.46	6.98	1.569	28.57	0	13.8	28.22	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL

Comments: Turbidity and DO not stable

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-16-81	Date	5/15/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	64.0 degrees F and Clear. The wind is blowing N/NE at 10.3 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	62.50	Total Depth (ft-bmp)	77.23	Water Column (ft)	14.73	Gallons in Well	2.39
Purge Start	13:00	Pump Intake (ft-bmp)	74.83	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	13:45	Volumes Purged	1.00	Sample ID	MW-16-81_051524	Sampled by	Austin Westhuis
Sample Time	13:40	Gallons Purged	2.38	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:05	0	0	200	63.35	0.26	6.89	3.008	58.25	5.31	16.4	90.1	Clear	None
13:10	5	5	200	64.60	0.53	6.97	3.007	52.54	7.08	16.2	96.2	Clear	None
13:15	5	10	200	64.81	0.79	7.05	3.007	31.11	8.08	16.3	100.3	Clear	None
13:20	5	15	200	64.95	1.06	7.1	3.008	22.58	8.75	16.3	103	Clear	None
13:25	5	20	200	64.95	1.32	7.13	3.008	16.81	8.58	16.4	105	Clear	None
13:30	5	25	200	64.98	1.59	7.14	3.01	12.38	8.56	16.5	106.1	Clear	None
13:35	5	30	200	65.03	1.85	7.14	3.006	11.64	8.42	16.6	107.7	Clear	None
13:40	5	35	200	65.03	2.11	7.12	3.011	11.32	8.33	16.4	111.1	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS - Method 537 mod.	250mL HDPE Plastic	2	None
1,4-Dioxane 8270D SIM,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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-16-82	Date	5/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	57.0 degrees F and Cloudy. The wind is blowing NE 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)	68.20	Total Depth (ft-bmp)	77.15	Water Column (ft)	8.95	Gallons in Well	1.45
Purge Start	12:10	Pump Intake (ft-bmp)	75	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	12:50	Volumes Purged	0.73	Sample ID	MW-16-82_051424	Sampled by	Billy Cobern
Sample Time	12:50	Gallons Purged	1.06	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:15	0	0	100	68.70	0.13	6.95	1.337	15.98	3.41	15.6	-84.4	Clear	None
12:20	5	5	100	68.88	0.26	6.94	1.34	19.82	1.21	15.4	-88.5	Clear	None
12:25	5	10	100	68.05	0.40	6.94	1.33	12.5	0.46	15.3	-92.5	Clear	None
12:30	5	15	100	68.21	0.53	6.95	1.319	10.47	0.4	15.2	-91.9	Clear	None
12:35	5	20	100	68.36	0.66	6.96	1.307	8.07	0.47	15.1	-86.3	Clear	None
12:40	5	25	100	68.50	0.79	6.97	1.305	7.03	0.52	15.1	-83.2	Clear	None
12:45	5	30	100	68.64	0.92	6.97	1.304	6.87	0.53	15.1	-82.7	Clear	None
12:50	5	35	100	68.79	1.06	6.97	1.304	7.04	0.54	15.2	-82.1	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL

Comments: Didn't meet drawdown requirements

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-16-84	Date	5/14/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	54.0 degrees F and Cloudy. The wind is blowing NE 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)	70.01	Total Depth (ft-bmp)	81.15	Water Column (ft)	11.14
				Gallons in Well	1.81
Purge Start	13:15	Pump Intake (ft-bmp)	79	Purge Method	Low-Flow
				Purge Equipment	Bladder
Purge End	14:10	Volumes Purged	0.80	Sample ID	MW-16-84_051424
				Sampled by	Billy Cobern
Sample Time	14:10	Gallons Purged	1.45	Replicate/ Code No.	MW-16-84_051424
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:20	0	0	100	70.48	0.13	7.1	2.238	303.73	8.65	15.2	47.7	Clear	None
13:25	5	5	100	70.75	0.26	6.92	2.328	281.94	4.02	14.8	52	Clear	None
13:30	5	10	100	70.89	0.40	6.93	2.289	221.63	3.46	15	57.2	Clear	None
13:35	5	15	100	70.99	0.53	6.94	2.269	194.37	3.49	15	60.5	Clear	None
13:40	5	20	100	71.10	0.66	6.94	2.271	129.47	3.48	14.8	61	Clear	None
13:45	5	25	100	71.21	0.79	6.95	2.28	101.48	3.35	14.8	60.6	Clear	None
13:50	5	30	100	71.32	0.92	6.94	2.285	90.69	3.25	14.9	60.1	Clear	None
13:55	5	35	100	71.42	1.06	6.94	2.295	83.58	3.14	14.9	59.5	Clear	None
14:00	5	40	100	71.51	1.19	6.94	2.313	69.43	3	14.9	58.1	Clear	None
14:05	5	45	100	71.51	1.32	6.94	2.326	65.85	2.89	15.1	58.1	Clear	None
14:10	5	50	100	71.60	1.45	6.94	2.327	66.82	2.88	15	58.1	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,VOCs	40 mL Glass	9	HCL

Comments: Didn't meet drawdown requirements

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-16-85	Date	5/16/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	63.0 degrees F and Clear. The wind is blowing at 3.4 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	71.49	Total Depth (ft-bmp)	81.75	Water Column (ft)	10.26	Gallons in Well	1.67
Purge Start	12:10	Pump Intake (ft-bmp)	79.25	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	12:50	Volumes Purged	0.63	Sample ID	MW-16-85_051624	Sampled by	Billy Cobern
Sample Time	12:50	Gallons Purged	1.06	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:15	0	0	100	72.25	0.13	7.41	1.042	205.75	6.53	17.7	-6.6	Gray	None
12:20	5	5	100	73.00	0.26	7.25	1.033	275.47	1.56	15.5	-75.7	Gray	None
12:25	5	10	100	73.38	0.40	7.28	0.981	186.47	2.47	17.5	-83.3	Gray	None
12:30	5	15	100	73.53	0.53	7.25	0.961	207.97	1.04	17.3	-88.3	Gray	None
12:35	5	20	100	73.73	0.66	7.25	0.929	204.57	0.82	17.6	-89.3	Gray	None
12:40	5	25	100	73.94	0.79	7.25	0.926	200	0.74	18.4	-89.2	Gray	None
12:45	5	30	100	74.15	0.92	7.25	0.93	193.79	0.74	18.4	-89.2	Gray	None
12:50	5	35	100	74.35	1.06	7.25	0.929	197.58	0.73	18.4	-89.1	Gray	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,VOCs	40 mL Glass	3	HCL

Comments: Didn't meet drawdown requirements

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-17-86	Date	5/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	57.0 degrees F and Cloudy. The wind is blowing NE at 10.3 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	66.99	Total Depth (ft-bmp)	81.45	Water Column (ft)	14.46	Gallons in Well	2.35
Purge Start	14:45	Pump Intake (ft-bmp)	79	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	15:25	Volumes Purged	0.45	Sample ID	MW-17-86_051424	Sampled by	Billy Cobern
Sample Time	15:25	Gallons Purged	1.06	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
14:50	0	0	100	67.03	0.13	7.13	2.757	37.67	6.28	16.4	-53.2	Clear	None
14:55	5	5	100	67.03	0.26	7.04	2.825	31.07	2.19	15.4	-60	Clear	None
15:00	5	10	100	67.03	0.40	7.03	2.812	30.43	0.85	15.2	-61.2	Clear	None
15:05	5	15	100	67.03	0.53	7.04	2.794	23.74	0.64	15	-57.4	Clear	None
15:10	5	20	100	67.03	0.66	7.04	2.781	17.49	0.65	14.9	-53.6	Clear	None
15:15	5	25	100	67.03	0.79	7.05	2.779	14.91	0.66	14.9	-52.4	Clear	None
15:20	5	30	100	67.03	0.92	7.05	2.779	14.29	0.67	14.9	-52.5	Clear	None
15:25	5	35	100	67.03	1.06	7.05	2.784	13.94	0.67	14.9	-53.1	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-88	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	75.0 degrees F and Cloudy. The wind is blowing S/SW at 15.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	5.19	Total Depth (ft-bmp)	15	Water Column (ft)	9.81	Gallons in Well	1.59
Purge Start	11:15	Pump Intake (ft-bmp)	12.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	11:50	Volumes Purged	0.58	Sample ID	MW-18-88_052224	Sampled by	Billy Cobern
Sample Time	11:50	Gallons Purged	0.92	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:20	0	0	100	5.25	0.13	7.12	0.684	19.28	1.12	17.4	71.2	Clear	None
11:25	5	5	100	5.25	0.26	7.12	0.684	10.21	0.54	17.8	68.9	Clear	None
11:30	5	10	100	5.25	0.40	7.1	0.682	8.31	0.14	17.8	64.9	Clear	None
11:35	5	15	100	5.25	0.53	7.09	0.681	7.67	0.19	16.9	59.6	Clear	None
11:40	5	20	100	5.25	0.66	7.09	0.679	7.62	0.25	17	59.6	Clear	None
11:45	5	25	100	5.25	0.79	7.09	0.679	7.27	0.27	17	59.4	Clear	None
11:50	5	30	100	5.25	0.92	7.09	0.681	7.21	0.27	16.9	58.6	Clear	None

Constituent Sampled	Container	Number	Preservative
Hexavalent Chromium SW-846 7196	250 mL Plastic	1	None
PFAS	250 mL Plastic	2	None
Total Metals	125 mL Plastic	1	HNO3
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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-89	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	It is Cloudy. The wind is blowing W/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)	6.55	Total Depth (ft-bmp)	12	Water Column (ft)	5.45	Gallons in Well	0.89
Purge Start	13:05	Pump Intake (ft-bmp)	9	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	14:03	Volumes Purged	1.63	Sample ID	MW-18-89_052124	Sampled by	Jackie Schulte
Sample Time	09:15	Gallons Purged	1.45	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:10	0	0	100	7.14	0.13	8.04	0.843	7.08	1	19.6	-12	Clear	None
13:20	10	10	100	7.94	0.40	7.94	0.84	9.55	2.03	22.4	-51.5	Clear	None
13:25	5	15	100	8.64	0.53	7.83	0.848	4.6	0.38	17.9	-125.4	Clear	None
13:35	10	25	100	9.16	0.79	7.78	0.866	6.19	2.58	19.7	-97.5	Clear	None
13:40	5	30	100	9.75	0.92	7.75	0.856	8.38	0.93	17.5	-125.2	Clear	None
13:45	5	35	100	10.26	1.06	7.73	0.853	11.22	0.28	17.6	-131.9	Clear	None
13:50	5	40	100	10.72	1.19	7.7	0.855	14.5	0.2	18	-130.8	Clear	None
13:55	5	45	100	11.00	1.32	7.67	0.856	19	0.21	18.7	-127.6	Clear	None
14:00	5	50	100	11.35	1.45	7.65	0.861	23.27	0.23	17.9	-122.7	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: Well went dry at 1403. Will sample refill later. Recharge sample taken at 0915 on 5/21/24.

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:	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-90	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	77.0 degrees F and Partly Cloudy.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	9.43	Total Depth (ft-bmp)	20	Water Column (ft)	10.57	Gallons in Well	1.72
Purge Start	14:25	Pump Intake (ft-bmp)	17	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:35	Volumes Purged	1.08	Sample ID	MW-18-90_052024	Sampled by	Jackie Schulte
Sample Time	15:25	Gallons Purged	1.85	Replicate/ Code No.	DUP-06_052024	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
14:30	0	0	100	9.46	0.13	12.22	1.717	3.76	0.73	15.9	12.2	Clear	None
14:35	5	5	100	9.50	0.26	12.08	1.717	7.27	0.32	17.1	-19.5	Clear	None
14:40	5	10	100	9.50	0.40	12.14	1.733	11.67	0.14	15.4	-34.3	Clear	None
14:45	5	15	100	9.50	0.53	12.15	1.743	15.4	0.01	14.8	-45.7	Clear	None
14:50	5	20	100	9.50	0.66	12.14	1.731	23.55	0	15.4	-54.9	Clear	None
14:55	5	25	100	9.50	0.79	12.13	1.727	24.82	0	15.7	-60.9	Clear	None
15:00	5	30	100	9.50	0.92	12.14	1.766	4.57	0	15.7	-68.3	Clear	None
15:05	5	35	100	9.50	1.06	12.16	1.795	7.15	0	15.6	-72.6	Clear	None
15:10	5	40	100	9.50	1.19	12.16	1.819	10.17	0	15.9	-78.1	Clear	None
15:15	5	45	100	9.50	1.32	12.16	1.839	12.11	0	16	-82	Clear	None
15:20	5	50	100	9.50	1.45	12.18	1.883	18.9	0	16	-85.9	Clear	None
15:25	5	55	100	9.50	1.59	12.15	1.884	16	0	16.7	-89.9	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: Well did not stabilize after 60 minute purge.

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:	Well Locked at Arrival: yes
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Stick-up</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-91	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	63.0 degrees F and Cloudy. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	5.70	Total Depth (ft-bmp)	15.08	Water Column (ft)	9.38	Gallons in Well	1.52
Purge Start	10:50	Pump Intake (ft-bmp)	11.58	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	11:20	Volumes Purged	1.05	Sample ID	MW-18-91_052124	Sampled by	Austin Westhuis
Sample Time	11:15	Gallons Purged	1.59	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
10:55	0	0	200	7.05	0.26	7.74	0.577	19.55	0.47	14.9	81.3	Clear	None
11:00	5	5	200	7.57	0.53	7.75	0.572	8.89	0.31	15	74.6	Clear	None
11:05	5	10	200	8.22	0.79	7.76	0.563	4.68	0.27	14.8	63.7	Clear	None
11:10	5	15	200	8.63	1.06	7.76	0.566	4.13	0.26	14.8	60.9	Clear	None
11:15	5	20	200	8.91	1.32	7.74	0.569	3.88	0.26	14.8	58.8	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-92	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	75.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	13.86	Total Depth (ft-bmp)	30.12	Water Column (ft)	16.26	Gallons in Well	2.64
Purge Start	14:30	Pump Intake (ft-bmp)	27.62	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:05	Volumes Purged	0.70	Sample ID	MW-18-92_052124	Sampled by	Austin Westhuis
Sample Time	15:00	Gallons Purged	1.85	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:35	0	0	200	13.86	0.26	6.87	1.017	22.43	0.46	13.4	142.6	Clear	None
14:40	5	5	200	13.86	0.53	6.87	1.018	11.24	0.39	13.3	141.9	Clear	None
14:45	5	10	200	13.86	0.79	6.87	1.02	6.48	0.35	13.4	141.4	Clear	None
14:50	5	15	200	13.86	1.06	6.89	1.019	4.93	0.32	13.3	141.6	Clear	None
14:55	5	20	200	13.86	1.32	6.87	1.018	4.39	0.31	13.1	139.8	Clear	None
15:00	5	25	200	13.86	1.59	6.87	1.018	4.07	0.31	13.3	138.8	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-93	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	61.0 degrees F and Cloudy. The wind is blowing W at 4.7 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	47.79	Total Depth (ft-bmp)	85	Water Column (ft)	37.21	Gallons in Well	6.05
Purge Start	09:10	Pump Intake (ft-bmp)	82.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	10:05	Volumes Purged	0.24	Sample ID	MW-18-93_052124	Sampled by	Billy Cobern
Sample Time	10:05	Gallons Purged	1.45	Replicate/ Code No.	DUP-08_052124	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
09:15	0	0	100	48.09	0.13	7.22	0.7	537.48	4.81	16.3	-23	Clear	None
09:20	5	5	100	48.29	0.26	7.25	0.702	539.89	5.15	16	-45.4	Clear	None
09:25	5	10	100	48.49	0.40	7.26	0.699	532.78	4.5	16.1	-66.9	Clear	None
09:30	5	15	100	48.69	0.53	7.26	0.699	511.88	3.6	16.2	-75.6	Clear	None
09:35	5	20	100	48.89	0.66	7.28	0.7	487.97	1.82	16.4	-87.2	Clear	None
09:40	5	25	100	49.07	0.79	7.3	0.7	432.46	1.17	16.5	-95.5	Clear	None
09:45	5	30	100	49.25	0.92	7.32	0.699	316.78	0.75	16.6	-103.5	Clear	None
09:50	5	35	100	49.41	1.06	7.32	0.698	278.37	0.66	16.9	-105.8	Clear	None
09:55	5	40	100	49.58	1.19	7.33	0.7	251.33	0.62	17.2	-106.6	Clear	None
10:00	5	45	100	49.72	1.32	7.35	0.7	242.72	0.61	17.1	-106.8	Clear	None
10:05	5	50	100	49.88	1.45	7.34	0.7	252.56	0.61	17.2	-107	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	4	None

Comments: Didn't meet drawdown requirements

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-94	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	70.0 degrees F and . The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	53.14	Total Depth (ft-bmp)	81.1	Water Column (ft)	27.96	Gallons in Well	4.54
Purge Start	13:16	Pump Intake (ft-bmp)	80	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	14:30	Volumes Purged	0.66	Sample ID	MW-18-94_052124	Sampled by	Jarrett Humpala
Sample Time	14:25	Gallons Purged	3	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:22	0	0	150	53.14	0.24	6.87	6.246	533.15	4.35	17.1	-71.5	Clear	None
13:27	5	5	150	53.14	0.44	6.84	6.37	330.47	0.62	16.6	-85.4	Clear	None
13:32	5	10	150	53.14	0.63	6.85	6.208	320.92	0.4	15.9	-86.9	Clear	None
13:37	5	15	150	53.14	0.83	6.85	6.186	257.95	0.19	16.1	-89.6	Clear	None
13:42	5	20	150	53.14	1.03	6.85	6.159	252.28	0.06	16	-91.5	Clear	None
13:47	5	25	150	53.14	1.23	6.85	6.139	291.94	0	16	-92.7	Clear	None
13:52	5	30	150	53.14	1.43	6.85	6.119	325.12	0	16.1	-93.8	Clear	None
13:57	5	35	150	53.14	1.62	6.85	6.134	327.24	0	16.4	-94.2	Clear	None
14:02	5	40	150	53.14	1.82	6.85	6.132	326.31	0	16.2	-94.6	Clear	None
14:07	5	45	150	53.14	2.02	6.86	6.091	435.87	0	16.3	-94.6	Clear	None
14:12	5	50	150	53.14	2.22	6.85	6.124	511.79	0	16.2	-95.1	Clear	None
14:17	5	55	150	53.14	2.42	6.86	6.107	414.78	0	16.2	-95.4	Clear	None
14:22	5	60	150	53.14	2.62	6.86	6.067	566.35	0	15.7	-95.5	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-95	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	62.1 degrees F and Cloudy. The wind is blowing W/NW at 4.7 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	6.56	Total Depth (ft-bmp)	9.5	Water Column (ft)	2.94	Gallons in Well	0.48
Purge Start	09:45	Pump Intake (ft-bmp)	9	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	10:50	Volumes Purged	3.02	Sample ID	MW-18-95_052124	Sampled by	Jackie Schulte
Sample Time	10:40	Gallons Purged	1.45	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
09:50	0	0	100	6.65	0.13	7.32	0.463	4.59	1.03	15.4	221.2	Clear	None
09:55	5	5	100	6.65	0.26	7.34	0.468	2.99	0.47	15.4	217	Clear	None
10:00	5	10	100	6.66	0.40	7.35	0.472	2.71	0.27	15.3	212.2	Clear	None
10:05	5	15	100	6.65	0.53	7.35	0.473	2.6	0.21	15.5	207.2	Clear	None
10:10	5	20	100	6.65	0.66	7.35	0.474	2.55	0.2	15.7	203.7	Clear	None
10:20	10	30	100	6.65	0.92	7.34	0.475	2.63	0.15	15.9	195.6	Clear	None
10:25	5	35	100	6.65	1.06	7.33	0.475	2.75	0.14	16	192.4	Clear	None
10:30	5	40	100	6.65	1.19	7.33	0.476	2.94	0.19	16.6	188.3	Clear	None
10:35	5	45	100	6.65	1.32	7.33	0.476	3.32	0.2	16.5	186.3	Clear	None
10:40	5	50	100	6.65	1.45	7.33	0.475	3.59	0.18	16.7	182	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: Sample pulled because well was nearly stable and pump battery was nearly dead.

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-97	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	63.0 degrees F and Cloudy. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	63.12	Total Depth (ft-bmp)	92.98	Water Column (ft)	29.86	Gallons in Well	4.85
Purge Start	11:30	Pump Intake (ft-bmp)	90.48	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	12:45	Volumes Purged	0.72	Sample ID	MW-18-97_052124	Sampled by	Jarrett Humpala
Sample Time	12:40	Gallons Purged	3.5	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
11:35	0	0	150	63.12	0.20	7	1.691	413.38	4.38	18.1	-69.2	Clear	None
11:40	5	5	150	63.12	0.40	6.9	1.594	283.66	1.74	16.3	-75	Clear	None
11:45	5	10	150	63.12	0.59	6.9	1.535	264.66	0.67	15.5	-78.7	Clear	None
11:50	5	15	150	63.12	0.79	6.9	1.521	237.76	0.35	15.9	-81.2	Clear	None
11:55	5	20	150	63.12	0.99	6.9	1.52	104.68	0.76	15.4	-79.8	Clear	None
12:00	5	25	150	63.12	1.19	6.9	1.5	120.69	0.38	15.1	-81.6	Clear	None
12:05	5	30	150	63.12	1.39	6.89	1.506	253.03	0.19	15.5	-82.9	Clear	None
12:10	5	35	150	63.12	1.59	6.9	1.499	255.47	0.08	15.3	-83.7	Clear	None
12:15	5	40	150	63.12	1.78	6.9	1.498	332.07	0.04	15.4	-84.6	Clear	None
12:20	5	45	150	63.12	1.98	6.9	1.505	608.54	0.02	15.5	-84.4	Clear	None
12:25	5	50	150	63.12	2.18	6.9	1.511	666.34	0	15.5	-84.7	Clear	None
12:30	5	55	150	63.12	2.38	6.9	1.505	655.82	-0.03	15.2	-85.1	Clear	None
12:35	5	60	150	63.12	2.58	6.9	1.502	621.38	-0.04	15.4	-85	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-98	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	75.0 degrees F and Clear. The wind is blowing N 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)	5.40	Total Depth (ft-bmp)	14.93	Water Column (ft)	9.53	Gallons in Well	1.55
Purge Start	15:15	Pump Intake (ft-bmp)	13	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	16:25	Volumes Purged	1.39	Sample ID	MW-18-98_052024	Sampled by	Ellen Redner
Sample Time	16:20	Gallons Purged	2.15	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate gal/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:20	0	0	0.04	7.03	0.2	7.39	1.042	20.1	0.55	14.4	178.7	Clear	None
15:25	5	5	0.03	7.75	0.35	7.43	0.985	14.2	0.76	14.6	177.7	Clear	None
15:30	5	10	0.03	8.32	0.5	7.5	0.908	5.14	1.97	14.8	174.8	Clear	None
15:35	5	15	0.03	8.60	0.65	7.5	0.927	4.21	2.53	14.8	174.8	Clear	None
15:40	5	20	0.03	8.80	0.8	7.45	0.963	4.24	2.08	14.7	174.9	Clear	None
15:45	5	25	0.03	9.12	0.95	7.43	0.974	4.16	1.83	15.2	174.8	Clear	None
15:50	5	30	0.03	9.50	1.1	7.42	0.985	4.24	1.64	14.9	173.8	Clear	None
15:55	5	35	0.03	10.01	1.25	7.42	0.986	4.16	1.68	14.9	172.9	Clear	None
16:00	5	40	0.03	10.27	1.4	7.42	0.983	4.01	1.74	15	172.9	Clear	None
16:05	5	45	0.03	10.61	1.55	7.44	0.972	4.8	2.01	15	171.3	Clear	None
16:10	5	50	0.03	10.91	1.7	7.41	0.986	10.1	1.66	15.3	170.2	Clear	None
16:15	5	55	0.03	11.20	1.85	7.4	0.988	13.2	1.6	15.3	169.8	Clear	None
16:20	5	60	0.03	11.63	2	7.39	0.996	14.3	1.4	15.1	169.3	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: Water level did not stabilize.

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:	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-99	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	77.0 degrees F and Clear. The wind is blowing NE 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)	3.45	Total Depth (ft-bmp)	16.9	Water Column (ft)	13.45	Gallons in Well	2.19
Purge Start	16:35	Pump Intake (ft-bmp)	15.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	17:45	Volumes Purged	1.00	Sample ID	MW-18-99_052024	Sampled by	Ellen Redner
Sample Time	17:40	Gallons Purged	2.2	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate gal/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
16:40	0	0	0.04	4.50	0.2	7.7	1.39	23.8	0.58	15.3	120.4	Clear	None
16:45	5	5	0.04	5.40	0.4	7.79	1.32	17.6	0.3	15.4	76.3	Clear	None
16:50	5	10	0.03	5.53	0.55	7.8	1.3	14.8	0.28	16.1	40.6	Clear	None
16:55	5	15	0.03	5.68	0.7	7.8	1.285	15.4	0.24	15.8	6.5	Clear	None
17:00	5	20	0.03	5.83	0.85	7.82	1.235	22.9	0.22	15.8	-38.7	Clear	None
17:05	5	25	0.03	5.93	1	7.87	1.192	12.2	0.28	15.3	-67.9	Clear	None
17:10	5	30	0.03	6.00	1.15	7.89	1.161	9.2	0.3	15.3	-82.6	Clear	None
17:15	5	35	0.03	6.03	1.3	7.94	1.126	15.2	0.39	15.4	-96	Clear	None
17:20	5	40	0.03	6.04	1.45	7.99	1.119	12.1	0.45	15.4	-100.9	Clear	None
17:25	5	45	0.03	6.05	1.6	8.02	1.125	8.3	0.44	15.2	-103.1	Clear	None
17:30	5	50	0.03	6.05	1.75	8.04	1.127	9.18	0.47	15.3	-111.3	Clear	None
17:35	5	55	0.03	6.05	1.9	8.06	1.129	8.99	0.49	15	-113.7	Clear	None
17:40	5	60	0.03	6.06	2.05	8.06	1.121	6.78	0.37	15.1	-117.4	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: DO did not stabilize.

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:	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-100	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	79.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	10.20	Total Depth (ft-bmp)	13	Water Column (ft)	2.80	Gallons in Well	0.45
Purge Start	15:00	Pump Intake (ft-bmp)	11	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:45	Volumes Purged	2.64	Sample ID	MW-18-100_052124	Sampled by	Jackie Schulte
Sample Time	15:40	Gallons Purged	1.19	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:05	0	0	100	10.42	0.13	7.96	1.48	8.61	4.49	20.8	116.3	Clear	None
15:10	5	5	100	10.58	0.26	7.73	1.337	5.12	3.76	17.1	127.2	Clear	None
15:15	5	10	100	10.60	0.40	7.61	1.355	4.46	3.5	18.1	132	Clear	None
15:20	5	15	100	10.62	0.53	7.58	1.386	4.54	3.4	17.7	136	Clear	None
15:25	5	20	100	10.66	0.66	7.57	1.368	4.96	3.3	16.8	140.1	Clear	None
15:30	5	25	100	10.66	0.79	7.55	1.367	5.14	3.29	17	143.4	Clear	None
15:35	5	30	100	10.70	0.92	7.54	1.38	5.04	3.27	16.6	147.2	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: Cone was taken from well to mark a driving hazard. JS left a new cone as there are many cars parked in this area.

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-101	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	79.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	63.48	Total Depth (ft-bmp)	88.1	Water Column (ft)	24.62	Gallons in Well	4.00
Purge Start	14:42	Pump Intake (ft-bmp)	87	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	15:52	Volumes Purged	0.80	Sample ID	MW-18-101_052124	Sampled by	Jarrett Humpala
Sample Time	15:50	Gallons Purged	3.2	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:48	0	0	150	63.48	0.24	6.89	3.991	89.54	4.15	15.8	-76.1	Clear	None
14:53	5	5	150	64.30	0.44	6.88	4.008	160.31	1.2	14.9	-81.5	Clear	None
14:58	5	10	150	64.30	0.63	6.86	4.235	208.68	0.5	14.9	-83.8	Clear	None
15:03	5	15	150	64.30	0.83	6.85	4.383	274.12	0.19	15.3	-86.2	Clear	None
15:08	5	20	150	64.30	1.03	6.85	4.367	293.07	0.06	14.9	-87.8	Clear	None
15:13	5	25	150	64.30	1.23	6.85	4.386	355.12	0	14.7	-89.1	Clear	None
15:18	5	30	150	64.30	1.43	6.85	4.415	375.28	0	14.9	-90.1	Clear	None
15:23	5	35	150	64.30	1.62	6.85	4.399	123.57	0	14.6	-90.8	Clear	None
15:28	5	40	150	64.30	1.82	6.85	4.422	76.28	0	14.8	-91.5	Clear	None
15:33	5	45	150	64.30	2.02	6.86	4.405	104.09	0	14.3	-91.8	Clear	None
15:38	5	50	150	64.30	2.22	6.96	4.406	113.92	0	14.4	-91.1	Clear	None
15:43	5	55	150	64.30	2.42	6.85	4.459	176.5	0	14.8	-91.8	Clear	None
15:48	5	60	150	64.30	2.62	6.91	4.424	234.83	0	14.6	-92.2	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL
PFAS	250mL HDPE Plastic	2	None

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-102	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	78.1 degrees F and Clear. The wind is blowing S 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)	8.24	Total Depth (ft-bmp)	14.69	Water Column (ft)	6.45	Gallons in Well	1.05
Purge Start	12:20	Pump Intake (ft-bmp)	13	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	13:30	Volumes Purged	2.00	Sample ID	MW-18-102_052024	Sampled by	Ellen Redner
Sample Time	13:25	Gallons Purged	2.1	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate gal/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
12:25	0	0	0.03	8.68	0.15	7.12	0.673	47	5.55	12.9	186.9	Clear	None
12:30	5	5	0.03	8.75	0.3	7.12	0.675	55.8	5.36	12.8	186.1	Clear	None
12:35	5	10	0.03	8.82	0.45	7.13	0.675	52	5.42	13.1	184.8	Clear	None
12:40	5	15	0.03	8.88	0.6	7.13	0.675	46.9	5.35	13.2	184.3	Clear	None
12:45	5	20	0.03	8.92	0.75	7.14	0.672	31.6	4.34	12.8	182.2	Clear	None
12:50	5	25	0.03	8.98	0.9	7.14	0.669	28.4	3.78	13	181.3	Clear	None
12:55	5	30	0.03	9.00	1.05	7.15	0.668	24.6	3.41	12.9	180.3	Clear	None
13:00	5	35	0.03	9.04	1.2	7.15	0.667	24.1	3.02	12.9	179.3	Clear	None
13:05	5	40	0.03	9.06	1.35	7.15	0.666	20.5	2.76	12.7	178.5	Clear	None
13:10	5	45	0.03	9.09	1.5	7.15	0.665	20.3	2.51	12.6	177.4	Clear	None
13:15	5	50	0.03	9.12	1.65	7.15	0.665	18.5	2.19	12.7	176.4	Clear	None
13:20	5	55	0.03	9.12	1.8	7.15	0.665	18.2	2.04	12.8	175.5	Clear	None
13:25	5	60	0.03	9.11	1.95	7.15	0.666	17.5	2.08	12.6	175.1	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-103	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	73.0 degrees F and Clear. The wind is blowing S 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)	3.00	Total Depth (ft-bmp)	10	Water Column (ft)	7.00	Gallons in Well	1.14
Purge Start	10:38	Pump Intake (ft-bmp)	7	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	12:25	Volumes Purged	1.09	Sample ID	MW-18-103_052024	Sampled by	Jackie Schulte
Sample Time	12:20	Gallons Purged	1.24	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
10:45	0	0	100	3.42	0.00	7.11	0.645	4.48	2.42	13.6	236.2	Clear	None
10:50	5	5	100	3.45	0.00	7.07	0.674	4.55	1.64	14.1	231	Clear	None
10:55	5	10	100	3.51	0.00	7.06	0.694	4.56	1.14	13.7	226.2	Clear	None
11:00	5	15	100	3.54	0.00	7.05	0.713	4.9	0.92	13.4	223.9	Clear	None
11:05	5	20	100	3.60	0.00	7.05	0.723	5.15	1.2	12.8	225.6	Clear	None
11:10	5	25	100	3.63	0.00	7.05	0.732	5.27	1.1	13.3	224.9	Clear	None
11:15	5	30	100	3.63	0.00	7.04	0.739	6.23	1.18	13.5	1.18	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: Stop work called for thunder at 11:13 AM. Took final stabilized reading at 11:15. Packed pump and YSI into vehicle to allow rain to pass. Tubing and water level meter remain in well to sample once storm has passed. Sample taken at 12:20 once work resumed.

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

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-104	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	73.0 degrees F and Clear. The wind is blowing S 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)	2.56	Total Depth (ft-bmp)	9.47	Water Column (ft)	6.91	Gallons in Well	1.12
Purge Start	10:35	Pump Intake (ft-bmp)	8	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	11:45	Volumes Purged	1.74	Sample ID	MW-18-104_052024	Sampled by	Ellen Redner
Sample Time	11:40	Gallons Purged	1.95	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate gal/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
10:40	0	0	0.03	2.99	0.15	6.93	0.731	28.4	2.45	13.3	192.4	Clear	None
10:45	5	5	0.03	3.18	0.3	6.93	0.727	19.6	1.41	13.8	189.4	Clear	None
10:50	5	10	0.03	3.50	0.45	6.97	0.66	11	2.01	13.8	186.9	Clear	None
10:55	5	15	0.03	3.85	0.6	6.95	0.668	5.99	1.98	13.8	186.3	Clear	None
11:00	5	20	0.03	4.10	0.75	6.95	0.668	6.07	2	13.7	185.5	Clear	None
11:05	5	25	0.03	4.30	0.9	6.96	0.663	6.48	2.04	13.6	185.1	Clear	None
11:10	5	30	0.03	4.55	1.05	6.96	0.657	6.95	2.11	13.7	184.6	Clear	None
11:15	5	35	0.03	4.90	1.2	6.96	0.651	6.64	2.15	13.8	183.9	Clear	None
11:20	5	40	0.03	5.10	1.35	6.97	0.638	8.3	2.22	13.7	183.6	Clear	None
11:25	5	45	0.03	5.40	1.5	6.98	0.633	8.71	2.26	13.6	183.3	Clear	None
11:30	5	50	0.03	5.70	1.65	6.99	0.649	11.4	2.16	13.7	183.1	Clear	None
11:35	5	55	0.03	6.00	1.8	6.99	0.661	12.5	2.01	13.5	182.8	Clear	None
11:40	5	60	0.03	6.30	1.95	7	0.672	13.02	1.9	13.4	182.7	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: Water level did not stabilize.

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

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-18-105	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	63.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	1.59	Total Depth (ft-bmp)	11	Water Column (ft)	9.41	Gallons in Well	1.53
Purge Start	09:08	Pump Intake (ft-bmp)	9	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	10:18	Volumes Purged	1.21	Sample ID	MW-18-105_052024	Sampled by	Jackie Schulte
Sample Time	10:10	Gallons Purged	1.85	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
09:15	0	0	100	2.00	0.18	7.01	0.615	4.43	0.52	12.5	277.6	Clear	None
09:20	5	5	100	2.26	0.32	6.86	0.611	3.25	0.19	12.3	267.5	Clear	None
09:25	5	10	100	2.50	0.45	6.95	0.612	3.29	0.06	12.3	257	Clear	None
09:30	5	15	100	2.65	0.58	6.94	0.614	2.72	0.02	12.8	247.3	Clear	None
09:35	5	20	100	2.84	0.71	6.95	0.614	3	0	12.5	233.6	Clear	None
09:40	5	25	100	3.03	0.85	6.95	0.613	2.8	0	12.4	214.2	Clear	None
09:45	5	30	100	3.22	0.98	6.95	0.617	3.32	0	12.1	183.1	Clear	None
09:50	5	35	100	3.35	1.11	6.95	0.616	3.08	0	12.2	160	Clear	None
09:55	5	40	100	3.50	1.24	6.96	0.615	3.47	0	12.2	140.6	Clear	None
10:00	5	45	100	3.70	1.37	6.97	0.616	3.33	0	12	111.9	Clear	None
10:05	5	50	100	3.70	1.51	6.95	0.62	4.01	0	12.2	110	Clear	None
10:10	5	55	100	4.05	1.64	6.96	0.621	3.81	0	12	105.7	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: Well is infested with mosquitos.

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

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-107	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	79.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	15.72	Total Depth (ft-bmp)	29.85	Water Column (ft)	14.13	Gallons in Well	2.30
Purge Start	15:20	Pump Intake (ft-bmp)	27.35	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:55	Volumes Purged	0.80	Sample ID	MW-19-107_052124	Sampled by	Austin Westhuis
Sample Time	15:50	Gallons Purged	1.85	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:25	0	0	200	16.80	0.26	6.72	0.979	149.75	0.15	12.6	21.6	Clear	None
15:30	5	5	200	16.80	0.53	6.71	0.989	102.17	0.12	13	8.2	Clear	None
15:35	5	10	200	16.80	0.79	6.71	0.994	62.02	0.1	13.2	-2.7	Clear	None
15:40	5	15	200	16.80	1.06	6.71	0.994	54.43	0.07	13.2	-9.3	Clear	None
15:45	5	20	200	16.80	1.32	6.71	0.996	52.16	0.07	13.2	-12.8	Clear	None
15:50	5	25	200	16.80	1.59	6.71	0.993	50.93	0.07	13.2	-15.6	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-108	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	70.0 degrees F and . The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	14.55	Total Depth (ft-bmp)	30.05	Water Column (ft)	15.50	Gallons in Well	2.52
Purge Start	13:35	Pump Intake (ft-bmp)	27.55	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	14:10	Volumes Purged	0.73	Sample ID	MW-19-108_052124	Sampled by	Austin Westhuis
Sample Time	14:05	Gallons Purged	1.85	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:40	0	0	200	14.85	0.26	6.67	1.299	11.74	0.22	12.1	120.8	Clear	None
13:45	5	5	200	14.85	0.53	6.67	1.292	5.58	0.18	12	125.1	Clear	None
13:50	5	10	200	14.85	0.79	6.68	1.306	3.94	0.16	12	129.4	Clear	None
13:55	5	15	200	14.85	1.06	6.67	1.302	3.03	0.14	12	126.4	Clear	None
14:00	5	20	200	14.85	1.32	6.67	1.302	2.81	0.13	12.1	123.2	Clear	None
14:05	5	25	200	14.85	1.59	6.67	1.3	2.42	0.13	12.1	121.2	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-111	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	68.0 degrees F and Mostly Cloudy. The wind is blowing N/NW at 3.4 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	21.49	Total Depth (ft-bmp)	27.42	Water Column (ft)	5.93	Gallons in Well	0.96
Purge Start	12:15	Pump Intake (ft-bmp)	24.92	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	12:50	Volumes Purged	1.93	Sample ID	MW-19-111_052124	Sampled by	Austin Westhuis
Sample Time	12:45	Gallons Purged	1.85	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
12:20	0	0	200	21.90	0.26	6.66	1.276	24.33	0.71	13.3	163.4	Clear	None
12:25	5	5	200	21.90	0.53	6.67	1.265	11.09	0.75	13.2	161.8	Clear	None
12:30	5	10	200	21.90	0.79	6.67	1.266	7.64	0.71	13.1	160.7	Clear	None
12:35	5	15	200	21.90	1.06	6.67	1.259	4.49	0.72	12.9	160	Clear	None
12:40	5	20	200	21.90	1.32	6.67	1.262	4.01	0.69	13.1	159.6	Clear	None
12:45	5	25	200	21.90	1.59	6.67	1.254	3.87	0.66	13.1	159.6	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-112	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	63.0 degrees F and Cloudy. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	5.10	Total Depth (ft-bmp)	14	Water Column (ft)	8.90	Gallons in Well	1.45
Purge Start	11:18	Pump Intake (ft-bmp)	12	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	12:25	Volumes Purged	1.22	Sample ID	MW-19-112_052124	Sampled by	Jackie Schulte
Sample Time	12:20	Gallons Purged	1.77	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
11:25	0	0	100	5.88	0.18	6.31	8.452	30	0.18	17.9	-74.9	Clear	None
11:30	5	5	100	6.07	0.32	6.32	8.512	53.03	0.13	19.1	-80.8	Clear	None
11:35	5	10	100	6.48	0.45	6.35	8.427	19.52	0.03	17.7	-82.6	Clear	None
11:40	5	15	100	6.95	0.58	6.36	8.432	19.61	0	17.3	-83.1	Clear	None
11:45	5	20	100	7.30	0.71	6.36	8.465	30	0	17.2	-83.1	Clear	None
11:50	5	25	100	7.41	0.85	6.34	8.5	21.01	0	17.8	-82.5	Clear	None
11:55	5	30	100	7.65	0.98	6.36	8.45	11	0	17.3	-81.9	Clear	None
12:00	5	35	100	8.02	1.11	6.36	8.5	9.05	0	17.1	-81.5	Clear	None
12:05	5	40	100	8.28	1.24	6.36	8.473	12.3	0	17.4	-80.8	Clear	None
12:10	5	45	100	8.28	1.37	6.35	8.444	13.5	0	18.9	-80.8	Clear	None
12:15	5	50	100	8.58	1.51	6.37	8.536	17.5	0	16.9	-79.5	Clear	None
12:20	5	55	100	8.80	1.64	6.37	8.532	9.95	0	17	-79.4	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: Well did not stabilize after 62 minutes purge. Turbidity fluctuated greatly between measurements. Organic sheen visible on purge water.

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-113	Date	5/20/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	77.0 degrees F and Partly Cloudy. The wind is blowing NW at 16.1 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation		Casing Diameter (in)	2
				Well Casing Material	PVC
Static Water Level (ft-bmp)	24.12	Total Depth (ft-bmp)	24.59	Water Column (ft)	0.47
				Gallons in Well	0.08
Purge Start	14:00	Pump Intake (ft-bmp)	24.59	Purge Method	Low-Flow
				Purge Equipment	Peristaltic
Purge End	14:05	Volumes Purged	0.00	Sample ID	MW-19-113_052124
				Sampled by	Ellen Redner
Sample Time	12:55	Gallons Purged	0	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate gal/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:05	0	0	0	24.59								Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: Well was purged dry on 5/20/24 before parameters could be collected. Collected sample on 5/21/24 after allowing to recharge overnight.

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:	Well Locked at Arrival: yes
Condition of Well:	Well Locked at Departure: yes
Well Completion:	Key Number To Well: NA

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-114	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	63.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	1.85	Total Depth (ft-bmp)	10.77	Water Column (ft)	8.92	Gallons in Well	1.45
Purge Start	09:05	Pump Intake (ft-bmp)	9	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	10:15	Volumes Purged	1.45	Sample ID	MW-19-114_052024	Sampled by	Ellen Redner
Sample Time	10:10	Gallons Purged	2.1	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate gal/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
09:10	0	0	0.03	2.85	0.15	7.06	0.57	8.27	0.65	12.3	176.9	Clear	None
09:15	5	5	0.03	2.91	0.3	7.05	0.554	6.56	0.33	12.5	179.7	Clear	None
09:20	5	10	0.03	2.97	0.45	7.06	0.55	5.23	0.24	12.5	179.8	Clear	None
09:25	5	15	0.03	3.00	0.6	7.07	0.555	3.95	0.15	12.3	179.7	Clear	None
09:30	5	20	0.03	3.03	0.75	7.08	0.556	4.02	0.1	12.3	179.2	Clear	None
09:35	5	25	0.03	3.05	0.9	7.09	0.555	4.11	0.08	12.3	179	Clear	None
09:40	5	30	0.03	3.06	1.05	7.09	0.556	4.16	0.07	12.2	179	Clear	None
09:45	5	35	0.03	3.07	1.2	7.09	0.556	4.48	0.06	12.2	178.9	Clear	None
09:50	5	40	0.03	3.09	1.35	7.1	0.556	5.09	0.05	12.2	178.8	Clear	None
09:55	5	45	0.03	3.10	1.5	7.1	0.556	5.62	0.04	12.2	178.7	Clear	None
10:00	5	50	0.03	3.11	1.65	7.11	0.556	7.1	0.03	12.1	178.1	Clear	None
10:05	5	55	0.03	3.11	1.8	7.12	0.555	6.87	0.02	12.1	177.9	Clear	None
10:10	5	60	0.03	3.12	1.95	7.12	0.555	6.14	0.02	12.1	177.7	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: DO did not stabilize.

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

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-115	Date	5/15/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	64.9 degrees F and Mostly Cloudy. The wind is blowing N at 15.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	58.81	Total Depth (ft-bmp)	80.3	Water Column (ft)	21.49	Gallons in Well	3.49
Purge Start	14:00	Pump Intake (ft-bmp)	78	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	14:30	Volumes Purged	0.23	Sample ID	MW-19-115_051524	Sampled by	Billy Cobern
Sample Time	14:30	Gallons Purged	0.79	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:05	0	0	100	59.11	0.13	6.8	3.134	36.74	4.82	19.5	-26.1	Clear	None
14:10	5	5	100	59.11	0.26	6.8	3.156	34.81	1.41	20	-34.2	Clear	None
14:15	5	10	100	59.11	0.40	6.82	3.174	32.17	0.69	20.6	-40.4	Clear	None
14:20	5	15	100	59.11	0.53	6.82	3.185	34.86	0.55	20.9	-41.5	Clear	None
14:25	5	20	100	59.11	0.66	6.82	3.183	37.33	0.5	21	-41	Clear	None
14:30	5	25	100	59.11	0.79	6.82	3.187	38.39	0.5	21	-40.8	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-116	Date	5/15/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	64.0 degrees F and Clear. The wind is blowing N/NE at 10.3 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	56.65	Total Depth (ft-bmp)	73.2	Water Column (ft)	16.55	Gallons in Well	2.69
Purge Start	12:40	Pump Intake (ft-bmp)	71	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	13:40	Volumes Purged	0.59	Sample ID	MW-19-116_051524	Sampled by	Billy Cobern
Sample Time	13:40	Gallons Purged	1.59	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
12:45	0	0	100	56.95	0.13	6.93	1.417	34.06	2.73	17.7	-73.8	Clear	None
12:50	5	5	100	56.95	0.26	6.93	1.415	27.66	1.93	17.7	-76.7	Clear	None
12:55	5	10	100	56.95	0.40	6.93	1.418	23.93	1.12	17.5	-80.1	Clear	None
13:00	5	15	100	56.95	0.53	6.94	1.415	24.11	0.51	17.2	-83	Clear	None
13:05	5	20	100	56.95	0.66	6.94	1.415	30.19	0.29	17	-84.3	Clear	None
13:10	5	25	100	56.95	0.79	6.94	1.415	38.59	0.22	16.9	-84.8	Clear	None
13:15	5	30	100	56.95	0.92	6.94	1.415	54.87	0.15	17.1	-85.2	Clear	None
13:20	5	35	100	56.95	1.06	6.94	1.415	65.86	0.11	17.2	-85.8	Clear	None
13:25	5	40	100	56.95	1.19	6.94	1.416	81.74	0.08	17.5	-86.4	Clear	None
13:30	5	45	100	56.95	1.32	6.94	1.416	93.87	0.11	17.4	-86.1	Clear	None
13:35	5	50	100	56.95	1.45	6.94	1.415	105.46	0.11	17.4	-86.5	Clear	None
13:40	5	55	100	56.95	1.59	6.94	1.416	111.11	0.11	17.4	-86.5	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL

Comments: Turbidity didn't stabilize after 60 minutes

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-117	Date	5/15/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	60.1 degrees F and Mostly Clear. The wind is blowing NE 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)	59.55	Total Depth (ft-bmp)	62.8	Water Column (ft)	3.25	Gallons in Well	0.53
Purge Start	11:25	Pump Intake (ft-bmp)	62	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	12:15	Volumes Purged	2.49	Sample ID	MW-19-117_051524	Sampled by	Billy Cobern
Sample Time	12:15	Gallons Purged	1.32	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
11:30	0	0	100	59.60	0.13	6.91	1.206	916.59	3.21	17.5	-76.2	Clear	None
11:35	5	5	100	59.62	0.26	6.9	1.189	732.86	1.18	17.4	-75.5	Clear	None
11:40	5	10	100	59.66	0.40	6.88	1.173	602.36	0.86	16.3	-71.5	Clear	None
11:45	5	15	100	59.69	0.53	6.88	1.172	399.79	0.46	16.5	-73.7	Clear	None
11:50	5	20	100	59.72	0.66	6.88	1.172	231.86	0.3	16.3	-73.9	Clear	None
11:55	5	25	100	59.75	0.79	6.87	1.171	130.79	0.24	16.5	-73.8	Clear	None
12:00	5	30	100	59.75	0.92	6.87	1.174	83.65	0.16	16.6	-72.5	Clear	None
12:05	5	35	100	59.75	1.06	6.87	1.176	68.88	0.12	16.7	-72.4	Clear	None
12:10	5	40	100	59.75	1.19	6.87	1.176	67.44	0.11	16.8	-72.5	Clear	None
12:15	5	45	100	59.75	1.32	6.87	1.176	66.36	0.11	16.7	-72.6	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-118D	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	78.11	Total Depth (ft-bmp)	192.95	Water Column (ft)	114.84	Gallons in Well	18.66
Purge Start	11:00	Pump Intake (ft-bmp)	190.45	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	12:20	Volumes Purged	0.17	Sample ID	MW-19-118D_052024	Sampled by	Donald Richmond
Sample Time	12:05	Gallons Purged	3.17	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
11:30	0	0	200	78.11	1.59	7.35	1.967	40.71	4.27	30.2	191.1	Clear	None
11:35	5	5	200	78.11	1.85	7.35	1.969	37.29	4.15	30.3	186.5	Clear	None
11:40	5	10	200	78.11	2.11	7.36	1.987	49.35	4.62	30.9	179.2	Clear	None
11:45	5	15	200	78.11	2.38	7.36	2.004	37.61	4.1	31.3	173.6	Clear	None
11:50	5	20	200	78.11	2.64	7.36	2.009	41.97	4.03	31.5	172.1	Clear	None
11:55	5	25	200	78.11	2.91	7.36	2.033	77	3.96	32	174.8	Clear	None
12:00	5	30	200	78.11	3.17	7.36	1.993	68	3.95	30.8	177.1	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Glass	2	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-119D	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	73.0 degrees F and Clear. The wind is blowing S 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)	84.55	Total Depth (ft-bmp)	197.9	Water Column (ft)	113.35	Gallons in Well	18.42
Purge Start	10:35	Pump Intake (ft-bmp)	195.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	11:00	Volumes Purged	0.04	Sample ID	MW-19-119D_052024	Sampled by	Billy Cobern
Sample Time	11:00	Gallons Purged	0.66	Replicate/ Code No.	DUP-10_052024	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
10:40	0	0	100	84.87	0.13	7.15	1.261	8.56	5.57	22.7	65.1	Clear	None
10:45	5	5	100	84.87	0.26	7.17	1.257	8.09	5.48	22.7	65.5	Clear	None
10:50	5	10	100	84.87	0.40	7.18	1.256	9.02	5.49	22.7	66	Clear	None
10:55	5	15	100	84.87	0.53	7.19	1.256	9.23	5.58	22.6	66.5	Clear	None
11:00	5	20	100	84.87	0.66	7.2	1.261	9.62	5.65	22.3	67.4	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Amber	4	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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-119S	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	78.1 degrees F and Clear. The wind is blowing S 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)	70.96	Total Depth (ft-bmp)	163.9	Water Column (ft)	92.94	Gallons in Well	15.10
Purge Start	12:25	Pump Intake (ft-bmp)	161.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	13:00	Volumes Purged	0.06	Sample ID	MW-19-119S_052024	Sampled by	Billy Cobern
Sample Time	13:00	Gallons Purged	0.92	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:30	0	0	100	71.27	0.13	7.18	1.269	5.28	3.49	21.8	87.4	Clear	None
12:35	5	5	100	71.27	0.26	7.18	1.28	6.78	4.13	22.8	87	Clear	None
12:40	5	10	100	71.27	0.40	7.13	1.298	7.89	3.4	22.4	86.9	Clear	None
12:45	5	15	100	71.27	0.53	7.13	1.324	8.91	1.77	22.6	75.7	Clear	None
12:50	5	20	100	71.27	0.66	7.12	1.325	9.12	1.62	22.7	73.5	Clear	None
12:55	5	25	100	71.27	0.79	7.12	1.326	9.27	1.5	22.8	71.2	Clear	None
13:00	5	30	100	71.27	0.92	7.12	1.328	9.56	1.48	22.9	68.9	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Amber	2	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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-120	Date	5/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	57.0 degrees F and Cloudy. The wind is blowing NE at 10.3 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	67.06	Total Depth (ft-bmp)	74.72	Water Column (ft)	7.66	Gallons in Well	1.24
Purge Start	15:37	Pump Intake (ft-bmp)	73	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	16:50	Volumes Purged	2.42	Sample ID	MW-19-120_051424	Sampled by	Jarrett Humpala
Sample Time	16:45	Gallons Purged	3	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:41	0	0	150	67.06	0.16	7.28	1.334	2125.54	5.66	16.6	172.9	Clear	None
15:46	5	5	150	67.06	0.36	7.25	1.227	721.08	4.37	16.6	165.1	Clear	None
15:51	5	10	150	67.06	0.55	7.26	1.163	280.64	4.56	16.7	168.7	Clear	None
15:56	5	15	150	67.06	0.75	7.36	1.147	183.41	4.77	16.2	122.7	Clear	None
16:01	5	20	150	67.06	0.95	7.25	1.166	147.98	4.63	16.2	156	Clear	None
16:06	5	25	150	67.06	1.15	7.25	1.174	104.48	4.5	16.3	167.9	Clear	None
16:11	5	30	150	67.06	1.35	7.24	1.193	94.52	4.35	16.2	175	Clear	None
16:16	5	35	150	67.06	1.55	7.24	1.203	93.63	4.24	16	180.2	Clear	None
16:21	5	40	150	67.06	1.74	7.23	1.214	56.19	4.13	16	183.9	Clear	None
16:26	5	45	150	67.06	1.94	7.23	1.219	64.92	4.08	16	186.2	Clear	None
16:31	5	50	150	67.06	2.14	7.23	1.224	58.16	4.06	16	188.5	Clear	None
16:36	5	55	150	67.06	2.34	7.22	1.229	44.17	3.98	17	190.4	Clear	None
16:41	5	60	150	67.06	2.54	7.24	1.22	35.94	4.23	15.2	192.3	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-121	Date	5/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	57.0 degrees F and Cloudy. The wind is blowing NE 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)	66.13	Total Depth (ft-bmp)	73.53	Water Column (ft)	7.40	Gallons in Well	1.20
Purge Start	10:55	Pump Intake (ft-bmp)	71.03	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	11:30	Volumes Purged	1.54	Sample ID	MW-19-121_051424	Sampled by	Austin Westhuis
Sample Time	11:25	Gallons Purged	1.85	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
11:00	0	0	200	67.20	0.26	6.47	2.427	46.65	0.94	15.3	223.4	Clear	None
11:05	5	5	200	67.28	0.53	6.47	2.414	24.19	1.27	15.2	217.6	Clear	None
11:10	5	10	200	67.34	0.79	6.52	2.41	20.55	1.9	15.1	212.9	Clear	None
11:15	5	15	200	67.36	1.06	6.54	2.408	18.74	2.02	15.1	212.9	Clear	None
11:20	5	20	200	67.36	1.32	6.58	2.4	18.22	2.03	15.1	207.1	Clear	None
11:25	5	25	200	67.37	1.59	6.58	2.4	17.83	2.03	15.1	207.1	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-122	Date	5/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	54.0 degrees F and Cloudy. The wind is blowing NE 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)	64.09	Total Depth (ft-bmp)	66.75	Water Column (ft)	2.66	Gallons in Well	0.43
Purge Start	12:25	Pump Intake (ft-bmp)	66.25	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	13:10	Volumes Purged	5.53	Sample ID	MW-19-122_051424	Sampled by	Austin Westhuis
Sample Time	13:05	Gallons Purged	2.38	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
12:30	0	0	200	64.09	0.26	6.74	4.2	300.98	4.36	15.2	195	Clear	None
12:35	5	5	200	64.09	0.53	6.73	4.146	51.62	3.85	15.1	194.3	Clear	None
12:40	5	10	200	64.09	0.79	6.73	4.128	48.06	3.84	15.1	193.7	Clear	None
12:45	5	15	200	64.09	1.06	6.72	4.072	38.59	3.64	15.1	191.7	Clear	None
12:50	5	20	200	64.09	1.32	6.72	4.026	29.34	3.57	15.1	189.1	Clear	None
12:55	5	25	200	64.09	1.59	6.73	4.021	26.99	3.48	15.2	188.3	Clear	None
13:00	5	30	200	64.09	1.85	6.73	4.018	26.06	3.44	15.1	187.7	Clear	None
13:05	5	35	200	64.09	2.11	6.71	4.016	24.63	3.4	15	183.5	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-123	Date	5/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	57.0 degrees F and Cloudy. The wind is blowing NE at 10.3 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	65.70	Total Depth (ft-bmp)	73.9	Water Column (ft)	8.20	Gallons in Well	1.33
Purge Start	15:15	Pump Intake (ft-bmp)	71.4	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	15:50	Volumes Purged	1.39	Sample ID	MW-19-123_051424	Sampled by	Austin Westhuis
Sample Time	15:45	Gallons Purged	1.85	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:20	0	0	200	67.45	0.26	6.69	1.752	8.62	6.28	14.4	171.5	Clear	None
15:25	5	5	200	67.62	0.53	6.7	1.755	7.88	6.16	15.1	178.1	Clear	None
15:30	5	10	200	67.72	0.79	6.69	1.766	7.11	6.13	15.5	180.6	Clear	None
15:35	5	15	200	67.79	1.06	6.69	1.77	6.77	6.1	15.5	181.9	Clear	None
15:40	5	20	200	67.83	1.32	6.68	1.794	6.09	6.09	15.6	182.6	Clear	None
15:45	5	25	200	67.83	1.59	6.68	1.792	5.89	6.03	15.6	183.2	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-124	Date	5/14/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	57.0 degrees F and Cloudy. The wind is blowing NE at 10.3 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	66.48	Total Depth (ft-bmp)	72.2	Water Column (ft)	5.72	Gallons in Well	0.93
Purge Start	16:10	Pump Intake (ft-bmp)	69.7	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	16:55	Volumes Purged	2.56	Sample ID	MW-19-124_051424	Sampled by	Austin Westhuis
Sample Time	16:50	Gallons Purged	2.38	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
16:15	0	0	200	66.48	0.26	6.53	3.046	430.16	1.41	16.5	26.1	Clear	None
16:20	5	5	200	66.48	0.53	6.54	2.99	122.65	0.6	15.8	-10.5	Clear	None
16:25	5	10	200	66.48	0.79	6.54	2.969	57.13	0.47	15.8	-28.4	Clear	None
16:30	5	15	200	66.48	1.06	6.55	2.956	43.8	0.42	15.7	-37.8	Clear	None
16:35	5	20	200	66.48	1.32	6.55	2.947	36.14	0.41	15.7	-40.5	Clear	None
16:40	5	25	200	66.48	1.59	6.55	2.94	32.41	0.39	15.7	-43.4	Clear	None
16:45	5	30	200	66.48	1.85	6.55	2.93	31.36	0.39	15.6	-45.6	Clear	None
16:50	5	35	200	66.48	2.11	6.55	2.92	31.36	0.37	15.5	-47	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-19-125	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	4	Well Casing Material	Steel	
Static Water Level (ft-bmp)	78.34	Total Depth (ft-bmp)	102.36	Water Column (ft)	24.02	Gallons in Well	15.61
Purge Start	13:00	Pump Intake (ft-bmp)	99.86	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	14:00	Volumes Purged	0.12	Sample ID	MW-19-125_052024	Sampled by	Donald Richmond
Sample Time	13:40	Gallons Purged	1.85	Replicate/ Code No.	MW-19-125_052024	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:20	0	0	200	78.34	1.06	10.72	0.684	94	1.56	23.5	47	Clear	None
13:25	5	5	200	78.34	1.32	10.74	0.691	107	1.48	23.4	40.8	Clear	None
13:30	5	10	200	78.34	1.59	10.74	0.689	107	1.42	23.5	37.7	Clear	None
13:35	5	15	200	78.34	1.85	10.74	0.691	110	1.34	23.6	32.8	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Glass	6	HCL

Comments:

Well Casing Volume Conversion

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

Well Information

Well Location: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-20-127	Date	5/15/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	48.0 degrees F and Clear. The wind is blowing N/NE at 6.9 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	68.10	Total Depth (ft-bmp)	78.7	Water Column (ft)	10.60	Gallons in Well	1.72
Purge Start	08:50	Pump Intake (ft-bmp)	76	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	09:35	Volumes Purged	0.69	Sample ID	MW-20-127_051524	Sampled by	Billy Cobern
Sample Time	09:35	Gallons Purged	1.19	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
08:55	0	0	100	68.42	0.13	6.48	3.49	10.73	1.95	14.1	6.2	Clear	None
09:00	5	5	100	68.42	0.26	6.49	3.497	10.32	1.33	14.1	1.7	Clear	None
09:05	5	10	100	68.42	0.40	6.49	3.5	14.08	1.09	14.1	-0.8	Clear	None
09:10	5	15	100	68.42	0.53	6.52	3.498	17.13	0.66	14.2	-7.7	Clear	None
09:15	5	20	100	68.42	0.66	6.53	3.501	19.49	0.52	14.3	-10.3	Clear	None
09:20	5	25	100	68.42	0.79	6.53	3.503	20.58	0.49	14.3	-11.1	Clear	None
09:25	5	30	100	68.42	0.92	6.54	3.502	21.74	0.37	14.4	-13.3	Clear	None
09:30	5	35	100	68.42	1.06	6.54	3.501	21.73	0.36	14.4	-13.6	Clear	None
09:35	5	40	100	68.42	1.19	6.54	3.498	22.06	0.35	14.4	-13.8	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-20-128	Date	5/15/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	54.0 degrees F and Mostly Clear. The wind is blowing N/NE at 10.3 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	65.95	Total Depth (ft-bmp)	69.6	Water Column (ft)	3.65	Gallons in Well	0.59
Purge Start	10:00	Pump Intake (ft-bmp)	69.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	11:00	Volumes Purged	2.69	Sample ID	MW-20-128_051524	Sampled by	Billy Cobern
Sample Time	11:00	Gallons Purged	1.59	Replicate/ Code No.	DUP-03_051524	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
10:05	0	0	100	66.20	0.13	6.99	3.442	243.86	2.97	15.4	92.4	Clear	None
10:10	5	5	100	66.25	0.26	6.98	3.439	210.97	2.48	15.5	92.5	Clear	None
10:15	5	10	100	66.28	0.40	6.98	3.434	196.47	1.74	15.6	92.4	Clear	None
10:20	5	15	100	66.28	0.53	6.97	3.438	148.67	0.86	16.1	91.3	Clear	None
10:25	5	20	100	66.28	0.66	6.97	3.432	102.57	0.74	16.7	89.5	Clear	None
10:30	5	25	100	66.28	0.79	6.97	3.436	91.98	0.74	16.4	88.1	Clear	None
10:35	5	30	100	66.28	0.92	6.98	3.45	76.17	0.7	16.2	86.8	Clear	None
10:40	5	35	100	66.28	1.06	6.99	3.444	51.27	0.65	16.2	85.6	Clear	None
10:45	5	40	100	66.28	1.19	6.99	3.447	34.11	0.69	16.5	84.2	Clear	None
10:50	5	45	100	66.28	1.32	6.99	3.447	28.02	0.71	16.9	83.6	Clear	None
10:55	5	50	100	66.28	1.45	6.99	3.448	30.08	0.72	16.9	83.6	Clear	None
11:00	5	55	100	66.28	1.59	6.99	3.45	35.96	0.72	16.9	83.5	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	6	HCL

Comments: Turbidity didn't stabilize within 60 minutes

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-20-129	Date	5/15/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	68.0 degrees F and Cloudy. The wind is blowing N at 10.3 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation		Casing Diameter (in)	2
				Well Casing Material	PVC
Static Water Level (ft-bmp)	61.69	Total Depth (ft-bmp)	70.95	Water Column (ft)	9.26
				Gallons in Well	1.50
Purge Start	15:00	Pump Intake (ft-bmp)	68.5	Purge Method	Low-Flow
				Purge Equipment	Bladder
Purge End	15:55	Volumes Purged	0.97	Sample ID	MW-20-129_051524
				Sampled by	Billy Cobern
Sample Time	15:55	Gallons Purged	1.45	Replicate/ Code No.	NA
				Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:05	0	0	100	61.99	0.13	7.22	1.473	58.95	8.25	20.7	-50.4	Clear	None
15:10	5	5	100	61.99	0.26	7.04	1.649	75.39	2.84	19.7	-65.9	Clear	None
15:15	5	10	100	61.99	0.40	7.04	1.642	70.36	1.76	20.4	-67	Clear	None
15:20	5	15	100	61.99	0.53	7.02	1.622	69.59	0.95	21.6	-66.4	Clear	None
15:25	5	20	100	61.99	0.66	7.02	1.492	65.74	1.35	22	-54.4	Clear	None
15:30	5	25	100	61.99	0.79	7.01	1.38	59.5	1.95	21.7	-39.1	Clear	None
15:35	5	30	100	61.99	0.92	7.01	1.32	61.02	2.5	21.6	-29.6	Clear	None
15:40	5	35	100	61.99	1.06	7	1.29	61.37	2.86	21.6	-23.6	Clear	None
15:45	5	40	100	61.99	1.19	7	1.29	66.54	2.88	21.5	-23	Clear	None
15:50	5	45	100	61.99	1.32	7	1.298	68.36	2.89	21.5	-22.8	Clear	None
15:55	5	50	100	61.99	1.45	7	1.299	66.31	2.91	21.5	-22.5	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-20-130	Date	5/16/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	54.0 degrees F and Clear. The wind is blowing E at 3.4 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	67.20	Total Depth (ft-bmp)	69.8	Water Column (ft)	2.60	Gallons in Well	0.42
Purge Start	09:55	Pump Intake (ft-bmp)	69.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End		Volumes Purged		Sample ID	NA	Sampled by	Billy Cobern
Sample Time		Gallons Purged		Replicate/ Code No.	NA	Sample Type	

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
10:20	0	0	100	67.20	0.00	0	0	0	0	0	0		

Comments: Bladder pump will not pump water from the well. Tried replacing the tubing and bladder and cleaning the screen and check valves. Heavy iron in well and low water volume

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-20-131	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	78.1 degrees F and Clear and Windy. The wind is blowing W/SW at 23.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	5.01	Total Depth (ft-bmp)	8.63	Water Column (ft)	3.62	Gallons in Well	0.59
Purge Start	15:09	Pump Intake (ft-bmp)	7.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	16:16	Volumes Purged	3.39	Sample ID	MW-20-131_052224	Sampled by	Jarrett Humpala
Sample Time	16:15	Gallons Purged	2	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:12	0	0	150	5.18	0.12	7.08	4.707	175.01	0.98	16.4	193.5	Clear	None
15:17	5	5	150	5.27	0.32	6.96	4.669	47.13	0.11	16.4	154.6	Clear	None
15:22	5	10	150	5.31	0.52	6.96	4.733	23.33	0	16.7	114.9	Clear	None
15:27	5	15	150	5.34	0.71	6.96	4.758	20.38	0	16.9	85.4	Clear	None
15:32	5	20	150	5.35	0.91	6.96	4.795	19.37	0	17.1	63.1	Clear	None
15:37	5	25	150	5.35	1.11	6.96	4.762	25.53	0	16.8	50.2	Clear	None
15:42	5	30	150	5.35	1.31	6.97	4.751	29.52	0	16.6	41.2	Clear	None
15:47	5	35	150	5.35	1.51	6.97	4.726	38.72	0	16.7	33.3	Clear	None
15:52	5	40	150	5.35	1.70	6.97	4.714	49.07	0	16.7	28.8	Clear	None
15:57	5	45	150	5.35	1.90	6.98	4.69	53.1	0	16.5	26.5	Clear	None
16:02	5	50	150	5.35	2.10	6.98	4.634	97.9	0	16.3	24.4	Clear	None
16:07	5	55	150	5.35	2.30	6.99	4.65	80.34	0	16.5	23.2	Clear	None
16:12	5	60	150	5.35	2.50	6.99	4.639	95.91	0	16.5	22.7	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-20-132	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	61.0 degrees F and Clear. The wind is blowing SW at 10.3 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	5.18	Total Depth (ft-bmp)	10.8	Water Column (ft)	5.62	Gallons in Well	0.91
Purge Start	09:20	Pump Intake (ft-bmp)	10	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	10:26	Volumes Purged	2.42	Sample ID	MW-20-132_052324	Sampled by	Jarrett Humpala
Sample Time	10:25	Gallons Purged	2.2	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
09:23	0	0	150	5.33	0.12	6.98	3.343	111.69	1.09	13.1	-104.5	Clear	None
09:28	5	5	150	5.35	0.32	7.08	3.28	44.93	0.19	13.3	-91.9	Clear	None
09:33	5	10	150	5.35	0.52	7.09	3.194	40.88	0.06	13.3	-75.8	Clear	None
09:38	5	15	150	5.35	0.71	7.08	3.153	55.85	0	13.2	-68.4	Clear	None
09:43	5	20	150	5.35	0.91	7.06	3.052	57.5	0	13	-68.1	Clear	None
09:48	5	25	150	5.35	1.11	7.05	2.997	63	0	13	-69.1	Clear	None
09:53	5	30	150	5.35	1.31	7.04	2.919	54.95	0	13.2	-72.1	Clear	None
09:58	5	35	150	5.35	1.51	7.03	2.892	57.66	0	13	-73.1	Clear	None
10:03	5	40	150	5.35	1.70	7.02	2.906	54.4	0	13.1	-82.8	Clear	None
10:08	5	45	150	5.35	1.90	7.02	2.889	50.14	0	13.2	-76.2	Clear	None
10:13	5	50	150	5.35	2.10	7.02	2.889	55.08	0	13.2	-74	Clear	None
10:18	5	55	150	5.35	2.30	7.02	2.876	72.8	0	13.1	-72.7	Clear	None
10:23	5	60	150	5.35	2.50	7.03	2.887	60.14	0	13.3	-71	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: Park outside plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-21-133	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	73.0 degrees F and Partly Cloudy. The wind is blowing SW at 15.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	8.57	Total Depth (ft-bmp)	15	Water Column (ft)	6.43	Gallons in Well	1.04
Purge Start	09:24	Pump Intake (ft-bmp)	13	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	10:27	Volumes Purged	1.60	Sample ID	MW-21-133_052224	Sampled by	Jackie Schulte
Sample Time	10:25	Gallons Purged	1.66	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
09:30	0	0	100	9.13	0.16	6.81	1.023	1.69	0.66	14.5	192.2	Clear	None
09:35	5	5	100	9.31	0.29	6.8	1.013	2.82	0.5	15.7	188.2	Clear	None
09:40	5	10	100	9.52	0.42	6.83	1.019	4.89	0.28	14.9	185.6	Clear	None
09:45	5	15	100	9.66	0.55	6.84	1.02	8.09	0.22	15.3	184.1	Clear	None
09:50	5	20	100	9.74	0.69	6.84	1.023	12.21	0.19	15.1	182.9	Clear	None
09:55	5	25	100	9.87	0.82	6.84	1.017	4.96	0.25	15.1	182.2	Clear	None
10:00	5	30	100	9.87	0.95	6.84	1.017	4.59	0.22	14.9	180.7	Clear	None
10:05	5	35	100	10.07	1.08	6.84	1.017	1.73	0.08	14.8	177.8	Clear	None
10:10	5	40	100	10.20	1.22	6.8	1.018	1.93	0.02	14.4	175.6	Clear	None
10:15	5	45	100	10.32	1.35	6.78	1.017	1.84	0	14.1	174	Clear	None
10:20	5	50	100	10.40	1.48	6.78	1.016	1.89	0	14.3	172.3	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: Well, it was only labeled on the plug. Added label to well exterior and inside lid in case plug is lost.

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-21-134	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	75.0 degrees F and Mostly Cloudy.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	8.32	Total Depth (ft-bmp)	16	Water Column (ft)	7.68	Gallons in Well	1.25
Purge Start	10:56	Pump Intake (ft-bmp)	13	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	11:55	Volumes Purged	1.25	Sample ID	MW-21-134_052224	Sampled by	Jackie Schulte
Sample Time	11:50	Gallons Purged	1.56	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
11:00	0	0	100	8.75	0.11	6.99	0.866	1.77	1.96	14.8	234	Clear	None
11:05	5	5	100	9.11	0.24	6.93	0.862	3.02	1.01	14.3	233.4	Clear	None
11:10	5	10	100	9.36	0.37	6.91	0.857	3.08	0.83	15	232.3	Clear	None
11:15	5	15	100	9.51	0.50	6.9	0.865	2.57	0.78	14.6	231.9	Clear	None
11:20	5	20	100	9.72	0.63	6.91	0.858	3.4	0.73	14.3	231.5	Clear	None
11:25	5	25	100	9.92	0.77	6.9	0.857	3.26	0.76	14.5	231.2	Clear	None
11:30	5	30	100	9.92	0.90	6.89	0.858	2.76	0.84	15.6	230.8	Clear	None
11:35	5	35	100	9.92	1.03	6.89	0.866	5	0.63	14.9	230.2	Clear	None
11:40	5	40	100	9.92	1.16	6.89	0.864	4.98	0.68	14.9	229.3	Clear	None
11:45	5	45	100	10.16	1.29	6.9	0.866	4.68	0.67	14.2	229.2	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: Label has worn away everywhere, but on the Jay plug. I re-labeled the outside and inner-lid.

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-21-135	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	77.0 degrees F and Clear. The wind is blowing W/SW at 17.2 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	24.98	Total Depth (ft-bmp)	27	Water Column (ft)	2.02	Gallons in Well	0.33
Purge Start	12:42	Pump Intake (ft-bmp)	26	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	13:50	Volumes Purged	5.03	Sample ID	MW-21-135_052224	Sampled by	Jackie Schulte
Sample Time	13:45	Gallons Purged	1.66	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:50	0	0	100	25.41	0.21	7.42	0.86	4.74	1.96	17.2	192.5	Clear	None
12:55	5	5	100	25.67	0.34	7.83	0.841	3.35	1.13	15.9	195.7	Clear	None
13:00	5	10	100	25.81	0.48	7.61	0.839	3.68	1.17	16.2	199.5	Clear	None
13:05	5	15	100	25.93	0.61	7.54	0.84	3.86	1.13	16.1	202.4	Clear	None
13:10	5	20	100	25.99	0.74	7.43	0.841	4.12	0.92	16.2	203.9	Clear	None
13:15	5	25	100	26.08	0.87	7.34	0.845	4.31	0.7	16.3	201.2	Clear	None
13:20	5	30	100	26.14	1.00	7.35	0.845	4.43	0.61	16.2	199.9	Clear	None
13:25	5	35	100	26.19	1.14	7.33	0.846	4.35	0.54	16.4	197.5	Clear	None
13:30	5	40	100	26.23	1.27	7.3	0.843	4.35	0.51	16.2	195.3	Clear	None
13:35	5	45	100	26.24	1.40	7.28	0.85	4.39	0.45	16.5	187.6	Clear	None
13:40	5	50	100	26.24	1.53	7.26	0.85	3.58	0.55	16.4	107.2	Clear	None
13:45	5	55	100	26.27	1.66	7.14	0.854	3.4	0.38	16.3	31.1	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: Label has worn off everywhere except the J plug. Added labels to the outside and inside the lid. Well did not stabilize after 60 minute purge.

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-21-136	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	77.0 degrees F and Mostly Clear.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	6.97	Total Depth (ft-bmp)	14	Water Column (ft)	7.03	Gallons in Well	1.14
Purge Start	14:30	Pump Intake (ft-bmp)	12	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:35	Volumes Purged	1.51	Sample ID	MW-21-136_052224	Sampled by	Jackie Schulte
Sample Time	15:30	Gallons Purged	1.72	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:35	0	0	100	7.54	0.13	7.35	0.91	2.44	0.82	14.5	206.4	Clear	None
14:40	5	5	100	7.99	0.26	7.22	0.904	2.06	0.31	14.5	202.8	Clear	None
14:45	5	10	100	8.40	0.40	7.19	0.902	3.49	0.2	14.8	197.7	Clear	None
14:50	5	15	100	8.69	0.53	7.18	0.902	2.85	0.19	15.3	193.3	Clear	None
14:55	5	20	100	9.07	0.66	7.17	0.891	3.37	0.21	14.5	181.3	Clear	None
15:00	5	25	100	9.02	0.79	7.16	0.888	4.39	0.4	14.8	155.9	Clear	None
15:05	5	30	100	8.99	0.92	7.15	0.885	5.3	0.66	14.8	137.4	Clear	None
15:10	5	35	100	8.99	1.06	7.15	0.89	5.81	0.83	14.8	100.8	Clear	None
15:15	5	40	100	8.99	1.19	7.15	0.895	2.4	0.77	14.6	63.5	Clear	None
15:20	5	45	100	9.08	1.32	7.15	0.891	2.95	0.68	14.4	43.1	Clear	None
15:25	5	50	100	9.19	1.45	7.14	0.893	2.88	0.61	14.7	26	Clear	None
15:30	5	55	100	9.27	1.59	7.18	0.898	3.71	0.52	14.9	12.6	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: Well did not stabilize after 60 minutes of purging.

Well Casing Volume Conversion

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

Well Information

Well Location: South of plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-21-137	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	9.11	Total Depth (ft-bmp)	12	Water Column (ft)	2.89	Gallons in Well	0.47
Purge Start	09:00	Pump Intake (ft-bmp)	11	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	09:40	Volumes Purged	0.13	Sample ID	MW-21-137_052324	Sampled by	Jackie Schulte
Sample Time	09:35	Gallons Purged	0.06	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
09:05	0	0	100	9.20	0.13	6.58	1.113	9.23	2.21	12.5	208.4	Clear	None
09:10	5	5	100	9.20	0.26	6.6	1.13	7.22	1.94	12.8	205.6	Clear	None
09:15	5	10	100	9.20	0.40	6.63	1.134	5	2.2	13.1	206.9	Clear	None
09:20	5	15	100	9.20	0.53	6.66	1.15	3.55	2.38	13.2	209.5	Clear	None
09:25	5	20	100	9.20	0.66	6.66	1.157	3.43	2.34	13	210.5	Clear	None
09:30	5	25	100	9.21	0.79	6.68	1.153	3.11	2.33	12.9	209.2	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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 of plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-21-138	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	68.0 degrees F and Clear. The wind is blowing 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)	21.32	Total Depth (ft-bmp)	29	Water Column (ft)	7.68	Gallons in Well	1.25
Purge Start	09:50	Pump Intake (ft-bmp)	26	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	11:15	Volumes Purged	1.80	Sample ID	MW-21-138_052324	Sampled by	Jackie Schulte
Sample Time	10:55	Gallons Purged	2.25	Replicate/ Code No.	MW-21-138_052324	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
09:55	0	0	100	21.59	0.13	6.96	1.647	4.13	3.03	18.7	252.2	Clear	None
10:00	5	5	100	21.92	0.26	6.91	1.65	3.15	0.72	14.4	240.4	Clear	None
10:05	5	10	100	22.21	0.40	6.87	1.641	2.74	0.49	14.2	220.3	Clear	None
10:10	5	15	100	22.47	0.53	6.85	1.642	2.46	0.37	14.2	192.6	Clear	None
10:15	5	20	100	22.72	0.66	6.85	1.645	2.28	0.34	14.1	167	Clear	None
10:20	5	25	100	23.00	0.79	6.85	1.629	2.16	0.34	14.5	136.4	Clear	None
10:25	5	30	100	23.21	0.92	6.84	1.643	2.15	0.27	14.3	121.5	Clear	None
10:30	5	35	100	23.47	1.06	6.84	1.635	2.48	0.26	14.1	92.4	Clear	None
10:35	5	40	100	23.74	1.19	6.83	1.627	2.59	0.25	14.1	63.3	Clear	None
10:40	5	45	100	23.88	1.32	6.81	1.564	2.85	1.21	14.7	27.3	Clear	None
10:47	7	52	100	24.02	1.51	6.83	1.591	2.75	1.43	15.6	31.6	Clear	None
10:50	3	55	100	24.04	1.59	6.85	1.641	2.45	0.76	14.1	34	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	6	None

Comments: Well did not stabilize after 60 minute purge. Well did not meet draw down requirements.

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 of plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-21-139	Date	5/16/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	73.9 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	3.08	Total Depth (ft-bmp)	15.36	Water Column (ft)	12.28	Gallons in Well	2.00
Purge Start	15:15	Pump Intake (ft-bmp)	13	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	16:30	Volumes Purged	2.00	Sample ID	MW-21-139_051624	Sampled by	Ellen Redner
Sample Time	16:20	Gallons Purged	4.0	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate gal/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:20	0	0	0.1	4.98	0.4	7.85	1.401	29.7	1.27	15.4	98.1	Clear	None
15:25	5	5	0.05	5.00	0.75	7.7	1.299	13.9	1.07	15.5	74.3	Clear	None
15:30	5	10	0.05	5.03	1	7.63	1.188	5.3	0.56	14.9	9.7	Clear	None
15:35	5	15	0.05	5.11	1.25	7.6	1.172	5	0.47	15.2	-39.9	Clear	None
15:40	5	20	0.05	5.19	1.5	7.6	1.174	4.19	0.48	14.8	-59.3	Clear	None
15:45	5	25	0.05	5.21	1.75	7.59	1.175	3.9	0.46	14.7	-66.6	Clear	None
15:50	5	30	0.05	5.29	2	7.59	1.175	3.94	0.42	14.5	-73	Clear	None
15:55	5	35	0.05	5.34	2.25	7.56	1.162	3.4	0.3	14.4	-78.2	Clear	None
16:00	5	40	0.05	5.38	2.5	7.57	1.173	3.84	0.34	14.8	-80.7	Clear	None
16:05	5	45	0.05	5.41	2.75	7.56	1.17	3.61	0.32	14.7	-82.8	Clear	None
16:10	5	50	0.05	5.43	3	7.55	1.167	3.47	0.26	14.7	-85.5	Clear	None
16:15	5	55	0.05	5.46	3.25	7.56	1.171	3.92	0.28	14.5	-86.4	Clear	None
16:20	5	60	0.05	5.40	3.5	7.55	1.167	3.83	0.25	14.3	-87	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	3	HCL
PFAS	250mL HDPE Plastic	2	None

Comments: DO did not stabilize.

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: _____	Well Locked at Arrival: yes _____
Condition of Well: Good condition _____	Well Locked at Departure: yes _____
Well Completion: Stick-up _____	Key Number To Well: 6000B _____

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-21-140	Date	5/16/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	60.1 degrees F and 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)	68.71	Total Depth (ft-bmp)	75.95	Water Column (ft)	7.24	Gallons in Well	1.18
Purge Start	10:55	Pump Intake (ft-bmp)	73.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	11:45	Volumes Purged	1.12	Sample ID	MW-21-140_051624	Sampled by	Billy Cobern
Sample Time	11:45	Gallons Purged	1.32	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:00	0	0	100	68.80	0.13	6.97	0.89	516.46	1.16	15.7	10.9	Gray	None
11:05	5	5	100	68.80	0.26	6.96	0.889	421.35	0.99	16.2	0.7	Gray	None
11:10	5	10	100	68.80	0.40	6.96	0.886	489.36	1.53	15.9	1.5	Gray	None
11:15	5	15	100	68.80	0.53	6.99	0.895	169.75	4.13	16.3	25.9	Gray	None
11:20	5	20	100	68.80	0.66	6.94	0.888	144.36	0.77	16.1	-3.3	Gray	None
11:25	5	25	100	68.80	0.79	6.93	0.889	111.64	0.55	16.2	-16	Gray	None
11:30	5	30	100	68.80	0.92	6.93	0.891	89.12	0.47	16.4	-23.5	Gray	None
11:35	5	35	100	68.80	1.06	6.93	0.892	83.05	0.41	16.4	-30.2	Gray	None
11:40	5	40	100	68.80	1.19	6.92	0.893	76.47	0.39	16.5	-34.2	Gray	None
11:45	5	45	100	68.80	1.32	6.92	0.892	77.79	0.38	16.5	-38.1	Gray	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-21-141	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	4	Well Casing Material	Steel	
Static Water Level (ft-bmp)	77.40	Total Depth (ft-bmp)	79.72	Water Column (ft)	2.32	Gallons in Well	1.51
Purge Start	15:40	Pump Intake (ft-bmp)	77.22	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	16:50	Volumes Purged	2.10	Sample ID	MW-21-141_052224	Sampled by	Donald Richmond
Sample Time	16:40	Gallons Purged	3.17	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:45	0	0	200	77.40	0.26	6.85	1.124	30	3.81	22	-45	Clear	None
15:50	5	5	200	77.40	0.53	6.67	1.01	13	1.28	19.6	-61.8	Clear	None
15:55	5	10	200	77.40	0.79	6.69	0.996	8.29	1.01	19.4	-67.5	Clear	None
16:00	5	15	200	77.40	1.06	6.71	0.99	8.67	0.85	19.5	-75.4	Clear	None
16:05	5	20	200	77.40	1.32	6.72	0.973	7.71	0.79	19.2	-76.4	Clear	None
16:10	5	25	200	77.40	1.59	6.72	0.974	7.51	0.66	19.4	-80.1	Clear	None
16:15	5	30	200	77.40	1.85	6.73	0.959	6.88	0.62	19.1	-82.5	Clear	None
16:20	5	35	200	77.40	2.11	6.73	0.965	7.73	0.41	19.6	-84.6	Clear	None
16:25	5	40	200	77.40	2.38	6.74	0.94	7.93	0.42	18.8	-84.7	Clear	None
16:30	5	45	200	77.40	2.64	6.74	0.924	7.87	0.29	18.7	-85.5	Clear	None
16:35	5	50	200	77.40	2.91	6.74	0.923	8.46	0.3	18.8	-86.8	Clear	None
16:40	5	55	200	77.40	3.17	6.81	0.933	9.32	0.29	19.2	-88	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-21-142	Date	5/15/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	48.0 degrees F and Clear. The wind is blowing N/NE at 6.9 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	66.92	Total Depth (ft-bmp)	79.39	Water Column (ft)	12.47	Gallons in Well	2.03
Purge Start	09:05	Pump Intake (ft-bmp)	78.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	10:18	Volumes Purged	1.72	Sample ID	MW-21-142_051524	Sampled by	Jarrett Humpala
Sample Time	10:15	Gallons Purged	3.5	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
09:10	0	0	150	66.98	0.20	6.55	2.289	4260.95	1.64	13.4	119.5	Brown	None
09:15	5	5	150	66.98	0.40	6.59	2.278	2622.47	0.23	13.3	48.2	Brown	None
09:20	5	10	150	66.98	0.59	6.6	2.269	4906.35	0.06	13.4	49.7	Brown	None
09:25	5	15	150	66.98	0.79	6.61	2.259	5452.78	-0.04	13.4	62.1	Brown	None
09:30	5	20	150	66.98	0.99	6.62	2.204	1544.38	-0.12	13.4	43.5	Brown	None
09:35	5	25	150	66.98	1.19	6.62	2.193	848.64	-0.12	13.3	37.7	Brown	None
09:40	5	30	150	66.98	1.39	6.63	2.167	829.73	-0.15	13.4	24.4	Brown	None
09:45	5	35	150	66.98	1.59	6.63	2.149	360.81	-0.18	13.4	15	Brown	None
09:50	5	40	150	66.98	1.78	6.63	2.134	261.84	-0.2	13.4	9.7	Brown	None
09:55	5	45	150	66.98	1.98	6.63	2.124	334.64	-0.22	13.4	6.1	Brown	None
10:00	5	50	150	66.98	2.18	6.64	2.123	663.61	-0.22	13.4	4	Brown	None
10:05	5	55	150	66.98	2.38	6.64	2.115	430.93	-0.24	13.3	2.5	Brown	None
10:10	5	60	150	66.98	2.58	6.64	2.107	320.75	-0.24	13.4	1	Brown	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-143	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	77.0 degrees F and Clear. The wind is blowing W/SW at 17.2 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	16.48	Total Depth (ft-bmp)	31	Water Column (ft)	14.52	Gallons in Well	2.36
Purge Start	12:45	Pump Intake (ft-bmp)	28.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	13:25	Volumes Purged	0.45	Sample ID	MW-22-143_052224	Sampled by	Billy Cobern
Sample Time	13:25	Gallons Purged	1.06	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
12:50	0	0	100	16.59	0.13	6.92	2.826	18.97	2.59	16.8	102	Clear	None
12:55	5	5	100	16.63	0.26	6.95	2.855	16.68	0.91	17	97.1	Clear	None
13:00	5	10	100	16.65	0.40	6.98	2.866	13.31	0.4	16.9	84.4	Clear	None
13:05	5	15	100	16.65	0.53	6.99	2.863	10.09	0.41	17.2	43.9	Clear	None
13:10	5	20	100	16.65	0.66	7	2.864	8.89	0.4	16.7	12.9	Clear	None
13:15	5	25	100	16.65	0.79	7	2.873	8.72	0.42	16.8	4.5	Clear	None
13:20	5	30	100	16.65	0.92	7	2.867	8.27	0.43	17	2.4	Clear	None
13:25	5	35	100	16.65	1.06	7	2.869	8.09	0.44	16.9	0.1	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	2	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-144	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	78.1 degrees F and Clear and Windy. The wind is blowing W/SW at 23.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	10.61	Total Depth (ft-bmp)	24.5	Water Column (ft)	13.89	Gallons in Well	2.26
Purge Start	15:15	Pump Intake (ft-bmp)	22	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:45	Volumes Purged	0.35	Sample ID	MW-22-144_052224	Sampled by	Billy Cobern
Sample Time	15:45	Gallons Purged	0.79	Replicate/ Code No.	DUP-14_052224	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:20	0	0	100	10.91	0.13	7.16	1.202	26.74	1.62	15.7	106.9	Clear	None
15:25	5	5	100	10.91	0.26	7.16	1.189	25.35	1.06	15.7	89.5	Clear	None
15:30	5	10	100	10.91	0.40	7.15	1.203	17.42	0.74	15.5	66.8	Clear	None
15:35	5	15	100	10.91	0.53	7.15	1.213	16.78	0.57	15.4	52.8	Clear	None
15:40	5	20	100	10.91	0.66	7.14	1.212	15.78	0.55	15.3	50.3	Clear	None
15:45	5	25	100	10.91	0.79	7.14	1.212	15.63	0.53	15.3	48.4	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	4	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-145	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	78.1 degrees F and Clear and Windy. The wind is blowing W/SW at 21.9 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	10.21	Total Depth (ft-bmp)	15	Water Column (ft)	4.79	Gallons in Well	0.78
Purge Start	16:05	Pump Intake (ft-bmp)	13	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	16:30	Volumes Purged	0.85	Sample ID	MW-22-145_052224	Sampled by	Billy Cobern
Sample Time	16:30	Gallons Purged	0.66	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
16:10	0	0	100	10.35	0.13	7.04	0.925	8.48	3.22	17.3	123.4	Clear	None
16:15	5	5	100	10.30	0.26	7.05	0.921	7.68	2.63	17.3	120.2	Clear	None
16:20	5	10	100	10.30	0.40	7.05	0.918	7.49	2.51	17.2	118.7	Clear	None
16:25	5	15	100	10.30	0.53	7.05	0.917	7.13	2.42	17.2	117.3	Clear	None
16:30	5	20	100	10.30	0.66	7.06	0.917	7.28	2.33	17.1	115.3	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	2	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-146	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	78.1 degrees F and Clear.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	4.38	Total Depth (ft-bmp)	10.5	Water Column (ft)	6.12	Gallons in Well	0.99
Purge Start	18:15	Pump Intake (ft-bmp)	8	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	18:45	Volumes Purged	0.80	Sample ID	MW-22-146_052224	Sampled by	Billy Cobern
Sample Time	18:45	Gallons Purged	0.79	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
18:20	0	0	100	4.70	0.13	7.28	0.959	60.68	4.93	13.4	106.1	Clear	None
18:25	5	5	100	4.70	0.26	7.28	0.947	36.21	4	13.2	107.8	Clear	None
18:30	5	10	100	4.70	0.40	7.28	0.944	23.28	3.76	13.1	108.5	Clear	None
18:35	5	15	100	4.70	0.53	7.28	0.941	8.09	3.66	12.9	109	Clear	None
18:40	5	20	100	4.70	0.66	7.28	0.941	8.24	3.62	12.8	109.7	Clear	None
18:45	5	25	100	4.70	0.79	7.27	0.938	8.75	3.58	12.9	111.3	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	2	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-147	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	61.0 degrees F and Clear. The wind is blowing SW at 10.3 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	9.03	Total Depth (ft-bmp)	12.2	Water Column (ft)	3.17	Gallons in Well	0.52
Purge Start	09:45	Pump Intake (ft-bmp)	11.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	10:20	Volumes Purged	1.77	Sample ID	MW-22-147_052324	Sampled by	Billy Cobern
Sample Time	10:20	Gallons Purged	0.92	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
09:50	0	0	100	9.36	0.13	7.03	1.254	42.85	5.31	13.1	172.6	Clear	None
09:55	5	5	100	9.35	0.26	7.07	1.244	20.82	4.26	13.1	169.8	Clear	None
10:00	5	10	100	9.35	0.40	7.09	1.255	14.63	4.38	13	168.8	Clear	None
10:05	5	15	100	9.35	0.53	7.09	1.262	10.39	4.41	12.9	167.4	Clear	None
10:10	5	20	100	9.35	0.66	7.1	1.276	8.89	4.42	13	165.1	Clear	None
10:15	5	25	100	9.35	0.79	7.11	1.287	8.68	4.38	12.9	161.3	Clear	None
10:20	5	30	100	9.35	0.92	7.11	1.288	8.41	4.39	13	160.8	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	2	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-148	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	61.0 degrees F and Clear. The wind is blowing SW at 10.3 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	24.74	Total Depth (ft-bmp)	29.3	Water Column (ft)	4.56	Gallons in Well	0.74
Purge Start	08:45	Pump Intake (ft-bmp)	28	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	09:35	Volumes Purged	1.78	Sample ID	MW-22-148_052324	Sampled by	Billy Cobern
Sample Time	09:35	Gallons Purged	1.32	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
08:50	0	0	100	25.25	0.13	6.41	1.02	88.51	3.18	14.9	202.3	Clear	None
08:55	5	5	100	25.60	0.26	6.7	0.996	70.15	2.58	15.2	191.6	Clear	None
09:00	5	10	100	25.95	0.40	6.81	0.988	63.32	2.25	15.2	191	Clear	None
09:05	5	15	100	26.16	0.53	6.86	0.982	51.73	2.11	15.5	190.4	Clear	None
09:10	5	20	100	26.30	0.66	6.9	0.977	50.74	1.95	15.6	190.3	Clear	None
09:15	5	25	100	26.41	0.79	6.91	0.97	23.07	1.76	15.5	190.4	Clear	None
09:20	5	30	100	26.49	0.92	6.93	0.97	22.02	1.7	15.5	189.9	Clear	None
09:25	5	35	100	26.55	1.06	6.94	0.971	19.04	1.69	15.3	189.1	Clear	None
09:30	5	40	100	26.59	1.19	6.93	0.971	18.7	1.68	15.3	188.9	Clear	None
09:35	5	45	100	26.64	1.32	6.94	0.971	19.8	1.68	15.3	188.7	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	2	None

Comments: Didn't meet drawdown requirements.

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-149	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	68.0 degrees F and Clear. The wind is blowing 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)	5.88	Total Depth (ft-bmp)	9.9	Water Column (ft)	4.02	Gallons in Well	0.65
Purge Start	11:00	Pump Intake (ft-bmp)	8.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	11:35	Volumes Purged	1.42	Sample ID	MW-22-149_052324	Sampled by	Billy Cobern
Sample Time	11:35	Gallons Purged	0.92	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:05	0	0	100	6.21	0.13	7.42	0.597	18.68	7.49	14.4	194.8	Clear	None
11:10	5	5	100	6.18	0.26	7.36	0.59	4.08	6.99	15.3	195.3	Clear	None
11:15	5	10	100	6.18	0.40	7.38	0.588	4.04	6.84	16.5	194.6	Clear	None
11:20	5	15	100	6.18	0.53	7.37	0.593	3.92	6.75	17.6	193.3	Clear	None
11:25	5	20	100	6.18	0.66	7.34	0.583	3.94	6.87	14.3	193.8	Clear	None
11:30	5	25	100	6.18	0.79	7.34	0.576	4.24	6.79	14.2	194	Clear	None
11:35	5	30	100	6.18	0.92	7.35	0.576	3.92	6.9	14.4	194.2	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	2	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-150	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	71.1 degrees F and Clear. 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)	5.65	Total Depth (ft-bmp)	17.95	Water Column (ft)	12.30	Gallons in Well	2.00
Purge Start	12:05	Pump Intake (ft-bmp)	15.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	13:00	Volumes Purged	0.72	Sample ID	MW-22-150_052324	Sampled by	Billy Cobern
Sample Time	13:00	Gallons Purged	1.45	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:10	0	0	100	6.05	0.40	7.23	4.215	19.06	1.91	14.5	56.8	Clear	None
12:15	5	5	100	6.31	0.26	7.26	4.266	14.43	0.68	14.7	-18.8	Clear	None
12:20	5	10	100	6.55	0.40	7.27	4.28	12.77	0.42	14.7	-37.5	Clear	None
12:25	5	15	100	6.77	0.53	7.27	4.285	12.57	0.29	14.7	-46.1	Clear	None
12:30	5	20	100	7.01	0.66	7.28	4.279	15.48	0.14	14.9	-53.8	Clear	None
12:35	5	25	100	7.25	0.79	7.28	4.286	17.31	0.05	15.1	-59.6	Clear	None
12:40	5	30	100	7.44	0.92	7.29	4.285	23.01	0	14.9	-64.9	Clear	None
12:45	5	35	100	7.65	1.06	7.29	4.282	25.46	0	14.8	-65.8	Clear	None
12:50	5	40	100	7.83	1.19	7.29	4.281	6.94	0.1	15	-67.6	Clear	None
12:55	5	45	100	7.99	1.32	7.29	4.283	6.62	0.1	15	-67.8	Clear	None
13:00	5	50	100	8.15	1.45	7.29	4.287	6.71	0.1	15	-68	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	2	None

Comments: Didn't meet drawdown requirements.

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-151	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	72.0 degrees F and Clear. The wind is blowing W at 12.8 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	6.43	Total Depth (ft-bmp)	14.95	Water Column (ft)	8.52	Gallons in Well	1.38
Purge Start	13:25	Pump Intake (ft-bmp)	12.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	14:05	Volumes Purged	0.77	Sample ID	MW-22-151_052324	Sampled by	Billy Cobern
Sample Time	14:05	Gallons Purged	1.06	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:30	0	0	100	6.76	0.13	6.87	2.553	31.45	0.66	16.4	-61.4	Clear	None
13:35	5	5	100	6.76	0.26	6.87	2.534	35.09	0.31	16	-62.3	Clear	None
13:40	5	10	100	6.76	0.40	6.87	2.528	43.57	0.07	15.8	-63.4	Clear	None
13:45	5	15	100	6.76	0.53	6.87	2.525	35.39	0.01	15.6	-63.7	Clear	None
13:50	5	20	100	6.76	0.66	6.87	2.525	23.64	0.01	5.4	-63.3	Clear	None
13:55	5	25	100	6.76	0.79	6.87	2.524	18.98	0.01	15.5	-63.6	Clear	None
14:00	5	30	100	6.76	0.92	6.87	2.524	18.16	0.01	15.5	-64.8	Clear	None
14:05	5	35	100	6.76	1.06	6.87	2.523	18.15	0.01	15.5	-63.8	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	2	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-152	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	73.9 degrees F and Clear. The wind is blowing W at 12.8 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	7.67	Total Depth (ft-bmp)	14.9	Water Column (ft)	7.23	Gallons in Well	1.17
Purge Start	14:30	Pump Intake (ft-bmp)	12.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:00	Volumes Purged	0.68	Sample ID	MW-22-152_052324	Sampled by	Billy Cobern
Sample Time	15:00	Gallons Purged	0.79	Replicate/ Code No.	MW-22-152_052324	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:35	0	0	100	7.70	0.13	7.16	0.927	7.23	0.51	14.2	8.5	Clear	None
14:40	5	5	100	7.70	0.26	7.15	0.904	4.4	0.18	14.2	-6.4	Clear	None
14:45	5	10	100	7.70	0.40	7.13	0.889	3.88	0.04	14	-10.9	Clear	None
14:50	5	15	100	7.70	0.53	7.13	0.888	4.41	0.01	13.8	-13.1	Clear	None
14:55	5	20	100	7.70	0.66	7.13	0.888	4.32	0.01	13.7	-13.2	Clear	None
15:00	5	25	100	7.70	0.79	7.12	0.887	4.49	0.01	13.6	-13.5	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	6	None
VOCs	40 mL Glass	9	HCL

Comments:

Well Casing Volume Conversion

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

Well Information

Well Location: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-154	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	75.0 degrees F and Clear. The wind is blowing W/SW at 17.2 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	5.24	Total Depth (ft-bmp)	10.55	Water Column (ft)	5.31	Gallons in Well	0.86
Purge Start	15:35	Pump Intake (ft-bmp)	8.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	16:05	Volumes Purged	0.92	Sample ID	MW-22-154_052324	Sampled by	Billy Cobern
Sample Time	16:05	Gallons Purged	0.79	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
15:40	0	0	100	5.44	0.13	6.88	4.959	6.48	0.24	14	81.9	Clear	None
15:45	5	5	100	5.44	0.26	6.89	4.949	5.59	0.11	14.1	70.9	Clear	None
15:50	5	10	100	5.44	0.40	6.9	4.933	4.21	0.01	14.2	58.7	Clear	None
15:55	5	15	100	5.44	0.53	6.92	4.92	3.7	0.01	13.9	48.5	Clear	None
16:00	5	20	100	5.44	0.66	6.93	4.896	3.79	0.01	13.9	44.9	Clear	None
16:05	5	25	100	5.44	0.79	6.93	4.905	3.47	0.01	13.8	44.6	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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-158	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	77.0 degrees F and Mostly Clear.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	12.03	Total Depth (ft-bmp)	21	Water Column (ft)	8.97	Gallons in Well	1.46
Purge Start	13:50	Pump Intake (ft-bmp)	17.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	14:35	Volumes Purged	0.82	Sample ID	MW-22-158_052224	Sampled by	Billy Cobern
Sample Time	14:35	Gallons Purged	1.19	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:55	0	0	100	12.23	0.13	7.03	3.564	63.42	1.93	15.9	-1.4	Clear	None
14:00	5	5	100	12.25	0.26	7.03	3.456	54.35	1.42	15.9	-10.4	Clear	None
14:05	5	10	100	12.25	0.40	7.05	3.469	48.17	0.42	15.8	-26.8	Clear	None
14:10	5	15	100	12.25	0.53	7.05	3.458	28.78	0.45	15.7	-32.3	Clear	None
14:15	5	20	100	12.25	0.66	7.05	3.46	17.68	0.47	15.7	-35.3	Clear	None
14:20	5	25	100	12.25	0.79	7.05	3.454	12.21	0.46	15.8	-35.7	Clear	None
14:25	5	30	100	12.25	0.92	7.05	3.456	9.98	0.48	15.8	-35.9	Clear	None
14:30	5	35	100	12.25	1.06	7.05	3.461	9.87	0.46	15.7	-36.2	Clear	None
14:35	5	40	100	12.25	1.19	7.05	3.465	9.74	0.46	15.6	-36.5	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	2	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-159	Date	5/22/2024
Project Name/Location	RACER Lansing 2024		Weather(°F)	78.1 degrees F and Clear and Windy. The wind is blowing W/SW at 23.0 mph.	
Measuring Pt. Description	Top of Inner Casing	MP Elevation		Casing Diameter (in)	2
Static Water Level (ft-bmp)	29.79	Total Depth (ft-bmp)	29.8	Water Column (ft)	0.01
Purge Start		Pump Intake (ft-bmp)		Purge Method	Low-Flow
Purge End		Volumes Purged		Sample ID	NA
Sample Time		Gallons Purged		Replicate/ Code No.	NA
				Sample Type	

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
14:55	0	0	0	29.79	0.00	0	0	0	0	0	0		

Comments: Well is dry, no sample

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-22-160	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	78.1 degrees F and Clear.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	12.62	Total Depth (ft-bmp)	19	Water Column (ft)	6.38	Gallons in Well	1.04
Purge Start	17:00	Pump Intake (ft-bmp)	16.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	17:45	Volumes Purged	1.14	Sample ID	MW-22-160_052224	Sampled by	Billy Cobern
Sample Time	17:45	Gallons Purged	1.19	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
17:05	0	0	100	12.71	0.13	6.88	1.186	11.43	1.73	14.6	-53.6	Clear	None
17:10	5	5	100	12.71	0.26	6.9	1.183	8.76	1.41	14.1	-53.5	Clear	None
17:15	5	10	100	12.71	0.40	6.91	1.181	11.02	1.03	13.8	-53.5	Clear	None
17:20	5	15	100	12.71	0.53	6.91	1.177	14.85	1.05	13.6	-53.9	Clear	None
17:25	5	20	100	12.71	0.66	6.91	1.178	14.22	0.88	13.5	-54.1	Clear	None
17:30	5	25	100	12.71	0.79	6.91	1.179	14.43	0.77	13.6	-54.1	Clear	None
17:35	5	30	100	12.71	0.92	6.91	1.178	14.41	0.72	13.5	-54.2	Clear	None
17:40	5	35	100	12.71	1.06	6.91	1.177	15.09	0.7	13.4	-54.3	Clear	None
17:45	5	40	100	12.71	1.19	6.91	1.178	14.87	0.67	13.4	-54.3	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250 mL Plastic	2	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-23	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	81.0 degrees F and Clear. The wind is blowing SW at 6.9 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	49.80	Total Depth (ft-bmp)	62.57	Water Column (ft)	12.77	Gallons in Well	2.08
Purge Start	16:09	Pump Intake (ft-bmp)	61	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	17:18	Volumes Purged	1.49	Sample ID	MW-23_052124	Sampled by	Jarrett Humpala
Sample Time	17:15	Gallons Purged	3.1	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
16:12	0	0	150	49.80	0.12	10.47	0.402	249.74	1.98	17	26.1	Clear	None
16:17	5	5	150	49.80	0.32	10.03	0.408	55.27	0.51	16.2	16	Clear	None
16:22	5	10	150	49.80	0.52	9.55	0.467	34.41	0.5	16.2	23.8	Clear	None
16:27	5	15	150	49.80	0.71	9.02	0.728	840.34	0.68	16	38.9	Clear	None
16:32	5	20	150	49.80	0.91	8.92	0.879	1528.43	0.59	15.9	45.1	Clear	None
16:37	5	25	150	49.80	1.11	8.57	1.004	932.16	0.62	16.1	57	Clear	None
16:42	5	30	150	49.80	1.31	8.32	1.048	609.41	0.72	15.8	65.2	Clear	None
16:47	5	35	150	49.80	1.51	8.13	1.083	465.02	0.74	16.3	45.8	Clear	None
16:52	5	40	150	49.80	1.70	8.04	1.146	253.36	1.24	15.8	-11.4	Clear	None
16:57	5	45	150	49.80	1.90	7.76	1.168	251.49	1.16	15.9	-90.5	Clear	None
17:02	5	50	150	49.80	2.10	7.61	1.195	257.22	1.03	15.9	-111.1	Clear	None
17:07	5	55	150	49.80	2.30	7.52	1.218	296.57	1.01	16.3	-114.4	Clear	None
17:12	5	60	150	49.80	2.50	7.44	1.212	275.35	0.94	15.9	-113.9	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-91-2R	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	73.0 degrees F and Partly Cloudy. The wind is blowing SW at 15.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	57.42	Total Depth (ft-bmp)	84.15	Water Column (ft)	26.73	Gallons in Well	4.34
Purge Start	08:45	Pump Intake (ft-bmp)	81.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	09:35	Volumes Purged	0.30	Sample ID	MW-91-2R_052224	Sampled by	Billy Cobern
Sample Time	09:35	Gallons Purged	1.32	Replicate/ Code No.	DUP-09_052224	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
08:50	0	0	100	57.52	0.13	6.94	1.73	15.56	5.54	19.1	-43.5	Clear	None
08:55	5	5	100	57.55	0.26	6.94	1.754	16.74	3.54	18.3	-70.1	Clear	None
09:00	5	10	100	57.55	0.40	6.99	1.755	7.58	17.7	18.5	-89.7	Clear	None
09:05	5	15	100	57.55	0.53	7.02	1.759	7.31	1.08	18.6	-96.1	Clear	None
09:10	5	20	100	57.55	0.66	7.04	1.761	7.98	0.78	18.5	-99.7	Clear	None
09:15	5	25	100	57.55	0.79	7.05	1.76	7.91	0.55	18.2	-102.3	Clear	None
09:20	5	30	100	57.55	0.92	7.07	1.757	8.09	0.35	18.6	-105.2	Clear	None
09:25	5	35	100	57.55	1.06	7.07	1.759	8.76	0.31	18.6	-106.3	Clear	None
09:30	5	40	100	57.55	1.19	7.07	1.757	8.96	0.3	18.6	-106.5	Clear	None
09:35	5	45	100	57.55	1.32	7.07	1.757	9.18	0.29	18.6	-106.6	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	6	HCL
Hexavalent Chromium SW-846 7196	250 mL Plastic	2	None
PFAS	250 mL Plastic	4	None
Total Metals	125 mL Plastic	2	HNO3

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-91-5	Date	5/20/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	63.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	63.55	Total Depth (ft-bmp)	126.35	Water Column (ft)	62.80	Gallons in Well	10.20
Purge Start	09:00	Pump Intake (ft-bmp)	124	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	10:00	Volumes Purged	0.16	Sample ID	MW-91-5_052024	Sampled by	Billy Cobern
Sample Time	10:00	Gallons Purged	1.59	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
09:05	0	0	100	63.88	0.13	6.91	0.168	140.47	9.94	16.1	-41.4	Clear	None
09:10	5	5	100	63.88	0.26	6.88	0.162	140.69	8.85	15.4	-47.8	Clear	None
09:15	5	10	100	63.88	0.40	6.88	0.16	139.68	7.29	14.9	-54.7	Clear	None
09:20	5	15	100	63.88	0.53	6.9	0.16	136.37	5.73	14.8	-59.9	Clear	None
09:25	5	20	100	63.88	0.66	6.91	0.16	111.35	4.65	14.6	-64.7	Clear	None
09:30	5	25	100	63.88	0.79	6.93	0.16	97.57	2.02	14.5	-75.8	Clear	None
09:35	5	30	100	63.88	0.92	6.94	0.16	67.63	1.61	14.4	-78.3	Clear	None
09:40	5	35	100	63.88	1.06	6.94	0.16	50.1	1.26	14.4	-81.1	Clear	None
09:45	5	40	100	63.88	1.19	6.94	0.16	35.81	1	14.4	-83.1	Clear	None
09:50	5	45	100	63.88	1.32	6.94	0.16	31.12	0.82	14.4	-84.7	Clear	None
09:55	5	50	100	63.88	1.45	6.94	0.16	25.07	0.89	14.3	-86.2	Clear	None
10:00	5	55	100	63.88	1.59	6.94	0.16	20.15	0.88	14.4	-87.4	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Amber	2	HCL

Comments: Turbidity didn't stabilize within 60 minutes

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: Plant 3	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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MW-91-6	Date	5/24/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	52.0 degrees F and . The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	62.22	Total Depth (ft-bmp)	96.15	Water Column (ft)	33.93	Gallons in Well	5.51
Purge Start	08:15	Pump Intake (ft-bmp)	93.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	09:00	Volumes Purged	0.22	Sample ID	MW-91-6_052424	Sampled by	Billy Cobern
Sample Time	09:00	Gallons Purged	1.19	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
08:20	0	0	100	62.44	0.13	6.69	1.209	160.22	1.06	15.4	95	Clear	None
08:25	5	5	100	62.44	0.26	6.77	1.275	154.88	0.46	15.5	11.5	Clear	None
08:30	5	10	100	62.44	0.40	6.83	1.702	64.78	0.69	15.6	-60.9	Clear	None
08:35	5	15	100	62.44	0.53	6.69	2.19	28.82	0.67	15.8	-73	Clear	None
08:40	5	20	100	62.44	0.66	6.62	2.348	20.17	0.66	15.9	-69.8	Clear	None
08:45	5	25	100	62.44	0.79	6.59	2.428	30.81	0.67	16	-66.7	Clear	None
08:50	5	30	100	62.44	0.92	6.58	2.456	19.06	0.68	16.2	-65.3	Clear	None
08:55	5	35	100	62.44	1.06	6.57	2.467	20.34	0.69	16.2	-65	Clear	None
09:00	5	40	100	62.44	1.19	6.57	2.471	20.11	0.7	16.2	-65	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 522	250 mL Amber	2	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: Plant 3	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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MWBP-10-UST5-6	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	71.1 degrees F and Clear. 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)	29.42	Total Depth (ft-bmp)	37.2	Water Column (ft)	7.78	Gallons in Well	1.26
Purge Start	10:53	Pump Intake (ft-bmp)	36	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	11:56	Volumes Purged	1.59	Sample ID	MWBP-10-UST5-6_052324	Sampled by	Jarrett Humpala
Sample Time	11:50	Gallons Purged	2	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:57	0	0	150	29.42	0.16	7.08	3.139	314	1.8	20.2	-88.9	Clear	None
11:02	5	5	150	29.42	0.36	7.08	3.165	199.48	1.32	20.2	-87.6	Clear	None
11:07	5	10	150	29.42	0.55	7.07	3.19	275.6	1.31	20.6	-88.7	Clear	None
11:12	5	15	150	29.42	0.75	7.06	3.321	192.2	1.02	19.3	-92.2	Clear	None
11:17	5	20	150	29.42	0.95	7.06	3.341	130.31	1.04	19.3	-90	Clear	None
11:22	5	25	150	29.42	1.15	7.06	3.345	128.81	1.04	19.5	-89.8	Clear	None
11:27	5	30	150	29.42	1.35	7.16	3.371	109.37	1	19.4	-88.5	Clear	None
11:32	5	35	150	29.42	1.55	7.07	3.39	104.2	1.01	19.5	-87.5	Clear	None
11:37	5	40	150	29.42	1.74	7.07	3.416	95.84	0.99	19.5	-82.1	Clear	None
11:42	5	45	150	29.42	1.94	7.07	3.438	100.76	0.99	19.5	-82.9	Clear	None
11:47	5	50	150	29.42	2.14	7.07	3.475	95.64	1.04	19.5	-78.6	Clear	None

Constituent Sampled	Container	Number	Preservative
Dissolved Metals, Total Metals	125 mL Plastic	2	HNO3

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MWBP-11-UST1-4	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	71.1 degrees F and Clear. The wind is blowing W/SW at 9.2 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	4	Well Casing Material	PVC	
Static Water Level (ft-bmp)	1.34	Total Depth (ft-bmp)	11.24	Water Column (ft)	9.90	Gallons in Well	6.43
Purge Start	12:15	Pump Intake (ft-bmp)	10.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	13:24	Volumes Purged	0.36	Sample ID	MWBP-11-UST1-4_052324	Sampled by	Jarrett Humpala
Sample Time	13:20	Gallons Purged	2.3	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
12:19	0	0	150	1.35	0.16	9.03	1.696	8.55	3.76	17.8	155.7	Clear	None
12:24	5	5	150	1.35	0.36	9.03	1.666	16.28	3.26	17.7	158.5	Clear	None
12:29	5	10	150	1.35	0.55	9.06	1.655	25.02	3.09	17.7	114.1	Clear	None
12:34	5	15	150	1.35	0.75	9.02	1.632	44.81	2.92	17.7	136.5	Clear	None
12:39	5	20	150	1.35	0.95	8.98	1.594	53.4	2.69	17.4	145	Clear	None
12:44	5	25	150	1.35	1.15	8.97	1.558	71.06	2.46	17.3	145.9	Clear	None
12:49	5	30	150	1.35	1.35	9	1.505	114.82	2.08	17.2	140.9	Clear	None
12:54	5	35	150	1.35	1.55	8.99	1.488	135.7	1.93	17.3	137.6	Clear	None
12:59	5	40	150	1.35	1.74	8.98	1.466	172.08	1.69	17.2	131.8	Clear	None
13:04	5	45	150	1.35	1.94	8.98	1.454	144.2	1.53	17.3	126.2	Clear	None
13:09	5	50	150	1.35	2.14	8.97	1.437	158.94	1.4	17.1	120.8	Clear	None
13:14	5	55	150	1.35	2.34	8.97	1.43	183.04	1.32	17	116.4	Clear	None
13:19	5	60	150	1.35	2.54	8.97	1.425	198.98	1.22	17	112.2	Clear	None

Constituent Sampled	Container	Number	Preservative
Dissolved Metals, Total Metals	125 mL Plastic	2	HNO3

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

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

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	MWBP-12-UST1-4	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	73.9 degrees F and Clear. The wind is blowing W at 12.8 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	4	Well Casing Material	PVC	
Static Water Level (ft-bmp)	2.14	Total Depth (ft-bmp)	11.28	Water Column (ft)	9.14	Gallons in Well	5.94
Purge Start	13:32	Pump Intake (ft-bmp)	10.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	14:18	Volumes Purged	0.42	Sample ID	MWBP-12-UST1-4_052324	Sampled by	Jarrett Humpala
Sample Time	14:15	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
13:36	0	0	150	2.15	0.16	7.84	0.811	5.38	2.31	14.6	166.6	Clear	None
13:41	5	5	150	2.15	0.36	7.68	0.799	5.72	1.88	14.3	171.6	Clear	None
13:46	5	10	150	2.15	0.55	7.68	0.794	8.8	1.81	14.3	175.9	Clear	None
13:51	5	15	150	2.15	0.75	7.67	0.805	11.43	1.8	15.3	179	Clear	None
13:56	5	20	150	2.15	0.95	7.67	0.81	16.39	1.8	15.2	181.8	Clear	None
14:01	5	25	150	2.15	1.15	7.67	0.81	21.72	1.78	15.3	184.9	Clear	None
14:06	5	30	150	2.15	1.35	7.66	0.809	22.41	1.75	15.3	187.3	Clear	None
14:11	5	35	150	2.15	1.55	7.66	0.805	23.74	1.7	15.1	190.3	Clear	None

Constituent Sampled	Container	Number	Preservative
Dissolved Metals, Total Metals	125 mL Plastic	2	HNO3
SVOCs	1L Glass	2	None
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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	P2-MW-02	Date	5/16/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	60.1 degrees F and 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)	36.16	Total Depth (ft-bmp)	40.21	Water Column (ft)	4.05	Gallons in Well	0.66
Purge Start	11:05	Pump Intake (ft-bmp)	39	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	11:32	Volumes Purged	2.45	Sample ID	P2-MW-02_051624	Sampled by	Ellen Redner
Sample Time	11:50	Gallons Purged	1.62	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate gal/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
11:10	0	0	0.06	36.45	0.3	6.66	1.21	110	1.16	14.2	175.5	Clear	None
11:15	5	5	0.06	36.71	0.6	6.78	1.189	32.7	0.5	14	152	Clear	None
11:20	5	10	0.06	36.90	0.9	6.79	1.189	26.3	0.43	13.9	138.4	Clear	None
11:25	5	15	0.06	39.10	1.2	6.81	1.185	20.5	0.26	13.9	116	Clear	None
11:30	5	20	0.06	39.50	1.5	6.82	1.166	19.4	0.27	13.8	78.7	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

Comments: Waited for recharge and then collected sample.

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: Plant 2	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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	P2-MW-04	Date	5/16/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	66.9 degrees F and Clear. The wind is blowing W/SW at 4.7 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	11.45	Total Depth (ft-bmp)	39.5	Water Column (ft)	28.05	Gallons in Well	4.56
Purge Start	12:55	Pump Intake (ft-bmp)	37	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:00	Volumes Purged	1.37	Sample ID	P2-MW-04_051624	Sampled by	Ellen Redner
Sample Time	14:00	Gallons Purged	6.25	Replicate/ Code No.	P2-MW-04_051624	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate gal/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:00	0	0	0.05	11.65	0.25	7.14	1.344	129	0.51	13.5	32.9	Clear	None
13:05	5	5	0.05	11.65	0.5	7.15	1.336	94.8	0.19	13.4	-51.3	Clear	None
13:10	5	10	0.05	11.65	0.75	7.15	1.333	80.2	0.17	13.4	-56.1	Clear	None
13:15	5	15	0.05	11.65	1	7.15	1.333	42.3	0.12	13.4	-67.1	Clear	None
13:20	5	20	0.05	11.65	1.25	7.14	1.334	28.6	0.09	13.2	-73.5	Clear	None
13:25	5	25	0.05	11.65	1.5	7.15	1.326	27.6	0.05	13.4	-80.2	Clear	None
13:30	5	30	0.05	11.65	1.75	7.15	1.326	28.4	0.04	13.3	-83.1	Clear	None
13:35	5	35	0.05	11.65	2	7.15	1.327	33.9	0.01	13.2	-88.1	Clear	None
13:40	5	40	0.05	11.65	2.25	7.15	1.327	39.4	0.01	13.2	-89.9	Clear	None
13:45	5	45	0.05	11.66	2.5	7.15	1.33	17.7	0.01	13.5	-93.1	Clear	None
13:50	5	50	0.05	11.67	2.75	7.16	1.329	15.2	0	13.3	-95.9	Clear	None
13:55	5	55	0.05	11.68	3	7.16	1.329	17.4	0	13.3	-98	Clear	None
14:00	5	60	0.05	11.69	3.25	7.2	1.33	18.5	0	13.2	-100	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	40 mL Glass	9	HCL
PFAS	250mL HDPE Plastic	6	None
SVOCs	1L Amber	6	None

Comments: Turbidity did not stabilize.

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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 6000B

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	P3-SB-28	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	75.9 degrees F and Mostly Cloudy. The wind is blowing W/SW 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)	5.87	Total Depth (ft-bmp)	10.37	Water Column (ft)	4.50	Gallons in Well	0.73
Purge Start	11:30	Pump Intake (ft-bmp)	7.87	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	12:10	Volumes Purged	2.89	Sample ID	P3-SB-28_052224	Sampled by	Austin Westhuis
Sample Time	12:00	Gallons Purged	2.11	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:35	0	0	200	6.18	0.26	7.43	0.488	8.93	0.58	16.5	159.1	Clear	None
11:40	5	5	200	6.23	0.53	7.46	0.472	5.73	0.25	16.7	149.9	Clear	None
11:45	5	10	200	6.23	0.79	7.49	0.462	5.22	0.17	16.8	141.4	Clear	None
11:50	5	15	200	6.23	1.06	7.51	0.455	5.09	0.14	16.9	138.6	Clear	None
11:55	5	20	200	6.23	1.32	7.53	0.448	4.91	0.14	16.8	134.8	Clear	None
12:00	5	25	200	6.24	1.59	7.53	0.446	4.63	0.13	16.9	133	Clear	None

Constituent Sampled	Container	Number	Preservative
SVOCs	1L Amber	2	None

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 2035

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	P6-SB-07	Date	5/23/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	75.0 degrees F and Clear. The wind is blowing W/SW at 17.2 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	6.82	Total Depth (ft-bmp)	23.6	Water Column (ft)	16.78	Gallons in Well	2.73
Purge Start	14:49	Pump Intake (ft-bmp)	22.6	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	15:59	Volumes Purged	0.92	Sample ID	P6-SB-07_052324	Sampled by	Jarrett Humpala
Sample Time	15:55	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
14:52	0	0	150	6.82	0.12	7.6	0.649	66.35	2.63	14.5	250.9	Clear	None
14:57	5	5	150	6.82	0.32	7.43	0.627	60.89	0.8	14.2	230	Clear	None
15:02	5	10	150	6.82	0.52	7.39	0.63	70.58	0.41	14.2	60	Clear	None
15:07	5	15	150	6.82	0.71	7.36	0.644	84.57	0.23	14.2	-51.2	Clear	None
15:12	5	20	150	6.82	0.91	7.35	0.645	110.2	0.1	13.9	-71.7	Clear	None
15:17	5	25	150	6.82	1.11	7.33	0.662	151.2	0	14.2	-83	Clear	None
15:22	5	30	150	6.82	1.31	7.32	0.662	184.53	0	13.9	-86.2	Clear	None
15:27	5	35	150	6.82	1.51	7.31	0.673	224.77	0	14.3	-90.1	Clear	None
15:32	5	40	150	6.82	1.70	7.3	0.672	275	0	13.8	-92.7	Clear	None
15:37	5	45	150	6.82	1.90	7.3	0.676	343.6	0	13.9	-94.9	Clear	None
15:42	5	50	150	6.82	2.30	7.3	0.671	330.72	0	13.8	-95.8	Clear	None
15:47	5	55	150	6.82	2.30	7.29	0.679	366.81	0	13.9	-97.5	Clear	None
15:52	5	60	150	6.82	2.23	7.3	0.683	353.31	0	13.9	-98.3	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None
SVOCs	1L Amber	2	None

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: Plant 6	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	PW-14-01	Date	5/15/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	59.0 degrees F and Partly Cloudy. The wind is blowing NE 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)	67.33	Total Depth (ft-bmp)	78.9	Water Column (ft)	11.57	Gallons in Well	1.88
Purge Start	11:00	Pump Intake (ft-bmp)	77.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	12:15	Volumes Purged	1.44	Sample ID	PW-14-01_051524	Sampled by	Jarrett Humpala
Sample Time	12:10	Gallons Purged	2.7	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
11:04	0	0	150	67.33	0.16	6.87	2.918	553.07	7.83	16.6	-55.2	Brown	None
11:09	5	5	150	67.33	0.36	6.88	2.853	233.51	5.81	14.8	-38.2	Brown	None
11:14	5	10	150	67.33	0.55	6.88	2.847	223.57	5.71	14.8	-37.6	Brown	None
11:19	5	15	150	67.33	0.75	6.89	2.834	180.5	5.57	14.8	-35.4	Brown	None
11:24	5	20	150	67.33	0.95	6.91	2.824	183.68	5.51	14.8	-33.4	Brown	None
11:29	5	25	150	67.33	1.15	6.93	2.811	156.89	5.51	14.9	-30.2	Brown	None
11:34	5	30	150	67.33	1.35	6.95	2.796	179.17	5.55	14.9	-24.9	Brown	None
11:39	5	35	150	67.33	1.55	6.96	2.798	182.81	5.54	15	-22	Brown	None
11:44	5	40	150	67.33	1.74	6.96	2.791	218.61	5.6	15	-19.3	Brown	None
11:49	5	45	150	67.33	1.94	6.96	2.78	239.94	5.65	14.9	-17	Brown	None
11:54	5	50	150	67.33	2.14	6.97	2.792	265.2	5.67	15.1	-14.6	Brown	None
11:59	5	55	150	67.33	2.34	6.97	2.802	284.62	5.69	15.4	-13	Brown	None
12:04	5	60	150	67.33	2.54	6.98	2.804	314.75	5.56	15.4	-10.6	Brown	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	PW-14-02	Date	5/15/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	64.0 degrees F and Clear. The wind is blowing N/NE at 10.3 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	67.51	Total Depth (ft-bmp)	76.8	Water Column (ft)	9.29	Gallons in Well	1.51
Purge Start	12:42	Pump Intake (ft-bmp)	75	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	14:00	Volumes Purged	1.72	Sample ID	PW-14-02_051524	Sampled by	Jarrett Humpala
Sample Time	13:55	Gallons Purged	2.6	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
12:50	0	0	150	67.51	0.20	7	2.04	181.57	6.16	17.6	-74.1	Clear	None
12:55	5	5	150	67.51	0.52	6.8	1.853	57.62	1.68	16.6	-28.9	Clear	None
13:00	5	10	150	67.51	0.71	6.79	2.191	32.35	1.19	16.8	-9.2	Clear	None
13:05	5	15	150	67.51	0.91	6.84	1.834	29.22	1.1	16.4	-2.7	Clear	None
13:10	5	20	150	67.51	1.11	6.78	1.836	40.2	1.04	16.4	0.4	Clear	None
13:15	5	25	150	67.51	1.31	6.78	1.844	36.05	1.01	16.5	5.8	Clear	None
13:20	5	30	150	67.51	1.51	6.78	1.842	22.46	1	16.7	8.8	Clear	None
13:25	5	35	150	67.51	1.70	6.78	1.853	52.26	1.02	16.9	12	Clear	None
13:30	5	40	150	67.51	1.90	6.78	1.8551	65.97	1.07	16.9	17.1	Clear	None
13:35	5	45	150	67.51	2.10	6.78	1.85	60.44	1.15	16.9	22.1	Clear	None
13:40	5	50	150	67.51	2.30	6.78	1.85	73.8	1.23	16.9	30.4	Clear	None
13:45	5	55	150	67.51	2.50	6.78	1.844	84.31	1.32	16.8	37.3	Clear	None
13:50	5	60	150	67.51	2.69	6.79	1.848	98.55	1.41	17	52.6	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	PW-14-03R	Date	5/17/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	6	Well Casing Material	PVC	
Static Water Level (ft-bmp)	72.12	Total Depth (ft-bmp)	94.3	Water Column (ft)	22.18	Gallons in Well	32.44
Purge Start	10:25	Pump Intake (ft-bmp)	91.8	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	11:35	Volumes Purged	0.10	Sample ID	PW-14-03R_051724	Sampled by	Donald Richmond
Sample Time	11:30	Gallons Purged	3.17	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
10:35	0	0	200	72.12	0.53	6.17	2.796	33.71	0.81	19.7	238.1	Clear	None
10:40	5	5	200	72.12	0.79	6.16	2.84	56	0.64	20.2	236.5	Clear	None
10:45	5	10	200	72.12	1.06	6.15	2.88	89	0.58	20.7	234.8	Clear	None
10:50	5	15	200	72.12	1.32	6.15	2.9	126.92	0.5	20.8	231.6	Clear	None
10:55	5	20	200	72.12	1.59	6.14	2.912	152	0.45	21	230.4	Clear	None
11:00	5	25	200	72.12	1.85	6.14	2.867	185	0.34	19.7	229.1	Clear	None
11:05	5	30	200	72.12	2.11	6.15	2.822	247	0.34	19.6	227	Clear	None
11:10	5	35	200	72.12	2.38	6.15	2.837	269	0.4	19.7	224.1	Clear	None
11:15	5	40	200	72.12	2.64	6.15	2.935	260	0.43	21.2	218.6	Clear	None
11:20	5	45	200	72.12	2.91	6.14	2.972	257	0.39	21.5	215	Clear	None
11:25	5	50	200	72.12	3.17	6.14	2.991	248	0.38	21.7	213.8	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	TW-14-02	Date	5/15/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	64.9 degrees F and Mostly Cloudy. The wind is blowing N at 15.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	61.85	Total Depth (ft-bmp)	72.87	Water Column (ft)	11.02	Gallons in Well	1.79
Purge Start	14:25	Pump Intake (ft-bmp)	70.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	15:40	Volumes Purged	1.34	Sample ID	TW-14-02_051524	Sampled by	Jarrett Humpala
Sample Time	15:35	Gallons Purged	2.4	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
14:33	0	0	150	61.85	0.32	7.11	3.872	153.77	9.13	15.8	218	Clear	None
14:38	5	5	150	61.85	0.52	6.83	3.865	160.25	6.67	15.3	214.4	Clear	None
14:43	5	10	150	61.85	0.71	6.74	3.878	129.14	5.08	15.2	211.7	Clear	None
14:48	5	15	150	61.85	0.91	6.67	3.897	94.62	3.47	15.3	208.9	Clear	None
14:53	5	20	150	61.85	1.11	6.63	3.908	81.21	2.51	15.2	206	Clear	None
14:58	5	25	150	61.85	1.31	6.61	3.911	100.69	1.65	15.1	202	Clear	None
15:03	5	30	150	61.85	1.51	6.61	3.917	123.3	1.39	15.1	199.8	Clear	None
15:08	5	35	150	61.85	1.70	6.6	3.917	118.37	1.33	15.2	199	Clear	None
15:13	5	40	150	61.85	1.90	6.59	3.919	137.32	1.15	15.2	197.3	Clear	None
15:18	5	45	150	61.85	2.10	6.59	3.924	167.98	1.05	15.2	195.8	Clear	None
15:23	5	50	150	61.85	2.30	6.59	3.925	184.15	0.98	15.1	194.6	Clear	None
15:28	5	55	150	61.85	2.50	6.59	3.923	186.1	0.94	15.3	193.9	Clear	None
15:33	5	60	150	61.85	2.69	6.61	3.916	207.57	0.92	15.1	123.9	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM,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: Plant 2	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	TW-15-11		Date	5/17/2024	
Project Name/Location	RACER Lansing 2024		Weather(°F)				
Measuring Pt. Description	Top of Inner Casing	MP Elevation		Casing Diameter (in)	2	Well Casing Material	PVC
Static Water Level (ft-bmp)	71.85	Total Depth (ft-bmp)	87.05	Water Column (ft)	15.20	Gallons in Well	2.47
Purge Start	08:55	Pump Intake (ft-bmp)	84.55	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	10:05	Volumes Purged	1.28	Sample ID	TW-15-11_051724	Sampled by	Donald Richmond
Sample Time	10:00	Gallons Purged	3.17	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
09:00	0	0	200	71.85	0.26	6.67	2.758	21	1.98	17.5	267.9	Clear	None
09:05	5	5	200	71.85	0.53	6.67	2.671	34	0.59	17.3	259.6	Clear	None
09:10	5	10	200	71.85	0.79	6.67	2.675	42.77	0.45	17.3	254.6	Clear	None
09:15	5	15	200	71.85	1.06	6.67	2.665	61	0.29	17.1	247.6	Clear	None
09:20	5	20	200	71.85	1.32	6.67	2.677	109	0.18	17.2	239.5	Clear	None
09:25	5	25	200	71.85	1.59	6.67	2.696	142	0.16	17.6	234.3	Clear	None
09:30	5	30	200	71.85	1.85	6.67	2.698	155	0.12	17.6	231.9	Clear	None
09:35	5	35	200	71.85	2.11	6.67	2.697	167	0.12	17.6	228.5	Clear	None
09:40	5	40	200	71.85	2.38	6.67	2.71	190	0.09	17.7	224.5	Clear	None
09:45	5	45	200	71.85	2.64	6.67	2.71	204	0.05	17.8	219.5	Clear	None
09:50	5	50	200	71.85	2.91	6.67	2.724	232	0.04	17.7	214	Clear	None
09:55	5	55	200	71.85	3.17	6.68	2.728	271	0.03	17.9	137.5	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 3	Well Locked at Arrival: yes
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Stick-up</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	TW-15-12		Date	5/16/2024	
Project Name/Location	RACER Lansing 2024		Weather(°F)	50.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation		Casing Diameter (in)	4	Well Casing Material	PVC
Static Water Level (ft-bmp)	65.84	Total Depth (ft-bmp)	77.05	Water Column (ft)	11.21	Gallons in Well	7.29
Purge Start	08:50	Pump Intake (ft-bmp)	74.5	Purge Method	Low-Flow	Purge Equipment	Bladder
Purge End	09:25	Volumes Purged	0.13	Sample ID	TW-15-12_051624	Sampled by	Billy Cobern
Sample Time	09:25	Gallons Purged	0.92	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
08:55	0	0	100	65.97	0.13	7.16	2.704	75.85	9.75	16.7	149.8	Clear	None
09:00	5	5	100	66.05	0.26	6.91	2.786	24.36	8.84	16	169.9	Clear	None
09:05	5	10	100	66.11	0.40	6.88	2.807	15.71	7.71	16.2	177.5	Clear	None
09:10	5	15	100	66.09	0.53	6.87	2.813	14.74	7.26	16.3	181.2	Clear	None
09:15	5	20	100	66.09	0.66	6.87	2.816	11.21	6.92	16.6	185.1	Clear	None
09:20	5	25	100	66.09	0.79	6.87	2.821	11.22	6.82	16.7	187.7	Clear	None
09:25	5	30	100	66.09	0.92	6.87	2.821	11.9	6.75	16.7	190.4	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-Dioxane 8270D SIM	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: Plant 2	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 = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	UNK-11	Date	5/22/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	75.9 degrees F and Mostly Cloudy. The wind is blowing W/SW 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)	0.25	Total Depth (ft-bmp)	11.82	Water Column (ft)	11.57	Gallons in Well	1.88
Purge Start	12:20	Pump Intake (ft-bmp)	9.32	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	13:05	Volumes Purged	1.27	Sample ID	UNK-11_052224	Sampled by	Austin Westhuis
Sample Time	12:55	Gallons Purged	2.38	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
12:25	0	0	200	0.51	0.26	10.36	0.193	184.33	2.44	17.3	37.2	Clear	None
12:30	5	5	200	0.56	0.53	10.26	0.197	63.72	2.37	18.4	39.6	Clear	None
12:35	5	10	200	0.62	0.79	10.19	0.199	43.11	2.22	18.9	41.5	Clear	None
12:40	5	15	200	0.67	1.06	10.16	0.203	33.98	2.24	19	42	Clear	None
12:45	5	20	200	0.71	1.32	10.16	0.206	31.68	2.3	19.7	42.3	Clear	None
12:50	5	25	200	0.73	1.59	10.19	0.209	30.75	2.27	19.6	41	Clear	None
12:55	5	30	200	0.74	1.85	10.22	0.211	30.11	2.25	19.6	39.9	Clear	None

Constituent Sampled	Container	Number	Preservative
SVOCs	1L Amber	2	None

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Stick-up	Key Number To Well: 2035

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form



Project Number	30214036	Well ID	UNK-15	Date	5/21/2024		
Project Name/Location	RACER Lansing 2024		Weather(°F)	81.0 degrees F and Clear. The wind is blowing SW at 6.9 mph.			
Measuring Pt. Description	Top of Inner Casing	MP Elevation	Casing Diameter (in)	2	Well Casing Material	PVC	
Static Water Level (ft-bmp)	0.50	Total Depth (ft-bmp)	15.08	Water Column (ft)	14.58	Gallons in Well	2.37
Purge Start	16:25	Pump Intake (ft-bmp)	11.58	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Purge End	17:05	Volumes Purged	0.89	Sample ID	UNK-15_052124	Sampled by	Austin Westhuis
Sample Time	17:00	Gallons Purged	2.11	Replicate/ Code No.	NA	Sample Type	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
16:30	0	0	200	1.05	0.26	8.01	0.559	7.33	0.22	14.7	86.1	Clear	None
16:35	5	5	200	1.25	0.53	7.95	0.583	7.35	0.16	16.5	81.9	Clear	None
16:40	5	10	200	1.44	0.79	7.98	0.579	6.94	0.16	16.1	80.9	Clear	None
16:45	5	15	200	1.67	1.06	7.97	0.574	4.88	0.15	16	76.9	Clear	None
16:50	5	20	200	1.86	1.32	7.96	0.573	4.23	0.13	16	73.2	Clear	None
16:55	5	25	200	2.02	1.59	7.96	0.57	3.79	0.13	15.8	71.2	Clear	None
17:00	5	30	200	2.17	1.85	7.96	0.568	3.51	0.12	15.8	69.4	Clear	None

Constituent Sampled	Container	Number	Preservative
PFAS	250mL HDPE Plastic	2	None

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: Plant 3	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: 2035

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv