## Clearwater, Scott

**From:** Clearwater, Scott
**Sent:** Tuesday, December 20, 2022 3:16 PM
**To:** Karg, Andrew (EGLE)
**Cc:** Armbruster, Amanda (DEQ); 'LeoneJ@michigan.gov'; 'Greensley.jean@Epa.gov'; bnorton1@wm.com; Brian Keenan-Lechel (blechel@saginawcounty.com); Dave Favero <dfavero@racertrust.org>; 'Pardys, John-Eric'
**Subject:** RACER Saginaw Malleable and Green Point Landfill - 2022 Annual Progress Report
**Attachments:** 2022 10030 RACER Saginaw Malleable and GPL Annual Progress Report.pdf

Good afternoon Andrew,
Attached please find the Saginaw Malleable and Green Point Landfill 2022 Annual Progress Report submitted on behalf of RACER. The report summarizes site activities completed during 2022 including the groundwater monitoring, gauging, and inspection and maintenance activities in accordance with the approved 2020 O&M Plan. Please let me know if you would like a hard copy submitted to you for the file. Feel free to contact Dave Favero or I with any questions.
Happy Holidays,
Scott

**Scott Clearwater**
Certified Project Manager
Arcadis of Michigan, LLC
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**Clearwater, Scott**

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**To:** Clearwater, Scott
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| **FROM** | ARCADIS<br>28550 Cabot Drive<br>Suite 500<br>Novi, MI, US, 48377 |
| **TO** | Michigan Dept of EGLE - Bay City<br>Andrew Karg<br>401 Ketchum Street<br>Suite B<br>BAY CITY, MI, US, 48708 |

| | |
|---|---|
| **PURCHASE ORDER NUMBER** | 2022 Annual Report |
| **REFERENCE** | 30121470.12000 |
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Mr. Andrew Karg
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Saginaw Bay District Office
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Michigan 48377
Phone: 248 994 2240
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Date: December 20, 2022
Our ref: 30121470

Subject:
Annual Progress Report - December 2021 through December 2022
RACER Trust Saginaw Malleable Industrial Land, Green Point Landfill, and Peninsula Property
Saginaw, Michigan

Dear Mr. Karg:

This annual progress report presents a summary of the work activities conducted during the period of December 2021 through December 2022 for the Revitalizing Auto Communities Environmental Response (RACER) Trust Saginaw Malleable Industrial Land (SMI), Green Point Landfill (GPL), and Peninsula former properties located in Saginaw, Michigan (the Site, **Figure 1**). This progress report also provides a summary of the work activities anticipated at the Site for the next 12-month period.

## Key Correspondence

The key correspondence between the Michigan Department of Environment, Great Lakes and Energy (EGLE), U.S. Environmental Protection Agency (EPA), or City of Saginaw from Arcadis and/or GHD on behalf of RACER Trust during the reporting period are as follows:

- The 2021 Annual Report was submitted by Arcadis on December 15, 2021.
- An acknowledgement of review of the 2021 Annual Report and indication to continue VOC analysis on TWW-1 in 2022 was received from EGLE on March 25, 2022.

## Conference Call/Meetings

- Work correspondence for routine work to be performed.
- A call with EGLE occurred to discuss potential for abandonment of the previously inaccessible monitoring wells on November 7, 2022.

## Site Activities

### Site Inspection

- A Site inspection was conducted on June 29, 2022, to evaluate surface water levels at the Site and to complete preliminary cover inspections. Overall, surface water levels were lower than what was observed in 2021.
- During the annual Operation and Maintenance (O&M) event that occurred from September 19 through September 28, 2022, the Site inspection activities were conducted in accordance with the O&M Plan (Arcadis, August 2020) to ensure the ongoing effectiveness of various Site corrective measures as summarized in the **table** below, at the locations depicted on **Figure 2.**
  - Inspection results are discussed further below and documented in the Site Inspection Form (**Attachment 4**).

**Summary of Site Operation and Maintenance Activities**

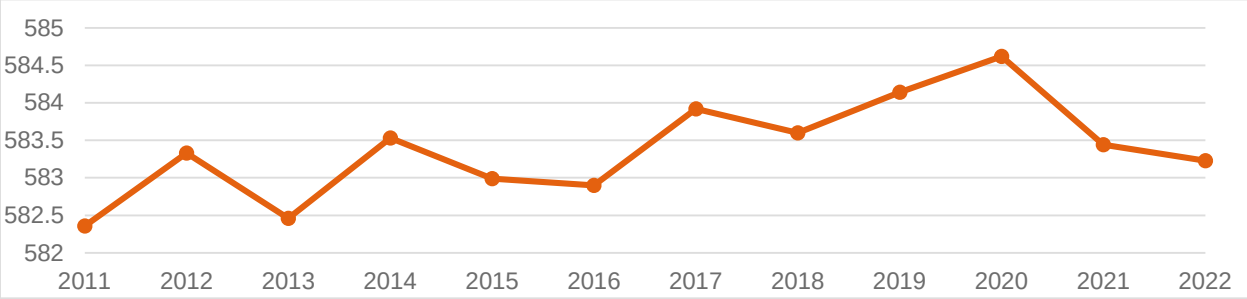
| No. | Site Area | Operation and Maintenance Activities |
|---|---|---|
| 1 | Green Point Landfill | Annual inspection of cover system, leachate breakouts, surface water drainage system, passive gas venting system, groundwater monitoring wells, site access and security, wetlands, and site appearance. |
| 2 | Terminated Type III Landfills | Annual soil cover inspection. |
| 3 | SMI Former Plant Slab Soil Cover Area | Annual soil cover inspection. |
| 4 | I27.7 Area | Annual soil cover inspection. |
| 5 | Quench Pit Area | Annual soil cover inspection. |
| 6 | Melting Department | Annual soil cover inspection. |
| 7 | SMI Former Southwest LNAPL Area | Annual soil cover inspection. |
| 8 | Former Railyard Area | Annual soil cover inspection. |
| 9 | Peninsula Property | Annual soil cover inspection. |
| 10 | Permanent Markers | Annual inspection of permanent markers. |
| 11 | Stormwater Pond & Secondary Settling Pond | Annual inspection for absence/presence of sheens. |

- Arcadis was able to access several monitoring wells on the south side of the Site during the event that had been inaccessible in previous years.

**SMI Annual Operation, Maintenance, and Monitoring**

- The annual O&M and groundwater monitoring event occurred from September 19 through September 28, 2022, in accordance with the 2020 O&M Plan approved by EGLE on July 31, 2020.
- All 45 of the SMI monitoring wells planned to be gauged were gauged on September 20, with an electronic water level indicator graduated at 0.01-foot increments, to measure static groundwater elevations, which are provided in **Table 1**. Two of the locations (MW-134WT and MW-134S1) were identified as having the gauging record not properly saved and were therefore re-gauged on November 17, 2022 and the re-gauging values are recorded in Table 1. Additionally, measurements were collected at one staff gauge (SG-1 from within the Secondary Settling Pond) and one river gauge (RG-1 from the Center Street bridge over the Saginaw River). The following 10 additional LNAPL monitoring locations were gauged by Arcadis during the gauging event: QP-1R, QP-2R, QP-3R, QPTW-03R2, QPTW-04R, QPTW-05R, FV3.0, S5.6, V3.6, and X5.9, see **Attachment 6** for more detail.
- Average annual groundwater elevations are shown in the graph below. Groundwater elevations rose approximately 1 foot following plant demolition (2010) and storm sewer bulkheading and elevations were stable between 2012 to 2018. The average groundwater elevation gradually increased another foot from 2018 to 2020 (2 feet since 2011). The average groundwater elevation dropped in 2021 and again in 2022 to 583.23 feet above mean sea level (amsl), indicating the average groundwater elevation has decreased back to a stable elevation, as previously observed from 2012 through 2018.

**Average Groundwater Elevation Sitewide Per Year**




- Groundwater generally flows east-southeast towards the Saginaw River in the SMI portion of the Site and transitions to more southerly in the GPL portion. (**Figure 3**).
- Groundwater samples were collected from 14 of the planned 15 monitoring wells (MW-107WT, MW-107S1, MW-108S2, MW-110WTR, MW-111WT, MW-114WT, MW-114S2, MW-149WT, MW-185WT, MW-186WT, MW-131WT, MW-134WT, B-3R, and QPTW-13R) located in the river berm area on the SMI Property. MW-107WT purged dry during sample collection, was given time to recharge and samples were collected during the event as the well recharged. MW-108WT purged dry before sample collection and samples were not able to be collected, as the well did not recharge during the event. A well construction and screen interval summary table, sampling parameters, and field parameters at the time of sampling for the SMI monitoring wells are included in **Attachment 1**. Groundwater concentrations were compared to the Site-specific Groundwater-Surface Water Interface (GSI) criteria, which have been identified as the minimum EGLE Rule 57 criterion for each

constituent[1]. The results from the sampling are summarized in **Table 2** (inorganics) and **Table 3** (organics) and as follows.

- Aroclor 1248 was detected in only one (MW-111WT2[2]) of the five locations (MW-110WTR, MW-111WT, MW-114WT, MW-185WT, and MW-186WT) that are analyzed for polychlorinated biphenyls (PCBs). The remaining analyzed Aroclors were not detected. Total fraction Aroclor 1248 was detected in MW-111WT at 0.22 micrograms per liter (µg/L) and dissolved fraction Aroclor 1248 was detected at 0.52 µg/L, both of which exceeded the Site-specific GSI criterion of 0.000026 µg/L[3]. The total fraction Aroclor 1248 result is the same concentration as was detected in 2019, and the dissolved fraction Aroclor 1248 result is greater than historic results.
- Total and dissolved arsenic were detected in both locations (MW-107WT and MW-149WT) analyzed at concentrations below the Site-specific GSI criterion of 680 µg/L[4].
- Manganese was detected in all six wells sampled (MW-107WT, MW-110WTR, MW-111WT, MW-114WT, MW-185WT, and MW-186WT) at concentrations below the Site-specific GSI criterion of 4,700 µg/L.
- EGLE previously evaluated a mixing zone application submitted by General Motors Corporation and established that there is no reasonable potential for ammonia to cause an exceedance of water quality standards. Concentrations of un-ionized ammonia were calculated using the measured groundwater temperatures and pH immediately prior to collecting each groundwater sample. The calculated un-ionized ammonia concentrations were less than the Site-specific GSI criterion of 53 µg/L for warm water bodies for all locations except for MW-108S2, both parent and duplicate samples, at concentrations of 80 and 81 µg/L, respectively. The historical concentrations of un-ionized ammonia in MW-108S2 have been variable and current concentrations are lower than those observed in 2015 and 2017.
- Total phosphorus was detected in the groundwater samples collected from monitoring wells MW-107WT, MW-110WTR, MW-111WT, MW-114WT, MW-185WT, and MW-186WT at concentrations less than the Site-specific GSI criterion of 1,000 µg/L. At MW-149WT, the detected concentration of 1,200 B (estimated) µg/L was slightly above the Site-specific GSI criterion; however, it is lower than historic levels, showing a historic downward trend and stability.

- During the annual O&M monitoring event in September 2022, samples from four monitoring wells located within SMI (**Figure 4**) were analyzed for per- and polyfluoroalkyl substances (PFAS). The results from the sampling are summarized in **Table 4**.

[1] Criteria are the current Rule 57 criteria. Hardness-dependent Rule 57 criteria are based on a hardness of 270 milligrams per liter for the Saginaw River, as analyzed in the October 2016 monitoring event. pH-dependent Rule 57 criteria are based on a default pH of 7. Un-ionized ammonia concentrations were calculated using field-measured pH and groundwater temperature, where available.
[2] A case narrative was provided for MW-111WT from the lab for the parent and duplicate samples collected on September 27, 2022. The samples collected do not directly match any of the laboratory's Aroclor standards used for instrument calibration. The samples were quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.
[3] This criterion defaults to the target method detection limit of 0.2 µg/L.
[4] The GSI mixing zone concentration for total arsenic was established for venting groundwater under the RAP and based on the 5 Year Mixing Zone Review renewals approved on August 5, 2016, and October 21, 2021.

  - Perfluorooctanesulfonic acid (PFOS) was detected above EGLE GSI Criterion at monitoring wells B-3R, MW-131WT, and QPTW-13R. MW-108WT purged dry before sample collection and samples were not able to be collected, as the well did not recharge during the event.
- Analytical data packages for the SMI September 2022 groundwater monitoring event are provided in **Attachment 2**. Groundwater sampling logs are provided in **Attachment 3**.
- The SMI Former Plant Slab Soil Cover Area, I27.7 Manhole Area, Quench Pit Area, SMI Former Southwest LNAPL Area, Former Railyard Area, Stormwater Pond, Secondary Settling Pond, River Berm Area, and Two Terminated Type III Landfills were inspected during the September 2022 groundwater monitoring event The inspection forms are provided in **Attachment 4.**
- Maintenance was completed on September 29, 2022, on the SMI Terminated Type III Landfills. The maintenance included trimming woody bushes/shrubs. The maintenance form is provided in **Attachment 4**.

**Green Point Landfill (GPL) Annual Operation, Maintenance, and Monitoring**

- The annual O&M and groundwater monitoring event occurred from September 19 through September 28, 2022 in accordance with the 2020 O&M Plan.
- A total of 27 of the 30 GPL monitoring wells planned to be gauged were gauged with an electronic water level indicator to measure static groundwater elevations to the nearest 0.01 foot (see **Table 1 and Figure 3**). MW-122S1 was unable to be opened, and MW-124WT and MW-124S1 were unable to be located due to overgrowth of vegetation. Of the wells gauged 1 well was dry (MW-16A). The MW-117 and MW-118 series wells were only accessible by boat due to standing water and were gauged on the following dates: MW-117S1 on September 21, and MW-117WT, MW-118WT, and MW-118S1 on September 22 as noted on Table 1.
- All 17 monitoring wells planned to be sampled were able to be sampled in the annual GPL groundwater monitoring program: MW-117WT, MW-117S1, MW-118WT, MW-118S1, MW-183WT, X-4AR, X-4CAUGR, X-4D, X-9AR, X-9BR, X-9CAUG, X-9D, TW-242, TWW-1, MW-122WT, X-10AR2, and X-2A. X-4AR has a history of purging dry and samples are often unable to be collected therefore sampling was conducted without purging the well. Due to a low volume of water in the well, dissolved samples were unable to be collected.
- A well construction and screen interval summary table, sampling parameters, and field parameters at the time of sampling for the GPL monitoring wells are included in **Attachment 5**. The results from the sampling are summarized in **Table 5** (inorganics) and **Table 6** (organics) and as follows.
  - Total and dissolved arsenic were detected at concentrations below the Site-specific GSI criterion in samples collected from monitoring wells MW-118WT, MW-118S1, MW-183WT, and X-9AR, adjacent to the Saginaw River. Total and dissolved arsenic were not detected at the remaining locations analyzed.
  - Total and dissolved barium were detected at concentrations above Site-specific GSI criterion in samples collected from MW-117S1 and MW-117WT. Total and dissolved barium were detected at concentrations below Site-specific GSI criterion in samples collected from MW-118S1, MW-

118WT, MW-183WT, X-4AR (total only, a dissolved sample was unable to be collected based on lack of recharge), X-4CAUGR, X-4D, X-9AR, X-9BR, X-9CAUG, and X-9D.

- Total and dissolved iron were detected at concentrations below Site-specific GSI criterion in samples collected from monitoring wells MW-117S1, MW-117WT, MW-118S1, MW-118WT, MW-183WT, X-4AR (total only, a dissolved sample was not collected), X-4CAUGR, X-4D, X-9AR, X-9BR, X-9CAUG, and X-9D (total only, dissolved iron was not detected) adjacent to the Saginaw River.
- Total and dissolved manganese were detected at concentrations below Site-specific GSI criterion in samples collected from monitoring wells MW-117S1, MW-117WT, MW-118S1, MW-118WT, MW-183WT, X-4AR (total only, a dissolved sample was not collected), X-4CAUGR, X-4D, X-9AR, X-9BR, X-9CAUG, and X-9D adjacent to the Saginaw River.
- Total and dissolved selenium were not detected in the monitoring wells sampled adjacent to the Saginaw River.
- Total cyanide was detected above Site-specific GSI criterion in the duplicate (but not the parent) sample collected from monitoring well X-9AR. Total cyanide was not detected at the remaining locations analyzed, and dissolved cyanide was not detected in any of the monitoring wells analyzed.
- EGLE previously evaluated a mixing zone application submitted by GM and Waste Management and established that there was no reasonable potential for ammonia to cause an exceedance of water quality standards. Concentrations of un-ionized ammonia were calculated using the measured groundwater temperatures and pH immediately prior to collecting each groundwater sample. The calculated un-ionized ammonia concentrations were greater than the Site-specific GSI criterion of 53 µg/L for warm water bodies for monitoring well X-4D at a concentration of 91 µg/L. The calculated un-ionized ammonia concentration in co-located monitoring wells X-4AR[5] and X-CAUGR and in nearby monitoring wells MW-183WT, X-9AR, X-9BR, X-9CAUG, and X-9D did not exceed Site-specific criterion.
- Concentrations of chloride were similar to those seen in prior years. Monitoring wells X-4D and X-9D are perimeter wells used for comparison to GSI criterion. Concentrations of chloride in monitoring wells X-4D and X-9D were above the Site-specific GSI criterion of 150,000 µg/L, at concentrations of 1,300,000 µg/L and 260,000 µg/L, respectively. The results are within the range of previously detected concentrations for X-4D and decreased in concentration for X-9D. Bedrock in the general vicinity of the Site is known to be high in chlorides, sodium, and other minerals, and may be contributing to elevated chloride concentrations with depth. The chloride concentrations in co-located monitoring wells screened at shallower intervals (X-4AR, X-4CAUGR, X-9AR, X-9BR, X-9CAUG) at these locations did not exceed the Site-specific GSI criterion.
- Detected concentrations of nitrate, nitrite, and sulfate were below Site-specific GSI criterion.

[5] The pH and temperature from co-located monitoring well X-4CAUGR were used to calculate an estimated un-ionized ammonia concentration for X-4AR, as pH and temperature were not measured at X-4AR prior to sampling. Ammonia was not detected in the sample collected from X-4AR.

  - Total dissolved solids (TDS) concentrations were similar to those seen in prior years. Monitoring wells X-4D and X-9D are perimeter wells used for evaluating potential GSI impacts. The established background screening level concentration for TDS in the RAP is 2,200,000 µg/L. Results from the samples collected from X-4D and X-9D were below the background screening level.

- Two monitoring wells located in the southwest portion of the GPL property (TWW-1 and TW-242) were sampled during the event for volatile organic compounds (VOCs), due to the historical discharge of VOCs to the subsurface from the neighboring property to the west through a drainage pipe. 1,1-Dichlorethane, cis-1,2-dichloroethene, and vinyl chloride were detected in TWW-1, all at concentrations less than the Site-specific GSI criteria. As mentioned in previous annual reports, a portion of a drainpipe was removed, and the remaining in-place ends were sealed to eliminate a migration pathway for VOCs from the adjacent property.
- During the annual O&M monitoring event in September 2022, samples from nine monitoring wells within GPL (**Figure 4**) were analyzed for PFAS. The results from the sampling are summarized in **Table 4**.
  - PFOS was detected above EGLE GSI Criterion at monitoring well X-2A.
- Analytical data packages for GPL September 2022 groundwater monitoring events are provided in **Attachment 2**. Groundwater sampling logs are provided in **Attachment 3**.
- Green Point Landfill was inspected during the annual O&M event that occurred from September 19 through September 28, 2022. The inspection forms are included in **Attachment 4**.

**Peninsula Property Annual Operation, Maintenance Inspection**

- Exposure barriers at the Peninsula Property were inspected during the annual O&M event that occurred from September 19 through September 28, 2022. The barriers were in good condition and no notable observations were identified during the inspection. The inspection forms are included in **Attachment 4**.

**PCB and LNAPL Activities**

- Completed inspections of 25.4 acre 1-ft clay cover over the concrete floor slab, including the I27.7 Manhole Area. See **Attachment 4 and 6** for a summary of the inspections.
- Completed annual gauging/inspection of the Quench Pit wells and manholes in the Southwest Plant LNAPL Area during the annual O&M event that occurred from September 19 through September 28, 2022. There was no measurable product identified in the Southwest Plant LNAPL Area manholes. See **Attachment 6** for a summary of the annual gauging/inspections of the LNAPL areas.

**The following activities are currently planned to be completed during 2023 in accordance with the EGLE approved O&M Plan:**

- Properly abandon the 27 monitoring wells no longer needed or damaged and as approved by EGLE that were previously inaccessible.
- Complete annual groundwater monitoring. Sampling is expected to take place towards the end of the third quarter of 2023.
- Conduct inspection of the clay cover over the slab, including the I27.7 Manhole Area at least annually, and complete repairs and maintenance, as necessary including evaluating the need for a mowing event of the vegetated clay cover over the slab.
- Complete on-going inspections/monitoring associated with the LNAPL areas.
- Complete a professional survey of all key monitoring wells and staff gauges based on the age of the previous survey and on certain wells not currently surveyed.
- Respond to other information requests from EGLE, as necessary.
- Coordinate with MDNR and the Saginaw County Parks regarding park development, as necessary.

**The following modifications to the EGLE approved O&M Plan are proposed:**

- Arcadis proposes to discontinue sampling and analysis for VOCs at GLP wells TWW-1 and TW-242 based on the continued decline/stable concentrations of vinyl chloride, over five rounds of data below criteria, and the fact that the drainage pipe from the neighboring property was sealed. Concentrations of vinyl chloride and other detected VOCs have not exceeded GSI criteria for at least the last five annual monitoring events.

Please contact me at 810-225-1921 or David Favero with RACER if you have any questions regarding the enclosed report or its attachments.

Sincerely,

Arcadis of Michigan, LLC



Scott Clearwater
Certified Project Manager

Email: scott.clearwater@arcadis.com
Direct Line: 810.225.1921

Copies:
Amanda Armbruster, EGLE
John Fordell Leone, Department of Attorney General
Jean Greensley, U.S. EPA
Brad Norton, Waste Management
Brian Lechel, Saginaw County Parks & Recreation
David Favero, RACER Trust
John-Eric Pardys, GHD

Enclosures:

**Tables**

1 Summary of Water Elevation Table
2 SMI Inorganics Analytical Data Summary Table
3 SMI Organics Analytical Data Summary Table
4 PFAS Groundwater Analytical Summary Table
5 GPL Inorganics Analytical Data Summary Table
6 GPL Organics Analytical Data Summary Table

**Figures**

1 Site Location Map
2 Site Inspection Areas
3 Groundwater Elevation Contour Map Shallow Aquifer – September 2022
4 PFAS Sampling Results

**Attachments**

1 SMI Well Construction Logs, Sampling Parameters, and Field Parameters
2 Laboratory Analytical Reports
3 Field Sampling Logs
4 SMI and Green Point Landfill Site Inspection Forms
5 GPL Well Construction Logs, Sampling Parameters, and Field Parameters
6 2022 PCB Cover Inspections and LNAPL Gauging/Inspections

# Tables

**Table 1**
**Summary of Water Elevation Table**
**September 20, 2022**
**RACER Trust, Saginaw, Michigan**

| Location | Well Type | Reference Elevation (feet AMSL) | 9/20/22 Depth to Water (feet) | Groundwater Elevation (feet AMSL) | Site Area (GPL or SMI) |
|---|---|---|---|---|---|
| **Sampled Monitoring Wells (Green Point Landfill)** | | | | | |
| MW-117WT | Stick Up | 585.56 | 3.29 | 582.27 | GPL |
| MW-117S1 | Stick Up | 586.32 | 4.13 | 582.19 | GPL |
| MW-118WT | Stick Up | 585.40 | 3.29 | 582.11 | GPL |
| MW-118S1 | Stick Up | 585.72 | 3.29 | 582.43 | GPL |
| MW-122WT | Stick Up | 584.97 | 3.48 | 581.49 | GPL |
| MW-183WT | Stick Up | 588.77 | 8.14 | 580.63 | GPL |
| X-2A | Stick Up | 593.12 | 5.40 | 587.72 | GPL |
| X-4AR | Stick Up | 586.82 | 4.69 | 582.13 | GPL |
| X-4CAUGR | Stick Up | 586.36 | 5.40 | 580.96 | GPL |
| X-4D | Stick Up | 586.32 | 2.44 | 583.88 | GPL |
| X-9AR | Stick Up | 586.95 | 7.13 | 579.82 | GPL |
| X-9BR | Stick Up | 586.85 | 7.01 | 579.84 | GPL |
| X-9CAUG | Stick Up | 586.62 | 6.79 | 579.83 | GPL |
| X-9D | Stick Up | 587.47 | 3.49 | 583.98 | GPL |
| X-10AR2 | Stick UP | 594.67 | 9.01 | 585.66 | GPL |
| TW-242 | Stick Up | 589.58 | 9.49 | 580.09 | GPL |
| TWW-1 | Stick Up | 587.31 | 6.15 | 581.16 | GPL |
| **Sampled Monitoring Wells (Saginaw Malleable Industrial Land)** | | | | | |
| B-3R | Stick Up | 609.51 | 9.07 | 600.44 | SMI |
| MW-107WT | Flushmount | 587.67 | 7.60 | 580.07 | SMI |
| MW-107S1 | Flushmount | 587.79 | 7.91 | 579.88 | SMI |
| MW-108WT | Stick Up | 590.53 | 9.98 | 580.55 | SMI |
| MW-108S2 | Stick Up | 590.26 | 10.47 | 579.79 | SMI |
| MW-110WTR | Stick Up | 591.52 | 12.28 | 579.24 | SMI |
| MW-111WT | Stick Up | 590.95 | 9.13 | 581.82 | SMI |
| MW-114WT | Stick Up | 591.12 | 8.00 | 583.12 | SMI |
| MW-114S2 | Stick Up | 591.20 | 10.57 | 580.63 | SMI |
| MW-131WT | Stick Up | 592.56 | 5.71 | 586.85 | SMI |
| MW-134WT | Flushmount | 591.11 | 4.44 | 586.67 | SMI |
| MW-149WT | Stick Up | 592.27 | 12.21 | 580.06 | SMI |
| MW-185WT | Stick Up | 588.67 | 6.82 | 581.85 | SMI |
| MW-186WT | Stick Up | 590.34 | 8.81 | 581.53 | SMI |
| QPTW-13R | Flushmount | 594.04 | 5.26 | 588.78 | SMI |
| **Gauging Only Monitoring Wells** | | | | | |
| B-3BAUG | Stick Up | 596.54 | 13.30 | 583.24 | SMI |
| B-5BAUG | Flushmount | 592.07 | 10.06 | 582.01 | SMI |
| B-5CAUG | Flushmount | 592.12 | 9.90 | 582.22 | SMI |
| B-5R | Flushmount | 590.84 | 4.82 | 586.02 | SMI |
| MW-103S1 | Flushmount | 592.62 | 9.50 | 583.12 | SMI |
| MW-103S2 | Flushmount | 592.95 | 11.25 | 581.70 | SMI |
| MW-103WT | Flushmount | 593.42 | 11.19 | 582.23 | SMI |
| MW-105S1 | Stick Up | 593.67 | 11.52 | 582.15 | SMI |
| MW-105S2 | Stick Up | 593.27 | 11.03 | 582.24 | SMI |
| MW-105WT | Stick Up | 593.35 | 7.89 | 585.46 | SMI |
| MW-108S1 | Stick Up | 590.24 | 9.77 | 580.47 | SMI |
| MW-108S3 | Stick Up | 589.98 | 7.14 | 582.84 | SMI |
| MW-108S4 | Stick Up | 590.11 | 7.28 | 582.83 | SMI |
| MW-111S1 | Stick Up | 591.14 | 10.62 | 580.52 | SMI |
| MW-111S2 | Stick Up | 591.05 | 11.02 | 580.03 | SMI |
| MW-111S3 | Stick Up | 591.35 | 8.58 | 582.77 | SMI |
| MW-111S4 | Stick Up | 591.66 | 8.75 | 582.91 | SMI |
| MW-114S1 | Stick Up | 591.13 | 8.74 | 582.39 | SMI |

**Table 1**
**Summary of Water Elevation Table**
**September 20, 2022**
**RACER Trust, Saginaw, Michigan**

| Location | Well Type | Reference Elevation (feet AMSL) | 9/20/22 Depth to Water (feet) | Groundwater Elevation (feet AMSL) | Site Area (GPL or SMI) |
|---|---|---|---|---|---|
| MW-114S3 | Stick Up | 591.02 | 8.05 | 582.97 | SMI |
| MW-122S1 | Stick Up | 584.97 | NM | NA | GPL |
| MW-122S2 | Stick Up | 585.13 | 3.35 | 581.78 | GPL |
| MW-124WT | Stick Up | 586.41 | NM | NA | GPL |
| MW-124S1 | Stick Up | 585.94 | NM | NA | GPL |
| MW-125WT | Stick Up | 586.98 | 4.90 | 582.08 | GPL |
| MW-128S1 | Flushmount | NA | 6.18 | NA | GPL |
| MW-128WT | Flushmount | NA | 5.15 | NA | GPL |
| MW-131S1 | Stick Up | 592.75 | 10.33 | 582.42 | SMI |
| MW-131S2 | Stick Up | 592.39 | 10.00 | 582.39 | SMI |
| MW-134S1 | Flushmount | 593.31 | 8.74 | 584.57 | SMI |
| MW-134S2 | Flushmount | 593.14 | 8.25 | 584.89 | SMI |
| MW-138WT | Stick Up | 602.39 | 6.24 | 596.15 | SMI |
| MW-140WT | Stick Up | 595.90 | 10.79 | 585.11 | SMI |
| MW-140S1 | Stick Up | 595.33 | 13.31 | 582.02 | SMI |
| MW-140S2 | Stick Up | 595.80 | 13.83 | 581.97 | SMI |
| MW-143WT | Stick Up | 596.52 | 21.85 | 574.67 | SMI |
| QP-1R | Flushmount | 594.59 | 5.47 | 589.12 | SMI |
| QPTW-10R | Flushmount | 594.20 | 5.42 | 588.78 | SMI |
| RG1 | Mark on bridge | NA | 23.25 | NA | SMI |
| SG1 (Offshore) | Staff Gauge | NA | 2.50 | NA | SMI |
| TW-241 | Stick Up | 589.03 | 7.57 | 581.46 | GPL |
| X-16A | Stick Up | 587.44 | NA | NA | GPL |
| X-16B | Stick Up | 587.20 | 6.45 | 580.75 | GPL |
| X-1A | Stick Up | 597.72 | 12.59 | 585.13 | GPL |
| X-1B | Stick Up | 597.69 | 13.20 | 584.49 | GPL |
| X-1CR2 | Stick Up | 598.41 | 12.63 | 585.78 | GPL |

**Notes:**

- Elevations are shown in feet above mean sea level (AMSL) relative to the NGVD datum of 1929.
- Depth to water measurements were taken from the top of well casing.
- Monitoring wells in the MW-128 and X-1 well clusters were extended during landfill capping activities. Reference elevations shown above are from August 2000 when the wells were resurveyed.
- QP-1 was replaced by QP-1R, QPTW-10 was replaced by QPTW-10R, and QPTW-13 was replaced by QPTW-13R reference elevations updated based on Spicer Group survey dated 7/6/17 and 9/5/17.
- The Reference Elevations for MW-117WT, MW-117S1, MW-118WT, and MW-118S1 are estimated values calculated based on total depth value differences from 2020 and 2016, these are being used until a survey of the wells can be completed.
- The Reference Elevations for B-5BAUG, B-5CAUG, B-5R, MW-103WT, MW-103S1, MW-103S2, MW-107WT, MW-107S1, MW-134WT, MW-134S1, and MW-134S2 are estimated values calculated based on total depth value differences from August and September 2021, these are being used until a survey of the wells can be completed.
- A Reference Elevation estimation for MW-128WT and MW-128S1 could not be calculated, these will be updated when a survey of the wells can be completed.
- A water level was not collected for X-16A, the well was dry.
- Water levels were collected for MW-117S1 on 9/21/2022, MW-117WT, MW-118WT, and MW-118S1 on 9/22/2022.
- Water levels were re-collected for MW-134S1 and MW-134S2 on 11/17/2022.

| | |
|---|---|
| GPL | Green Point Landfill |
| NA | Not available |
| NM | Not measured |
| SMI | Saginaw Malleable Industrial Land |
| TOC | Top of Casing |

**Table 2**
**Analytical Data Summary Table - SMI Inorganics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | Arsenic | Manganese | Arsenic (Dissolved) | Ammonia Nitrogen | Estimated Un-ionized Ammonia | Phosphorus |
|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 680* | 4,700 | 680* | 53 | 53 | 1,000 |
| MW-107S1 | 12.5 - 17.5 | 07/12/95 | -- | -- | -- | -- | -- | -- |
| MW-107S1 | 12.5 - 17.5 | 06/07/96 | -- | -- | -- | -- | -- | -- |
| MW-107S1 | 12.5 - 17.5 | 06/06/08 | -- | -- | -- | **1,200 J** | -- | -- |
| MW-107S1 | 12.5 - 17.5 | 09/30/10 | -- | -- | -- | **1,200** | **20** | -- |
| MW-107S1 | 12.5 - 17.5 | 09/21/11 | -- | -- | -- | **1,400** | **4.9** | -- |
| MW-107S1 | 12.5 - 17.5 | 09/17/12 | -- | -- | -- | **1,400** | **6.1** | -- |
| MW-107S1 | 12.5 - 17.5 | 09/26/13 | -- | -- | -- | **1,400 B** | **8.2 B** | -- |
| MW-107S1 | 12.5 - 17.5 | 09/24/14 | -- | -- | -- | **1,700 B** | **9.7 B** | -- |
| MW-107S1 | 12.5 - 17.5 | 10/01/15 | -- | -- | -- | **1,400** | **4.8** | -- |
| MW-107S1 | 12.5 - 17.5 | 09/29/16 | -- | -- | -- | **1,500** | **4.1** | -- |
| MW-107S1 | 12.5 - 17.5 | 08/30/17 | -- | -- | -- | **1,800** | **12** | -- |
| MW-107S1 | 12.5 - 17.5 | 09/26/18 | -- | -- | -- | **1,300** | **4.1** | -- |
| MW-107S1 | 12.5 - 17.5 | 08/21/19 | -- | -- | -- | **1,400** | **8.6** | -- |
| MW-107S1 | 12.5 - 17.5 | 08/11/20 | -- | -- | -- | **1,400** | **13** | -- |
| MW-107S1 | 12.5 - 17.5 | 08/20/21 | -- | -- | -- | **1,200** | **11** | -- |
| MW-107S1 | 12.5 - 17.6 | 09/26/22 | -- | -- | -- | **1,200** | **5.6** | -- |
| MW-107WT | 4 - 9 | 07/12/95 | **2.30** | **446** | -- | -- | -- | -- |
| MW-107WT | 4 - 9 | 06/07/96 | 5.00 U | **38.3 J** | -- | -- | -- | -- |
| MW-107WT | 4 - 9 | 04/03/08 | **0.950 J** | **379** | -- | **300** | -- | **30 J** |
| MW-107WT | 4 - 9 | 09/18/12 | **1.1 J** | **170** | -- | **62 J** | -- | 100 U |
| MW-107WT | 4 - 9 | 09/26/13 | -- | -- | -- | **880 B** | **2.3 B** | **100** |
| MW-107WT | 4 - 9 | 09/24/14 | **4.2** | **1,500** | -- | **1,300 B** | **2.9 B** | 100 U |
| MW-107WT | 4 - 9 | 10/01/15 | **11** | -- | -- | **1,200** | **6.2** | 100 U |
| MW-107WT | 4 - 9 | 09/29/16 | **6.5** | **2,000 ^** | -- | **1,400** | **3.2** | 100 U |
| MW-107WT | 4 - 9 | 08/30/17 | **2** | **1500** | -- | **590 B** | **4.4 B** | 100 U |
| MW-107WT | 4 - 9 | 09/26/18 | **7.3 J** | **870** | -- | **290** | **0.91** | 100 U |
| MW-107WT | 4 - 9 | 08/21/19 | 15 U | **340** | -- | **150 J** | **0.68 J** | 100 U |
| MW-107WT | 4 - 9 | 08/11/20 | 2.0 U [2.0 U] | **200 [240]** | 5.0 U [5.0 U] | 200 U [200 U] | 1.0 U [1.0 U] | 100 U [100 U] |
| MW-107WT | 4 - 9 | 08/20/21 | **22** | **820** | **8.2** | **850** | **9** | **250** |
| MW-107WT | 4 - 9 | 09/27/22 | **8.0 J** | **480** | **9.2** | **620 F1** | **2.7 F1** | **120 B** |
| MW-108S2 | 22 - 27 | 07/13/95 | -- | -- | -- | -- | -- | -- |
| MW-108S2 | 22 - 27 | 06/08/96 | -- | -- | -- | -- | -- | -- |
| MW-108S2 | 22 - 27 | 06/06/08 | -- | -- | -- | **3,500 J** | -- | -- |
| MW-108S2 | 22 - 27 | 09/29/10 | -- | -- | -- | **4,600** | **38** | -- |
| MW-108S2 | 22 - 27 | 09/21/11 | -- | -- | -- | **4,900** | **39** | -- |
| MW-108S2 | 22 - 27 | 09/17/12 | -- | -- | -- | **6,200** | **35** | -- |
| MW-108S2 | 22 - 27 | 09/26/13 | -- | -- | -- | **5,300 B** | **36 B** | -- |
| MW-108S2 | 22 - 27 | 09/24/14 | -- | -- | -- | **4,600 B** | -- | -- |
| MW-108S2 | 22 - 27 | 10/01/15 | -- | -- | -- | **7,700** | **72** | -- |
| MW-108S2 | 22 - 27 | 09/29/16 | -- | -- | -- | **5,400** | **18** | -- |
| MW-108S2 | 22 - 27 | 08/30/17 | -- | -- | -- | **8,800** | **110** | -- |
| MW-108S2 | 22 - 27 | 09/27/18 | -- | -- | -- | **4,900** | **19** | -- |
| MW-108S2 | 22 - 27 | 08/21/19 | -- | -- | -- | **5,100** | **51** | -- |
| MW-108S2 | 22 - 27 | 08/11/20 | -- | -- | -- | **6,200** | **59** | -- |
| MW-108S2 | 22 - 27 | 08/19/21 | -- | -- | -- | **5,000 [4,900]** | **33 [32]** | -- |
| MW-108S2 | 22 - 27 | 09/27/22 | -- | -- | -- | **5,700 [5,800]** | **80 [81]** | -- |
| MW-108WT | 2.5 - 7.5 | 07/13/95 | **8.30 J** | **4,800** | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 06/08/96 | 5.00 U | **933** | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 05/21/00 | 10.0 U | **1,230** | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 06/02/04 | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 09/29/16 | -- | **2,000 ^** | -- | **60 J** | **0.065 J** | 100 U |
| MW-108WT | 2.5 - 7.5 | 08/31/17 | -- | **1,300** | -- | 200 U | -- | 100 U |
| MW-108WT | 2.5 - 7.5 | 09/27/18 | -- | **430** | -- | **97 J** | **0.049 J** | 100 U |
| MW-108WT | 2.5 - 7.5 | 08/21/19 | -- | **1,900** | -- | **130 J** | **0.44 J** | 100 U |
| MW-108WT | 2.5 - 7.5 | 08/13/20 | -- | **2,000** | -- | **131 J** | **1.44 J** | 100 U |
| MW-108WT | 2.5 - 7.5 | 08/19/21 | -- | **2,600** | -- | **132 J** | **2.44 J** | 100 U |
| MW-110WT | UNKNOWN | 06/12/96 | **7.30** | **460** | -- | -- | -- | -- |
| MW-110WT | UNKNOWN | 12/10/97 | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 3 - 8 | 04/02/08 | -- | **2,680** | -- | **90 J** | -- | **200** |
| MW-110WTR | 3 - 8 | 09/24/14 | -- | **4,000** | -- | **100 J,B** | -- | **120** |
| MW-110WTR | 3 - 8 | 10/01/15 | -- | **4,000** | -- | 200 U | 0.41 U | **200** |
| MW-110WTR | 3 - 8 | 09/29/16 | -- | **3,500 ^** | -- | **130 JB** | **0.1 JB** | **270** |
| MW-110WTR | 3 - 8 | 10/13/16 | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 3 - 8 | 08/31/17 | -- | **2,900** | -- | 200 U | 0.27 U | **370** |
| MW-110WTR | 3 - 8 | 09/27/18 | -- | **3,200** | -- | **100 J** | **0.061 J** | **180** |
| MW-110WTR | 3 - 8 | 08/21/19 | -- | **2,000** | -- | 200 U | 0.85 U | **470** |
| MW-110WTR | 3 - 8 | 08/12/20 | -- | **2,000** | -- | 200 U | 0.45 U | **250** |
| MW-110WTR | 3 - 8 | 08/19/21 | -- | **2,400 [2,400]** | -- | 200 U | 0.48 U | **250** |
| MW-110WTR | 3 - 8 | 09/27/22 | -- | **2,300 [2,200]** | -- | 200 U | 0.32 U | **320 B** |

**Table 2**
**Analytical Data Summary Table - SMI Inorganics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | Arsenic | Manganese | Arsenic (Dissolved) | Ammonia Nitrogen | Estimated Un-ionized Ammonia | Phosphorus |
|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 680* | 4,700 | 680* | 53 | 53 | 1,000 |
| MW-111WT | 5.5 - 10.5 | 07/14/95 | **24.0 J** | **3,740** | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 06/12/96 | **30.7** | **4,440** | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 06/30/99 | -- | **2,100** | -- | **2,700** | -- | **1,000** |
| MW-111WT | 5.5 - 10.5 | 09/02/99 | -- | -- | -- | **3,100** | -- | -- |
| MW-111WT | 5.5 - 10.5 | 05/19/00 | **11.4** | **2,560** | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 06/02/04 | -- | **1,090** | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/26/05 | -- | **1,680 [1,520]** | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 04/02/08 | -- | **1,080 [1,140]** | -- | **500 [500]** | -- | **400 [400]** |
| MW-111WT | 5.5 - 10.5 | 09/18/12 | -- | **3,600** | -- | **1,600** | **2.7** | **87 J** |
| MW-111WT | 5.5 - 10.5 | 09/26/13 | -- | **1,600** | -- | **1,400 B** | **2.2 B** | **370** |
| MW-111WT | 5.5 - 10.5 | 09/23/14 | -- | **780** | -- | **1,700** | -- | **610** |
| MW-111WT | 5.5 - 10.5 | 10/01/15 | -- | **1,600** | -- | **1,400** | **3.7** | **970** |
| MW-111WT | 5.5 - 10.5 | 09/29/16 | -- | **1,700** | -- | **2,900** | **3.7** | **480** |
| MW-111WT | 5.5 - 10.5 | 08/31/17 | -- | **1,000** | -- | **1,100 B** | **7 B** | **390** |
| MW-111WT | 5.5 - 10.5 | 09/27/18 | -- | **2,300** | -- | **5,000** | **14** | **970** |
| MW-111WT | 5.5 - 10.5 | 08/22/19 | -- | **1,500** | -- | **1,900** | **7.9** | **1,000** |
| MW-111WT | 5.5 - 10.5 | 08/12/20 | -- | **1,400** | -- | **1,800** | **12** | **970** |
| MW-111WT | 5.5 - 10.5 | 08/23/21 | -- | **1,700** | -- | **1,900** | **6.5** | **960** |
| MW-111WT | 55. - 10.5 | 09/27/22 | -- | **1,200** | -- | **1,300** | **6.7** | **870 B** |
| MW-114S2 | 22.5 - 27.5 | 07/17/95 | -- | -- | -- | -- | -- | -- |
| MW-114S2 | 22.5 - 27.5 | 06/07/96 | -- | -- | -- | -- | -- | -- |
| MW-114S2 | 22.5 - 27.5 | 06/06/08 | -- | -- | -- | **2,500 J** | -- | -- |
| MW-114S2 | 22.5 - 27.5 | 09/29/10 | -- | -- | -- | **2,300 [2,200]** | **160 [160 ]** | -- |
| MW-114S2 | 22.5 - 27.5 | 09/22/11 | -- | -- | -- | **3,000 [3,000]** | **14 [14 ]** | -- |
| MW-114S2 | 22.5 - 27.5 | 09/18/12 | -- | -- | -- | **2,900 [2,800]** | **13 [13 ]** | -- |
| MW-114S2 | 22.5 - 27.5 | 09/25/13 | -- | -- | -- | **3,800 B [3,800 B]** | **23 B [23 B]** | -- |
| MW-114S2 | 22.5 - 27.5 | 09/23/14 | -- | -- | -- | **5,000^ [5,500^]** | **7.9 ^ [8.6 ^]** | -- |
| MW-114S2 | 22.5 - 27.5 | 10/02/15 | -- | -- | -- | **2,200 [2,800]** | **11 [14 ]** | -- |
| MW-114S2 | 22.5 - 27.5 | 09/29/16 | -- | -- | -- | **2,700** | **7.2** | -- |
| MW-114S2 | 22.5 - 27.5 | 09/01/17 | -- | -- | -- | **2,300 [2,100 B]** | **14 [13 B]** | -- |
| MW-114S2 | 22.5 - 27.5 | 09/28/18 | -- | -- | -- | **2,500 [2,000]** | **2.8 [2.2 ]** | -- |
| MW-114S2 | 22.5 - 27.5 | 08/22/19 | -- | -- | -- | **2,600 F1 [2,400]** | **16 F1 [15]** | **330 [330]** |
| MW-114S2 | 22.5 - 27.5 | 08/13/20 | -- | -- | -- | **2,200** | **2** | **--** |
| MW-114S2 | 22.5 - 27.5 | 08/20/21 | -- | -- | -- | **1,500** | **8.4** | **--** |
| MW-114S2 | 22.5 - 27.5 | 09/27/22 | -- | -- | -- | **1,800** | **6.7** | **--** |
| MW-114WT | 3.5 - 8.5 | 06/08/96 | 5.00 U | **2,260** | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 12/11/97 | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 05/22/00 | 10.0 U | **503** | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/26/13 | -- | **1,100** | -- | **66 J,B** | **0.23 J,B** | 100 U |
| MW-114WT | 3.5 - 8.5 | 09/23/14 | **5.3** | **1,400** | -- | 200 U | 0.22 U | 100 U |
| MW-114WT | 3.5 - 8.5 | 10/02/15 | -- | **1,000** | -- | **200 U [820]** | **0.34 U [1.4 ]** | 100 U, F1 [100 U] |
| MW-114WT | 3.5 - 8.5 | 09/29/16 | -- | **1,100** | -- | 200 U | 0.42 U | 100 U |
| MW-114WT | 3.5 - 8.5 | 08/31/17 | -- | **850** | -- | 200 U | 0.99 U | **160** |
| MW-114WT | 3.5 - 8.5 | 09/28/18 | -- | **1,100** | -- | 200 U | 0.31 U | **150** |
| MW-114WT | 3.5 - 8.5 | 08/22/19 | -- | **950** | -- | **150 J** | **0.69 J** | **240** |
| MW-114WT | 3.5 - 8.5 | 08/13/20 | -- | **740** | -- | **360** | **3.4** | **280** |
| MW-114WT | 3.5 - 8.5 | 08/19/21 | -- | **860** | -- | **570** | **2.6** | **190** |
| MW-114WT | 3.5 - 8.5 | 09/27/22 | -- | **390** | -- | **500** | **1.8** | **200 B** |
| MW-149WT | 7 - 17 | 06/12/96 | -- | -- | -- | -- | -- | -- |
| MW-149WT | 7 - 17 | 05/21/00 | **10.7** | **868** | -- | -- | -- | -- |
| MW-149WT | 7 - 17 | 06/02/04 | **223 [227]** | **4,440 [4,560]** | -- | -- | -- | -- |
| MW-149WT | 7 - 17 | 04/03/08 | **93.6 [92.3]** | **1,570** | -- | **800** | -- | **300** |
| MW-149WT | 7 - 17 | 09/30/10 | **126 [122]** | -- | -- | **3,600** | **6.7** | **2,200 [1,800]** |
| MW-149WT | 7 - 17 | 09/28/11 | **190 [180]** | -- | -- | **4,700** | **6.9** | **1,600 [1,600]** |
| MW-149WT | 7 - 17 | 09/18/12 | **160 [160]** | -- | -- | **5,000** | **6.8** | **2,000 [1,900]** |
| MW-149WT | 7 - 17 | 09/25/13 | **140 B [140 B]** | -- | -- | **4,600 B** | **6.2 B** | **2,000 [2,100]** |
| MW-149WT | 7 - 17 | 09/24/14 | **75 B [69 B]** | -- | -- | **3,200 B** | -- | **2,000 [1,300]** |
| MW-149WT | 7 - 17 | 10/01/15 | **60** | -- | -- | **3,000** | **4.7** | **1,100** |
| MW-149WT | 7 - 17 | 09/29/16 | **50 [52]** | -- | -- | **1,200** | **1** | **620 [700 ]** |
| MW-149WT | 7 - 17 | 08/30/17 | **48[48]** | -- | -- | **1,100 B** | **4.4 B** | **970 [850]** |
| MW-149WT | 7 - 17 | 09/26/18 | **66 [60]** | -- | -- | **920 [880]** | **0.66 [0.63 ]** | **910 [880]** |
| MW-149WT | 7 - 17 | 08/21/19 | **51 [50]** | -- | -- | **960 [1,600]** | **2.3 [3.8 ]** | **650 [1,100]** |
| MW-149WT | 7 - 17 | 08/11/20 | **40** | **900** | **9.1** | **1,800** | **5.1** | **1,100** |
| MW-149WT | 7 - 17 | 08/19/21 | **45 [50]** | **--** | **9.1 [11]** | **2,600 [2,700]** | **6.2 [6.5]** | **1,000 [1,000]** |
| MW-149WT | 7 - 17 | 09/26/22 | **30 [32]** | **--** | **8.7 [8.3]** | **2,600 [2,600]** | **3.5 [3.5]** | **1,200 B [1,400 B]** |

**Table 2**
**Analytical Data Summary Table - SMI Inorganics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | Arsenic | Manganese | Arsenic (Dissolved) | Ammonia Nitrogen | Estimated Un-ionized Ammonia | Phosphorus |
|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 680* | 4,700 | 680* | 53 | 53 | 1,000 |
| MW-185WT | 3 - 8 | 11/28/07 | -- | **291** | -- | 300 U [300 U] | -- | 100 U [100 U] |
| MW-185WT | 3 - 8 | 09/18/12 | -- | **700** | -- | **380** | **4.3** | 100 U |
| MW-185WT | 3 - 8 | 09/25/13 | -- | **400** | -- | **400 B** | -- | 100 U |
| MW-185WT | 3 - 8 | 09/24/14 | -- | **320** | -- | **160 J,B** | **4 J,B** | 100 U |
| MW-185WT | 3 - 8 | 10/01/15 | -- | **330** | -- | **190 J** | **4.1 J** | 100 U |
| MW-185WT | 3 - 8 | 09/30/16 | -- | **150** | -- | **97 J** | **0.54 J** | 100 U |
| MW-185WT | 3 - 8 | 08/31/17 | -- | **140** | -- | **96 J,B** | **3.4 J,B** | 100 U |
| MW-185WT | 3 - 8 | 09/27/18 | -- | **1100** | -- | **150 J** | **0.93 J** | 100 U |
| MW-185WT | 3 - 8 | 08/22/19 | -- | **650** | -- | **120 J** | **1.7 J** | 100 U |
| MW-185WT | 3 - 8 | 08/14/20 | -- | **320** | -- | **100 J** | **1.7 J** | 100 U |
| MW-185WT | 3 - 8 | 08/23/21 | -- | **470** | -- | **140 J** | **2.9 J** | **70 J** |
| MW-185WT | 3 - 8 | 09/27/22 | -- | **330** | -- | **200** | **1.4** | **87 JB** |
| MW-186WT | 8 - 18 | 09/30/10 | -- | **252** | -- | **1,500** | **29** | **300** |
| MW-186WT | 8 - 18 | 09/23/11 | -- | **450** | -- | **2,100** | **57** | **360** |
| MW-186WT | 8 - 18 | 09/18/12 | -- | **400** | -- | **2,100** | **15** | **250** |
| MW-186WT | 8 - 18 | 09/25/13 | -- | **1,100** | -- | **2,000 B** | **4.3 B** | **290** |
| MW-186WT | 8 - 18 | 09/24/14 | -- | **2,100** | -- | **2,000 B** | **2.3 B** | **170** |
| MW-186WT | 8 - 18 | 10/02/15 | -- | **1,400** | -- | **1,600** | **9.7** | **290** |
| MW-186WT | 8 - 18 | 09/30/16 | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8 - 18 | 09/30/16 | -- | **1,800** | -- | **1,500** | **3.4** | **260** |
| MW-186WT | 8 - 18 | 08/31/17 | -- | **700** | -- | **1,300 B** | **12 B** | **290** |
| MW-186WT | 8 - 18 | 09/27/18 | -- | **690** | -- | **1,600** | **9.7** | **400** |
| MW-186WT | 8 - 18 | 08/22/19 | -- | **920** | -- | **1,500 [1,400]** | **12 [11]** | **440 [120]** |
| MW-186WT | 8 - 18 | 08/12/20 | -- | **410** | -- | **1,300** | **22** | **440** |
| MW-186WT | 8 - 18 | 08/24/21 | -- | **1,000** | -- | **1,200** | **4** | **460** |
| MW-186WT | 8 - 18 | 09/28/22 | -- | **700** | -- | **1,300** | **9** | **490 B** |

**Table 2**
**Analytical Data Summary Table - SMI Inorganics**
**RACER Trust**
**Saginaw, MI**

**Notes:**
All results are in micrograms per liter (ug/L).
Criteria presented are the applicable site-specific criteria. Drinking water is not a complete pathway; therefore drinking water criteria are not presented.
Applicable site-specific criteria are the minimum Rule 57 criteria, excluding drinking water.
Hardness-dependent Rule 57 criteria are based on a hardness of 270 milligrams per liter for the Saginaw River, as analyzed in the October 2016 sampling event.
pH-dependent Rule 57 criteria are based on a default pH of 7.
Un-ionized ammonia is calculated based on the pH and temperature of the groundwater sample, using the following equaitons. When available, the field-measured pH was used.
Un-ionized ammonia (µg/L = Total Ammonia (µg/L) × Fraction un-ionized ammonia
Fraction un-ionized ammonia = $1/[10^{(pKa-pH)} + 1]$
pKa = 0.0901821+2729.92/T
T (in Kelvin) = T(°C) + 273.15
Bolded cells represent constitiuent concentrations with detections.
Duplicate results are presented in brackets.
Gray shaded cells represent constituent concentrations that exceed site-specific Groundwater/Surface Water Interface (GSI) Criteria.
MW-183WT, X-4CAUGR, X-9AR, X-9BR, X-9CAUG represent a groundwater surface water interface (GSI) perimeter monitoring well from Green Point Landfill.
MW-107WT, MW-107S1, MW-108S2, MW-110WTR, MW-111WT, MW-114S2, MW-114WT, MW-149WT, MW-185WT, and MW-186WT represent a GSI perimeter monitoring well from SMI.
* Venting groundwater discharge concentrations was recommended by MDEQ in a letter dated November 26, 2008 followed by a Mixing Zone Determination Request and based on a five year renewal approved by the MDEQ on October 21, 2021.

**Data Qualifiers:**
ND = Not detected. The value in parentheses represents the associated detection limit.
-- or NA = Not analyzed for this constituent.
B = Inorganics: the detected analyte is an estimated value between the instrument detection limit (IDL) and the reporting limit (RL).
B = Organics: the compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
BJ = The detected analyte is an estimated concentration between the IDL and the RL.
D = Concentration is based on a diluted sample analysis.
F1= MS and/or MSD Recovery is outside acceptance limits/recovery exceeds control limits.
H = Sample was prepped or analyzed beyond the specified hold time.
J = The compound/constituent was positively identified; however, the associated numerical value is an estimated concentration only.
L = A negative instrument reading had an absolute value greater than the reporting limit.
M = Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.
R = Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data shall not be used for any qualitative or quantitative purposes.
U = The constituent was analyzed for but not detected. The associated value is the constituent quantitation limit.
UJ = The constituent was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual result.
^ = ICV, CCV, ICB, CCB, ISA, ISB, CRI, CRA, DLCK, or MRL standard: instrument related QC exceeds the control limits.

**Table 3**
**Analytical Data Summary Table - SMI Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | 2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether) | 2,4,5-Trichlorophenol | 2,4,6-Trichlorophenol | 2,4-Dichlorophenol | 2,4-Dimethylphenol | 2,4-Dinitrophenol | 2,4-Dinitrotoluene | 2,6-Dinitrotoluene | 2-Chloronaphthalene | 2-Chlorophenol | 2-Methylnaphthalene | 2-Methylphenol | 2-Nitroaniline | 2-Nitrophenol | 3&4-Methylphenol | 3,3'-Dichlorobenzidine | 3-Nitroaniline | 4,6-Dinitro-2-methylphenol |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 290 | NSL | 5 | 11 | 380 | 19 | NSL | NSL | NSL | 18 | 19 | 30 | NSL | 56 | 30 | 0.2 | NSL | NSL |
| MW-107S1 | 12.5 - 17.5 | 07/12/95 | 5.0 U | 50 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |
| MW-107S1 | 12.5 - 17.5 | 06/07/96 | 5.0 U | 50 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |
| MW-107S1 | 12.5 - 17.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-107WT | 4 - 9 | 07/12/95 | 5.0 U | 50 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |
| MW-107WT | 4 - 9 | 06/07/96 | 5.0 U | 50 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |
| MW-107WT | 4 - 9 | 03/10/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-107WT | 4 - 9 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108S2 | 22 - 27 | 07/13/95 | 5.0 U | 50 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |
| MW-108S2 | 22 - 27 | 06/08/96 | 5.0 U | 50 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |
| MW-108S2 | 22 - 27 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 07/13/95 | 5.0 U | 50 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |
| MW-108WT | 2.5 - 7.5 | 06/08/96 | 5.0 U | 50 U | 5.0 U | 5.0 U | 5.0 U | 20 UJ | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |
| MW-108WT | 2.5 - 7.5 | 03/10/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 09/29/16 | 0.95 U | 4.8 U | 3.8 U | 1.9 U | 1.9 U | 4.8 U | 4.8 U | 4.8 U | 0.95 U | 0.95 U | 0.19 U | 0.95 U | 1.9 U | 1.9 U | -- | 3.8 U | 1.9 U | 4.8 U |
| MW-108WT | 2.5 - 7.5 | 10/13/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 08/31/17 | 0.95 U | 4.8 U | 3.8 U | -- | 1.9 U | 4.8 U | 4.8 U | 4.8 U | 0.95 U | 0.95 U | 0.19 U | 0.95 U | 1.9 U | 1.9 U | -- | 3.8 U | 1.9 U | -- |
| MW-108WT | 2.5 - 7.5 | 09/27/18 | -- | 4.8 U | 4.8 U | 1.9 U | 1.9 U | 9.5 U | 4.8 U | 4.8 U | 0.95 U | 0.95 U | 0.19 U | 0.95 U | 1.9 U | 1.9 U | 1.9 U | 4.8 U | 1.9 U | 4.8 U |
| MW-108WT | 2.5 - 7.5 | 08/21/19 | 0.95 U | 4.8 U | 4.8 U | 1.9 U | 1.9 U | 9.5 U | 4.8 U | 4.8 U | 0.95 U | 0.95 U | 0.19 U | 0.95 U | 1.9 U | 1.9 U | -- | 4.8 U | 1.9 U | 4.8 U |
| MW-108WT | 2.5 - 7.5 | 08/13/20 | 0.96 U [0.95 U] | 4.8 U [4.8 U] | 4.8 U [4.8 U] | 1.9 U[1.9 U] | 1.9 U [1.9 U] | 9.6 U [9.5 U] | 4.8 U [4.8 U] | 4.8 U [4.8 U] | 0.96 U [0.95 U] | 0.96 U [0.95 U] | 0.19 U [0.19 U] | 0.96 U [0.95 U] | 1.9 U [1.9 U] | 1.9 U [1.9 U] | 1.9 U [1.9 U] | 4.8 U [4.8 U] | 1.9 U [1.9 U] | 4.8 U [4.8 U] |
| MW-108WT | 2.5 - 7.5 | 08/19/21 | 0.95 U [0.95 U] | 4.8 U [4.8 U] | 3.8 U [3.8 U] | 1.9 U [1.9 U] | 1.9 U [1.9 U] | 4.8 U [4.8 U] | 4.8 U [4.8 U] | 4.8 U [4.8 U] | 0.95 U [0.95 U] | 0.95 U [0.95 U] | 0.19 U [0.19 U] | 0.95 U [0.95 U] | 1.9 U [1.9 U] | 1.9 U [1.9 U] | 1.9 U [1.9 U] | 3.8 U F2 [3.8 U] | 1.9 U [1.9 U] | 4.8 U [4.8 U] |
| MW-110WT | UNKNOWN | 06/12/96 | 5.0 U | 50 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |
| MW-110WT | UNKNOWN | 03/06/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WT | UNKNOWN | 05/22/00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 06/02/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/24/05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 04/02/08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 09/24/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 10/01/15 | 0.95 U | 4.8 U | 3.8 U | -- | 1.9 U | 4.8 U | 4.8 U | -- | 0.95 U | 0.95 U | 0.19 U | 0.95 U | 1.9 U | 1.9 U | 1.9 U | 3.8 U | 1.9 U | 4.8 U |
| MW-110WTR | 10 - 15 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 10/13/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/21/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/12/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/19/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 09/27/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 07/14/95 | 5.0 U | 50 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |
| MW-111WT | 5.5 - 10.5 | 06/12/96 | 5.0 U | 50 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |
| MW-111WT | 5.5 - 10.5 | 03/07/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 06/30/99 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 05/19/00 | 5.0 U | 5.0 U | 5.0 U | 10 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |
| MW-111WT | 5.5 - 10.5 | 04/05/01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 06/02/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/26/05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 04/02/08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5-10.5 | 09/18/12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5-10.5 | 09/26/13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5-10.5 | 09/23/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5-10.5 | 10/01/15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/22/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/12/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/23/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 09/27/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114S2 | 22.5 - 27.5 | 07/17/95 | 5.0 U | 50 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |
| MW-114S2 | 22.5 - 27.5 | 06/07/96 | 5.0 U | 50 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |

**Table 3**
**Analytical Data Summary Table - SMI Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | 2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether) | 2,4,5-Trichlorophenol | 2,4,6-Trichlorophenol | 2,4-Dichlorophenol | 2,4-Dimethylphenol | 2,4-Dinitrophenol | 2,4-Dinitrotoluene | 2,6-Dinitrotoluene | 2-Chloronaphthalene | 2-Chlorophenol | 2-Methylnaphthalene | 2-Methylphenol | 2-Nitroaniline | 2-Nitrophenol | 3&4-Methylphenol | 3,3'-Dichlorobenzidine | 3-Nitroaniline | 4,6-Dinitro-2-methylphenol |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 290 | NSL | 5 | 11 | 380 | 19 | NSL | NSL | NSL | 18 | 19 | 30 | NSL | 56 | 30 | 0.2 | NSL | NSL |
| MW-114S2 | 22.5 - 27.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 06/08/96 | 5.0 U | 50 U | 5.0 U | 5.0 U | 5.0 U | 20 UJ | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |
| MW-114WT | 3.5 - 8.5 | 03/06/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 12/11/97 | 5.0 U | 50 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |
| MW-114WT | 3.5 - 8.5 | 05/22/00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 04/05/01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 06/03/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/24/05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/26/13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/23/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 10/02/15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/22/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/13/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/19/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/28/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-149WT | 7 - 17 | 06/12/96 | 5.0 U | 50 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | -- | 20 U | 20 U | 20 U |
| MW-149WT | 7 - 17 | 03/10/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-149WT | 7 - 17 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 06/03/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 11/28/07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/18/12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/25/13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/24/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 10/01/15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/30/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 08/22/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 08/14/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 08/23/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/27/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/30/10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/23/11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/18/12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/25/13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/24/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 10/02/15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/30/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 08/22/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 08/12/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 08/24/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/28/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 3**
**Analytical Data Summary Table - SMI Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | 4-Bromophenyl phenyl ether | 4-Chloro-3-Methylphenol | 4-Chloroaniline | 4-Chlorophenyl phenyl ether | 4-Nitroaniline | 4-Nitrophenol | Acenaphthene | Acenaphthylene | Acetophenone | Anthracene | Atrazine | Benzaldehyde | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(g,h,i)perylene | Benzo(k)fluoranthene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | NSL | 7.4 | 72 | NSL | NSL | 200 | 38 | NA | NA | 2,400 | 7.3 | NSL | NA | NA | NA | NA | NSL |
| MW-107S1 | 12.5 - 17.5 | 07/12/95 | 5.0 U | 5.0 U | 20 U | 5.0 U | 20 U | 20 U | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-107S1 | 12.5 - 17.5 | 06/07/96 | 5.0 U | 5.0 U | 20 U | 5.0 U | 20 U | 20 U | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-107S1 | 12.5 - 17.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-107WT | 4 - 9 | 07/12/95 | 5.0 U | 5.0 U | 20 U | 5.0 U | 20 U | 20 U | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-107WT | 4 - 9 | 06/07/96 | 5.0 U | 5.0 U | 20 U | 5.0 U | 20 U | 20 U | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-107WT | 4 - 9 | 03/10/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-107WT | 4 - 9 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108S2 | 22 - 27 | 07/13/95 | 5.0 U | 5.0 U | 20 U | 5.0 U | 20 U | 20 U | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-108S2 | 22 - 27 | 06/08/96 | 5.0 U | 5.0 U | 20 U | 5.0 U | 20 U | 20 U | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-108S2 | 22 - 27 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 07/13/95 | 5.0 U | 5.0 U | 20 U | 5.0 U | 20 U | 20 U | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-108WT | 2.5 - 7.5 | 06/08/96 | 5.0 U | 5.0 U | 20 U | 5.0 U | 20 U | 20 U | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-108WT | 2.5 - 7.5 | 03/10/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 09/29/16 | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 4.8 U | 0.19 U | 0.19 U | 0.95 U | 0.19 U | 0.95 U | 0.95 U | 0.19 U | 0.19 U | 0.19 U | 0.19 U | 0.19 U |
| MW-108WT | 2.5 - 7.5 | 10/13/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 08/31/17 | -- | 1.9 U | 1.9 U | -- | 1.9 U | 4.8 U | 0.19 U | 0.19 U | 0.95 U | 0.19 U | 0.95 U | 0.95 U | 0.19 U | 0.19 U | 0.19 U | 0.19 U | 0.19 U |
| MW-108WT | 2.5 - 7.5 | 09/27/18 | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 9.5 U | 0.19 U | 0.19 U | 0.95 U | 0.19 U | 1.9 U | 1.9 U | 0.19 U | 0.19 U | 0.19 U | 0.19 U | 0.19 U |
| MW-108WT | 2.5 - 7.5 | 08/21/19 | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 9.5 U | 0.19 U | 0.19 U | 0.95 U | 0.19 U | 1.9 U | 1.9 U | 0.19 U | 0.19 U | 0.19 U | 0.19 U | 0.19 U |
| MW-108WT | 2.5 - 7.5 | 08/13/20 | 1.9 U [1.9 U] | 1.9 U [1.9 U] | 1.9 U [1.9 U] | 1.9 U [1.9 U] | 1.9 U [1.9 U] | 9.6 U [9.5 U] | 0.19 U [0.19 U] | 0.19 U [0.19 U] | 0.96 U [0.95 U] | 0.19 U [0.19 U] | 1.9 U [1.9 U] | 1.9 U [1.9 U] | 0.19 U [0.19 U] | 0.19 U [0.19 U] | 0.19 U [0.19 U] | 0.19 U [0.19 U] | 0.19 U [0.19 U] |
| MW-108WT | 2.5 - 7.5 | 08/19/21 | 1.9 U [1.9 U] | 1.9 U [1.9 U] | 1.9 U * F1 [ 1.9 U *] | 1.9 U [1.9 U] | 1.9 U [1.9 U] | 4.8 U [4.8 U] | 0.19 U [0.19 U] | 0.19 U [0.19 U] | 0.95 U [0.95 U] | 0.19 U [0.19 U] | 0.95 U [0.95 U] | 0.95 U [0.95 U] | 0.19 U [0.19 U] | 0.19 U [0.19 U] | 0.19 U [0.19 U] | 0.19 U [0.19 U] | 0.19 U [0.19 U] |
| MW-110WT | UNKNOWN | 06/12/96 | 5.0 U | 5.0 U | 20 U | 5.0 U | 20 U | 20 U | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-110WT | UNKNOWN | 03/06/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WT | UNKNOWN | 05/22/00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 06/02/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/24/05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 04/02/08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 09/24/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 10/01/15 | 1.9 U | 1.9 U | 1.9 U, F1 | 1.9 U | 1.9 U | 4.8 U | 0.19 U | 0.19 U | 0.95 U | 0.19 U | 0.95 U | 0.95 U | 0.19 U | 0.19 U | 0.19 U | 0.19 U | 0.19 U |
| MW-110WTR | 10 - 15 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 10/13/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/21/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/12/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/19/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 09/27/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 07/14/95 | 5.0 U | 5.0 U | 20 U | 5.0 U | 20 U | 20 U | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-111WT | 5.5 - 10.5 | 06/12/96 | 5.0 U | 5.0 U | 20 U | 5.0 U | 20 U | 20 U | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-111WT | 5.5 - 10.5 | 03/07/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 06/30/99 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 05/19/00 | 5.0 U | 5.0 U | 10 U | 5.0 U | 20 U | 20 U | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-111WT | 5.5 - 10.5 | 04/05/01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 06/02/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/26/05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 04/02/08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5-10.5 | 09/18/12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5-10.5 | 09/26/13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5-10.5 | 09/23/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5-10.5 | 10/01/15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/22/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/12/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/23/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 09/27/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114S2 | 22.5 - 27.5 | 07/17/95 | 5.0 U | 5.0 U | 20 U | 5.0 U | 20 U | 20 UJ | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-114S2 | 22.5 - 27.5 | 06/07/96 | 5.0 U | 5.0 U | 20 U | 5.0 U | 20 U | 20 U | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |

**Table 3**
**Analytical Data Summary Table - SMI Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | 4-Bromophenyl phenyl ether | 4-Chloro-3-Methylphenol | 4-Chloroaniline | 4-Chlorophenyl phenyl ether | 4-Nitroaniline | 4-Nitrophenol | Acenaphthene | Acenaphthylene | Acetophenone | Anthracene | Atrazine | Benzaldehyde | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(g,h,i)perylene | Benzo(k)fluoranthene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | NSL | 7.4 | 72 | NSL | NSL | 200 | 38 | NA | NA | 2,400 | 7.3 | NSL | NA | NA | NA | NA | NSL |
| MW-114S2 | 22.5 - 27.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 06/08/96 | 5.0 U | 5.0 U | 20 U | 5.0 U | 20 U | 20 UJ | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-114WT | 3.5 - 8.5 | 03/06/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 12/11/97 | 5.0 U | 5.0 U | 20 U | 5.0 U | 20 U | 20 U | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-114WT | 3.5 - 8.5 | 05/22/00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 04/05/01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 06/03/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/24/05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/26/13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/23/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 10/02/15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/22/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/13/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/19/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/28/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-149WT | 7 - 17 | 06/12/96 | 5.0 U | 5.0 U | 20 U | 5.0 U | 20 U | 20 U | 5.0 U | 5.0 U | -- | 5.0 U | -- | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-149WT | 7 - 17 | 03/10/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-149WT | 7 - 17 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 06/03/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 08/25/05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 11/28/07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/18/12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/25/13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/24/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 10/01/15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/30/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 08/22/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 08/14/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 08/23/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/27/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/30/10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/23/11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/18/12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/25/13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/24/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 10/02/15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/30/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 08/22/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 08/12/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 08/24/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/28/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 3**
**Analytical Data Summary Table - SMI Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | 1,1'-Biphenyl | bis(2-Chloroethoxy)methane | bis(2-Chloroethyl)ether | bis(2-Ethylhexyl)phthalate | Butylbenzylphthalate | Caprolactam | Carbazole | Chrysene | Dibenzo(a,h)anthracene | Dibenzofuran | Diethylphthalate | Dimethylphthalate | Di-n-Butylphthalate | Di-n-Octylphthalate | Fluoranthene | Fluorene | Hexachlorobenzene | Hexachlorobutadiene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 13 | NSL | 15 | 18 | 67 | NSL | 4 | NA | NA | 4 | 110 | NSL | 9.7 | 300 | 1.6 | 12 | 0.0003 | 0.053 |
| MW-107S1 | 12.5 - 17.5 | 07/12/95 | -- | 5.0 U | 5.0 U | **9.0** | 5.0 U | -- | 10 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-107S1 | 12.5 - 17.5 | 06/07/96 | -- | 5.0 U | 5.0 U | 11 U | 5.0 U | -- | 10 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-107S1 | 12.5 - 17.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-107WT | 4 - 9 | 07/12/95 | -- | 5.0 U | 5.0 U | **0.70 J** | 5.0 U | -- | 10 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-107WT | 4 - 9 | 06/07/96 | -- | 5.0 U | 5.0 U | 7.7 U | 5.0 U | -- | 10 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-107WT | 4 - 9 | 03/10/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-107WT | 4 - 9 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108S2 | 22 - 27 | 07/13/95 | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | -- | 10 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-108S2 | 22 - 27 | 06/08/96 | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | -- | 10 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-108S2 | 22 - 27 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 07/13/95 | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | -- | 10 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-108WT | 2.5 - 7.5 | 06/08/96 | -- | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | -- | 10 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-108WT | 2.5 - 7.5 | 03/10/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 09/29/16 | 0.95 U | 0.95 U | 0.95 U | 1.9 U | 0.95 U | 4.8 U | 0.95 U | 0.19 U | 0.19 U | 0.95 U | 0.95 U | 0.95 U | 0.95 U | 0.95 U | 0.19 U | 0.19 U | 0.19 U | 0.95 U |
| MW-108WT | 2.5 - 7.5 | 10/13/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 08/31/17 | 0.95 U | 0.95 U | 0.95 U | 1.9 U | 0.95 U | 4.8 U | 0.95 U | 0.19 U | 0.19 U | 0.95 U | 0.95 U | 0.95 U | 0.95 U | 0.95 U | 0.19 U | 0.19 U | 0.19 U | 0.95 U |
| MW-108WT | 2.5 - 7.5 | 09/27/18 | -- | 0.95 U | 0.95 U | 4.8 U | 1.9 U | 4.8 U | 0.95 U | 0.19 U | 0.19 U | 0.95 U | 4.8 U | 1.9 U | 4.8 U | 1.9 U | 0.19 U | 0.19 U | 0.19 U | 0.95 U |
| MW-108WT | 2.5 - 7.5 | 08/21/19 | 0.95 U | 0.95 U | 0.95 U | 4.8 U | 1.9 U | 4.8 U | 0.95 U | 0.19 U | 0.19 U | 0.95 U | 4.8 U | 1.9 U | 4.8 U | 1.9 U | 0.19 U | 0.19 U | 0.19 U | 0.95 U |
| MW-108WT | 2.5 - 7.5 | 08/13/20 | 0.96 U [0.95 U] | 0.96 U [0.95 U] | 0.96 U [0.95 U] | 4.8 U [4.8 U] | 1.9 U [ 1.9 U] | 4.8 U [4.8 U] | 0.96 U [0.95 U] | 0.19 U [0.19 U] | 0.19 U [0.19 U] | 0.96 U [0.95 U] | 4.8 U [4.8 U] | 1.9 U [ 1.9 U] | 4.8 U [4.8 U] | 1.9 U [ 1.9 U] | 0.19 U [0.19 U] | 0.19 U * [0.19 U *] | 0.19 U [0.19 U] | 0.96 U [0.95 U] |
| MW-108WT | 2.5 - 7.5 | 08/19/21 | 0.95 U [0.95 U] | 0.95 U [0.95 U] | 0.95 U [0.95 U] | 1.9 U [1.9 U] | 0.95 U [0.95 U] | 4.8 U [4.8 U] | 0.95 U [0.95 U] | 0.19 U [0.19 U] | 0.19 U [0.19 U] | 0.95 U [0.95 U] | 0.95 U [0.95 U] | 0.95 U [0.95 U] | 0.95 U [0.95 U] | 0.95 U [0.95 U] | 0.19 U [0.19 U] | 0.19 U [0.19 U] | 0.19 U [0.19 U] | 0.95 U [0.95 U] |
| MW-110WT | UNKNOWN | 06/12/96 | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | -- | 10 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-110WT | UNKNOWN | 03/06/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WT | UNKNOWN | 05/22/00 | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-110WTR | 10 - 15 | 06/02/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/24/05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 04/02/08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 09/24/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 10/01/15 | 0.95 U | 0.95 U | 0.95 U | 1.9 U | 0.95 U | **0.38 J** | 0.95 U | 0.19 U | 0.19 U | -- | 0.95 U | 0.95 U | 0.95 U | 0.95 U | 0.19 U | 0.19 U | 0.19 U | 0.95 U |
| MW-110WTR | 10 - 15 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 10/13/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/21/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/12/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/19/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 09/27/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 07/14/95 | -- | 5.0 U | 5.0 U | **54** | 5.0 U | -- | 10 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-111WT | 5.5 - 10.5 | 06/12/96 | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | -- | 10 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-111WT | 5.5 - 10.5 | 03/07/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 06/30/99 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 05/19/00 | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | -- | 10 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-111WT | 5.5 - 10.5 | 04/05/01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 06/02/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/26/05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 04/02/08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5-10.5 | 09/18/12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5-10.5 | 09/26/13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5-10.5 | 09/23/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5-10.5 | 10/01/15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/22/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/12/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/23/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 09/27/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114S2 | 22.5 - 27.5 | 07/17/95 | -- | 5.0 U | 5.0 U | **0.63 J** | 5.0 U | -- | 10 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-114S2 | 22.5 - 27.5 | 06/07/96 | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | -- | 10 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |

**Table 3**
**Analytical Data Summary Table - SMI Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | 1,1'-Biphenyl | bis(2-Chloroethoxy)methane | bis(2-Chloroethyl)ether | bis(2-Ethylhexyl)phthalate | Butylbenzylphthalate | Caprolactam | Carbazole | Chrysene | Dibenzo(a,h)anthracene | Dibenzofuran | Diethylphthalate | Dimethylphthalate | Di-n-Butylphthalate | Di-n-Octylphthalate | Fluoranthene | Fluorene | Hexachlorobenzene | Hexachlorobutadiene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 13 | NSL | 15 | 18 | 67 | NSL | 4 | NA | NA | 4 | 110 | NSL | 9.7 | 300 | 1.6 | 12 | 0.0003 | 0.053 |
| MW-114S2 | 22.5 - 27.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 06/08/96 | -- | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | -- | 10 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-114WT | 3.5 - 8.5 | 03/06/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 12/11/97 | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-114WT | 3.5 - 8.5 | 05/22/00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 04/05/01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 06/03/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/24/05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/26/13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/23/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 10/02/15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/22/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/13/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/19/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/28/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-149WT | 7 - 17 | 06/12/96 | -- | 5.0 U | 5.0 U | 5.0 U | 5.0 U | -- | 10 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| MW-149WT | 7 - 17 | 03/10/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-149WT | 7 - 17 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 06/03/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 08/25/05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 11/28/07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/18/12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/25/13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/24/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 10/01/15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/30/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 08/22/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 08/14/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 08/23/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 09/27/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/30/10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/23/11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/18/12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/25/13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/24/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 10/02/15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/30/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 08/22/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 08/12/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 08/24/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-186WT | 8-18 | 09/28/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 3**
**Analytical Data Summary Table - SMI Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | Hexachlorocyclopentadiene | Hexachloroethane | Indeno(1,2,3-cd)pyrene | Isophorone | Naphthalene | Nitrobenzene | N-Nitroso-di-n-propylamine | N-Nitrosodiphenylamine | Pentachlorophenol | Phenanthrene | Phenol | Pyrene | Aroclor 1016 | Aroclor 1221 | Aroclor 1232 | Aroclor 1242 | Aroclor 1248 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 450 | 6.7 | NA | 1,300 | 11 | 180 | NSL | NSL | 2.8 | 1.7 | 450 | 15 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 |
| MW-107S1 | 12.5 - 17.5 | 07/12/95 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U |
| MW-107S1 | 12.5 - 17.5 | 06/07/96 | 5.0 U | 2.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 25 U | 5.0 U | 5.0 U | 5.0 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U |
| MW-107S1 | 12.5 - 17.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-107WT | 4 - 9 | 07/12/95 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U |
| MW-107WT | 4 - 9 | 06/07/96 | 5.0 U | 2.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 25 U | 5.0 U | 5.0 U | 5.0 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U |
| MW-107WT | 4 - 9 | 03/10/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U |
| MW-107WT | 4 - 9 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108S2 | 22 - 27 | 07/13/95 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 25 UJ | 5.0 U | 5.0 U | 5.0 UJ | R | R | R | R | R |
| MW-108S2 | 22 - 27 | 06/08/96 | 5.0 U | 2.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 25 U | 5.0 U | 5.0 U | 5.0 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U |
| MW-108S2 | 22 - 27 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 07/13/95 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | R | R | R | R | R |
| MW-108WT | 2.5 - 7.5 | 06/08/96 | 5.0 U | 2.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 25 U | 5.0 U | 5.0 U | 5.0 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U |
| MW-108WT | 2.5 - 7.5 | 03/10/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U |
| MW-108WT | 2.5 - 7.5 | 09/29/16 | 4.8 U | 0.95 U | 0.19 U | 0.95 U | 0.19 U | 0.95 U | -- | -- | 4.8 U | 0.19 U | 0.95 U | 0.19 U | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 10/13/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 08/31/17 | 4.8 U | 0.95 U | 0.19 U | 0.95 U | 0.19 U | 0.95 U | 0.95 U | 0.95 U | 4.8 U | 0.19 U | 0.95 U | 0.19 U | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 09/27/18 | 9.5 U | 0.95 U | 0.19 U | 0.95 U | 0.19 U | 0.95 U | 0.95 U | 0.95 U | 9.5 U | 0.19 U | 0.95 U | 0.19 U | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 08/21/19 | 9.5 U | 0.95 U | 0.19 U | 0.95 U | 0.19 U | 0.95 U | 0.95 U | 0.95 U | 9.5 U | 0.19 U | 0.95 U | 0.19 U | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 08/13/20 | 9.6 U [9.5 U] | 0.96 U [0.95 U] | 0.19 U [0.19 U] | 0.96 U [0.95 U] | 0.19 U [0.19 U] | 0.96 U [0.95 U] | 0.96 U [0.95 U] | 0.96 U [0.95 U] | 9.6 U [9.5 U] | 0.19 U [0.19 U] | 0.96 U [0.95 U] | 0.19 U [0.19 U] | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 08/19/21 | 4.8 U [4.8 U] | 0.95 U [0.95 U] | 0.19 U [0.19 U] | 0.95 U [0.95 U] | 0.19 U [0.19 U] | 0.95 U [0.95 U] | 0.95 U [0.95 U] | 0.95 U [0.95 U] | 4.8 U [4.8 U] | 0.19 U [0.19 U] | 0.95 U [0.95 U] | 0.19 U [0.19 U] | -- | -- | -- | -- | -- |
| MW-110WT | UNKNOWN | 06/12/96 | 5.0 U | 2.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 25 U | 5.0 U | 5.0 U | 5.0 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U |
| MW-110WT | UNKNOWN | 03/06/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.2 U | 0.2 U | 0.4 U | 0.2 U | **0.23** |
| MW-110WT | UNKNOWN | 05/22/00 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 0.20 U | 0.20 U | 0.40 U | 0.20 U | 0.20 U |
| MW-110WTR | 10 - 15 | 06/02/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/24/05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.20 U [0.20 U] | 0.20 U [0.20 U] | 0.20 U [0.20 U] | 0.20 U [0.20 U] | 0.20 U [0.20 U] |
| MW-110WTR | 10 - 15 | 04/02/08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U |
| MW-110WTR | 10 - 15 | 09/24/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-110WTR | 10 - 15 | 10/01/15 | 4.8 U | 0.95 U | 0.19 U | 0.95 U | 0.19 U | 0.95 U | 0.95 U | 0.95 U | 4.8 U | -- | 0.19 U | 0.19 U | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-110WTR | 10 - 15 | 10/13/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-110WTR | 10 - 15 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-110WTR | 10 - 15 | 08/21/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-110WTR | 10 - 15 | 08/12/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-110WTR | 10 - 15 | 08/19/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.097 U | 0.097 U | 0.097 U | 0.097 U | 0.097 U |
| MW-110WTR | 10 - 15 | 09/27/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| MW-111WT | 5.5 - 10.5 | 07/14/95 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 0.21 U | 0.21 U | 0.42 U | 0.21 U | **0.41** |
| MW-111WT | 5.5 - 10.5 | 06/12/96 | 5.0 U | 2.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 25 U | 5.0 U | 5.0 U | 5.0 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U |
| MW-111WT | 5.5 - 10.5 | 03/07/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.2 U | 0.2 U | 0.4 U | 0.2 U | **0.28** |
| MW-111WT | 5.5 - 10.5 | 06/30/99 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 U | 0.10 U | 0.10 U | 0.10 U | **0.11** |
| MW-111WT | 5.5 - 10.5 | 05/19/00 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 1.0 U | 5.0 U | 5.0 U | 5.0 U | 0.20 U | 0.20 U | 0.40 U | 0.20 U | 0.20 U |
| MW-111WT | 5.5 - 10.5 | 04/05/01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.20 U | 0.20 U | 0.40 U | 0.20 U | 0.20 U |
| MW-111WT | 5.5 - 10.5 | 06/02/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/26/05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U |
| MW-111WT | 5.5 - 10.5 | 04/02/08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.20 U [0.20 U] | 0.20 U [0.20 U] | 0.20 U [0.20 U] | 0.20 U [0.20 U] | 0.20 U [0.20 U] |
| MW-111WT | 5.5-10.5 | 09/18/12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.098 U | 0.098 U | 0.098 U | 0.098 U | 0.098 U |
| MW-111WT | 5.5-10.5 | 09/26/13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | **0.45** |
| MW-111WT | 5.5-10.5 | 09/23/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-111WT | 5.5-10.5 | 10/01/15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-111WT | 5.5 - 10.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.19 U | 0.19 U | 0.19 U | 0.19 U | **0.21** |
| MW-111WT | 5.5 - 10.5 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.95 U | 0.95 U | 0.95 U | 0.95 U | 0.95 U |
| MW-111WT | 5.5 - 10.5 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | **0.82** |
| MW-111WT | 5.5 - 10.5 | 08/22/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.098 U | 0.098 U | 0.098 U | 0.098 U | **0.22** |
| MW-111WT | 5.5 - 10.5 | 08/12/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | **0.068 J** |
| MW-111WT | 5.5 - 10.5 | 08/23/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] |
| MW-111WT | 5.5 - 10.5 | 09/27/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U F2 [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | **0.22** [0.095 U] |
| MW-114S2 | 22.5 - 27.5 | 07/17/95 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 25 U | 5.0 U | 5.0 U | 5.0 U | 0.21 U | 0.21 U | 0.41 U | 0.21 U | 0.21 U |
| MW-114S2 | 22.5 - 27.5 | 06/07/96 | 5.0 U | 2.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 25 U | 5.0 U | 5.0 U | 5.0 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U |

**Table 3**
**Analytical Data Summary Table - SMI Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | Hexachlorocyclopentadiene | Hexachloroethane | Indeno(1,2,3-cd)pyrene | Isophorone | Naphthalene | Nitrobenzene | N-Nitroso-di-n-propylamine | N-Nitrosodiphenylamine | Pentachlorophenol | Phenanthrene | Phenol | Pyrene | Aroclor 1016 | Aroclor 1221 | Aroclor 1232 | Aroclor 1242 | Aroclor 1248 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 450 | 6.7 | NA | 1,300 | 11 | 180 | NSL | NSL | 2.8 | 1.7 | 450 | 15 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 |
| MW-114S2 | 22.5 - 27.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 06/08/96 | 5.0 U | 2.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 25 U | 5.0 U | 5.0 U | 5.0 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U |
| MW-114WT | 3.5 - 8.5 | 03/06/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U |
| MW-114WT | 3.5 - 8.5 | 12/11/97 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 20 U | 5.0 U | 5.0 U | 5.0 U | 0.2 U | 0.2 UJ | 0.4 U | 0.2 U | 0.2 UJ |
| MW-114WT | 3.5 - 8.5 | 05/22/00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.20 U | 0.20 U | 0.40 U | 0.20 U | 0.20 U |
| MW-114WT | 3.5 - 8.5 | 04/05/01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.20 U | 0.20 U | 0.40 U | 0.20 U | 0.20 U |
| MW-114WT | 3.5 - 8.5 | 06/03/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/24/05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U |
| MW-114WT | 3.5 - 8.5 | 09/26/13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-114WT | 3.5 - 8.5 | 09/23/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-114WT | 3.5 - 8.5 | 10/02/15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-114WT | 3.5 - 8.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-114WT | 3.5 - 8.5 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-114WT | 3.5 - 8.5 | 09/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-114WT | 3.5 - 8.5 | 08/22/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.098 U | 0.098 U | 0.098 U | 0.098 U | 0.098 U |
| MW-114WT | 3.5 - 8.5 | 08/13/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-114WT | 3.5 - 8.5 | 08/19/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-114WT | 3.5 - 8.5 | 09/28/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-149WT | 7 - 17 | 06/12/96 | 5.0 U | 2.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 25 U | 5.0 U | 5.0 U | 5.0 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U |
| MW-149WT | 7 - 17 | 03/10/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U |
| MW-149WT | 7 - 17 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 06/03/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 08/25/05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U |
| MW-185WT | 3 - 8 | 11/28/07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.20 U [0.20 U] | 0.20 U [0.20 U] | 0.20 U [0.20 U] | 0.20 U [0.20 U] | 0.17 J [0.20 U] |
| MW-185WT | 3 - 8 | 09/18/12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.096 U | 0.096 U | 0.096 U | 0.096 U | 0.096 U |
| MW-185WT | 3 - 8 | 09/25/13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-185WT | 3 - 8 | 09/24/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-185WT | 3 - 8 | 10/01/15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-185WT | 3 - 8 | 09/30/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-185WT | 3 - 8 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-185WT | 3 - 8 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-185WT | 3 - 8 | 08/22/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 08/14/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-185WT | 3 - 8 | 08/23/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-185WT | 3 - 8 | 09/27/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| MW-186WT | 8-18 | 09/30/10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| MW-186WT | 8-18 | 09/23/11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-186WT | 8-18 | 09/18/12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] |
| MW-186WT | 8-18 | 09/25/13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] |
| MW-186WT | 8-18 | 09/24/14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 U [0.097 U] | 0.10 U [0.097 U] | 0.10 U [0.097 U] | 0.10 U [0.097 U] | 0.10 U [0.097 U] |
| MW-186WT | 8-18 | 10/02/15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] |
| MW-186WT | 8-18 | 09/30/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] |
| MW-186WT | 8-18 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] |
| MW-186WT | 8-18 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] |
| MW-186WT | 8-18 | 08/22/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] |
| MW-186WT | 8-18 | 08/12/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U [0.097 U] | 0.095 U [0.097 U] | 0.095 U [0.097 U] | 0.095 U [0.097 U] | 0.095 U [0.097 U] |
| MW-186WT | 8-18 | 08/24/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] |
| MW-186WT | 8-18 | 09/28/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |

**Table 3**
**Analytical Data Summary Table - SMI Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | Aroclor 1254 | Aroclor 1260 | Aroclor 1262 | Aroclor 1268 | Total PCBs | Aroclor 1016 (Dissolved) | Aroclor 1221 (Dissolved) | Aroclor 1232 (Dissolved) | Aroclor 1242 (Dissolved) | Aroclor 1248 (Dissolved) | Aroclor 1254 (Dissolved) | Aroclor 1260 (Dissolved) | Aroclor 1262 (Dissolved) | Aroclor 1268 (Dissolved) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 |
| MW-107S1 | 12.5 - 17.5 | 07/12/95 | 0.2 U | 0.2 U | -- | -- | 0.4 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-107S1 | 12.5 - 17.5 | 06/07/96 | 0.2 U | 0.2 U | -- | -- | 0.4 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-107S1 | 12.5 - 17.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-107WT | 4 - 9 | 07/12/95 | 0.2 U | 0.2 U | -- | -- | 0.4 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | |
| MW-107WT | 4 - 9 | 06/07/96 | 0.2 U | 0.2 U | -- | -- | 0.4 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-107WT | 4 - 9 | 03/10/97 | 0.2 U | 0.2 U | -- | -- | 0.4 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-107WT | 4 - 9 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108S2 | 22 - 27 | 07/13/95 | R | R | -- | -- | R | R | R | R | R | R | R | R | -- | -- |
| MW-108S2 | 22 - 27 | 06/08/96 | 0.2 U | 0.2 U | -- | -- | 0.4 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-108S2 | 22 - 27 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 07/13/95 | R | R | -- | -- | R | R | R | R | R | R | R | R | -- | -- |
| MW-108WT | 2.5 - 7.5 | 06/08/96 | 0.2 U | 0.2 U | -- | -- | 0.4 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-108WT | 2.5 - 7.5 | 03/10/97 | 0.2 U | 0.2 U | -- | -- | 0.4 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-108WT | 2.5 - 7.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 10/13/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 08/31/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 09/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 08/21/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 08/13/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-108WT | 2.5 - 7.5 | 08/19/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WT | UNKNOWN | 06/12/96 | 0.2 U | 0.2 U | -- | -- | 0.4 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-110WT | UNKNOWN | 03/06/97 | 0.2 U | 0.2 U | -- | -- | **0.23** | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-110WT | UNKNOWN | 12/10/97 | 0.2 U | 0.2 U | -- | -- | 0.4 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-110WT | UNKNOWN | 05/22/00 | 0.20 U | 0.20 U | -- | -- | 0.40 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-110WTR | 10 - 15 | 06/02/04 | -- | -- | -- | -- | -- | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-110WTR | 10 - 15 | 08/24/05 | 0.20 U [0.20 U] | 0.20 U [0.20 U] | -- | -- | 0.20 U [0.20 U] | 0.2 U [0.2 U] | 0.2 U [0.2 U] | 0.2 U [0.2 U] | 0.2 U [0.2 U] | 0.2 U [0.2 U] | 0.2 U [0.2 U] | 0.2 U [0.2 U] | -- | -- |
| MW-110WTR | 10 - 15 | 04/02/08 | 0.20 U | 0.20 U | -- | -- | 0.20 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-110WTR | 10 - 15 | 09/24/14 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.098 U | 0.098 U | 0.098 U | 0.098 U | 0.098 U | 0.098 U | 0.098 U | -- | -- |
| MW-110WTR | 10 - 15 | 10/01/15 | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-110WTR | 10 - 15 | 09/29/16 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-110WTR | 10 - 15 | 10/13/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-110WTR | 10 - 15 | 08/31/17 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-110WTR | 10 - 15 | 09/27/18 | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-110WTR | 10 - 15 | 08/21/19 | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-110WTR | 10 - 15 | 08/12/20 | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-110WTR | 10 - 15 | 08/19/21 | 0.097 U | 0.097 U | -- | -- | 0.097 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-110WTR | 10 - 15 | 09/27/22 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-111WT | 5.5 - 10.5 | 07/14/95 | 0.21 U | 0.21 U | -- | -- | **0.41** | 0.21 U | 0.21 U | 0.42 U | 0.21 U | 0.21 U | 0.21 U | 0.21 U | -- | -- |
| MW-111WT | 5.5 - 10.5 | 06/12/96 | 0.2 U | 0.2 U | -- | -- | 0.4 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-111WT | 5.5 - 10.5 | 03/07/97 | 0.2 U | 0.2 U | -- | -- | **0.28** | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-111WT | 5.5 - 10.5 | 06/30/99 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | **0.11** | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| MW-111WT | 5.5 - 10.5 | 05/19/00 | 0.20 U | 0.20 U | -- | -- | 0.40 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-111WT | 5.5 - 10.5 | 04/05/01 | 0.20 U | 0.20 U | -- | -- | 0.40 U | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-111WT | 5.5 - 10.5 | 06/02/04 | -- | -- | -- | -- | -- | 0.2 U [0.2 U] | 0.2 U [0.2 U] | 0.4 U [0.4 U] | 0.2 U [0.2 U] | 0.2 U [0.2 U] | 0.2 U [0.2 U] | 0.2 U [0.2 U] | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/26/05 | 0.20 U | 0.20 U | -- | -- | 0.20 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-111WT | 5.5 - 10.5 | 04/02/08 | 0.20 U [0.20 U] | 0.20 U [0.20 U] | -- | -- | 0.20 U [0.20 U] | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-111WT | 5.5-10.5 | 09/18/12 | 0.098 U | 0.098 U | -- | -- | 0.098 U | 0.096 U | 0.096 U | 0.096 U | 0.096 U | **0.082 J** | 0.096 U | 0.096 U | -- | -- |
| MW-111WT | 5.5-10.5 | 09/26/13 | 0.095 U | 0.095 U | -- | -- | **0.45** | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-111WT | 5.5-10.5 | 09/23/14 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-111WT | 5.5-10.5 | 10/01/15 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-111WT | 5.5 - 10.5 | 09/29/16 | 0.19 U | 0.19 U | -- | -- | **0.21** | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/31/17 | 0.95 U | 0.95 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | **0.067 J p** | 0.095 U | 0.095 U | -- | -- |
| MW-111WT | 5.5 - 10.5 | 09/27/18 | 0.095 U | 0.095 U | 0.095 U | 0.095 U | **0.82** | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-111WT | 5.5 - 10.5 | 08/22/19 | 0.098 U | 0.098 U | -- | -- | **0.22** | 0.097 U | 0.097 U | 0.097 U | 0.097 U | 0.097 U | 0.097 U | 0.097 U | -- | -- |
| MW-111WT | 5.5 - 10.5 | 08/12/20 | 0.095 U | 0.095 U | 0.095 U | 0.095 U | **0.068 J** | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-111WT | 5.5 - 10.5 | 08/23/21 | 0.095 U [0.095 U] | 0.095 U [0.095 U] | --- | -- | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | -- | -- |
| MW-111WT | 5.5 - 10.5 | 09/27/22 | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | **0.22** | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | **0.52 [0.46]** | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] |
| MW-114S2 | 22.5 - 27.5 | 07/17/95 | 0.21 U | 0.21 U | -- | -- | 0.41 U | 0.2 U | 0.2 U | 0.41 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-114S2 | 22.5 - 27.5 | 06/07/96 | 0.2 U | 0.2 U | -- | -- | 0.4 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |

**Table 3**
**Analytical Data Summary Table - SMI Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | Aroclor 1254 | Aroclor 1260 | Aroclor 1262 | Aroclor 1268 | Total PCBs | Aroclor 1016 (Dissolved) | Aroclor 1221 (Dissolved) | Aroclor 1232 (Dissolved) | Aroclor 1242 (Dissolved) | Aroclor 1248 (Dissolved) | Aroclor 1254 (Dissolved) | Aroclor 1260 (Dissolved) | Aroclor 1262 (Dissolved) | Aroclor 1268 (Dissolved) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 | 0.000026 |
| MW-114S2 | 22.5 - 27.5 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 06/08/96 | 0.2 U | 0.2 U | -- | -- | 0.4 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-114WT | 3.5 - 8.5 | 03/06/97 | 0.2 U | **0.41** | **--** | -- | **0.41** | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-114WT | 3.5 - 8.5 | 12/11/97 | 0.2 UJ | 0.2 U | -- | -- | 0.4 U | 0.2 U | 0.2 UJ | 0.4 U | 0.2 U | 0.2 UJ | 0.2 UJ | 0.2 U | -- | -- |
| MW-114WT | 3.5 - 8.5 | 05/22/00 | 0.20 U | 0.20 U | -- | -- | 0.40 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-114WT | 3.5 - 8.5 | 04/05/01 | 0.20 U | 0.20 U | -- | -- | 0.40 U | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-114WT | 3.5 - 8.5 | 06/03/04 | -- | -- | -- | -- | -- | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/24/05 | 0.20 U | 0.20 U | -- | -- | 0.20 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/26/13 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/23/14 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-114WT | 3.5 - 8.5 | 10/02/15 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/29/16 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/31/17 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/28/18 | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-114WT | 3.5 - 8.5 | 08/22/19 | 0.098 U | 0.098 U | -- | -- | 0.098 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-114WT | 3.5 - 8.5 | 08/13/20 | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-114WT | 3.5 - 8.5 | 08/19/21 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-114WT | 3.5 - 8.5 | 09/28/22 | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-149WT | 7 - 17 | 06/12/96 | 0.2 U | 0.2 U | -- | -- | 0.4 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-149WT | 7 - 17 | 03/10/97 | 0.2 U | 0.2 U | -- | -- | 0.4 U | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-149WT | 7 - 17 | 09/29/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-185WT | 3 - 8 | 06/03/04 | -- | -- | -- | -- | -- | 0.2 U | 0.2 U | 0.4 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-185WT | 3 - 8 | 08/25/05 | 0.20 U | 0.20 U | -- | -- | 0.20 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | -- | -- |
| MW-185WT | 3 - 8 | 11/28/07 | 0.20 U [0.20 U] | 0.20 U [0.20 U] | -- | -- | 0.17 J [0.20 U] | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | **0.06 J** | -- | -- |
| MW-185WT | 3 - 8 | 09/18/12 | 0.096 U | 0.096 U | -- | -- | 0.096 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | **0.041 J*** | -- | -- |
| MW-185WT | 3 - 8 | 09/25/13 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-185WT | 3 - 8 | 09/24/14 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-185WT | 3 - 8 | 10/01/15 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-185WT | 3 - 8 | 09/30/16 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-185WT | 3 - 8 | 08/31/17 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-185WT | 3 - 8 | 09/27/18 | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-185WT | 3 - 8 | 08/22/19 | -- | -- | -- | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-185WT | 3 - 8 | 08/14/20 | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-185WT | 3 - 8 | 08/23/21 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-185WT | 3 - 8 | 09/27/22 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-186WT | 8-18 | 09/30/10 | 0.10 U | 0.10 U | -- | -- | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | -- | -- |
| MW-186WT | 8-18 | 09/23/11 | 0.095 U | 0.095 U | -- | -- | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-186WT | 8-18 | 09/18/12 | 0.095 U [0.095 U] | 0.095 U [0.095 U] | -- | -- | 0.095 U [0.095 U] | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-186WT | 8-18 | 09/25/13 | 0.095 U [0.095 U] | 0.095 U [0.095 U] | -- | -- | 0.095 U [0.095 U] | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-186WT | 8-18 | 09/24/14 | 0.10 U [0.097 U] | 0.10 U [0.097 U] | -- | -- | 0.10 U [0.097 U] | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-186WT | 8-18 | 10/02/15 | 0.095 U [0.095 U] | 0.095 U [0.095 U] | -- | -- | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | -- | -- |
| MW-186WT | 8-18 | 09/30/16 | 0.095 U [0.095 U] | 0.095 U [0.095 U] | -- | -- | 0.095 U [0.095 U] | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-186WT | 8-18 | 08/31/17 | 0.095 U [0.095 U] | 0.095 U [0.095 U] | -- | -- | 0.095 U [0.095 U] | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-186WT | 8-18 | 09/27/18 | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |
| MW-186WT | 8-18 | 08/22/19 | 0.095 U [0.095 U] | 0.095 U [0.095 U] | -- | -- | 0.095 U [0.095 U] | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | -- | -- |
| MW-186WT | 8-18 | 08/12/20 | 0.095 U [0.097 U] | 0.095 U [0.097 U] | 0.095 U [0.097 U] | 0.095 U [0.097 U] | 0.095 U [0.097 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] |
| MW-186WT | 8-18 | 08/24/21 | 0.095 U [0.095 U] | 0.095 U [0.095 U] | -- | -- | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | 0.095 U [0.095 U] | -- | -- |
| MW-186WT | 8-18 | 09/28/22 | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U | 0.095 U |

**Notes:**
All results are in micrograms per liter (ug/L).
Criteria presented are the applicable site-specific criteria. Drinking water is not a complete pathway; therefore drinking water criteria are not presented.
Applicable site-specific criteria are the minimum Rule 57 criteria, excluding drinking water.
Hardness-dependent Rule 57 criteria are based on a hardness of 270 milligrams per liter for the Saginaw River, as analyzed in the October 2016 sampling event.
pH-dependent Rule 57 criteria are based on a default pH of 7.
Un-ionized ammonia is calculated based on the pH and temperature of the groundwater sample, using the following equaitons. When available, the field-measured pH was used.
Un-ionized ammonia (µg/L = Total Ammonia (µg/L) × Fraction un-ionized ammonia
Fraction un-ionized ammonia = $1/[10^{(pKa-pH)} + 1]$
pKa = 0.0901821+2729.92/T
T (in Kelvin) = T(°C) + 273.15
Bolded cells represent constitiuent concentrations with detections.
Duplicate results are presented in brackets.
Gray shaded cells represent constituent concentrations that exceed site-specific Groundwater/Surface Water Interface (GSI) Criteria.
MW-183WT, X-4CAUGR, X-9AR, X-9BR, X-9CAUG represent a groundwater surface water interface (GSI) perimeter monitoring well from Green Point Landfill.
MW-107WT, MW-107S1, MW-108S2, MW-110WTR, MW-111WT, MW-114S2, MW-114WT, MW-149WT, MW-185WT, and MW-186WT represent a GSI perimeter monitoring well from SMI.

For MW-111WT a case narrative was provided from the lab for the parent and duplicate samples collected on September 27, 2022. The samples collected do not directly match any of the laboratory's Aroclor standards used for instrument calibration. The samples were quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.
Venting groundwater discharge concentrations was recommended by MDEQ in a letter dated November 26, 2008 followed by a Mixing Zone Determination Request and based on a five year renewal approved by the MDEQ on October 21, 2021.

**Data Qualifiers:**

| | |
|---|---|
| ND = | Not detected. The value in parentheses represents the associated detection limit. |
| -- or NA = | Not analyzed for this constituent. |
| B = | Inorganics: the detected analyte is an estimated value between the instrument detection limit (IDL) and the reporting limit (RL). |
| B = | Organics: the compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect. |
| BJ = | The detected analyte is an estimated concentration between the IDL and the RL. |
| D = | Concentration is based on a diluted sample analysis. |
| F1 = | MS and/or MSD Recovery is outside acceptance limits. |
| F2 = | MS/MSD RPD exceeds control limits. |
| H = | Sample was prepped or analyzed beyond the specified hold time. |
| J = | The compound/constituent was positively identified; however, the associated numerical value is an estimated concentration only. |
| L = | A negative instrument reading had an absolute value greater than the reporting limit. |
| M = | Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit. |
| R = | Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data shall not be used for any qualitative or quantitative purposes. |
| RPD = | Relative Percent Difference, a measure of the relative distance between two points. |
| U = | The constituent was analyzed for but not detected. The associated value is the constituent quantitation limit. |
| UJ = | The constituent was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual result. |
| ^ = | ICV, CCV, ICB, CCB, ISA, ISB, CRI, CRA, DLCK, or MRL standard: instrument related QC exceeds the control limits. |
| * = | LCS (lab control sample) or LCSD (lab control sample duplicate) is outside acceptance limits. |

**Table 4**
**PFAS Groundwater Analytical Summary Table**
**RACER Saginaw Malleable**
**Saginaw, Michigan**

| Analyte | EGLE Drinking Water MCL | Groundwater Surface Water Interface Criteria | Well ID Sample Date Site Area Units | B-3R 12/18/2018 SMI | B-3R 8/11/2020 SMI | B-3R 8/19/2021 SMI | B-3R 9/26/2022 SMI | MW-108WT 12/18/2018 SMI | MW-108WT 8/13/2020 SMI | MW-108WT 8/19/2021 SMI | MW-117WT 8/13/2020 GPL | MW-117WT 8/17/2021 GPL | MW-117WT 9/22/2022 GPL | MW-117S1 8/13/2020 GPL | MW-117S1 8/17/2021 GPL | MW-117S1 9/21/2022 GPL | MW-118WT 8/14/2020 GPL | MW-118WT 8/17/2021 GPL | MW-118WT 9/22/2022 GPL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | -- | -- | ng/L | **2.3 J** | **11.3** | 3.6 U | 3.7 U [a] | **3.02 J** | **8.8** | **3.7 J** | **296** | **449** [a] | **269** [b] | 3.7 U | 3.6 U | 3.7 U [a] | **18.2** | **49.4** | **48.8** [a] |
| Perfluoropentanoic acid (PFPeA) | -- | -- | ng/L | **1.68 J** | **13.4** | 1.8 U | 1.9 U [a] | **1.77 J** | **2.1 J** | **1.8 J** | **43.9** | **134** [a] | **47.3** [b] | 1.9 U | 8.9 U | 1.9 U [a] | **4.8** | **23.0** | **11.8** [a] |
| Perfluorohexanoic acid (PFHxA) | 400,000 | -- | ng/L | **1.26 J** | 1.9 U | 1.8 U | **2.1 J** [a] | 2.0 U | **2.4 J** | **1.9 J** | **77.8** | **114** [a] | **84.1** [b] | 1.9 U | 1.8 U | 1.9 U [a] | **7.6** | **21.1** | **19.4** [a] |
| Perfluoroheptanoic acid (PFHpA) | -- | -- | ng/L | 2.0 U | **2.1 J** | **1.8 J** | 1.9 U [a] | 2.0 U | **1.2 J** | **1.9 J** | **9.7** | **18.7** | **10** | 1.9 U | 1.8 U | 1.9 U [a] | **3.1 J** | **6.1 J** | **9.7** [a] |
| Perfluorooctanoic acid (PFOA) | 8 | 170 | ng/L | **5.58** | **2.7 J** | **2.7 J** | **2.7 J** [a] | **3.66 J** | **4.4** | **4.6** | **3.6 J** | **5.5** | 1.9 U | 1.9 U | 1.8 U | 1.9 U | **2.4 J** | **5.3** | **4.8** |
| Perfluorononanoic acid (PFNA) | 6 | -- | ng/L | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U | **1.4 J** | 1.9 U | 8.9 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U [a] | 1.9 U | 8.9 U | 1.9 U [a] |
| Perfluorodecanoic acid (PFDA) | -- | -- | ng/L | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 1.8 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U [a] | 1.9 U | 1.8 U | 1.9 U [a] |
| Perfluoroundecanoic acid (PFUnA) | -- | -- | ng/L | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 1.8 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U |
| Perfluorododecanoic acid (PFDoA) | -- | -- | ng/L | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 8.9 U [a] | 1.9 U | 1.9 U | 8.9 U [a] | 1.9 U [a] | 1.9 U | 8.9 U [b] | 1.9 U [a] |
| Perfluorotridecanoic Acid (PFTriA) | -- | -- | ng/L | 2.0 U | 1.9 U [a] | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 8.9 U [a] | 1.9 U | 1.9 U | 8.9 U [a] | 1.9 U [a] | 1.9 U | 8.9 U [b] | 1.9 U [a] |
| Perfluorotetradecanoic acid (PFTeA) | -- | -- | ng/L | 2.0 U | 1.9 U [a] | 1.8 U [a] | 1.9 U [a] | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 8.9 U [a] | 9.3 U [b] | 1.9 U | 8.9 U [a] | 1.9 U [a] | 1.9 U | 8.9 U [b] | 1.9 U [a] |
| Perfluorobutanesulfonic acid (PFBS) | 420 | 670,000 | ng/L | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | **1.9 J** | 1.8 U | 1.9 U | 8.9 U | 9.3 U [b] | 1.9 U | 1.8 U | 1.9 U [a] | **2.5 J** | 1.8 U | 1.9 U [a] |
| Perfluoropentanesulfonic acid (PFPeS) | -- | -- | ng/L | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 8.9 U | 9.3 U [b] | 1.9 U | 1.8 U | 1.9 U [a] | 1.9 U | 1.8 U | 1.9 U [a] |
| Perfluorohexanesulfonic acid (PFHxS) | 51 | -- | ng/L | **1.13 J** | 1.9 U | **0.98 J** | 1.9 U [a] | **1.92 J** | **5.8** | **3.5 J** | 1.9 U | 1.8 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U |
| Perfluoroheptanesulfonic Acid (PFHpS) | -- | -- | ng/L | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 1.8 U | 1.9 U [a] | 1.9 U | 1.8 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U |
| Perfluorooctanesulfonic acid (PFOS) | 16 | 12 | ng/L | **15.6** | **14.4** | **13.7** | **14.3** | **2.63 J** | **17.1** | **15.1** | 1.9 U | 1.8 U | 1.9 U [a] | 1.9 U | 1.8 U | 1.9 U [a] | 1.9 U | 1.8 U | 1.9 U [a] |
| Perfluorononanesulfonic acid (PFNS) | -- | -- | ng/L | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 1.8 U | 9.3 U [b] | 1.9 U | 1.8 U | 1.9 U [a] | 1.9 U | 1.8 U | 1.9 U [a] |
| Perfluorodecanesulfonic acid (PFDS) | -- | -- | ng/L | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 1.8 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U |
| 4:2 Flourotelemer Sulfonate (4:2 FTS) | -- | -- | ng/L | 4.0 U | 3.7 U | 3.6 U | 3.7 U [a] | 4.0 U | 3.7 U | 3.6 U | 3.7 U | 18 U | 19 U [b] | 3.7 U | 3.6 U | 3.7 U [a] | 3.7 U | 3.6 U | 3.7 U [a] |
| 6:2 Flourotelemer Sulfonate (6:2 FTS) | -- | -- | ng/L | 4.0 U | 3.7 U | 3.6 U | 3.7 U | 4.0 U | 3.7 U | 3.6 U | 3.7 U | 3.6 U | 3.7 U | 3.7 U | 3.6 U | 3.7 U | 3.7 U | 3.6 U | 3.7 U |
| 8:2 Flourotelemer Sulfonate (8:2 FTS) | -- | -- | ng/L | 4.0 U | 3.7 U | 3.6 U | 3.7 U [a] | 4.0 U | 3.7 U | 3.6 U | 3.7 U | 3.6 U | 3.7 U | 3.7 U | 3.6 U | 3.7 U [a] | 3.7 U | 3.6 U | 3.7 U [a] |
| acetic acid (MeFOSAA) | -- | -- | ng/L | 8.0 U | 7.4 U | 3.6 U | 3.7 U | 8.0 U | 7.4 U | 3.6 U | 7.4 U | 3.6 U | 3.7 U | 7.4 U | 3.6 U | 3.7 U | 7.4 U | 3.6 U | 3.7 U |
| acid (EtFOSAA) | -- | -- | ng/L | 8.0 U | 7.4 U | 3.6 U | 3.7 U | 8.0 U | 7.4 U | 3.6 U | 7.4 U | 3.6 U | 3.7 U | 7.4 U | 3.6 U | 3.7 U [a] | 7.4 U | 3.6 U | 3.7 U |
| Perfluorooctane Sulfonamide (FOSA) | -- | -- | ng/L | 2.0 U | 1.9 U [a] | 1.8 U [a] | 1.9 U [a] | 2.0 U | 9.3 U | 1.8 U [a] | 1.9 U | 8.9 U [a] | 9.3 U [b] | 1.9 U | 8.9 U [a] | 1.9 U [a] | 9.3 U | 8.9 U [b] | 1.9 U [a] |
| HFPO-DA (GenX) | 370 | -- | ng/L | -- | 9.3 U | 3.6 U | 3.7 U [a] | -- | 9.3 U | 3.6 U | 9.3 U | 3.6 U | 3.7 U | 9.3 U | 3.6 U | 3.7 U [a] | 9.3 U | 3.6 U | 3.7 U [a] |
| ADONA | -- | -- | ng/L | -- | 3.7 U | 3.6 U | 3.7 U [a] | -- | 3.7 U | 3.6 U | 3.7 U | 3.6 U | 3.7 U | 3.7 U | 3.6 U | 3.7 U | 3.7 U | 3.6 U | 3.7 U |
| 9Cl-PF3ONS (F-53B Major) | -- | -- | ng/L | -- | 3.7 U | 3.6 U | 3.7 U [a] | -- | 3.7 U | 3.6 U | 3.7 U | 3.6 U | 3.7 U | 3.7 U | 3.6 U | 3.7 U [a] | 3.7 U | 3.6 U | 3.7 U [a] |
| 11Cl-PF3OUdS (F-53B Minor) | -- | -- | ng/L | -- | 3.7 U | 3.6 U | 3.7 U [a] | -- | 3.7 U | 3.6 U | 3.7 U | 18 U [a] | 3.7 U | 3.7 U | 18 U [a] | 3.7 U [a] | 3.7 U | 18 U [b] | 3.7 U [a] |
| **Total PFAS** | **--** | **--** | ng/L | **27.55** | **43.9** | **19.18** | **19.1** | **13** | **43.7** | **33.9** | **431** | **721.2** | **410.4** | **0** | **0** | **0** | **38.6** | **104.9** | **94.5** |

**Notes:**
All values are in nanograms per liter (ng/L).
**Bold result denotes detection.**
Shaded result denotes detection is above the EGLE Groundwater Surface Water Criteria.
Red result denotes detection is above EGLE Drinking Water Maximum Contaminant Limit (MCL).
For Total PFAS all detections were summed.

-- = not applicable
a = Associated ID Standard outside control limits. Confirmed by batch QC, re-extraction and/or reanalysis.
b = Result is from Run #2
U = not detected
J = estimated value between the limit of quantitation and the method detection limit.
[ ] = duplicate sample detections
EGLE = Environment Great Lakes and Energy

**Table 4**
**PFAS Groundwater Analytical Summary Table**
**RACER Saginaw Malleable**
**Saginaw, Michigan**

| Analyte | EGLE Drinking Water MCL | Groundwater Surface Water Interface Criteria | Well ID Sample Date Site Area Units | MW-118S1 12/18/2018 GPL | MW-122WT 8/18/2021 GPL | MW-122WT 9/23/2022 GPL | MW-125WT 9/8/2020 GPL | MW-131WT 12/18/2018 SMI | MW-131WT 8/11/2020 SMI | MW-131WT 8/19/2021 SMI | MW-131WT 9/26/2022 SMI | MW-134WT 12/18/2018 SMI | MW-134WT 8/11/2020 SMI | MW-134WT 8/19/2021 SMI | MW-134WT 9/27/2022 SMI | MW-183WT 12/19/2018 GPL | MW-183WT 8/18/2020 GPL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | -- | -- | ng/L | **9.71** | **51.3** | **79.1** [b] | **20.5** | **4.14 J** | **11.1** | **6.2 J** | **7.4** [a] | **5.64 J** | **5.9 J** | **3.0 J** | **6.4 J** [a] | **11.4** | **15.2** |
| Perfluoropentanoic acid (PFPeA) | -- | -- | ng/L | **4.37** | **6.4 J** | **7.3 J** [b] | **2.4 J** | **2.24 J** | 1.9 U | **1.3 J** | **5.9** [a] | **3.54 J** | **2.7 J** | **1.0 J** | **5.0** [a] | 2.0 U | **2.4 J** |
| Perfluorohexanoic acid (PFHxA) | 400,000 | -- | ng/L | **1.77 J** | **2.6 J** | **5.6 J** [b] | **2.9 J** | **1.14 J** | **0.99 J** | **1.8 J** | **1.6 J** [a] | **1.66 J** | **1.9 J** | 1.8 U | **2.4 J** [a] | 2.0 U | **2.5 J** |
| Perfluoroheptanoic acid (PFHpA) | -- | -- | ng/L | **1.93 J** | **2.2 J** | **1.7 J** | **1.5 J** | **1.2 J** | 1.9 U | **1.6 J** | 1.9 U [a] | **1.28 J** | **2.2 J** | 1.8 U | 1.9 U [a] | 2.0 U | **2.5 J** |
| Perfluorooctanoic acid (PFOA) | 8 | 170 | ng/L | **1.95 J** | **3.1 J** | **2.4 J** | **4.3** | **2.38 J** | **3.6 J** | **3.7** | **3.3 J** | **3.0 J** | **2.0 J** | **1.7 J** | **3.6 J** [a] | **2.07 J** | **4.6** |
| Perfluorononanoic acid (PFNA) | 6 | -- | ng/L | 2.0 U | 1.8 U | 1.9 U | 1.7 U | 2.0 U | 1.9 U | **1.3 J** | 1.9 U [a] | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | **1.1 J** |
| Perfluorodecanoic acid (PFDA) | -- | -- | ng/L | 2.0 U | 1.8 U | 1.9 U | 1.7 U | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U |
| Perfluoroundecanoic acid (PFUnA) | -- | -- | ng/L | 2.0 U | 1.8 U | 1.9 U | 1.7 U | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 2.0 U | 1.9 U |
| Perfluorododecanoic acid (PFDoA) | -- | -- | ng/L | 2.0 U | 8.9 U [a] | 1.9 U | 1.7 U | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U |
| Perfluorotridecanoic Acid (PFTriA) | -- | -- | ng/L | 2.0 U | 8.9 U [a] | 1.9 U | 1.7 U | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U |
| Perfluorotetradecanoic acid (PFTeA) | -- | -- | ng/L | 2.0 U | 8.9 U [a] | 9.3 U [b] | 1.7 U | 2.0 U | 1.9 U | 1.8 J [q] | 1.9 U [a] | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U |
| Perfluorobutanesulfonic acid (PFBS) | 420 | 670,000 | ng/L | 2.0 U | **2.0 J** | **2.6 J** [a] | **3.0 J** | **1.72 J** | **3.0 J** | **2.0 J** | **3.0 J** [a] | **1.99 J** | 1.9 U | **1.1 J** | 1.9 U [a] | **1.66 J** | **2.2 J** |
| Perfluoropentanesulfonic acid (PFPeS) | -- | -- | ng/L | 2.0 U | 1.8 U | 9.3 U [b] | **1.2 J** | 2.0 U | **1.1 J** | **1.3 J** | **2.8 J** [a] | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U |
| Perfluorohexanesulfonic acid (PFHxS) | 51 | -- | ng/L | 2.0 U | 1.8 U | 1.9 U | **3.0 J** | **4.21** | **4.9** | **9.1 J** | **8.3** | 2.0 U | 1.9 U | 1.8 U | 1.9 U | **1.5 J** | **2.0 J** |
| Perfluoroheptanesulfonic Acid (PFHpS) | -- | -- | ng/L | 2.0 U | 1.8 U | 1.9 U | 1.7 U | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 2.0 U | 1.9 U |
| Perfluorooctanesulfonic acid (PFOS) | 16 | 12 | ng/L | 4.0 U | **1.7 J** | 1.9 U | 1.7 U | **4.88 J** | **7.9** | **11.0** | **14.6** [a] | 4.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 4.0 U | **3.5 J** |
| Perfluorononanesulfonic acid (PFNS) | -- | -- | ng/L | 2.0 U | 1.8 U | 1.9 U | 1.7 U | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U | 1.8 U | 1.9 U [a] | 2.0 U | 1.9 U |
| Perfluorodecanesulfonic acid (PFDS) | -- | -- | ng/L | 2.0 U | 1.8 U | 1.9 U | 1.7 U | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 2.0 U | 1.9 U |
| 4:2 Flourotelemer Sulfonate (4:2 FTS) | -- | -- | ng/L | 4.0 U | 3.6 U | 19 U [b] | 3.4 U | 4.0 U | 3.7 U | 3.6 U | 3.7 U [a] | 4.0 U | 3.7 U | 3.6 U | 3.7 U [a] | 4.0 U | 3.7 U |
| 6:2 Flourotelemer Sulfonate (6:2 FTS) | -- | -- | ng/L | 4.0 U | 3.6 U | 3.7 U | 3.4 U | 4.0 U | 3.7 U | 3.6 U | 3.7 U | 4.0 U | 3.7 U | 3.6 U | 3.7 U | 4.0 U | 3.7 U |
| 8:2 Flourotelemer Sulfonate (8:2 FTS) | -- | -- | ng/L | 4.0 U | 3.6 U | 3.7 U | 3.4 U | 4.0 U | 3.7 U | 3.6 U | 3.7 U [a] | 4.0 U | 3.7 U | 3.6 U | 3.7 U [a] | 4.0 U | 3.7 U |
| acetic acid (MeFOSAA) | -- | -- | ng/L | 8.0 U | 3.6 U | 3.7 U | 6.9 U | 8.0 U | 7.4 U | 3.6 U | 3.7 U | 8.0 U | 7.4 U | 3.6 U | 3.7 U | 8.0 U | 7.4 U |
| acid (EtFOSAA) | -- | -- | ng/L | 8.0 U | 3.6 U | 3.7 U | 6.9 U | 8.0 U | 7.4 U | 3.6 U | 3.7 U | 8.0 U | 7.4 U | 3.6 U | 3.7 U | 8.0 U | 7.4 U |
| Perfluorooctane Sulfonamide (FOSA) | -- | -- | ng/L | 2.0 U | 8.9 U | 1.9 U [a] | 1.7 U | 2.0 U | 1.9 U | 1.8 U [a] | 1.9 U [a] | 2.0 U | 9.3 U | 1.8 U [a] | 1.9 U [a] | 2.0 U | 1.9 U |
| HFPO-DA (GenX) | 370 | -- | ng/L | -- | 3.6 U | 19 U [b] | 8.6 U | -- | 9.3 U | 3.6 U | 3.7 U [a] | -- | 9.3 U | 3.6 U | 3.7 U [a] | -- | 9.3 U |
| ADONA | -- | -- | ng/L | -- | 3.6 U | 3.7 U | 3.4 U | -- | 3.7 U | 3.6 U | 3.7 U | -- | 3.7 U | 3.6 U | 3.7 U [a] | -- | 3.7 U |
| 9Cl-PF3ONS (F-53B Major) | -- | -- | ng/L | -- | 3.6 U | 3.7 U | 3.4 U | -- | 3.7 U | 3.6 U | 3.7 U [a] | -- | 3.7 U | 3.6 U | 3.7 U [a] | -- | 3.7 U |
| 11Cl-PF3OUdS (F-53B Minor) | -- | -- | ng/L | -- | 18 U [a] | 3.7 U | 3.4 U | -- | 3.7 U | 3.6 U | 3.7 U [a] | -- | 3.7 U | 3.6 U | 3.7 U [a] | -- | 3.7 U |
| **Total PFAS** | **--** | **--** | ng/L | **19.73** | **69.3** | **98.7** | **38.8** | **21.91** | **32.59** | **39.3** | **46.9** | **17.11** | **14.7** | **6.8** | **17.4** | **16.63** | **36** |

**Notes:**
All values are in nanograms per liter (ng/L).
**Bold result denotes detection.**
Shaded result denotes detection is above the EGLE Groundwater Surface Water Criteria.
Red result denotes detection is above EGLE Drinking Water Maximum Contaminant Limit (MCL).
For Total PFAS all detections were summed.

-- = not applicable
a = Associated ID Standard outside control limits. Confirmed by batch QC, re-extraction and/or rea
b = Result is from Run #2
U = not detected
J = estimated value between the limit of quantitation and the method detection limit.
[ ] = duplicate sample detections
EGLE = Environment Great Lakes and Energy

**Table 4**
**PFAS Groundwater Analytical Summary Table**
**RACER Saginaw Malleable**
**Saginaw, Michigan**

| Analyte | EGLE Drinking Water MCL | Groundwater Surface Water Interface Criteria | Well ID Sample Date Site Area Units | MW-183WT 8/24/2021 GPL | MW-183WT 9/26/2022 GPL | MW97-105WT 12/18/2018 Peninsula | TW98-111WT 12/18/2018 Peninsula | QPTW-13R 12/18/2018 SMI | QPTW-13R 8/11/2020 SMI | QPTW-13R 8/19/2021 SMI | QPTW-13R 9/26/2022 SMI | TWW-1 9/8/2020 GPL | TWW-1 8/18/2021 GPL | TWW-1 9/23/2022 GPL | X-2A 12/18/2018 GPL | X-2A 9/8/2020 GPL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | -- | -- | ng/L | **8.3** | **11.4** | **65.7** | **39.9** [a] | **17** | **16.6 [17.7]** | **11.3** [a] **[12.9** [a]**]** | **16.2** [a] **[16.8** [a]**]** | **29.7 J** | **34.9 J** | **34.0 J** [b] | **34.1** [a] **[26.3** [a]**]** | **20.4** [a] |
| Perfluoropentanoic acid (PFPeA) | -- | -- | ng/L | **0.83 J** | **3.4 J** | **20.8** | 2.0 U | **16.4** | **38.4 [37.3]** | 8.9 U [a] [8.9 U ] | 1.9 U [a] [1.9 U [a]] | **8.0** | **9.3 J** | **7.8 J** [b] | **18.1 [14.4]** | 1.7 U |
| Perfluorohexanoic acid (PFHxA) | 400,000 | -- | ng/L | **1.0 J** | **1.3 J** | **33.5** | **2.1 J** | **2.91 J** | **2.7 J [2.8 J]** | **1.9 J** [a] [1.8 U [a]] | 1.9 U [a] [1.9 U [a]] | **8.9** | **11.4** | **11.3 J** [b] | **6.46 [5.32]** | **4.4** |
| Perfluoroheptanoic acid (PFHpA) | -- | -- | ng/L | **1.10 J** | **1.4 J** | **17.5** | 2.0 U | 2.0 U | 9.3 U **[1.9 J]** | **1.6 J** [a] **[2.1 J** [a]**]** | **5.1** [a] **[1.8 J** [a]**]** | **5.9** | **14.1** | **10.9 J** [b] | **4.93 [5.15]** | **3.1 J** |
| Perfluorooctanoic acid (PFOA) | 8 | 170 | ng/L | **2.9 J** | **4.0** | **22.1** | **6.36** | **8.38** | **4.7 J [5.1]** | **3.8** [a] **[4.0** [a]**]** | **3.9** [a] **[4.8** [a]**]** | **11.0** | **27.1** | **19.7** | **50.6 [46.5]** | **29.9** |
| Perfluorononanoic acid (PFNA) | 6 | -- | ng/L | 1.6 U | 1.9 U | 2.0 U | 2.0 U | 2.0 U | 9.3 U **[1.5 J]** | 1.8 U [a] [1.8 U [a]] | 1.9 U [a] [1.9 U [a]] | 1.8 U | **1.6 J** | **1.1 J** | 2.0 U [2.0 U] | **1.9 J** |
| Perfluorodecanoic acid (PFDA) | -- | -- | ng/L | 1.6 U | 1.9 U | 2.0 U | 2.0 U | 2.0 U | 9.3 U [1.9 U] | 1.8 U [a] [1.8 U [a]] | 1.9 U [a] [1.9 U [a]] | 1.8 U | 1.8 U | 1.9 U | 2.0 U [2.0 U] | 1.7 U |
| Perfluoroundecanoic acid (PFUnA) | -- | -- | ng/L | 1.6 U | 1.9 U | 2.0 U | 2.0 U | 2.0 U | 9.3 U [1.9 U] | 1.8 U [a] [1.8 U [a]] | 1.9 U [a] [1.9 U] | 1.8 U | 1.8 U | 1.9 U | 2.0 U [2.0 U] | 1.7 U |
| Perfluorododecanoic acid (PFDoA) | -- | -- | ng/L | 1.6 U | 1.9 U | 2.0 U | 2.0 U | 2.0 U | 1.9 U [1.9 U] | 1.8 U [a] [1.8 U [a]] | 1.9 U [a] [1.9 U] | 1.8 U | 1.8 U | 1.9 U | 2.0 U [2.0 U] | 1.7 U |
| Perfluorotridecanoic Acid (PFTriA) | -- | -- | ng/L | 1.6 U | 1.9 U | 2.0 U | 4.0 U | 2.0 U | 1.9 U [1.9 U] | 1.8 U [a] [1.8 U [a]] | 1.9 U [a] [1.9 U] | 1.8 U | 1.8 U | 1.9 U | 2.0 U [2.0 U] | 1.7 U |
| Perfluorotetradecanoic acid (PFTeA) | -- | -- | ng/L | 16 U [a] | 1.9 U | 2.0 U | 4.0 U | 2.0 U | 1.9 U [1.9 U] | 1.8 U [a] [1.8 U [a]] | 1.9 U [a] [1.9 U [a]] | 1.8 U | 8.9 [a] | 1.9 U [a] | 2.0 U [2.0 U] | 1.7 U |
| Perfluorobutanesulfonic acid (PFBS) | 420 | 670,000 | ng/L | **1.1 J** | **2.5 J** | **9.29** | 2.0 U | **3.54 J** | 1.9 U [1.9 U] | 1.8 U [1.8 U [a]] | 1.9 U [a] [1.9 U [a]] | **1.9 J** | **4.0** | **2.9 J** [a] | 2.0 U **[4.91]** | **3.4** |
| Perfluoropentanesulfonic acid (PFPeS) | -- | -- | ng/L | 1.6 U | 1.9 U | 2.0 U | 2.0 U | 2.0 U | 1.9 U [1.9 U] | 1.8 U [1.8 U [a]] | 1.9 U [a] [1.9 U [a]] | 1.8 U | 1.8 U | 9.3 U [b] | 2.0 U [2.0 U] | 1.7 U |
| Perfluorohexanesulfonic acid (PFHxS) | 51 | -- | ng/L | **1.7 J** | **2.1 J** | **4.12** | **4.76** | **1.92 J** | **3.7 [3.4 J]** | **1.9 J [1.5 J]** | 1.9 U [a] **[2.6 J** [a]**]** | 1.8 U | 1.8 U | 1.9 U | **7.73 [5.89]** | **4.7** |
| Perfluoroheptanesulfonic Acid (PFHpS) | -- | -- | ng/L | 1.6 U | 1.9 U | 2.0 U | 2.0 U | 2.0 U | 1.9 U [1.9 U] | 1.8 U [1.8 U] | 1.9 U [a] [1.9 U [a]] | 1.8 U | 1.8 U | 1.9 U | 2.0 U [2.0 U] | 1.7 U |
| Perfluorooctanesulfonic acid (PFOS) | 16 | 12 | ng/L | **1.5 J** | 1.9 U | **9.7** | **18** | **8.47** | **11.0 [10.6]** | **6.6 [8.4]** | **11.0 [12.8** [a]**]** | 1.8 U | **1.7 J** | **3.6 J** [a] | **16.5 [14.6]** | **14.5** |
| Perfluorononanesulfonic acid (PFNS) | -- | -- | ng/L | 1.6 U | 1.9 U | 2.0 U | 2.0 U | 2.0 U | 1.9 U [1.9 U] | 1.8 U [1.8 U] | 1.9 U [a] [1.9 U [a]] | 1.8 U | 1.8 U | 9.3 U [b] | 2.0 U [2.0 U] | 1.7 U |
| Perfluorodecanesulfonic acid (PFDS) | -- | -- | ng/L | 1.6 U | 1.9 U | 2.0 U | 2.0 U | 2.0 U | 1.9 U [1.9 U] | 1.8 U [1.8 U [a]] | 1.9 U [a] [1.9 U] | 1.8 U | 1.8 U | 1.9 U | 2.0 U [2.0 U] | 1.7 U |
| 4:2 Flourotelemer Sulfonate (4:2 FTS) | -- | -- | ng/L | 3.2 U | 3.7 U | 4.0 U | 4.0 U | 4.0 U | 3.7 U [3.7 U] | 3.6 U [a] [3.6 U [a]] | 3.7 U [a] [3.7 U [a]] | 3.6 U | 3.6 U | 19 U [b] | 4.0 U [4.0 U] | 3.4 U |
| 6:2 Flourotelemer Sulfonate (6:2 FTS) | -- | -- | ng/L | 3.2 U | 3.7 U | 4.0 U | 4.0 U [a] | 4.0 U | 3.7 U [3.7 U] | 18 U [3.6 U] | 3.7 U [a] [3.7 U [a]] | 3.6 U | 3.6 U | 3.7 U | 4.0 U [4.0 U] | 3.4 U |
| 8:2 Flourotelemer Sulfonate (8:2 FTS) | -- | -- | ng/L | 3.2 U | 3.7 U | 4.0 U | 4.0 U | 4.0 U [c] | 3.7 U [3.7 U] | 18 U [3.6 U] | 3.7 U [a] [3.7 U [a]] | 3.6 U | 3.6 U | 19 U [b] | 4.0 U [4.0 U] | 3.4 U |
| acetic acid (MeFOSAA) | -- | -- | ng/L | 3.2 U | 3.7 U | 8.0 U | 8.0 U | 8.0 U | 37 U [37 U] | 18 U [3.6 U [a]] | 3.7 U [a] [3.7 U [a]] | 7.1 U | 3.6 U | 3.7 U | 8.0 U [8.0 U] | 6.9 U |
| acid (EtFOSAA) | -- | -- | ng/L | 3.2 U | 3.7 U | 8.0 U | 8.0 U | 8.0 U | 37 U [37 U] | 18 U [3.6 U [a]] | 3.7 U [a] [3.7 U [a]] | 7.1 U | 3.6 U | 3.7 U | 8.0 U [8.0 U] | 6.9 U |
| Perfluorooctane Sulfonamide (FOSA) | -- | -- | ng/L | 16 U | 9.3 U [b] | 2.0 U [a] | 2.0 U [a] | 2.0 U [a] | 9.3 U [a] [9.3 U [a]] | 1.8 U [a] [1.8 U [a]] | 1.9 U [a] [1.9 U [a]] | 1.8 U | 8.9 U [a] | 1.9 U [a] | 2.0 U [a] [2.0 U [a]] | 1.7 U [a] |
| HFPO-DA (GenX) | 370 | -- | ng/L | 3.2 U | 3.7 U [a] | -- | -- | -- | 9.3 U [9.3 U] | 3.6 U [a] [3.6 U [a]] | 3.7 U [a] [3.7 U [a]] | 8.9 U | 3.6 U | 19 U [b] | -- | 8.6 U |
| ADONA | -- | -- | ng/L | 3.2 U | 3.7 U | -- | -- | -- | 3.7 U [3.7 U] | 3.6 U [a] [3.6 U [a]] | 3.7 U [a] [3.7 U [a]] | 3.6 U | 3.6 U | 3.7 U | -- | 3.4 U |
| 9Cl-PF3ONS (F-53B Major) | -- | -- | ng/L | 3.2 U | 3.7 U | -- | -- | -- | 3.7 U [3.7 U] | 3.6 U [a] [3.6 U [a]] | 3.7 U [a] [3.7 U [a]] | 3.6 U | 3.6 U | 3.7 U | -- | 3.4 U |
| 11Cl-PF3OUdS (F-53B Minor) | -- | -- | ng/L | 3.2 U | 3.7 U | -- | -- | -- | 3.7 U [3.7 U] | 3.6 U [a] [3.6 U [a]] | 3.7 U [a] [3.7 U] | 3.6 U | 3.6 U | 3.7 U | -- | 3.4 U |
| **Total PFAS** | **--** | **--** | ng/L | **18.43** | **26.1** | **182.71** | **71.12** | **58.62** | **77.1 [80.3]** | **27.1 [28.9]** | **36.2 [38.8]** | **65.4** | **104.1** | **91.3** | **138.42 [123.07]** | **82.3** |

**Notes:**
All values are in nanograms per liter (ng/L).
**Bold result denotes detection.**
Shaded result denotes detection is above the EGLE Groundwater Surface Water Criteria.
Red result denotes detection is above EGLE Drinking Water Maximum Contaminant Limit (MCL).
For Total PFAS all detections were summed.

-- = not applicable
a = Associated ID Standard outside control limits. Confirmed by batch QC, re-extraction and/or re
b = Result is from Run #2
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**RACER Saginaw Malleable**
**Saginaw, Michigan**

| Analyte | EGLE Drinking Water MCL | Groundwater Surface Water Interface Criteria | Well ID<br>Sample Date<br>Site Area<br>Units | X-2A<br>8/18/2021<br>GPL | X-2A<br>9/21/2022<br>GPL | X-9AR<br>12/19/2018<br>GPL | X-9AR<br>8/17/2020<br>GPL | X-9AR<br>8/18/2021<br>GPL | X-9AR<br>9/22/2022<br>GPL | X-10AR2<br>12/18/2018<br>GPL | X-10AR2<br>9/8/2020<br>GPL | X-10AR2<br>8/18/2021<br>GPL | X-10AR2<br>9/22/2022<br>GPL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | -- | -- | ng/L | **14.3 [a] [13.8 [a]]** | **11.5 [a] [11.0 [a]]** | **5.98 J** | **14.4** | **18.6** | **19.0** | 4.0 U | **2.9 J [2.9 J]** | **4.4 J** | **4.3 J** |
| Perfluoropentanoic acid (PFPeA) | -- | -- | ng/L | 1.8 U [1.8 U] | 1.9 U [a] [1.9 U [a]] | 2.0 U | **4.4** | **1.3 J** | **2.0 J** | 2.0 U | 1.7 U [1.7 U] | **1.4 J** | 1.9 U |
| Perfluorohexanoic acid (PFHxA) | 400,000 | -- | ng/L | **2.9 J [a] [2.7 J]** | 1.9 U [a] [1.9 U [a]] | 2.0 U | **2.7 J** | **1.4 J** | **1.6 J** | 2.0 U | 1.7 U [**0.97 J**] | **1.1 J** | 1.9 U |
| Perfluoroheptanoic acid (PFHpA) | -- | -- | ng/L | **3.8 [3.7]** | **1.8 J [a] [4.2 [a]]** | 2.0 U | **2.5 J** | **1.8 J** | **1.6 J** | 2.0 U | 1.7 U [1.7 U] | 1.8 U | 1.9 U |
| Perfluorooctanoic acid (PFOA) | 8 | 170 | ng/L | **29.6 [27.7]** | **23.6 [a] [23.2 [a]]** | 2.0 U | **2.5 J** | **1.5 J** | **1.3 J** | **2.13 J** | **5.8 [5.6]** | **6.1** | **6.3** |
| Perfluorononanoic acid (PFNA) | 6 | -- | ng/L | 1.8 U [1.8 U] | 1.9 U [a] [1.9 U [a]] | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 2.0 U | 1.7 U [1.7 U] | 1.8 U | 1.9 U |
| Perfluorodecanoic acid (PFDA) | -- | -- | ng/L | 1.8 U [1.8 U] | 1.9 U [a] [1.9 U [a]] | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 2.0 U | 1.7 U [1.7 U] | 1.8 U | 1.9 U |
| Perfluoroundecanoic acid (PFUnA) | -- | -- | ng/L | 1.8 U [1.8 U] | 1.9 U [1.9 U [a]] | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 2.0 U | 1.7 U [1.7 U] | 1.8 U | 1.9 U |
| Perfluorododecanoic acid (PFDoA) | -- | -- | ng/L | 1.8 U [1.8 U] | 1.9 U [1.9 U [a]] | 2.0 U | 1.9 U | 8.9 U [a] | 9.3 U [b] | 2.0 U | 1.7 U [1.7 U] | 1.8 U | 9.3 U [b] |
| Perfluorotridecanoic Acid (PFTriA) | -- | -- | ng/L | 1.8 U [1.8 U] | 1.9 U [1.9 U [a]] | 2.0 U | 1.9 U | 8.9 U [a] | 9.3 U [b] | 2.0 U | 1.7 U [1.7 U] | 1.8 U | 9.3 U [b] |
| Perfluorotetradecanoic acid (PFTeA) | -- | -- | ng/L | 1.8 U [1.8 U] | 1.9 U [a] [1.9 U [a]] | 2.0 U | 1.9 U | 8.9 U [a] | 1.9 U [a] | 2.0 U | 1.7 U [1.7 U] | 1.8 U | 1.9 U [a] |
| Perfluorobutanesulfonic acid (PFBS) | 420 | 670,000 | ng/L | 1.8 U [1.8 U] | 1.9 U [a] [1.9 U [a]] | 2.0 U | **1.6 J** | **1.5 J** | **1.4 J** | 2.0 U | **1.1 J [1.0 J]** | **1.3 J** | **1.1 J** |
| Perfluoropentanesulfonic acid (PFPeS) | -- | -- | ng/L | 1.8 U [1.8 U] | 1.9 U [a] [1.9 U [a]] | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 2.0 U | 1.7 U [1.7 U] | 1.8 U | 1.9 U |
| Perfluorohexanesulfonic acid (PFHxS) | 51 | -- | ng/L | **5.6 [3.1 J]** | **4.3 [a] [5.0 [a]]** | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 2.0 U | 1.7 U [1.7 U] | 1.8 U | 1.9 U |
| Perfluoroheptanesulfonic Acid (PFHpS) | -- | -- | ng/L | 1.8 U [1.8 U] | 1.9 U [a] [1.9 U [a]] | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 2.0 U | 1.7 U [1.7 U] | 1.8 U | 1.9 U |
| Perfluorooctanesulfonic acid (PFOS) | 16 | 12 | ng/L | **15.8 [14.9]** | **20.9 [a] [21.2 [a]]** | 4.0 U | 1.9 U | 1.8 U | 1.9 U | 4.0 U | 1.7 U [1.7 U] | 1.8 U | 1.9 U |
| Perfluorononanesulfonic acid (PFNS) | -- | -- | ng/L | 1.8 U [1.8 U] | 1.9 U [a] [1.9 U [a]] | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 2.0 U | 1.7 U [1.7 U] | 1.8 U | 1.9 U |
| Perfluorodecanesulfonic acid (PFDS) | -- | -- | ng/L | 1.8 U [1.8 U] | 1.9 U [1.9 U [a]] | 2.0 U | 1.9 U | 1.8 U | 1.9 U | 2.0 U | 1.7 U [1.7 U] | 1.8 U | 1.9 U |
| 4:2 Flourotelemer Sulfonate (4:2 FTS) | -- | -- | ng/L | 3.6 U [3.6 U] | 3.7 U [a] [3.7 U [a]] | 4.0 U | 3.7 U | 3.6 U | 3.7 U | 4.0 U | 3.4 U [3.4 U] | 3.6 U | 3.7 U |
| 6:2 Flourotelemer Sulfonate (6:2 FTS) | -- | -- | ng/L | 3.6 U [3.6 U] | 3.7 U [3.7 U [a]] | 4.0 U | 3.7 U | 3.6 U | 3.7 U | 4.0 U | 3.4 U [3.4 U] | 3.6 U | 3.7 U |
| 8:2 Flourotelemer Sulfonate (8:2 FTS) | -- | -- | ng/L | 3.6 U [3.6 U] | 3.7 U [3.7 U [a]] | 4.0 U | 3.7 U | 3.6 U | 3.7 U | 4.0 U | 3.4 U [3.4 U] | 3.6 U | 3.7 U |
| acetic acid (MeFOSAA) | -- | -- | ng/L | 3.6 U [3.6 U] | 3.7 U [3.7 U] | 8.0 U | 7.4 U | 3.6 U | 3.7 U | 8.0 U | 6.9 U [6.9 U] | 3.6 U | 3.7 U |
| acid (EtFOSAA) | -- | -- | ng/L | 3.6 U [3.6 U] | 3.7 U [3.7 U] | 8.0 U | 7.4 U | 3.6 U | 3.7 U | 8.0 U | 6.9 U [6.9 U] | 3.6 U | 3.7 U |
| Perfluorooctane Sulfonamide (FOSA) | -- | -- | ng/L | 1.8 U [a] [1.8 U [a]] | 1.9 U [a] [1.9 U [a]] | 2.0 U | 1.9 U | 8.9 U [a] | 1.9 U [a] | 2.0 U | 1.7 U [1.7 U] | 1.8 U | 1.9 U [a] |
| HFPO-DA (GenX) | 370 | -- | ng/L | 3.6 U [3.6 U] | 3.7 U [a] [3.7 U [a]] | -- | 9.3 U | 3.6 U | 3.7 U | -- | 8.6 U [8.6 U] | 3.6 U | 3.7 U |
| ADONA | -- | -- | ng/L | 3.6 U [3.6 U] | 3.7 U [a] [3.7 U [a]] | -- | 3.7 U | 3.6 U | 3.7 U | -- | 3.4 U [3.4 U] | 3.6 U | 3.7 U |
| 9Cl-PF3ONS (F-53B Major) | -- | -- | ng/L | 3.6 U [3.6 U] | 3.7 U [a] [3.7 U [a]] | -- | 3.7 U | 3.6 U | 3.7 U | -- | 3.4 U [3.4 U] | 3.6 U | 3.7 U |
| 11Cl-PF3OUdS (F-53B Minor) | -- | -- | ng/L | 3.6 U [3.6 U] | 3.7 U [3.7 U [a]] | -- | 3.7 U | 18 U [a] | 19 U [b] | -- | 3.4 U [3.4 U] | 3.6 U | 19 U [b] |
| **Total PFAS** | **--** | **--** | ng/L | **72 [65.9]** | **62.1 [64.6]** | **5.98** | **28.1** | **26.1** | **26.9** | **2.13** | **9.8 [10.47]** | **14.3** | **11.7** |

**Notes:**
All values are in nanograms per liter (ng/L).
**Bold result denotes detection.**
Shaded result denotes detection is above the EGLE Groundwater Surface Water Criteria.
Red result denotes detection is above EGLE Drinking Water Maximum Contaminant Limit (MCL).
For Total PFAS all detections were summed.

-- = not applicable
a = Associated ID Standard outside control limits. Confirmed by batch QC, re-extraction and/or rea
b = Result is from Run #2
U = not detected
J = estimated value between the limit of quantitation and the method detection limit.
[ ] = duplicate sample detections
EGLE = Environment Great Lakes and Energy

**Table 5**
**Analytical Data Summary Table - GPL Inorganics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | Arsenic | Barium | Cyanide (total) | Iron | Manganese | Selenium | Sodium | Arsenic (Dissolved) | Barium (Dissolved) | Cyanide (Dissolved) | Iron (Dissolved) | Manganese (Dissolved) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 680* | 1,300 | 5.2 | NSL | 4,700 | 5 | NSL | 680* | 1,300 | 5.2 | NSL | 4,700 |
| MW-117S1 | 24.2 - 29.2 | 06/20/95 | -- | -- | 5.00 U | -- | -- | -- | -- | **1.2** | **1,410** | -- | **5,780** | **347** |
| MW-117S1 | 24.2 - 29.2 | 07/14/95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117S1 | 24.2 - 29.2 | 06/11/96 | -- | -- | -- | -- | -- | -- | -- | -- | **1,670** | -- | **8,260** | **330** |
| MW-117S1 | 24.2 - 29.2 | 05/19/00 | -- | -- | -- | -- | -- | -- | -- | 10 U | **1,720** | 5 U | **8,730** | **341** |
| MW-117S1 | 24.2 - 29.2 | 06/19/01 | -- | -- | -- | -- | -- | -- | -- | 10 U | **1,740** | 5 U | **9,120** | **340** |
| MW-117S1 | 24.2 - 29.2 | 06/26/02 | -- | -- | -- | -- | -- | -- | -- | 10 U | **1,740** | 5 U | **8,650** | **326** |
| MW-117S1 | 24.2 - 29.2 | 06/19/03 | -- | -- | -- | -- | -- | -- | -- | 10 U | **1,800** | 5 U | **9,160** | **354** |
| MW-117S1 | 24.2 - 29.2 | 05/27/04 | -- | -- | -- | -- | -- | -- | -- | 10 U | **1,780** | 5 U | **10,100** | **326 J** |
| MW-117S1 | 24.2 - 29.2 | 06/23/05 | -- | -- | -- | -- | -- | -- | -- | **2.7** | **1,530 J** | 10 U | **8,150** | **289 J** |
| MW-117S1 | 24.2 - 29.2 | 12/13/06 | -- | -- | -- | -- | -- | -- | -- | 5 U | **2,010** | 10 U | **8,980** | **329** |
| MW-117S1 | 24.2 - 29.2 | 12/07/07 | -- | -- | -- | -- | -- | -- | -- | 5 U | **1,890** | 10 U | **9,480** | **332** |
| MW-117S1 | 24.2 - 29.2 | 03/14/08 | -- | -- | -- | -- | -- | -- | -- | **3.9 J** | **1,810** | 10 U | **7,350** | **312** |
| MW-117S1 | 24.2 - 29.2 | 10/01/10 | -- | -- | -- | -- | -- | -- | -- | 5 U | **1,800 J** | 100 U | **8,980** | **307 J** |
| MW-117S1 | 24.2 - 29.2 | 09/27/11 | -- | -- | -- | -- | -- | -- | -- | **1.6** | **2,000** | -- | **9,500** | **330** |
| MW-117S1 | 24.2 - 29.2 | 09/13/12 | -- | -- | -- | -- | -- | -- | -- | **1.6 J** | **1,800 B** | 10 U | **8,600** | **300** |
| MW-117S1 | 24.2 - 29.2 | 09/24/13 | -- | -- | -- | -- | -- | -- | -- | **4.3 B** | **2,000** | 10 U | **3,900** | **510** |
| MW-117S1 | 24.2 - 29.2 | 09/22/14 | -- | -- | -- | -- | -- | -- | -- | **4.6 B** | **2,100 B** | 10 U | **12,000 B** | **290** |
| MW-117S1 | 24.2 - 29.2 | 09/30/15 | -- | -- | 10 U | -- | -- | -- | -- | **2.3** | **1,700** | 10 U | **8,700** | **270** |
| MW-117S1 | 24.2 - 29.2 | 09/27/16 | -- | -- | 10 U | -- | -- | -- | -- | **1.9 J** | **1,500 B** | 10 U | **9,000 B** | **270 B** |
| MW-117S1 | 24.2 - 29.2 | 11/13/17 | -- | -- | 10 U | -- | -- | -- | -- | **2.0** | **1,700** | 10 U | **8,700** | **260** |
| MW-117S1 | 24.2 - 29.2 | 08/21/19 | -- | -- | 10 U | -- | -- | -- | -- | 10 U | **1,700** | 10 U | **8,700** | **270** |
| MW-117S1 | 24.2 - 29.2 | 08/13/20 | 10 U | **1,500** | 10 U | **8,600 B** | **290** | 15 U | **110,000** | 10 U | **1,500** | 10 U | **7,900 B** | **290** |
| MW-117S1 | 24.2 - 29.2 | 08/17/21 | 10 U | **1,800** | 10 U | **7,800** | **290** | 15 U | **120,000** | 10 U | **1,800** | 10 U | **7,600** | **270** |
| MW-117S1 | 24.2 - 29.2 | 09/21/22 | 10 U | **1,700** | 10 U | **8,400** | **340** | 15 U | **120,000** | 10 U | **1,800** | 10 U | **8,200** | **330** |
| MW-117WT | 3 - 13 | 06/20/95 | -- | -- | 5.00 U | -- | -- | -- | -- | 1.3 | **2,210** | -- | **100,000** | **5,130** |
| MW-117WT | 3 - 13 | 07/14/95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117WT | 3 - 13 | 06/11/96 | -- | -- | -- | -- | -- | -- | -- | -- | **2,520** | -- | **124,000** | **5,190** |
| MW-117WT | 3 - 13 | 05/19/00 | -- | -- | -- | -- | -- | -- | -- | 10 U | **3,580** | 5 U | **149,000** | **5,510** |
| MW-117WT | 3 - 13 | 06/18/01 | -- | -- | -- | -- | -- | -- | -- | 10 U | **3,170** | 5 U | **137,000** | **4,900** |
| MW-117WT | 3 - 13 | 06/26/02 | -- | -- | -- | -- | -- | -- | -- | **2.2 B** | **2,970** | 5 U | **128,000** | **4,850** |
| MW-117WT | 3 - 13 | 06/19/03 | -- | -- | -- | -- | -- | -- | -- | 10 U | **3,250** | 5 U | **139,000** | **5,480** |
| MW-117WT | 3 - 13 | 12/09/04 | -- | -- | -- | -- | -- | -- | -- | **4.1 [4.6 J]** | **3,110 J [2,880 J]** | 10 U [10 U] | **143,000 J [125,000 J]** | **5,150 J [3,970 J]** |
| MW-117WT | 3 - 13 | 06/23/05 | -- | -- | -- | -- | -- | -- | -- | **4.5** | **2,360 J** | 10 U | **122,000** | **3,810 J** |
| MW-117WT | 3 - 13 | 12/13/06 | -- | -- | -- | -- | -- | -- | -- | 5 U | **2,710** | 10 U | **105,000** | **4,000** |
| MW-117WT | 3 - 13 | 12/07/07 | -- | -- | -- | -- | -- | -- | -- | 5 U | **2,880** | 10 U | **124,000** | **4,460** |
| MW-117WT | 3 - 13 | 03/14/08 | -- | -- | -- | -- | -- | -- | -- | 5 U | **2,670** | 10 U | **112,000** | **4,160** |
| MW-117WT | 3 - 13 | 10/01/10 | -- | -- | -- | -- | -- | -- | -- | 5 U | **2,910 J** | 10 U | **119,000** | **4,360 J** |
| MW-117WT | 3 - 13 | 09/27/11 | -- | -- | -- | -- | -- | -- | -- | **2.5** | **3,300** | -- | **130,000** | **4,700** |
| MW-117WT | 3 - 13 | 09/13/12 | -- | -- | -- | -- | -- | -- | -- | **3.7** | **3,000 B** | 10 U | **110,000** | **4,100** |
| MW-117WT | 3 - 13 | 09/24/13 | -- | -- | -- | -- | -- | -- | -- | **4.8 B** | **3,100** | 10 U | **130,000** | **7,000** |
| MW-117WT | 3 - 13 | 09/23/14 | -- | -- | -- | -- | -- | -- | -- | **1.4 J,B** | **2,800 B** | 10 U | **110,000 B** | **3,700** |
| MW-117WT | 3 - 13 | 09/30/15 | -- | -- | 10 U | -- | -- | -- | -- | **3.0** | **2,100** | 10 U | **83,000** | **2,900** |
| MW-117WT | 3 - 13 | 09/27/16 | -- | -- | 10 U | -- | -- | -- | -- | **1.6 J** | **1,600 B** | 10 U | **96,000 B** | **3,400 B** |
| MW-117WT | 3 - 13 | 10/13/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117WT | 3 - 13 | 08/13/20 | **6.5 J** | **2,000** | 10 U | **96,000 B** | **3,700** | 15 U | **460,000** | **4.1 J** | **2,100** | 10 U | **97,000 B** | **3,800** |
| MW-117WT | 3 - 13 | 08/17/21 | **5.6 J** | **3,800** | 10 U | **130,000** | **4,600** | 15 U | **680,000** | **4.5 J** | **3,500** | 10 U | **120,000** | **4,400** |
| MW-117WT | 3 - 13 | 09/22/22 | 10 U | **2,300** | 10 U | **100,000** | **4,200** | 15 U | **470,000** | 10 U | **2,200** | 10 U *+ | **99,000** | **3,900** |
| MW-118S1 | 23.5 - 28.5 | 06/20/95 | -- | -- | 5.00 U | -- | -- | -- | -- | **1.8** | **482** | -- | **2,500** | **347** |
| MW-118S1 | 23.5 - 28.5 | 07/14/95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118S1 | 23.5 - 28.5 | 06/11/96 | -- | -- | -- | **4,970** | **372** | -- | -- | -- | **532** | -- | **5,390** | **383** |
| MW-118S1 | 23.5 - 28.5 | 05/17/00 | -- | -- | -- | -- | -- | -- | -- | 10 U [10 U] | **593 [612]** | 5 U [5 U] | **6,090 [6,150]** | **420 [415]** |
| MW-118S1 | 23.5 - 28.5 | 06/19/01 | -- | -- | -- | -- | -- | -- | -- | 10 U | **645** | 5 U | **7,070** | **428** |
| MW-118S1 | 23.5 - 28.5 | 06/27/02 | -- | -- | -- | -- | -- | -- | -- | 10 U | **622** | 5 U | **6,070** | **408** |
| MW-118S1 | 23.5 - 28.5 | 06/19/03 | -- | -- | -- | -- | -- | -- | -- | 10 U | **713** | 5 U | **7,570** | **476** |
| MW-118S1 | 23.5 - 28.5 | 12/09/04 | -- | -- | -- | -- | -- | -- | -- | **2.3 J** | **718 J** | 10 U | **7,420 J** | **405 J** |
| MW-118S1 | 23.5 - 28.5 | 06/23/05 | -- | -- | -- | -- | -- | -- | -- | **1.9 B** | **676 JE** | 10 U | **6,630** | **370 J** |
| MW-118S1 | 23.5 - 28.5 | 12/14/06 | -- | -- | -- | -- | -- | -- | -- | 5 U | **727** | 10 U | **5,930** | **401** |
| MW-118S1 | 23.5 - 28.5 | 12/07/07 | -- | -- | -- | -- | -- | -- | -- | 5 U | **753** | 10 U | **6,940** | **425** |
| MW-118S1 | 23.5 - 28.5 | 04/01/08 | -- | -- | -- | -- | -- | -- | -- | 5 U | **763** | 10 U | **6,340** | **413** |
| MW-118S1 | 23.5 - 28.5 | 10/01/10 | -- | -- | -- | -- | -- | -- | -- | 5 U | **759 J** | 10 U | **6,570** | **395 J** |
| MW-118S1 | 23.5 - 28.5 | 09/27/11 | -- | -- | -- | -- | -- | -- | -- | **0.58** | **810** | 10 U | **6,700** | **410** |
| MW-118S1 | 23.5 - 28.5 | 09/13/12 | -- | -- | -- | -- | -- | -- | -- | **0.74** | **710 B** | **11** | **5,900** | **400** |

**Table 5**
**Analytical Data Summary Table - GPL Inorganics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | Arsenic | Barium | Cyanide (total) | Iron | Manganese | Selenium | Sodium | Arsenic (Dissolved) | Barium (Dissolved) | Cyanide (Dissolved) | Iron (Dissolved) | Manganese (Dissolved) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 680* | 1,300 | 5.2 | NSL | 4,700 | 5 | NSL | 680* | 1,300 | 5.2 | NSL | 4,700 |
| MW-118S1 | 23.5 - 28.5 | 09/24/13 | -- | -- | -- | -- | -- | -- | -- | **18 B** | **970 B** | 10 U | **3,900 B** | **470 B** |
| MW-118S1 | 23.5 - 28.5 | 09/22/14 | -- | -- | -- | -- | -- | -- | -- | **0.86 J** | **730 B** | 10 U | 50 U | **350** |
| MW-118S1 | 23.5 - 28.5 | 09/30/15 | -- | -- | 10 U | -- | -- | -- | -- | **1.6 J** | **890** | 10 U | 7,700 | **340** |
| MW-118S1 | 23.5 - 28.5 | 09/27/16 | -- | -- | 10 U | -- | -- | -- | -- | **1.9 J** | **850 B** | 10 U | **8,700 B** | **360 B** |
| MW-118S1 | 23.5 - 28.5 | 11/13/17 | -- | -- | 10 U F1 | -- | -- | -- | -- | **1.4 J** | **750** | 10 U | **8,500** | **460** |
| MW-118S1 | 23.5 - 28.5 | 08/14/20 | **7.8 J** | **29 J** | 10 U | **3,900** | **770** | 15 U | **13,000 B** | **8.2 J** | **28 J** | 10 U | **2,700** | **800** |
| MW-118S1 | 23.5 - 28.5 | 08/17/21 | 10 U | **300** | 10 U | **13,000** | **2,100** | 15 U | **97,000** | 10 U | **300** | 10 U | **12,000** | **2,100** |
| MW-118S1 | 23.5 - 28.5 | 09/26/22 | **4.7 J** | **72 J B** | 10 U | **9,700** | **940** | 15 U | **45,000** | **4.4 J** | **69 J B** | 10 U *+ | **8,700** | **850** |
| MW-118WT | 1.6 - 11.6 | 06/20/95 | -- | -- | 5.00 U | -- | -- | -- | -- | **1** | **1,970** | -- | **71,500** | **5,460** |
| MW-118WT | 1.6 - 11.6 | 07/14/95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118WT | 1.6 - 11.6 | 06/11/96 | -- | -- | -- | **81,900** | **4,990** | -- | -- | -- | **2,420** | -- | **93,100** | **5,390** |
| MW-118WT | 1.6 - 11.6 | 05/17/00 | -- | -- | -- | -- | -- | -- | -- | 10 U | **7,970** | 5 U | **261,000** | **8,930** |
| MW-118WT | 1.6 - 11.6 | 06/19/01 | -- | -- | -- | -- | -- | -- | -- | **5.1 B [7.4 B]** | **10,700 [11,200]** | 5 U [5 U] | **330,000 [344,000]** | **7,740 [8,070]** |
| MW-118WT | 1.6 - 11.6 | 06/27/02 | -- | -- | -- | -- | -- | -- | -- | **3.9 B [7.9 B]** | **8,650 [9,200]** | 5 U [5 U] | **259,000 [277,000]** | **6,250 [6,360]** |
| MW-118WT | 1.6 - 11.6 | 06/19/03 | -- | -- | -- | -- | -- | -- | -- | 10 U [10 U] | **5,620 [5,420]** | 5 U [5 U] | **173,000 [166,000]** | **4,110 [4,000]** |
| MW-118WT | 1.6 - 11.6 | 05/27/04 | -- | -- | -- | -- | -- | -- | -- | **3.2** | **4,350** | 5 U | **135,000** | **3,080 J** |
| MW-118WT | 1.6 - 11.6 | 06/23/05 | -- | -- | -- | -- | -- | -- | -- | **3.4** | **2,210 J** | 10 U | **92,400** | **1,560 J** |
| MW-118WT | 1.6 - 11.6 | 12/14/06 | -- | -- | -- | -- | -- | -- | -- | 5 U | **1,400** | 10 U | **39,200** | **1,050** |
| MW-118WT | 1.6 - 11.6 | 12/07/07 | -- | -- | -- | -- | -- | -- | -- | 5 U | **1,120** | 10 U | **35,400** | **881** |
| MW-118WT | 1.6 - 11.6 | 04/01/08 | -- | -- | -- | -- | -- | -- | -- | 5 U | **1,040** | 10 U | **30,500** | **800** |
| MW-118WT | 1.6 - 11.6 | 09/30/10 | -- | -- | -- | -- | -- | -- | -- | 5 U | **571 J** | 10 U | **16,900** | **448 J** |
| MW-118WT | 1.6 - 11.6 | 09/27/11 | -- | -- | -- | -- | -- | -- | -- | **1.1** | **600** | -- | **16,000** | **470** |
| MW-118WT | 1.6 - 11.6 | 09/13/12 | -- | -- | -- | -- | -- | -- | -- | **0.80 J** | **390** | -- | **11,000** | **340** |
| MW-118WT | 1.6 - 11.6 | 09/24/13 | -- | -- | -- | -- | -- | -- | -- | **0.72 J,B** | **390 B** | 10 U | **8,700 B** | **330 B** |
| MW-118WT | 1.6 - 11.6 | 09/22/14 | -- | -- | -- | -- | -- | -- | -- | **0.37 J,B** | **360 B** | 10 U | **8,600 B** | **300** |
| MW-118WT | 1.6 - 11.6 | 09/30/15 | -- | -- | 10 U | -- | -- | -- | -- | **0.85 J** | **300** | 10 U | **7,100** | **270** |
| MW-118WT | 1.6 - 11.6 | 09/27/16 | -- | -- | 10 U | -- | -- | -- | -- | **1.0 J** | **300 B** | 10 U | **8,500 B** | **300 B** |
| MW-118WT | 1.6 - 11.6 | 11/13/17 | -- | -- | 10 U | -- | -- | -- | -- | 2.0 U | **370** | **5.8 J** | **15,000** | **570** |
| MW-118WT | 1.6 - 11.6 | 08/14/20 | **15** | **250** | 10 U | **26,000** | **970** | 15 U | **48,000 B** | **15** | **250** | 10 U | **26,000** | **1,000** |
| MW-118WT | 1.6 - 11.6 | 08/17/21 | 10 U | **390** | **6.4 J** | **12,000** | **390** | 15 U | **100,000** | 10 U | **360** | 10 U | **11,000** | **390** |
| MW-118WT | 1.6 - 11.6 | 09/22/22 | **11** | **330** | 10 U | **19,000** | **860** | 15 U | **92,000** | **10** | **340** | 10 U | **18,000** | **850** |
| MW-183WT | 6 - 16 | 12/06/07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-183WT | 6 - 16 | 01/09/08 | 5.00 U [5.00 U] | **44.1 J [44.3 J]** | -- | **1,200 J [669 J]** | **514 [429 J]** | 5.00 U [5.00 U] | **97,200 [99,800]** | 5 U [5 U] | **45.6 J [44.2 J]** | 10 U [10 U] | **714 J [1,280 J]** | **440 [565 J]** |
| MW-183WT | 6 - 16 | 03/12/08 | 5.00 U | **52.6 J** | -- | **659** | **611** | 5.00 U | **99,000** | **3.3 J** | **51.4 J** | 10 U | **298** | **608** |
| MW-183WT | 6 - 16 | 09/28/10 | **5.0 U [6.90]** | **38.2 BJ [37.7 BJ]** | -- | **3,850 [3,630]** | **252 [248]** | 5.0 U [5.0 U] | -- | **5.0 U [5.0 U)]** | **36.8 BJ [37 BJ]** | 10 U | **3.06 [3.02]** | **243 [238]** |
| MW-183WT | 6 - 16 | 09/28/11 | **1.90 [2.0]** | **36.0 [38.0]** | -- | **2,600 [2,600]** | **240 [260]** | 5.0 U [5.0 U] | -- | **2.0** | **39** | -- | **2,600** | **250** |
| MW-183WT | 6 - 16 | 09/14/12 | **1.0 [0.73 J]** | **79 B [85 B]** | -- | **2,200 [2,100]** | **400 B [440 B]** | 5.0 U [5.0 U] | -- | **1.4 J** | **78 B** | 10 U | **2,100** | **400 B** |
| MW-183WT | 6 - 16 | 09/24/13 | **3.9 B [3.3 B]** | **85 B [83 B]** | -- | **4,500 B [3,800 B]** | **500 B [490 B]** | 5.0 U [5.0 U] | -- | **3.2 B** | **82 B** | 10 U | **3,400 B** | **490 B** |
| MW-183WT | 6 - 16 | 09/23/14 | **1.8 J,B [1.9 J,B]** | **43 B [45 B]** | -- | **2,300 B [2,600 B]** | **460 [540]** | **0.32 J,B [0.27 J,B]** | -- | **1.9 J,B [1.9 J,B]** | **460 B [470 B]** | 10 U | **2,700 B [2,600 B]** | **550 [560]** |
| MW-183WT | 6 - 16 | 10/01/15 | **1.5 J [1.3 J]** | **46 [45]** | -- | **2,500 [2,400]** | **350 [330]** | **0.69 J,B [0.55 J,B]** | -- | **1.7 J** | **44** | 10 U | **2,600** | **350** |
| MW-183WT | 6 - 16 | 09/28/16 | **6.0** | **41 B** | 10 U | **5,000 B** | **1,100 B** | **0.82 J** | **49,000** | **4.1** | **40 B** | 10 U | **5,300 B** | **1,100 B** |
| MW-183WT | 6 - 16 | 08/29/17 | **5.8 [4.6]** | **50 F1 [41]** | 10 U F1 F2 | **4,200 [3,600]** | **1,700 [1,300]** | 5.0 U [5.0 U] | **38,000 [35,000]** | **4.8** | **45** | 10 U F1 F2 | **3,800** | **1,500** |
| MW-183WT | 6 - 16 | 09/26/18 | **6.4 J [8.2 J]** | **35 J [44 J]** | 10 U | **3,900 F1 [4,900]** | **1,200 F1 [1,500]** | 15 U [15 U] | **21,000 [27,000]** | **6.5 J** | **41 J** | 10 U [10 U] | **4,000** | **1,300** |
| MW-183WT | 6 - 16 | 08/21/19 | **10 [9.4 J]** | **52 J [52 J]** | 10 U | **6,600 [6,800]** | **1,500 [1,500]** | 15 U ^ [15 U ^] | **30,000 [29,000]** | **8.1 J** | **51 J** | 10 U [10 U] | **5,900** | **1,400** |
| MW-183WT | 6 - 16 | 08/18/20 | **4.6 J [4.5 J]** | **48 J [53 J]** | 10 U [10 U] | **5,400 [5,700]** | **1,600 [1,800]** | 15 U [15 U] | **14,000 [15,000]** | **7.0 J,F2 [5.3 J]** | **53 J,F1,F2 [52 J]** | 10 U [10 U] | **5,800 F1,F2 [5,600]** | **1,800 F1,F2 [1,800]** |
| MW-183WT | 6 - 16 | 08/19/21 | **10** | **45 J** | 10 U | **5,800** | **1,700** | 15 U | **23,000** | **8.3 J** | **43 J** | 10 U | **4,400** | **1,600** |
| MW-183WT | 6 - 16 | 09/26/22 | **13** | **36 J B** | 10 U | **5,100 F1** | **1,200 F1** | 15 U | **22,000** | **11** | **34 J B** | 10 U *+ | **4,700** | **1,200** |
| TWW-1 | 1.5 - 6.5 | 01/25/97 | -- | -- | -- | -- | -- | -- | -- | 5 U | 200 UL | 10 U | **110** | **2,110** |
| TWW-1 | 1.5 - 6.5 | 05/21/00 | 10.0 U | **146** | -- | 100 U | **1,580** | 5.00 U | **839,000** | 10 U | **145** | -- | 127 U | **1,610** |
| TWW-1 | 1.5 - 6.5 | 05/29/08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| TWW-1 | 1.5 - 6.5 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| TWW-1 | 1.5 - 6.5 | 08/30/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-10BR | 26.3 - 31.3 | 07/24/95 | -- | -- | 5.00 U | -- | -- | -- | -- | **32** | **387** | -- | **22,600** | **457** |
| X-10BR | 26.3 - 31.3 | 12/15/06 | -- | -- | -- | -- | -- | -- | -- | **27.6** | **598** | 10 U | **30,500** | **691** |
| X-10BR | 26.3 - 31.3 | 12/04/07 | -- | -- | -- | -- | -- | -- | -- | **29.5** | **570** | 10 U | **32,700** | **696** |
| X-10BR | 26.3 - 31.3 | 03/12/08 | -- | -- | -- | -- | -- | -- | -- | **33** | **597** | 10 U | **31,800** | **716** |
| X-10BR | 26.3 - 31.3 | 09/29/10 | -- | -- | -- | -- | -- | -- | -- | **28.5** | **581 J** | 10 U | **31,700** | **751** |
| X-10BR | 26.3 - 31.3 | 09/22/11 | -- | -- | -- | -- | -- | -- | -- | **30** | **630** | 10 U | **35,000** | **750** |
| X-10BR | 26.3 - 31.3 | 09/14/12 | -- | -- | -- | -- | -- | -- | -- | **27** | **570** | 10 U | **30,000** | **730 B^** |
| X-10BR | 26.3 - 31.3 | 09/24/13 | -- | -- | -- | -- | -- | -- | -- | **28 B** | **630** | 10 U | **33,000** | **750** |

**Table 5**
**Analytical Data Summary Table - GPL Inorganics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | Arsenic | Barium | Cyanide (total) | Iron | Manganese | Selenium | Sodium | Arsenic (Dissolved) | Barium (Dissolved) | Cyanide (Dissolved) | Iron (Dissolved) | Manganese (Dissolved) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 680* | 1,300 | 5.2 | NSL | 4,700 | 5 | NSL | 680* | 1,300 | 5.2 | NSL | 4,700 |
| X-4AR | 3.3 - 8.3 | 07/24/95 | **12.7** | **431** | 5.00 U | **72,400** | **1,500** | 5.00 U | **20,700** | **1.2** | 200 U | -- | **1,080** | **248** |
| X-4AR | 3.3 - 8.3 | 06/09/96 | 5.00 U | 200 U | 5.00 U | **399** | **41.9** | 5.00 U | **21,900** | 5 U | 200 U | 5 U | **289** | **44.4** |
| X-4AR | 3.3 - 8.3 | 05/21/00 | 10.0 U | **73.3 B** | -- | 193 U | 15.0 U | 5.00 U | **20,700** | 10 U | **73.9 B** | -- | 100 U | 15 U |
| X-4AR | 3.3 - 8.3 | 06/03/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-4AR | 3.3 - 8.3 | 08/18/20 | 10 U | **25 J** | 10 U | 100 U | **3.0 J** | 15 U | **28,000** | 10 U | **36 J** | -- | 100 U | **180** |
| X-4AR | 3.3 - 8.3 | 09/21/22 | 10 U | **14 J** | 10 U | **130** | **52** | 15 U | **26,000** | -- | **--** | -- | -- | **--** |
| X-4CAUG | 18 - 23 | 07/24/95 | -- | -- | 5.00 U | -- | -- | -- | -- | 1 UJ | 200 U | -- | **1,970** | **447** |
| X-4CAUG | 18 - 23 | 06/08/96 | -- | -- | -- | -- | -- | -- | -- | 5 U | 200 U | 5 UJ | **1,980** | **464** |
| X-4CAUGR | 14 - 19 | 01/09/08 | 5.00 U | **114** | -- | **4,600** | **397** | 5.00 U | **73,900** | 5 U | **123** | 10 U | **4,940** | **427** |
| X-4CAUGR | 14 - 19 | 03/12/08 | 5.00 U | **129** | -- | **5,060** | **495** | 5.00 U | **55,400** | 5 U | **137** | 10 U | **5,020** | **535** |
| X-4CAUGR | 14 - 19 | 09/28/10 | 5.00 U | **132 J** | -- | **4,930** | **559** | 5.00 U | **54,000** | 5 U | **129 J** | 10 U | **5,180** | **571** |
| X-4CAUGR | 14 - 19 | 09/26/11 | **0.740** | **140** | -- | **5,400** | **620** | 5.00 U | **44,000** | **0.45** | **130** | 10 U | **5,000** | **590** |
| X-4CAUGR | 14 - 19 | 09/14/12 | **0.42 J** | **120 B** | -- | **4,500** | **560 B^** | 5.00 U | **53,000** | **0.40 J** | **120 B** | 10 U | **4,400** | **570 B^** |
| X-4CAUGR | 14 - 19 | 09/24/13 | **1.9 B** | **89** | -- | **6,700** | **730** | 5.00 U | **22,000 B** | **6.9 B** | **89 B** | 10 U | **6,300 B** | **760 B** |
| X-4CAUGR | 14 - 19 | 09/23/14 | **2.3 B** | **130 B** | -- | **9,100 B** | **610** | **0.36 J,B** | **59,000 B** | **2.2 B** | **140 B** | 10 U | **9,000 B** | **610** |
| X-4CAUGR | 14 - 19 | 09/30/15 | **2.0** | **120** | 10 U | **6,500** | **430** | **0.56 J** | **64,000 B** | **2.1** | **140** | 10 U | **7,800** | **500** |
| X-4CAUGR | 14 - 19 | 09/28/16 | **1.3 J** | **100 B** | 10 U | **4,900 B** | **380 B** | **0.92 J** | **78,000** | **1.1 J** | **96 B** | 10 U | **4,700 B** | **370 B** |
| X-4CAUGR | 14 - 19 | 08/29/17 | **0.84 J** | **110** | 10 U | **4,800** | **420** | -- | **9,200** | **0.84 J** | **110** | 10 U | **4,700** | **450** |
| X-4CAUGR | 14 - 19 | 09/26/18 | 10 U | **67 J** | 10 U | **3,500** | **300** | 15 U | **10,000** | 10 U | **64 J** | 10 U | **2,800** | **300** |
| X-4CAUGR | 14 - 19 | 08/22/19 | 2.0 U | **57** | 10 U | **2,400** | **270** | 5.0 U | **12,000** | 2.0 U | **59** | 10 U | **2,700** | **280** |
| X-4CAUGR | 14 - 19 | 08/17/20 | **7.2 J** | **54 J** | 10 U | **2,700** | **300** | 15 U | **13,000** | **4.3 J** | **54 J** | 10 U | **2,700** | **300** |
| X-4CAUGR | 14 - 19 | 08/17/21 | 10 U | **52 J** | **6.6 J** | **2,600** | **290** | 15 U | **13,000** | 10 U | **53 J** | 10 U | **2,300** | **290** |
| X-4CAUGR | 14 - 19 | 09/21/22 | 10 U | **58 J** | 10 U | **3,200** | **300** | 15 U | **12,000** | 10 U | **55 J** | 10 U | **2,800** | **290** |
| X-4D | 40 - 45 | 01/09/08 | 5.00 U | **125** | -- | **2,250** | **327** | 5.00 U | **733,000** | 5 U | **124** | 10 U | **2,080** | **318** |
| X-4D | 40 - 45 | 04/01/08 | -- | -- | -- | -- | -- | -- | -- | 5 U [5 U] | **112 [111]** | 10 U [10 U] | **1,930 [1,780]** | **263 [258]** |
| X-4D | 40 - 45 | 04/03/08 | 5.00 U | **110** | -- | **1,640** | **263** | 5.00 U | **701,000** | -- | -- | -- | -- | -- |
| X-4D | 40 - 45 | 06/05/08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-4D | 40 - 45 | 09/28/10 | 5.0 U | **99.7 BJ** | -- | **1,030** | **265** | 5.00 U | **699,000** | 5 U | **98.9 BJ** | 10 U | **979** | **275** |
| X-4D | 40 - 45 | 09/26/11 | **1.10** | **100** | -- | **1,400** | **190** | 5.00 U | **720,000** | **0.94** | **99** | 10 U | **1,300** | **180** |
| X-4D | 40 - 45 | 09/14/12 | **1.1** | **86 B** | -- | **980** | **180 B** | 5.00 U | **690,000** | **0.89 J** | **87 B** | 10 U | **1,000** | **190 B^** |
| X-4D | 40 - 45 | 09/24/13 | **0.91 J,B** | **92** | -- | **1,300** | **160** | 5.00 U | **690,000** | **0.79 J,B** | **89 B** | 10 U | **1,200** | **160 B** |
| X-4D | 40 - 45 | 09/23/14 | **0.49 J,B** | **58 B** | -- | **290 J,B** | **340** | **0.42 J,B** | **260,000 B** | **0.53 J,B** | **82 B** | 10 U | **35 J,B** | **180** |
| X-4D | 40 - 45 | 09/30/15 | **1.2 J** | **87** | 10 U | **1,000** | **160** | **2.0 J,B** | **660,000** | **1.1 J** | **82** | 10 U | **740** | **180** |
| X-4D | 40 - 45 | 09/28/16 | **0.85 J** | **93 B** | 10 U | **1,200 B** | **200 B** | 5.0 U | **660,000** | **0.97 J** | **91 B** | 10 U | **1,100 B** | **200 B** |
| X-4D | 40 - 45 | 08/29/17 | 2.0 U | **83** | 10 U | 50 U | **190** | 5.0 U | **1,600,000** | 2.0 U | **84** | 10 U | 50 U | **180** |
| X-4D | 40 - 45 | 09/26/18 | 10 U | **83 J** | 10 U | **330** | **310** | 15 U | **560,000** | 10 U | **83 J** | 10 U | **1,300** | **210** |
| X-4D | 40 - 45 | 08/22/19 | 2.0 U | **28** | 10 U | **1,000** | **240** | 5.0 U | **85,000** | 2.0 U | **61** | 10 U | **1,000** | **220** |
| X-4D | 40 - 45 | 08/17/20 | **6.3 J** | **81 J** | 10 U | **1,200** | **210** | 15 U | **630,000** | **5.8 J** | **84 J** | 10 U | **1,100** | **220** |
| X-4D | 40 - 45 | 08/17/21 | 10 U | **61 J** | **7.2 J** | **340** | **260** | 15 U | **350,000** | 10 U | **95 J** | 10 U | **940** | **280** |
| X-4D | 40 - 45 | 09/21/22 | 10 U | **75 J** | 10 U | **900** | **180** | 15 U | **620,000** | 10 U | **83 J** | 10 U | **1,200** | **160** |
| X-9AR | 3 - 13 | 07/24/95 | **1.60** | 200 U | 5.00 U | **11,100** | **770** | 5.00 U | **340,000** | **2.1** | 200 U | -- | **9,170** | **674** |
| X-9AR | 3 - 13 | 06/09/96 | 5.00 U | 200 U | 5.00 U | **2,900** | **348** | 5.00 U | **57,200** | 5 U | 200 U | 5 UJ | **3,190** | **382** |
| X-9AR | 3 - 13 | 12/15/06 | 5.00 U | **94.0 J** | -- | **1,090** | **157** | 5.00 U | **55,000** | 5 U | **91.2 J** | 10 U | **965** | **153** |
| X-9AR | 3 - 13 | 01/10/08 | 5.00 U | **108** | -- | **5,510** | **318** | 5.00 U | **58,600** | 5 U | **110** | 10 U | **5,620** | **325** |
| X-9AR | 3 - 13 | 03/11/08 | 5.00 U | **51.8 J** | -- | 100 U | **6.80 J** | **8.20** | **34,300** | 5 U | **51.2 J** | 10 U | **134** | **3.1 J** |
| X-9AR | 3 - 13 | 06/05/08 | -- | -- | -- | -- | -- | **4.60 B [5.00 U]** | -- | -- | -- | -- | -- | -- |
| X-9AR | 3 - 13 | 09/29/10 | 5.00 U | **113 J** | -- | **6,320** | **380** | 5.00 U | **55,600** | 5 U | **116 J** | 10 U | **6,580** | **388** |
| X-9AR | 3 - 13 | 09/23/11 | **0.40** | **200** | -- | **6,600** | **770** | 5.00 U | **95,000** | 2 U | **200** | 10 U | **6,600** | **750** |
| X-9AR | 3 - 13 | 09/12/12 | **0.43 J** | **190** | -- | **5,400** | **790 B^** | 5.00 U | **120,000** | 2 U | **190** | 10 U | **5,500** | **780 B^** |
| X-9AR | 3 - 13 | 09/25/13 | **6** | **220 B** | -- | **10,000 B** | **840 B** | 5.00 U | **120,000 B** | **5.5** | **220 B** | 10 U | **8,900 B** | **670 B** |
| X-9AR | 3 - 13 | 09/22/14 | **1.2 J** | **160 B** | -- | **8,800** | **570** | 5.00 U | **60,000 B** | **1.3 J** | **170 B** | 10 U | **9,100** | **590** |
| X-9AR | 3 - 13 | 10/01/15 | **0.63 J** | **91** | 10 U | **5,000** | **310** | **0.55 J,B** | **39,000 B** | 2.0 U | **87** | 10 U | **4,700** | **300** |
| X-9AR | 3 - 13 | 09/28/16 | **0.50 *J** | **100** | 10 U | **5,600** | **360** | **0.62 J** | **39,000** | **0.61 *J** | **97** | 10 U | **5,500** | **360** |
| X-9AR | 3 - 13 | 08/29/17 | **2.4** | **56** | 10 U | **2,900** | **1,300** | 5.0 U | **11,000** | **2.4** | **--** | 10 U | **2,300** | **1,400** |
| X-9AR | 3 - 13 | 09/26/18 | 10 U | **58 J** | 10 U | **2,100** | **3,600** | 15 U | **10,000** | 10 U | **55 J** | 10 U | **1,900** | **4,000** |
| X-9AR | 3 - 13 | 08/21/19 | **4.4 J** | **64 J** | 10 U | **3,300** | **3,600** | 15 U ^ | **11,000** | **4.3 J** | **65 J** | 10 U | **3,100** | **3,600** |
| X-9AR | 3 - 13 | 08/17/20 | **23** | **57 J** | 10 U | **6,400** | **3,100** | 15 U | **9,600** | **24** | **57 J** | 10 U | **5,600** | **3,000** |
| X-9AR | 3 - 13 | 08/18/21 | **11** | **71 J** | 10 U | **7,500** | **2,500** | 15 U | **13,000** | **10** | **72 J** | 10 U | **7,800** | **2,600** |
| X-9AR | 3 - 13 | 09/22/22 | **13 [14]** | **67 J [69 J]** | 10 U **[11]** | **12,000 [12,000]** | **1,900 [2,000]** | 15 U [15 U] | **9,600 [9,800]** | **14 [16]** | **75 J [76 J]** | 10 U *+ [10 U *+] | **13,000 [13,000]** | **2,100 [2,200]** |

**Table 5**
**Analytical Data Summary Table - GPL Inorganics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | Arsenic | Barium | Cyanide (total) | Iron | Manganese | Selenium | Sodium | Arsenic (Dissolved) | Barium (Dissolved) | Cyanide (Dissolved) | Iron (Dissolved) | Manganese (Dissolved) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 680* | 1,300 | 5.2 | NSL | 4,700 | 5 | NSL | 680* | 1,300 | 5.2 | NSL | 4,700 |
| X-9BR | 26 - 31 | 07/24/95 | -- | -- | 5.00 U | -- | -- | -- | -- | 1 UJ | 200 U | -- | **3,360** | **763** |
| X-9BR | 26 - 31 | 06/08/96 | -- | -- | -- | -- | -- | -- | -- | 5 U | 200 U | 5 UJ | **2,490** | **813** |
| X-9BR | 26 - 31 | 12/15/06 | 5.00 U [5.00 U] | **143 [148]** | -- | **3,070 [3,120]** | **777 [801]** | 5.00 U [5.00 U] | **102,000 [102,000]** | 5 U | **153** | 10 U | **4,450** | **717** |
| X-9BR | 26 - 31 | 01/08/08 | 5.00 U | **155** | -- | **4,160** | **833** | 5.00 U | **122,000** | 5 U | **103** | 10 U | **2,790** | **541** |
| X-9BR | 26 - 31 | 03/11/08 | 5.00 U | **147** | -- | **2,590** | **903** | 5.00 U | **81,200** | 5 U | **136** | 10 U | **2,560** | **828** |
| X-9BR | 26 - 31 | 09/28/10 | 5.00 U | **175 J** | -- | **3,970** | **893** | 5.00 U | **151,000** | 5 U | **164 J** | 10 U | **4,060** | **848** |
| X-9BR | 26 - 31 | 09/23/11 | **0.650** | **180** | -- | **3,700** | **960** | 5.00 U | **140,000** | **0.63** | **180** | 10 U | **3,700** | **960** |
| X-9BR | 26 - 31 | 09/12/12 | **0.940 J** | **170** | -- | **5,100** | **900 B^** | 5.00 U | **190,000** | **0.91 J** | **160** | 10 U | **5,300** | **850 B^** |
| X-9BR | 26 - 31 | 09/25/13 | **6.2** | **130 B** | -- | **9,200 B** | **620 B** | 5.00 U | **210,000 B** | **6.6** | **140 B** | 10 U | **9,000 B** | **740 B** |
| X-9BR | 26 - 31 | 09/22/14 | **2.0** | **170 B** | -- | **10,000** | **610** | **0.25 J** | **230,000 B** | **1.9 J** | **160 B** | 10 U | **10,000** | **630** |
| X-9BR | 26 - 31 | 10/01/15 | **1.6 J** | **160** | 10 U | **8,700** | **560** | **0.74 J,B** | **210,000 B** | **1.7 J** | **170** | 10 U | **8,700** | **560** |
| X-9BR | 26 - 31 | 09/28/16 | **1.7 *J** | **150** | 10 U | **7,500** | **550** | **0.72 J** | **230,000** | **1.8 *J** | **150** | 10 U | **7,900** | **530** |
| X-9BR | 26 - 31 | 08/29/17 | **2.1** | **170** | 10 U | **8,700** | **520** | 5.0 U | **250,000** | **2.1** | **170** | 10 U | **8,600** | **520** |
| X-9BR | 26 - 31 | 09/26/18 | 10 U | **63 J** | 10 U | **5,000** | **220** | 15 U | **49,000** | 10 U | **59 J** | 10 U | **4,100** | **180** |
| X-9BR | 26 - 31 | 08/21/19 | 10 U | **150 J** | -- | **9,400** | **540** | 15 U ^ | **200,000** | 10 U | **150 J** | 10 U | **9,900** | **520** |
| X-9BR | 26 - 31 | 08/18/20 | 10 U | **50 J** | 10 U | **5,000** | **590** | 15 U | **100,000** | **4.7 J** | **56 J** | 10 U | **7,200** | **680** |
| X-9BR | 26 - 31 | 08/18/21 | 10 U | **53 J** | 10 U | **3,700** | **330** | 15 U | **59,000** | 10 U | **53 J** | 10 U | **3,500** | **340** |
| X-9BR | 26 - 31 | 09/22/22 | 10 U | **100 J** | 10 U | **6,700** | **340** | 15 U | **120,000** | 10 U | **97 J** | 10 U *+ | **6,300** | **330** |
| X-9CAUG | 20 - 25 | 07/24/95 | -- | -- | 5.00 U | -- | -- | -- | -- | 1 UJ | 200 U | -- | **7,500** | **628** |
| X-9CAUG | 20 - 25 | 06/08/96 | -- | -- | -- | -- | -- | -- | -- | 5 U | 200 U | 5 UJ | **8,900** | **615** |
| X-9CAUG | 20 - 25 | 12/15/06 | 5.00 U | **176** | -- | **6,920** | **632** | 5.00 U | **59,400** | 5 U | **173** | 10 U | **6,730** | **630** |
| X-9CAUG | 20 - 25 | 01/08/08 | 5.00 U | **381** | -- | **2,980** | **616** | 5.00 U | **72,800** | 5 U | **360** | 10 U | **2,810** | **586** |
| X-9CAUG | 20 - 25 | 03/11/08 | 5.00 U | **167** | -- | **6,410** | **679** | 5.00 U | **59,900** | 5 U | **174** | 10 U | **6,730** | **699** |
| X-9CAUG | 20 - 25 | 09/28/10 | 5.00 U | **193 J** | -- | **5,420** | **760** | 5.00 U | **100,000** | 5 U | **194 J** | 10 U | **5,790** | **801** |
| X-9CAUG | 20 - 25 | 09/23/11 | **1.50** | **110** | -- | **6,000** | **350** | 5.00 U | **54,000** | **1.7** | **120** | 10 U | **6,000** | **350** |
| X-9CAUG | 20 - 25 | 09/12/12 | **1.9 J** | **110 B** | -- | **4,700** | **340** | **0.68 J** | **47,000** | **0.12 J** | **100 B** | 10 U | **5,200** | **340** |
| X-9CAUG | 20 - 25 | 09/25/13 | **1.8 J** | **89 B** | -- | **4,500 B** | **290 B** | 5.00 U | **47,000 B** | **1.8 J** | **87 B** | 10 U | **4,400 B** | **300 B** |
| X-9CAUG | 20 - 25 | 09/22/14 | **1.1 J,B** | **84 B** | -- | **5,700 B** | **330** | **0.40 J,B** | **38,000 B** | **1.1 J,B** | **860 B** | 10 U | **5,700 B** | **350** |
| X-9CAUG | 20 - 25 | 09/30/15 | **1.3 J** | **210** | -- | **9,800** | **640** | **0.32 J** | **88,000 B** | **1.1 J,B** | **190** | 10 U | **10,000** | **550** |
| X-9CAUG | 20 - 25 | 09/28/16 | **0.97 *J** | **260** | 10 U | **8,400** | **740** | **0.89 J** | **120,000** | **1.0 *J** | **250** | 10 U | **9,900** | **690** |
| X-9CAUG | 20 - 25 | 08/29/17 | 2.0 U | **220** | 10 U | **12,000** | **530** | 5.0 U | **42,000** | 2.0 U | **230** | 10 U | **12,000** | **570** |
| X-9CAUG | 20 - 25 | 09/25/18 | 10 U | **120 J** | 10 U | **7,500** | **500** | 15 U | **24,000** | 10 U | **120 J** | 10 U | **7,500** | **500** |
| X-9CAUG | 20 - 25 | 08/21/19 | 10 U | **130 J** | 10 U | **7,700** | **470** | 15 U ^ | **16,000** | 10 U | **130 J** | 10 U | **7,600** | **440** |
| X-9CAUG | 20 - 25 | 08/18/20 | 10 U | **73 J** | 10 U | **8,900** | **480** | 15 U | **16,000** | 10 U | **69 J** | 10 U | **8,000** | **440** |
| X-9CAUG | 20 - 25 | 08/18/21 | 10 U | **130 J** | 10 U | **8,500** | **510** | 15 U | **21,000** | 10 U | **130 J** | 10 U | **7,900** | **520** |
| X-9CAUG | 20 - 25 | 09/22/22 | 10 U | **130 J** | 10 U | **7,700** | **570** | 15 U | **22,000** | 10 U | **130 J** | 10 U *+ | **7,700** | **560** |
| X-9D | 42.5 - 47.5 | 01/08/08 | 5.00 U | **94.2 J** | -- | **3,640** | **186** | 5.00 U | **717,000** | 5 U | **87.8 J** | 10 U | **3,370** | **173** |
| X-9D | 42.5 - 47.5 | 03/11/08 | 5.00 U | **80.7 J** | -- | **3,150** | **149** | 5.00 U | **635,000** | 5 U | **86.6 J** | 10 U | **3,570** | **155** |
| X-9D | 42.5 - 47.5 | 06/05/08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9D | 42.5 - 47.5 | 09/28/10 | 5.00 U | **93.0 BJ** | -- | **2,930** | **132** | 5.00 U | **685,000** | 5 U | **90.3 BJ** | 10 U | **2,670** | **125** |
| X-9D | 42.5 - 47.5 | 09/23/11 | **0.640** | **100** | -- | **3,100** | **130** | 5.00 U | **690,000** | **0.63** | **95** | 10 U | **2,900** | **120** |
| X-9D | 42.5 - 47.5 | 09/12/12 | **0.67 J** | **84 B** | -- | **2,500** | **110** | 5.00 U | **650,000** | **0.83 J** | **88 B** | 10 U | **2,700** | **120** |
| X-9D | 42.5 - 47.5 | 09/25/13 | **21** | **140 B** | -- | **3,100 B** | **360 B** | 5.00 U | **690,000 B** | **22** | **140 B** | 10 U | **2,900 B** | **390 B** |
| X-9D | 42.5 - 47.5 | 09/22/14 | **15** | **110 B** | -- | **3,000** | **170** | **0.58 J** | **680,000 B** | **16** | **110 B** | 10 U | **2,800** | **170** |
| X-9D | 42.5 - 47.5 | 09/30/15 | **9.5** | **100** | 10 U | **2,800** | **140** | **0.49 J** | **630,000 B** | **7.3** | **85** | 10 U | **1,900** | **180** |
| X-9D | 42.5 - 47.5 | 09/28/16 | **3.8** | **94** | 10 U | **1,500** | **130** | **0.52 J** | **630,000 B** | **5.0** | **91** | 10 U | **2,200** | **120** |
| X-9D | 42.5 - 47.5 | 08/29/17 | **1.2 J** | **54** | 10 U | 50 U | **75** | 5.0 U | **330,000** | **0.76 J** | **74** | 10 U | 50 U | **130** |
| X-9D | 42.5 - 47.5 | 09/25/18 | **5.4 J** | **120 J** | 10 U | **2,900** | **360** | 15 U | **630,000** | 10 U | **120 J** | 10 U | **2,900** | **370** |
| X-9D | 42.5 - 47.5 | 08/20/19 | **5.7 J** | **110 J** | 10 U H | **3,300** | **200** | 15 U | **620,000** | 10 U | **110 J** | 10 U | **2,800** | **200** |
| X-9D | 42.5 - 47.5 | 08/17/20 | **38** | **200** | 10 U | **22,000** | **3,400** | 15 U | **490,000** | **22** | **160 J** | **6.6 J** | **13,000** | **2,200** |
| X-9D | 42.5 - 47.5 | 08/18/21 | **19 [13]** | **170 J [120 J]** | 10 U [10 U] | **13,000 [9,500]** | **2,400 [2,200]** | 15 U [15 U] | **420,000 [290,000]** | 10 U [10 U] | **130 J [130 J]** | 10 U [10 U] | **5,100 [5,100]** | **550 [550]** |
| X-9D | 42.5 - 47.5 | 09/22/22 | 10 U | **33 J** | 10 U | **820** | **220** | 15 U | **110,000** | 10 U | **30 J** | 10 U *+ | 100 U | **190** |

**Table 5**
**Analytical Data Summary Table - GPL Inorganics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | Selenium (Dissolved) | Sodium (Dissolved) | Ammonia Nitrogen | Un-ionized Ammonia | Chloride | Nitrate (as N) | Nitrite (as N) | Sulfate | Total Dissolved Solids (TDS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| *Site-Specific Groundwater Surface Water Interface Criteria* | | | 5 | NSL | 53 | 53 | 150,000 | NA | NSL | 370,000 | NSL |
| MW-117S1 | 24.2 - 29.2 | 06/20/95 | 5 UJ | **101,000** | -- | -- | -- | -- | -- | -- | -- |
| MW-117S1 | 24.2 - 29.2 | 07/14/95 | -- | -- | 1,000 UJ | -- | **230,000** | -- | -- | -- | **990,000** |
| MW-117S1 | 24.2 - 29.2 | 06/11/96 | -- | **108,000** | -- | -- | -- | -- | -- | -- | -- |
| MW-117S1 | 24.2 - 29.2 | 05/19/00 | 5 U | **120,000** | **5,100** | -- | **284,000 J** | 1,000 UG | 1,000 UG | 2,000 UG | **840,000** |
| MW-117S1 | 24.2 - 29.2 | 06/19/01 | 5 U | **121,000** | **11,000** | -- | **269,000** | 500 U | R | **260 B** | **920,000** |
| MW-117S1 | 24.2 - 29.2 | 06/26/02 | 5 U | **114,000** | **7,100** | -- | **270,000** | 500 U | 500 U | **140 B** | **970,000** |
| MW-117S1 | 24.2 - 29.2 | 06/19/03 | 5 U | **118,000** | **7,400** | -- | **264,000** | 500 U | 140 BJ | 1,000 UJ | **1,000,000** |
| MW-117S1 | 24.2 - 29.2 | 05/27/04 | 5 U | **115,000** | **7,300** | -- | **275,000** | 500 U | 160 B | **440 B** | **1,000,000** |
| MW-117S1 | 24.2 - 29.2 | 06/23/05 | **5.4** | **118,000** | **8,400 J** | -- | **270,000** | 100 U | 100 U | 1,000 U | **970,000 J** |
| MW-117S1 | 24.2 - 29.2 | 12/13/06 | 5 U | **118,000** | **8,200** | -- | **267,000** | 100 U | 100 U | 1,000 U | **960,000** |
| MW-117S1 | 24.2 - 29.2 | 12/07/07 | 5 U | **129,000** | **22,000** | -- | **268,000** | 100 U | 100 U | 1,000 U | **950,000** |
| MW-117S1 | 24.2 - 29.2 | 03/14/08 | 5 U | **113,000** | **1,200** | -- | **274,000** | 100 UJ | 100 UJ | 1,000 U | **940,000** |
| MW-117S1 | 24.2 - 29.2 | 10/01/10 | 5 U | **119,000** | **6,500** | **210** | **319,000** | 100 U | 100 U | 1,000 U | **940,000** |
| MW-117S1 | 24.2 - 29.2 | 09/27/11 | 5 U | **120,000** | **8,400** | **19** | **270,000** | 100 U | 100 U | 1,000 U | **970,000** |
| MW-117S1 | 24.2 - 29.2 | 09/13/12 | 5 U | **110,000** | **7,800** | **13** | **270,000** | 100 U | 100 U | 1,000 U | **930,000** |
| MW-117S1 | 24.2 - 29.2 | 09/24/13 | 5 U | **120,000** | **7,000 B** | **11 B** | **250,000** | 100 U | 100 U | **450 J** | **880,000** |
| MW-117S1 | 24.2 - 29.2 | 09/22/14 | **0.29 J,B** | **120,000 B** | **7,800** | **4.8** | **260,000** | 100 U , H | 100 U, H | 1,000 U | **880,000** |
| MW-117S1 | 24.2 - 29.2 | 09/30/15 | **0.52 J, B** | **110,000 B** | **6,500** | **7.6** | **240,000** | 500 U | 500 U | 5,000 U | **930,000** |
| MW-117S1 | 24.2 - 29.2 | 09/27/16 | **0.57 J** | **120,000** | **10,000 B** | **10 B** | **250,000** | 50 U | 50 U | 1,000 U | **870,000** |
| MW-117S1 | 24.2 - 29.2 | 11/13/17 | 5.0 U | **110,000** | **8,500** | **1.2** | **240,000** | 50 U | 50 U | 1,000 U | **950,000** |
| MW-117S1 | 24.2 - 29.2 | 08/21/19 | 15 U ^ | **110,000** | **4,500** | **12** | **110,000** | 50 U | 50 U | **23,000** | **530,000** |
| MW-117S1 | 24.2 - 29.2 | 08/13/20 | 15 U | **110,000** | **8,200** | **43** | **220,000** | **1,300** | 100 U | 1,000 U | **860,000** |
| MW-117S1 | 24.2 - 29.2 | 08/17/21 | 15 U | **120,000** | **7,200** | **27** | **230,000** | **7,200** | **71 J** | **7,300** | **1,100,000** |
| MW-117S1 | 24.2 - 29.2 | 09/21/22 | 15 U | **120,000** | **7,000** | **23** | **220,000** | 100 U H | 100 U H | **710 J** | **710,000** |
| MW-117WT | 3 - 13 | 06/20/95 | 5 UJ | **463,000** | -- | -- | -- | -- | -- | -- | -- |
| MW-117WT | 3 - 13 | 07/14/95 | -- | -- | **30,000 J** | -- | **4,600,000** | -- | -- | -- | **11,000,000** |
| MW-117WT | 3 - 13 | 06/11/96 | -- | **499,000** | -- | -- | -- | -- | -- | -- | -- |
| MW-117WT | 3 - 13 | 05/19/00 | 5 U | **590,000** | **46,000** | -- | **4,930,000 J** | 12,500 UG | 12,500 UG | 25,000 UG | **11,000,000** |
| MW-117WT | 3 - 13 | 06/18/01 | 5 U | **559,000** | **63,000** | -- | **5,380,000** | 500 U | R | **230 B** | **13,000,000** |
| MW-117WT | 3 - 13 | 06/26/02 | 5 U | **539,000** | **63,000** | -- | **5,540,000** | 1,000 U | 25,000 U | **320 B** | **11,000,000 J [12,000,000]** |
| MW-117WT | 3 - 13 | 06/19/03 | 5 U | **628,000** | **63,000** | -- | **4,680,000** | 1,000 U | 25,000 U | **340 BJG** | **13,000,000** |
| MW-117WT | 3 - 13 | 12/09/04 | **14 J [14.3 J]** | -- | **65,000 [69,000]** | -- | **4,650,000 J [4,420,000 J]** | 100 U [100 U] | 1,000 UG [1,000 UG] | **240 B [1,000 U]** | **7,800,000 J [7,900,000 J]** |
| MW-117WT | 3 - 13 | 06/23/05 | **16.1** | **564,000** | **59,000 J** | -- | **3,970,000** | 100 U | 2,000 U | **230 B** | **9,600,000 J** |
| MW-117WT | 3 - 13 | 12/13/06 | 5 U | **531,000** | **75,000** | -- | **3,680,000** | **750** | **3,600** | **270 J** | **7,800,000** |
| MW-117WT | 3 - 13 | 12/07/07 | 5 U | **620,000** | **68,000** | -- | **3,690,000** | 100 U | 100 U | **800 J** | **7,600,000** |
| MW-117WT | 3 - 13 | 03/14/08 | 5 U | **545,000** | **68,000** | -- | **3,220,000** | 200 UJ | 200 UJ | 2,000 U | **5,900,000** |
| MW-117WT | 3 - 13 | 10/01/10 | 5 U | **604,000** | **64,000** | **5,100** | **5,210,000** | 100 U | 5,000 U, G | 1,000 U | **7,900,000** |
| MW-117WT | 3 - 13 | 09/27/11 | 5 U | **560,000** | **71,000** | **68** | **4,300,000** | 100 U | 2,500 U | **380** | **9,800,000** |
| MW-117WT | 3 - 13 | 09/13/12 | **0.78 J** | **560,000 B** | **78,000** | **40** | **4,600,000** | 100 U | 5,000 U | **350 J** | **9,900,000** |
| MW-117WT | 3 - 13 | 09/24/13 | 5 U | **570,000** | **86,000 B** | **46 B** | **4,500,000 B** | 100 U | 1,000 U | **710 J** | **7,300,000** |
| MW-117WT | 3 - 13 | 09/23/14 | **0.59 J,B** | **520,000 B** | **3,000^** | **1.2 ^** | **3,700,000** | 1,000 U, H | 1,000 U, H | 10,000 U | **6,300,000** |
| MW-117WT | 3 - 13 | 09/30/15 | **1.0 J B** | **450,000 B** | **60,000** | **49** | **3,500,000** | 2,500 U | 2,500 U | 2,500 U | **5,700,000** |
| MW-117WT | 3 - 13 | 09/27/16 | **1.5 J** | **470,000** | **81,000 B** | **120 B** | **3,500 ,000** | 50 U | 50 U | **250 J** | **4,800,000** |
| MW-117WT | 3 - 13 | 10/13/16 | -- | -- | -- | -- | -- | -- | -- | -- | **--** |
| MW-117WT | 3 - 13 | 08/13/20 | 15 U | **490,000** | **66,000** | **97** | **3,200,000** | **630** | 500 U | **5,100** | **4,600,000** |
| MW-117WT | 3 - 13 | 08/17/21 | 15 U | **650,000** | **83,000** | **100** | **4,700,000** | 1,000 U | 1,000 U | 100,000 U | **9,400,000** |
| MW-117WT | 3 - 13 | 09/22/22 | 15 U | **440,000** | **58,000** | **39** | **3,800,000** | 500 U | 500 U | **2,000 J** | **4,900,000** |
| MW-118S1 | 23.5 - 28.5 | 06/20/95 | 5 UJ | **97,300** | -- | -- | -- | -- | -- | -- | -- |
| MW-118S1 | 23.5 - 28.5 | 07/14/95 | -- | -- | **4,800 J** | -- | **260,000** | -- | -- | -- | **8,000,000** |
| MW-118S1 | 23.5 - 28.5 | 06/11/96 | -- | **112,000** | -- | -- | -- | 80 U | 70 U | 5,000 U | -- |
| MW-118S1 | 23.5 - 28.5 | 05/17/00 | 5 U [5 U] | **121,000 [122,000]** | **5,900 [6,200]** | -- | **284,000 [281,000]** | 2,000 UG [2,000 UG] | 2,000 UG [2,000 UG] | 4,000 UG [4,000 UG] | **930,000 [940,000]** |
| MW-118S1 | 23.5 - 28.5 | 06/19/01 | 5 U | **117,000** | **8,400** | -- | **272,000** | 500 U | R | **150 B** | **910,000** |
| MW-118S1 | 23.5 - 28.5 | 06/27/02 | 5 U | **112,000** | **7,300** | -- | **286,000** | 500 U | 500 U | **1,600** | **1,200,000 [1,200,000]** |
| MW-118S1 | 23.5 - 28.5 | 06/19/03 | 5 U | **118,000** | **6,200** | -- | **264,000** | 500 U | 500 U | 1,000 UJ | **1,000,000** |
| MW-118S1 | 23.5 - 28.5 | 12/09/04 | **5.9 J** | -- | **5,900** | -- | **270,000 J** | 100 U | 100 U | 1,000 U | **980,000 J** |
| MW-118S1 | 23.5 - 28.5 | 06/23/05 | 3.5 | **112,000** | **7,300 J** | -- | **296,000** | 100 U | 100 U | 1,000 U | **520,000 J** |
| MW-118S1 | 23.5 - 28.5 | 12/14/06 | 5 U | **115,000** | **8,000** | -- | **290,000** | 100 U | **160** | 1,000 U | **1,000,000** |
| MW-118S1 | 23.5 - 28.5 | 12/07/07 | 5 U | **131,000** | **8,500** | -- | **275,000** | 100 U | 100 U | 1,000 U | **900,000** |
| MW-118S1 | 23.5 - 28.5 | 04/01/08 | 5 U | **115,000** | **8,100** | -- | **310,000** | 100 U | 100 U | **4,700** | **960,000** |
| MW-118S1 | 23.5 - 28.5 | 10/01/10 | 5 U | **129,000** | **6,700** | -- | **362,000** | 100 U | 100 U | 1,000 U | **970,000** |
| MW-118S1 | 23.5 - 28.5 | 09/27/11 | 5 U | **130,000** | **7,900** | **27** | **290,000** | 100 U | 100 U | 1,000 U | **1,000,000** |
| MW-118S1 | 23.5 - 28.5 | 09/13/12 | 5 U | **130,000** | **7,200** | **14** | **290,000** | 100 U | 100 U | 1,000 U | **960,000** |

Table 5
Analytical Data Summary Table - GPL Inorganics
RACER Trust
Saginaw, MI

| Sample ID: | Sample Depth (feet): | Date Collected: | Selenium (Dissolved) | Sodium (Dissolved) | Ammonia Nitrogen | Un-ionized Ammonia | Chloride | Nitrate (as N) | Nitrite (as N) | Sulfate | Total Dissolved Solids (TDS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| *Site-Specific Groundwater Surface Water Interface Criteria* | | | 5 | NSL | 53 | 53 | 150,000 | NA | NSL | 370,000 | NSL |
| MW-118S1 | 23.5 - 28.5 | 09/24/13 | **0.47 J** | **150,000 B** | **6,900 B** | **3.7 B** | **300,000 B** | 100 U | 100 U | **320 J** | **920,000** |
| MW-118S1 | 23.5 - 28.5 | 09/22/14 | 5 U | **130,000 B** | **7,500** | **3.8** | **320,000** | 100 U | 100 U | 1,000 U | **980,000** |
| MW-118S1 | 23.5 - 28.5 | 09/30/15 | 0.58 J B | **120,000 B** | **5,900** | **8** | **310,000** | 500 U | 500 U | 5,000 U | **1,000,000** |
| MW-118S1 | 23.5 - 28.5 | 09/27/16 | **1.0 J** | **130,000** | **9,900 B** | **13 B** | **290,000** | 50 U | 50 U | 1,000 U | **930,000** |
| MW-118S1 | 23.5 - 28.5 | 11/13/17 | 5.0 U | **100,000** | **7,600** | **1.2** | **260,000** | **31 J** | **31 J** | 1,000 U | **920,000** |
| MW-118S1 | 23.5 - 28.5 | 08/14/20 | 15 U | **15,000 B** | 200 U | 1.1 U | **17,000** | 100 U | 100 U | **420 J** | **200,000** |
| MW-118S1 | 23.5 - 28.5 | 08/17/21 | 15 U | **97,000** | **3,800** | **16** | **220,000** | 500 U H | **240** | **3,200** | **830,000** |
| MW-118S1 | 23.5 - 28.5 | 09/26/22 | 15 U | **46,000** | **2,100** | **8.4** | **120,000** | 100 U | 100 U | 1,000 U | **440,000** |
| MW-118WT | 1.6 - 11.6 | 06/20/95 | 5 UJ | **175,000** | -- | -- | -- | -- | -- | -- | -- |
| MW-118WT | 1.6 - 11.6 | 07/14/95 | -- | -- | **10,000 J** | -- | **3,700,000** | -- | -- | -- | **1,400,000** |
| MW-118WT | 1.6 - 11.6 | 06/11/96 | -- | **229,000** | -- | -- | -- | 80 U | 70 U | 5,000 U | -- |
| MW-118WT | 1.6 - 11.6 | 05/17/00 | 5 U | **647,000** | **26,000** | -- | **16,100,000** | 50,000 UG | 50,000 UG | 100,000 UG | **37,000,000** |
| MW-118WT | 1.6 - 11.6 | 06/19/01 | 5 U [5 U] | **955,000 [976,000]** | **92,000 [76,000]** | -- | **21,800,000 [18,800,000]** | 50,000 U [500 U] | R [R] | **100,000 U [630 B]** | **34,000,000 [36,000,000]** |
| MW-118WT | 1.6 - 11.6 | 06/27/02 | 5 U [5 U] | **925,000 [970,000]** | **82,000 [88,000]** | -- | **16,900,000 [16,500,000]** | 2,500 U [2,500 U] | 2,500 U [2,500 U] | **590 B [560 B]** | **42,000,000 [41,000,000]** |
| MW-118WT | 1.6 - 11.6 | 06/19/03 | 5 U [5 U] | **764,000 [735,000]** | **66,000 [65,000]** | -- | **9,740,000 [9,470,000]** | 2,000 U [2,000 U] | 50,000 U [50,000 U] | **700 BJG [1,200 BJG]** | **23,000,000 [24,000,000]** |
| MW-118WT | 1.6 - 11.6 | 05/27/04 | 5 U | **662,000** | **66,000** | -- | **7,580,000** | 1,000 U | 25,000 U | **2,000 U** | **15,000,000** |
| MW-118WT | 1.6 - 11.6 | 06/23/05 | **16.3** | **541,000** | **47,000 J** | -- | **4,670,000** | 100 U | 2,000 U | **5,000** | **12,000,000 J** |
| MW-118WT | 1.6 - 11.6 | 12/14/06 | 5 U | **408,000** | **42,000** | -- | **2,370,000** | 100 U | **1,900** | **25,300** | **6,800,000** |
| MW-118WT | 1.6 - 11.6 | 12/07/07 | 5 U | **406,000** | **42,000** | -- | **1,760,000** | 100 U | 100 U | **17,600** | **4,600,000** |
| MW-118WT | 1.6 - 11.6 | 04/01/08 | 5 U | **334,000** | **38,000** | -- | **1,800,000** | 100 U | 100 U | **23,500** | **4,600,000** |
| MW-118WT | 1.6 - 11.6 | 09/30/10 | 5 U | **216,000** | **34,000** | **170** | **932,000** | 100 U | 1,000 U, G | **10,000** | **2,000,000** |
| MW-118WT | 1.6 - 11.6 | 09/27/11 | 5 U | **200,000** | **38,000** | **33** | **730,000** | 100 U | 100 U | **5,200** | **2,300,000** |
| MW-118WT | 1.6 - 11.6 | 09/13/12 | 5 U | **140,000** | **35,000** | **61** | **410,000** | 100 U | 100 U | **2,300** | **1,300,000** |
| MW-118WT | 1.6 - 11.6 | 09/24/13 | 5 U | **120,000 B** | **35,000 B** | **23 B** | **280,000 B** | 100 U | 100 U | **18,000** | **1,000,000** |
| MW-118WT | 1.6 - 11.6 | 09/22/14 | **0.27 J,B** | **86,000 B** | **29,000** | **35** | **260,000** | 100 U, H | 100 U, H | **19,000** | **990,000** |
| MW-118WT | 1.6 - 11.6 | 09/30/15 | **1.6 J,B** | **70,000 B** | **24,000** | **74** | **230,000** | 500 U | 500 U | **9,300** | **980,000** |
| MW-118WT | 1.6 - 11.6 | 09/27/16 | **1.0 J** | **82,000** | **37,000 B** | **100 B** | **240,000** | 50 U | 50 U | **6,100** | **900,000** |
| MW-118WT | 1.6 - 11.6 | 11/13/17 | 5.0 U | **82,000** | **24,000** | **5.6** | **270,000** | 50 U | 50 U | 1,000 U | **1,000,000** |
| MW-118WT | 1.6 - 11.6 | 08/14/20 | 15 U | **100,000 B** | **14,000** | **40** | **120,000 F1** | **1,200 F1** | 100 U,F1,F2 | **520 J,F1** | **720,000** |
| MW-118WT | 1.6 - 11.6 | 08/17/21 | 15 U | **96,000** | **27,000** | **110** | **300,000** | 1,000 U H | **170** | **14,000** | **1,200,000** |
| MW-118WT | 1.6 - 11.6 | 09/22/22 | 15 U | **96,000** | **15,000** | **22** | **310,000** | **85 J** | **76 J** | **510 J** | **1,100,000** |
| MW-183WT | 6 - 16 | 12/06/07 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-183WT | 6 - 16 | 01/09/08 | 5 U [5 U] | **102,000 [98,000]** | **400 [300]** | -- | **147,000 [148,000]** | 100 U [100 U] | 100 U [100 U] | 1,000 [700 J] | 440,000 [470,000] |
| MW-183WT | 6 - 16 | 03/12/08 | 5 U | **100,000** | **300** | -- | **147,000** | 100 U | 100 U | 2,600 U | 520,000 |
| MW-183WT | 6 - 16 | 09/28/10 | 5.0 U [5.0 U] | **87.4 [85.6]** | **800 J [800 J]** | **5.3 J [5.3 J]** | **76,600 [77,400]** | 100 U [100 U] | 100 U [100 U] | **1,000 U [1,000 U]** | **360,000 [370,000]** |
| MW-183WT | 6 - 16 | 09/28/11 | 5.0 U | **94,000** | **530 [550]** | **7 [7.3 ]** | **63,000 [63,000]** | 100 U [100 U] | 100 U [100 U] | **11,000 [11,000]** | **410,000 [430,000]** |
| MW-183WT | 6 - 16 | 09/14/12 | **0.78 J** | **93,000** | **920 [1,100]** | **3.3 [3.9 ]** | **36,000 [46,000]** | 100 U [100 U] | 100 U [100 U] | **200,000 [200,000]** | **600,000 [600,000]** |
| MW-183WT | 6 - 16 | 09/24/13 | 5.0 U | **100,000 B** | **1,100 B [800 B]** | **1.3 B [0.93 B]** | **36,000 B [36,000 B]** | 100 U, H [100 U, H] | 100 U, H [100 U, H] | **89,000 [88,000]** | **570,000 [570,000]** |
| MW-183WT | 6 - 16 | 09/23/14 | **0.27 J,B [5.0 U]** | **47,000 B [47,000 B]** | **200 U [140 J]** | -- | **29,000 [23,000]** | 100 U, H [100 U, H] | 100 U, H [100 U, H] | **3,200 [2,900 J]** | **410,000 [400,000]** |
| MW-183WT | 6 - 16 | 10/01/15 | **0.72 J,B** | **52,000** | **750 [840]** | **3.4 [3.9 ]** | **32,000 F1 [33,000]** | 100 U [100 U] | 100 U [100 U] | 1,000 U [1,000 U] | **410,000 [410,000]** |
| MW-183WT | 6 - 16 | 09/28/16 | **1.5 J** | **50,000** | **940 J,B** | **4.9 J,B** | **28,000** | 50 U, F1 | 50 U, F1 | **970 J** | **400,000** |
| MW-183WT | 6 - 16 | 08/29/17 | 5.0 U | **37,000** | **350 [490]** | **1.2 [1.7 ]** | **21,000 [21,000]** | 50 U [50 U] | 50 U [50 U] | **3,100 [3,200]** | **390,000 [390,000]** |
| MW-183WT | 6 - 16 | 09/26/18 | 15 U | **27,000** | **120 J [98 J]** | **0.16 J [0.13 J]** | **21,000 [21,000]** | 100 UH [100 U H] | 100 UH [100 U H] | **3,100 [3,100]** | **380,000 [380,000]** |
| MW-183WT | 6 - 16 | 08/21/19 | 15 U ^ | **30,000** | **190 J [200]** | **0.67 J [0.71 ]** | **20,000 [20,000]** | 50 U [50 U] | 50 U [50 U] | **980 J [1,100]** | **430,000 [420,000]** |
| MW-183WT | 6 - 16 | 08/18/20 | 15 U,F2 [15 U] | **15,000 F1,F2 [15,000]** | 200 U [200 U] | 0.48 U [0.48 U] | **17,000 [17,000]** | 100 U [100 U] | 100 U [100 U] | 1,000 U [1,000 U] | **380,000 [400,000]** |
| MW-183WT | 6 - 16 | 08/19/21 | 15 U | **23,000** | **85 J F1 B** | **0.36 J F1 B** | **19,000** | 500 U H | 100 U H | **3,000** | **350,000** |
| MW-183WT | 6 - 16 | 09/26/22 | 15 U | **24,000** | **110 J** | **0.55 J** | **15,000** | 100 U | 100 U | **480 J** | **330,000** |
| TWW-1 | 1.5 - 6.5 | 01/25/97 | 5 U | **858,000** | -- | -- | -- | -- | -- | -- | -- |
| TWW-1 | 1.5 - 6.5 | 05/21/00 | 5 U | **845,000** | -- | -- | -- | -- | -- | **340,000** | -- |
| TWW-1 | 1.5 - 6.5 | 05/29/08 | -- | -- | **200** | -- | -- | -- | -- | -- | **1,600,000** |
| TWW-1 | 1.5 - 6.5 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | **--** |
| TWW-1 | 1.5 - 6.5 | 08/30/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-10BR | 26.3 - 31.3 | 07/24/95 | 5 U | **149,000** | -- | -- | -- | -- | -- | -- | -- |
| X-10BR | 26.3 - 31.3 | 12/15/06 | 5 U | **192,000** | **6,000** | -- | **505,000** | 100 U | **300** | 1,000 U | **1,600,000** |
| X-10BR | 26.3 - 31.3 | 12/04/07 | 5 U | **198,000** | **4,500** | -- | **497,000** | 100 U | 100 U | 1,000 U | **1,400,000** |
| X-10BR | 26.3 - 31.3 | 03/12/08 | 5 U | **186,000** | **4,000** | -- | **502,000** | 100 U | 100 U | 1,000 U | **1,400,000** |
| X-10BR | 26.3 - 31.3 | 09/29/10 | 5 U | **187,000** | **4,800** | **6** | **595,000** | 100 U | 100 U | 1,000 U | **1,400,000** |
| X-10BR | 26.3 - 31.3 | 09/22/11 | 5 U | **190,000** | **6,000** | **11** | **540,000** | 500 U | 100 U | **360** | **1,500,000** |
| X-10BR | 26.3 - 31.3 | 09/14/12 | 5 U | **200,000** | **7,900** | **8.1** | **620,000** | 100 U | 100 U | **590 J** | **1,500,000** |
| X-10BR | 26.3 - 31.3 | 09/24/13 | 5 U | **200,000** | **9,100 B** | **5.9 B** | **540,000 B** | 100 U | 500 U | **120 J** | **1,500,000** |

Table 5
Analytical Data Summary Table - GPL Inorganics
RACER Trust
Saginaw, MI

| Sample ID: | Sample Depth (feet): | Date Collected: | Selenium (Dissolved) | Sodium (Dissolved) | Ammonia Nitrogen | Un-ionized Ammonia | Chloride | Nitrate (as N) | Nitrite (as N) | Sulfate | Total Dissolved Solids (TDS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| *Site-Specific Groundwater Surface Water Interface Criteria* | | | 5 | NSL | 53 | 53 | 150,000 | NA | NSL | 370,000 | NSL |
| X-4AR | 3.3 - 8.3 | 07/24/95 | 5 U | **18,100** | -- | -- | -- | -- | -- | -- | -- |
| X-4AR | 3.3 - 8.3 | 06/09/96 | 5 U | **22,900** | -- | -- | -- | -- | -- | -- | -- |
| X-4AR | 3.3 - 8.3 | 05/21/00 | 5 U | **20,900** | -- | -- | -- | -- | -- | -- | -- |
| X-4AR | 3.3 - 8.3 | 06/03/04 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-4AR | 3.3 - 8.3 | 08/18/20 | 15 U | **27,000** | 200 U | 21 U | **17,000** | **1,500** | 100 U | **1,100** | **310,000** |
| X-4AR | 3.3 - 8.3 | 09/21/22 | -- | **--** | 200 U | **0.55 U** | **17,000** | **3,200 H** | 100 U H | **1,000** | **200,000** |
| X-4CAUG | 18 - 23 | 07/24/95 | 5 U | **65,400** | -- | -- | -- | -- | -- | -- | -- |
| X-4CAUG | 18 - 23 | 06/08/96 | 5 U | **79,100** | -- | -- | -- | -- | -- | -- | -- |
| X-4CAUGR | 14 - 19 | 01/09/08 | 5 U | **79,600** | **1,500** | -- | **160,000** | 100 U | 100 U | 1,000 U | **550,000** |
| X-4CAUGR | 14 - 19 | 03/12/08 | 5 U | **58,000** | **2,000** | -- | **108,000** | 100 U | 100 U | 1,000 U | **580,000** |
| X-4CAUGR | 14 - 19 | 09/28/10 | 5 U | **52,300** | **1,900 J** | **5.4 J** | **123,000** | 100 U | 100 U | **210 B** | **570,000** |
| X-4CAUGR | 14 - 19 | 09/26/11 | 5 U | **41,000** | **1,800** | **5.3** | **99,000** | 100 U | 100 U | 1,000 U | **570,000** |
| X-4CAUGR | 14 - 19 | 09/14/12 | 5 U | **54,000** | **1,900** | **3.5** | **140,000** | 100 U | 100 U | 1,000 U | **630,000** |
| X-4CAUGR | 14 - 19 | 09/24/13 | 5 U | **26,000 B** | **2,900 B** | **1.1 B** | **37,000 B** | 100 U | 100 U | **190** | **540,000** |
| X-4CAUGR | 14 - 19 | 09/23/14 | 5 U | **60,000 B** | **1,600** | -- | **129,000** | 100 U | 100 U | 1,000 U | **630,000** |
| X-4CAUGR | 14 - 19 | 09/30/15 | **0.35 J** | **75,000 B** | -- | -- | **170,000** | 100 U H | 100 U H | 1,000 U | **700,000** |
| X-4CAUGR | 14 - 19 | 09/28/16 | 5.0 U | **74,000** | **1,100 B** | **1.8 B** | **81,000** | 50 U | 50 U | **18,000** | **570,000** |
| X-4CAUGR | 14 - 19 | 08/29/17 | 5.0 U | **10,000** | **990** | **11** | **6,500** | 50 U | 50 U | 1,000 U | **490,000** |
| X-4CAUGR | 14 - 19 | 09/26/18 | 15 U | **12,000** | **420** | **0.65** | **23,000** | 100 U H | 100 U H | 1,000 U | **370,000** |
| X-4CAUGR | 14 - 19 | 08/22/19 | 5.0 U | **13,000** | **390** | **1.4** | **23,000** | 50 U | 50 U | **1,400** | **350,000** |
| X-4CAUGR | 14 - 19 | 08/17/20 | 15 U | **13,000** | **340** | **0.92** | **18,000** | **31 J** | 100 U | 1,000 U | **280,000** |
| X-4CAUGR | 14 - 19 | 08/17/21 | 15 U | **13,000** | **250** | **1.4** | **21,000** | 500 U H | 100 U H | 5,000 U | **320,000** |
| X-4CAUGR | 14 - 19 | 09/21/22 | 15 U | **12,000** | **330** | **3.2** | **20,000** | 100 U H | 100 U H | **370 J** | **300,000** |
| X-4D | 40 - 45 | 01/09/08 | 5 U | **718,000** | **6,900** | -- | **1,400,000** | 100 U | 2,000 U | **94,400** | **2,300,000** |
| X-4D | 40 - 45 | 04/01/08 | 5 U [5 U] | **726,000 [708,000]** | **8,800 [8,100]** | -- | **1,460,000 [1,460,000]** | 100 U [100 U] | 100 U [100 U] | **118,000 [118,000]** | **2,500,000 [2,600,000 J]** |
| X-4D | 40 - 45 | 04/03/08 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-4D | 40 - 45 | 06/05/08 | -- | -- | **6,200 [7,320]** | -- | -- | -- | -- | -- | **3,300,000 [2,820,000]** |
| X-4D | 40 - 45 | 09/28/10 | 5 U | **708,000** | **6,800 J** | **42 J** | **1,470,000** | **130** | 1,000 U, G | **122,000** | **2,500,000** |
| X-4D | 40 - 45 | 09/26/11 | 5 U | **700,000** | **9,700** | **120** | **1,400,000** | 100 U | 2,000 U | **150,000** | **2,800,000** |
| X-4D | 40 - 45 | 09/14/12 | 5 U | **690,000** | **8,300** | **28** | **1,500,000** | 500 U | 100 U | **190,000** | **2,400,000** |
| X-4D | 40 - 45 | 09/24/13 | 5 U | **680,000 B** | **8,800 B** | **5.3 B** | **1,500,000 B** | 100 U | 1,000 U | **160,000** | **2,400,000** |
| X-4D | 40 - 45 | 09/23/14 | **0.31 J,B** | **550,000 B** | **200 U** | -- | **760,000** | **1800** | 100 U | **88,000** | **830,000** |
| X-4D | 40 - 45 | 09/30/15 | **1.8 J,B** | **620,000** | **3,600** | **13** | **1,500,000** | 2,500 U | 2,500 U | **160,000** | **2,700,000** |
| X-4D | 40 - 45 | 09/28/16 | 5.0 U | **630,000** | **6,200 B** | **38 B** | **1,300,000** | 50 U | 50 U | **160,000** | **2,600,000** |
| X-4D | 40 - 45 | 08/29/17 | 5.0 U | **1,600,000** | **6,800** | **55** | **1,300,000** | **360** | **360** | **180,000** | **2,300,000** |
| X-4D | 40 - 45 | 09/26/18 | 15 U | **590,000** | **8,800** | **17** | **1,300,000** | 500 UH | 500 UH | **190,000** | **2,400,000** |
| X-4D | 40 - 45 | 08/22/19 | 5.0 U | **420,000** | **7,000** | **30** | **890,000** | 50 U | 50 U | **160,000** | **1,800,000** |
| X-4D | 40 - 45 | 08/17/20 | 15 U | **650,000** | **7,600** | **82** | **1,300,000** | 500 U | 500 U | **190,000** | **2,100,000** |
| X-4D | 40 - 45 | 08/17/21 | 15 U | **640,000** | **5,700** | **24** | **1,300,000** | 500 U H | 500 U H | **170,000** | **2,500,000** |
| X-4D | 40 - 45 | 09/21/22 | 15 U | **640,000** | **7,200** | **91** | **1,300,000** | 200 U H | 200 U H | **210,000** | **1,800,000** |
| X-9AR | 3 - 13 | 07/24/95 | 5 U | **37,600** | -- | -- | -- | -- | -- | -- | -- |
| X-9AR | 3 - 13 | 06/09/96 | 5 U | **57,000** | -- | -- | -- | -- | -- | -- | -- |
| X-9AR | 3 - 13 | 12/15/06 | 5 U | **54,500** | 200 U | -- | **29,700** | 100 U | 100 U | **29,200** | **790,000** |
| X-9AR | 3 - 13 | 01/10/08 | 5 U | **60,500** | **300** | -- | **58,000** | 100 U | 100 U | **400 J** | **770,000** |
| X-9AR | 3 - 13 | 03/11/08 | **9.8** | **33,600** | 200 U | -- | **10,700** | 100 U | 100 U | **35,500** | **600,000** |
| X-9AR | 3 - 13 | 06/05/08 | 5 U [5 U] | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9AR | 3 - 13 | 09/29/10 | 5 U | **56,400** | **600** | **3.5** | **52,100** | 100 U | 100 U | **310 B** | **700,000** |
| X-9AR | 3 - 13 | 09/23/11 | 5 U | **91,000** | **4,300** | **11** | **180,000** | 100 U | 100 U | 1,000 U | **750,000** |
| X-9AR | 3 - 13 | 09/12/12 | 5 U | **120,000** | **5,000** | **9.6** | **180,000** | 100 U | 100 U | 1,000 U | **820,000** |
| X-9AR | 3 - 13 | 09/25/13 | 5 U | **110,000 B** | **6,200 B** | **11 B** | **160,000** | 100 U | 100 U | **790 J** | **800,000** |
| X-9AR | 3 - 13 | 09/22/14 | **0.25 J** | **63,000 B** | **3,700^** | -- | **100,000** | 100 U | 100 U | 1,000 U | **630,000** |
| X-9AR | 3 - 13 | 10/01/15 | **0.50 J,B** | **37,000 B** | **720** | **1.2** | **17,000** | 100 U | 100 U | 130 U | **640,000** |
| X-9AR | 3 - 13 | 09/28/16 | **0.67 J** | **38,000** | **560 B** | **0.65 B** | **15,000** | 50 U | 50 U | 1,000 U | **630,000** |
| X-9AR | 3 - 13 | 08/29/17 | 5.0 U | **11,000** | **540** | **4.4** | **17,000** | 50 U | 50 U | 1,000 U | **460,000** |
| X-9AR | 3 - 13 | 09/26/18 | 15 U | **11,000** | **160 J** | **0.11 J** | **14,000** | 100 U H | 100 U H | **4,100** | **430,000** |
| X-9AR | 3 - 13 | 08/21/19 | 15 U ^ | **11,000** | **94 J** | **0.43 J** | **15,000** | 50 U | 50 U | **13,000** | **550,000** |
| X-9AR | 3 - 13 | 08/17/20 | 15 U | **9,700** | **110 J** | **0.51 J** | **13,000** | 100 U | 100 U | 1,000 U | **360,000** |
| X-9AR | 3 - 13 | 08/18/21 | 15 U | **13,000** | **210** | **0.7** | **19,000** | 100 U | **18 J** | **8,900** | **410,000** |
| X-9AR | 3 - 13 | 09/22/22 | 15 U [15 U] | **11,000 [11,000]** | **260 F1 [230]** | **0.96 F1 [0.85]** | **13,000 [13,000]** | 100 U [**48 J H**] | 100 U [100 U H] | **830 J** [1,000 U] | **370,000 [380,000]** |

Table 5
Analytical Data Summary Table - GPL Inorganics
RACER Trust
Saginaw, MI

| Sample ID: | Sample Depth (feet): | Date Collected: | Selenium (Dissolved) | Sodium (Dissolved) | Ammonia Nitrogen | Un-ionized Ammonia | Chloride | Nitrate (as N) | Nitrite (as N) | Sulfate | Total Dissolved Solids (TDS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| *Site-Specific Groundwater Surface Water Interface Criteria* | | | 5 | NSL | 53 | 53 | 150,000 | NA | NSL | 370,000 | NSL |
| X-9BR | 26 - 31 | 07/24/95 | 5 U | **64,000** | -- | -- | -- | -- | -- | -- | -- |
| X-9BR | 26 - 31 | 06/08/96 | 5 U | **48,800** | -- | -- | -- | -- | -- | -- | -- |
| X-9BR | 26 - 31 | 12/15/06 | 5.7 U | **125,000** | **5,900** | -- | **191,000** | **100** | **180** | 1,000 U | **830,000** |
| X-9BR | 26 - 31 | 01/08/08 | 5 U | **81,500** | **5,200** | -- | **200,000** | 100 U | 100 U | 1,000 U | **810,000** |
| X-9BR | 26 - 31 | 03/11/08 | 5 U | **84,500** | **5,000** | -- | **181,000** | 100 U | 100 U | 1,000 U | **760,000** |
| X-9BR | 26 - 31 | 09/28/10 | 5 U | **145,000** | **2,900 J** | **9.4 J** | **269,000** | 100 U | 100 U | 1,000 U | **880,000** |
| X-9BR | 26 - 31 | 09/23/11 | 5 U | **140,000** | **6,700** | **18** | **250,000** | 100 U | 100 U | 1,000 U | **900,000** |
| X-9BR | 26 - 31 | 09/12/12 | 5 U | **190,000** | **7,300** | **9** | **280,000** | 100 U | 100 U | 1,000 U | **980,000** |
| X-9BR | 26 - 31 | 09/25/13 | 5 U | **210,000 B** | **9,400 B** | **18 B** | **240,000** | 100 U | 100 U | **2,100** | **870,000** |
| X-9BR | 26 - 31 | 09/22/14 | **0.39 J** | **220,000 B** | **9,900** | -- | **260,000** | 100 U | 100 U | 1,000 U | **1,000,000** |
| X-9BR | 26 - 31 | 10/01/15 | **0.76 J,B** | **210,000 B** | **12,000** | **21** | **270,000** | 100 U | 100 U | 1,000 U | **990,000** |
| X-9BR | 26 - 31 | 09/28/16 | **0.70 J** | **240,000** | **6,800 B** | **29 B** | **280,000** | 50 U | 50 U | 1,000 U | **990,000** |
| X-9BR | 26 - 31 | 08/29/17 | 5.0 U | **250,000** | **12,000** | **45** | **290,000** | 50 U | 50 U | 1,000 U | **990,000** |
| X-9BR | 26 - 31 | 09/26/18 | 15 U | **40,000** | **2,400** | **3.1** | **62,000** | 100 U H | 100 U H | **8,800** | **290,000** |
| X-9BR | 26 - 31 | 08/21/19 | 15 U ^ | **210,000** | **9,000** | **42** | **110,000** | **590** | **590** | **23,000** | **930,000** |
| X-9BR | 26 - 31 | 08/18/20 | 15 U | **200,000** | **5,900** | **31** | **190,000** | 100 U | 100 U | **870 J** | **680,000** |
| X-9BR | 26 - 31 | 08/18/21 | 15 U | **59,000** | **1,100** | **3** | **69,000** | 100 U | 100 U | **5,400** | **350,000** |
| X-9BR | 26 - 31 | 09/22/22 | 15 U | **150,000** | **3,800** | **21** | **150,000** | 100 U | **19 J** | **3,100** | **600,000** |
| X-9CAUG | 20 - 25 | 07/24/95 | 5 U | **47,200** | -- | -- | -- | -- | -- | -- | -- |
| X-9CAUG | 20 - 25 | 06/08/96 | 5 U | **47,000** | -- | -- | -- | -- | -- | -- | -- |
| X-9CAUG | 20 - 25 | 12/15/06 | 5 U | **58,200** | **2,900** | -- | **130,000** | 100 U | **110** | 1,000 U | **690,000** |
| X-9CAUG | 20 - 25 | 01/08/08 | 5 U | **68,600** | **3,200** | -- | **145,000** | **200** | 100 U | **300 J** | **700,000** |
| X-9CAUG | 20 - 25 | 03/11/08 | 5 U | **62,000** | **3,300** | -- | **130,000** | 100 U | 100 U | 1,000 U | **680,000** |
| X-9CAUG | 20 - 25 | 09/28/10 | 5 U | **101,000** | **4,400 J** | **9.2 J** | **200,000** | **34 B** | 100 U | **260 B** | **750,000** |
| X-9CAUG | 20 - 25 | 09/23/11 | 5 U | **55,000** | **550** | **1.4** | **41,000** | 100 U | 100 U | **310** | **690,000** |
| X-9CAUG | 20 - 25 | 09/12/12 | 5 U | **48,000** | **690** | **1.3** | **34,000** | 100 U | 100 U | 1,000 U | **680,000** |
| X-9CAUG | 20 - 25 | 09/25/13 | 5 U | **47,000 B** | **430 B** | **0.43 B** | **24,000** | 100 U | 100 U | **340 J** | **640,000** |
| X-9CAUG | 20 - 25 | 09/22/14 | **0.42 J,B** | **38,000 B** | **120 J** | -- | **16,000** | 100 U , H | 100 U , H | **1,100** | **640,000** |
| X-9CAUG | 20 - 25 | 09/30/15 | **0.43 J** | **73,000 B** | **7,800** | **23** | **180,000** | 100 U , H | 100 U , H | 1,000 U | **790,000** |
| X-9CAUG | 20 - 25 | 09/28/16 | **0.57 J** | **110,000** | **4,400 B** | **5.3 B** | **190,000** | 50 U | 50 U | 1,000 U | **830,000** |
| X-9CAUG | 20 - 25 | 08/29/17 | 5.0 U | **42,000** | **3,400** | **23** | **39,000** | 50 U | 50 U | 1,000 U | **570,000** |
| X-9CAUG | 20 - 25 | 09/25/18 | 15 U | **24,000** | **2,500** | **13** | **26,000** | 100 U H | 100 U H | 1,000 U | **490,000** |
| X-9CAUG | 20 - 25 | 08/21/19 | 15 U ^ | **15,000** | **1,900** | **5.7** | **240,000** | 50 U | 50 U | **1,100** | **550,000** |
| X-9CAUG | 20 - 25 | 08/18/20 | 15 U | **14,000** | **1,400** | **3.8** | **12,000** | 500 U | 100 U | **380 J** | **470,000** |
| X-9CAUG | 20 - 25 | 08/18/21 | 15 U | **20,000** | **1,700** | **6** | **23,000** | 100 U | 100 U | 1,000 U | **550,000** |
| X-9CAUG | 20 - 25 | 09/22/22 | 15 U | **18,000** | **1,900** | **6.4** | **35,000** | **54 J** | **22 J** | **820 J** | **550,000** |
| X-9D | 42.5 - 47.5 | 01/08/08 | 5 U | **634,000** | **8,500** | -- | **1,370,000** | 100 U | 100 U | **194,000** | **2,400,000** |
| X-9D | 42.5 - 47.5 | 03/11/08 | 5 U | **678,000** | **9,700** | -- | **1,340,000** | 100 U | 100 UJ | **185,000** | **2,500,000** |
| X-9D | 42.5 - 47.5 | 06/05/08 | -- | -- | **5,900** | -- | -- | -- | -- | -- | **2,900,000** |
| X-9D | 42.5 - 47.5 | 09/28/10 | 5 U | **679,000** | **7,400 J** | **34 J** | **1,520,000** | 100 U | 1,000 U, G | **220,000** | **2,400,000** |
| X-9D | 42.5 - 47.5 | 09/23/11 | 5 U | **650,000** | **8,600** | **50** | **1,400,000** | 100 U | 1,000 U | **220,000** | **2,700,000** |
| X-9D | 42.5 - 47.5 | 09/12/12 | 5 U | **680,000** | **7,700** | **27** | **1,400,000** | 100 U | 1,000 U | **200,000** | **2,600,000** |
| X-9D | 42.5 - 47.5 | 09/25/13 | 5 U | **690,000 B** | **7,400 B** | **21 B** | **1,300,000** | 100 U | 100 U | **240,000** | **2,400,000** |
| X-9D | 42.5 - 47.5 | 09/22/14 | **0.50 J** | **640,000 B** | **7,500** | -- | **1,400,000** | 100 U | 500 U, H | **220,000** | **2,600,000** |
| X-9D | 42.5 - 47.5 | 09/30/15 | **0.66 J** | **640,000 B** | **7,500 F1** | **30 F1** | **1,500,000** | 500 U, H | 500 U, H | **230,000 F1** | **2,800,000** |
| X-9D | 42.5 - 47.5 | 09/28/16 | **0.70 J** | **630,000 B** | **6,700 B** | **23 B** | **1,300,000** | 50 U* | 50 U* | **240,000** | **2,300,000** |
| X-9D | 42.5 - 47.5 | 08/29/17 | 5.0 U | **1,500,000** | **3,200** | **10** | **1,100,000** | **1,700** | -- | **230,000** | **2,300,000** |
| X-9D | 42.5 - 47.5 | 09/25/18 | 15 U | **630,000** | **4,800** | **22** | **1,300,000** | 500 U H | 500 U H | **250,000** | **2,100,000** |
| X-9D | 42.5 - 47.5 | 08/20/19 | 15 U ^ | **650,000** | **7,000** | **52** | **1,200,000** | 50 U | 50 U | **250,000** | **2,600,000** |
| X-9D | 42.5 - 47.5 | 08/17/20 | 15 U | **560,000** | **4,900** | **68** | **1,100,000** | 500 U | 500 U | **170,000** | **2,100,000** |
| X-9D | 42.5 - 47.5 | 08/18/21 | 15 U [15 U] | **570,000 [590,000]** | **6,300 B [5,500 B]** | **56 B [49 B]** | **1,300,000 [1,200,000]** | 500 U H [500 U H] | 500 U H [500 U H] | **240,000 [240,000]** | **2,600,000 [2,300,000]** |
| X-9D | 42.5 - 47.5 | 09/22/22 | 15 U | **110,000** | **160 J** | **1.5 J** | **260,000** | **230** | 100 U | **50,000** | **620,000** |

**Notes:**

All results are in micrograms per liter (ug/L).

Criteria presented are the applicable site-specific criteria. Drinking water is not a complete pathway; therefore drinking water criteria are not presented.

Applicable site-specific criteria are the minimum Rule 57 criteria, excluding drinking water.

Hardness-dependent Rule 57 criteria are based on a hardness of 270 milligrams per liter for the Saginaw River, as analyzed in the October 2016 sampling event.

pH-dependent Rule 57 criteria are based on a default pH of 7.

Un-ionized ammonia is calculated based on the pH and temperature of the groundwater sample, using the following equaitons. When available, the field-measured pH was used.

Un-ionized ammonia (µg/L = Total Ammonia (µg/L) × Fraction un-ionized ammonia

Fraction un-ionized ammonia = $1/[10^{(pKa-pH)} + 1]$

pKa = 0.0901821+2729.92/T

T (in Kelvin) = T(°C) + 273.15

Bolded cells represent constitiuent concentrations with detections.

Duplicate results are presented in brackets.

Gray shaded cells represent constituent concentrations that exceed site-specific Groundwater/Surface Water Interface (GSI) Criteria.

MW-183WT, X-4CAUGR, X-9AR, X-9BR, X-9CAUG represent a groundwater surface water interface (GSI) perimeter monitoring well from Green Point Landfill.

MW-107WT, MW-107S1, MW-108S2, MW-110WTR, MW-111WT, MW-114S2, MW-114WT, MW-149WT, MW-185WT, and MW-186WT represent a GSI perimeter monitoring well from SMI.

The pH and temperature from co-located monitoring well X-4CAUGR were used to calculate an estimated un-ionized ammonia concentration for X-4AR on September 21, 2022.

* Venting groundwater discharge concentrations was recommended by MDEQ in a letter dated November 26, 2008 followed by a Mixing Zone Determination Request and based on a five year renewal approved by the MDEQ on October 21, 2021.

**Data Qualifiers:**

| | |
|---|---|
| ND = | Not detected. The value in parentheses represents the associated detection limit. |
| -- or NA = | Not analyzed for this constituent. |
| B = | Inorganics: the detected analyte is an estimated value between the instrument detection limit (IDL) and the reporting limit (RL). |
| B = | Organics: the compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect. |
| BJ = | The detected analyte is an estimated concentration between the IDL and the RL. |
| D = | Concentration is based on a diluted sample analysis. |
| F1= | MS and/or MSD Recovery is outside acceptance limits |
| H = | Sample was prepped or analyzed beyond the specified hold time. |
| J = | The compound/constituent was positively identified; however, the associated numerical value is an estimated concentration only. |
| L = | A negative instrument reading had an absolute value greater than the reporting limit. |
| M = | Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit. |
| R = | Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data shall not be used for any qualitative or quantitative purposes. |
| U = | The constituent was analyzed for but not detected. The associated value is the constituent quantitation limit. |
| UJ = | The constituent was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual result. |
| ^ = | ICV, CCV, ICB, CCB, ISA, ISB, CRI, CRA, DLCK, or MRL standard: instrument related QC exceeds the control limits. |
| *+ = | LCS and/or LCSD is outside acceptance limits, high biased. |
| *- = | LCS and/or LCSD is outside acceptance limits, low biased. |
| ^- = | Continuing Calibration Verification (CCV) is outside acceptance limits, low biased. |

**Table 6**
**Analytical Data Summary Table - GPL Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | 1,1,1-Trichloroethane | 1,1,2,2-Tetrachloroethane | 1,1,2-trichloro-1,2,2-trifluoroethane | 1,1,2-Trichloroethane | 1,1-Dichloroethane | 1,1-Dichloroethene | 1,2,4-Trichlorobenzene | 1,2-Dibromo-3-chloropropane | 1,2-Dibromoethane | 1,2-Dichlorobenzene | 1,2-Dichloroethane | 1,2-Dichloropropane |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 89 | 78 | 32 | 330 | 740 | 130 | 99 | 4.9 | 5.7 | 13 | 360 | 230 |
| MW-117S1 | 24.2 - 29.2 | 06/20/95 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | 1.0 U | 1.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 05/19/00 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | -- | 1.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 06/19/01 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | -- | 1.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 06/26/02 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 06/19/03 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | -- | 1.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 05/27/04 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | -- | 1.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 06/23/05 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | -- | 1.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 12/13/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117S1 | 24.2 - 29.2 | 11/13/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117S2 | 35 - 40 | 06/20/95 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | 1.0 U | 1.0 U | 1.0 U |
| MW-117S2 | 35 - 40 | 05/20/00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117S2 | 35 - 40 | 12/13/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 06/20/95 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | 1.0 U | 1.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 05/19/00 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | -- | 1.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 06/18/01 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | -- | 1.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 06/26/02 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 06/19/03 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | -- | 1.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 12/09/04 | 1.0 U [1.0 U] | 1.0 UJ [1.0 UJ] | -- | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | -- | -- | -- | -- | 1.0 U [1.0 U] | 1.0 U [1.0 U] |
| MW-117WT | 3 - 13 | 06/23/05 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | -- | 1.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 12/13/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117WT | 3 - 13 | 10/13/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118S1 | 23.5 - 28.5 | 06/20/95 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | 1.0 U | 1.0 U | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 05/17/00 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | -- | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | -- | -- | -- | -- | 1.0 U [1.0 U] | 1.0 U [1.0 U] |
| MW-118S1 | 23.5 - 28.5 | 06/19/01 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | -- | 1.0 U | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 06/27/02 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 06/19/03 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | -- | 1.0 U | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 12/09/04 | 1.0 U | 1.0 UJ | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | -- | 1.0 U | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 06/23/05 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | -- | 1.0 U | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 12/14/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118S1 | 23.5 - 28.5 | 11/13/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118S2 | 38.5 - 43.5 | 06/20/95 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | -- | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | -- | -- | -- | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] |
| MW-118S2 | 38.5 - 43.5 | 12/14/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-118WT | 1.6 - 11.6 | 06/20/95 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | 1.0 U | 1.0 U | 1.0 U |
| MW-118WT | 1.6 - 11.6 | 05/17/00 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | -- | 1.0 U | 1.0 U |
| MW-118WT | 1.6 - 11.6 | 06/19/01 | 4.0 U [4.0 U] | 4.0 U [4.0 U] | -- | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | -- | -- | -- | -- | 4.0 U [4.0 U] | 4.0 U [4.0 U] |
| MW-118WT | 1.6 - 11.6 | 06/27/02 | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 4.0 UJ [2.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] |
| MW-118WT | 1.6 - 11.6 | 06/19/03 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | -- | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | -- | -- | -- | -- | 1.0 U [1.0 U] | 1.0 U [1.0 U] |
| MW-118WT | 1.6 - 11.6 | 05/27/04 | 1.7 U | 1.7 U | -- | 1.7 U | 1.7 U | 1.7 U | -- | -- | -- | -- | 1.7 U | 1.7 U |
| MW-118WT | 1.6 - 11.6 | 06/23/05 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | -- | 1.0 U | 1.0 U |
| MW-118WT | 1.6 - 11.6 | 12/14/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-118WT | 1.6 - 11.6 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118WT | 1.6 - 11.6 | 11/13/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-183WT | 6 - 16 | 08/17/00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-183WT | 6 - 16 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 6**
**Analytical Data Summary Table - GPL Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | 1,1,1-Trichloroethane | 1,1,2,2-Tetrachloroethane | 1,1,2-trichloro-1,2,2-trifluoroethane | 1,1,2-Trichloroethane | 1,1-Dichloroethane | 1,1-Dichloroethene | 1,2,4-Trichlorobenzene | 1,2-Dibromo-3-chloropropane | 1,2-Dibromoethane | 1,2-Dichlorobenzene | 1,2-Dichloroethane | 1,2-Dichloropropane |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 89 | 78 | 32 | 330 | 740 | 130 | 99 | 4.9 | 5.7 | 13 | 360 | 230 |
| TWW-1 | 1.5 - 6.5 | 01/25/97 | 330 U | 330 U | -- | 330 U | 330 U | 330 U | -- | -- | -- | -- | 330 U | 330 U |
| TWW-1 | 1.5 - 6.5 | 08/08/98 | 200 U | 200 U | -- | 200 U | 200 U | 200 U | -- | -- | -- | 200 U | 200 U | 200 U |
| TWW-1 | 1.5 - 6.5 | 05/18/99 | 250 UD [250 UD] | 250 UD [250 UD] | -- | 250 UD [250 UD] | 250 UD [250 UD] | 250 UD [250 UD] | -- | -- | -- | -- | 250 UD [250 UD] | 250 UD [250 UD] |
| TWW-1 | 1.5 - 6.5 | 05/21/00 | 250 U | 250 UJ | -- | 250 U | 250 U | **51 J** | -- | -- | -- | -- | 250 U | 250 U |
| TWW-1 | 1.5 - 6.5 | 09/29/10 | 71 U | 71 U | 71 U | 71 U | 71 U | 71 U | 360 U | 71 U | 71 U | 71 U | 71 U | 71 U |
| TWW-1 | 1.5 - 6.5 | 09/21/11 | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | 150 U [150 U] | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] |
| TWW-1 | 1.5 - 6.5 | 09/14/12 | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | **1.7 J [1.6 J]** | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 8.0 U [8.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] |
| TWW-1 | 1.5 - 6.5 | 09/24/13 | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 36 U [40 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] |
| TWW-1 | 1.5 - 6.5 | 09/23/14 | 25 U [25 U] | 25 U [25 U] | -- | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 50 U [50 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] |
| TWW-1 | 1.5 - 6.5 | 10/01/15 | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | **1.5 J [5.0 U]** | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 10 U [10 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] |
| TWW-1 | 1.5 - 6.5 | 09/27/16 | 10 U [7.7 U] | 10 U [7.7 U] | -- | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | **17** [7.7 U] | 20 U [15 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] |
| TWW-1 Dup | 1.5 - 6.5 | 09/27/16 | 7.7 U | 7.7 U | -- | 7.7 U | 7.7 U | 7.7 U | 7.7 U | 15 U | 7.7 U | 7.7 U | 7.7 U | 7.7 U |
| TWW-1 | 1.5 - 6.5 | 08/30/17 | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | **1.4 J [1.4 J]** | 1.7 U [1.7 U] | **1.1 J** [1.7 U] | 3.3 U [3.3 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] |
| TWW-1 Dup | 1.5 - 6.5 | 08/30/17 | 1.7 U | 1.7 U | 1.7 U | 1.7 U | **1.4 J** | 1.7 U | 1.7 U | 3.3 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| TWW-1 | 1.5 - 6.5 | 09/25/18 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | **1.3 [1.2]** | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 2.0 U [2.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] |
| TWW-1 Dup | 1.5 - 6.5 | 09/25/18 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.2** | 1.0 U | 1.0 U | 2.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| TWW-1 | 1.5 - 6.5 | 08/22/19 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | **0.63 J [0.72 J]** | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 2.0 U [2.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] |
| TWW-1 Dup | 1.5 - 6.5 | 08/22/19 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **0.72 J** | 1.0 U | 1.0 U | 2.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| TWW-1 | 1.5 - 6.5 | 08/12/20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.3** | 1.0 U * | 1.0 U | 2.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| TWW-1 | 1.5 - 6.5 | 08/18/21 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | **0.72 J [0.72 J]** | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 2.0 U [2.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] |
| TWW-1 | 1.5 - 6.5 | 09/23/22 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | **0.77 J [0.75 J]** | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 2.0 U [2.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] |
| TW-242 | 2 - 7 | 09/25/18 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| TW-242 | 2 - 7 | 08/22/19 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| TW-242 | 2 - 7 | 08/12/20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U F1 | 1.0 U F1 * | 1.0 U | 2.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| TW-242 | 2 - 7 | 08/18/21 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| TW-242 | 2 - 7 | 09/23/22 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| X-10BR | 26.3 - 31.3 | 07/24/95 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | 1.0 U | 1.0 U | 1.0 U |
| X-10BR | 26.3 - 31.3 | 12/15/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| X-4A | 6.2 - 9.2 | 12/14/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| X-4AR | 3.3 - 8.3 | 07/24/95 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | 1.0 U | 1.0 U | 1.0 U |
| X-4AR | 3.3 - 8.3 | 06/09/96 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | 1.0 U | 1.0 U | 1.0 U |
| X-4AR | 3.3 - 8.3 | 03/05/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-4CAUG | 18 - 23 | 07/24/95 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | 1.0 U | 1.0 U | 1.0 U |
| X-4CAUG | 18 - 23 | 06/08/96 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | 1.0 U | 1.0 U | 1.0 U |
| X-4CAUGR | 14 - 19 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-4D | 40 - 45 | 01/09/08 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| X-4D | 40 - 45 | 04/02/08 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| X-4D | 40 - 45 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9AR | 3 - 13 | 07/24/95 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | 1.0 U | 1.0 U | 1.0 U |
| X-9AR | 3 - 13 | 06/09/96 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | 1.0 U | 1.0 U | 1.0 U |
| X-9AR | 3 - 13 | 03/05/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9AR | 3 - 13 | 12/15/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| X-9AR | 3 - 13 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9BR | 26 - 31 | 07/24/95 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | 1.0 U | 1.0 U | 1.0 U |
| X-9BR | 26 - 31 | 06/08/96 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | 1.0 U | 1.0 U | 1.0 U |
| X-9BR | 26 - 31 | 12/15/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| X-9BR | 26 - 31 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9CAUG | 20 - 25 | 07/24/95 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | 1.0 U | 1.0 U | 1.0 U |
| X-9CAUG | 20 - 25 | 06/08/96 | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | 1.0 U | -- | -- | -- | 1.0 U | 1.0 U | 1.0 U |
| X-9CAUG | 20 - 25 | 12/15/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| X-9CAUG | 20 - 25 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9D | 42.5 - 47.5 | 01/08/08 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| X-9D | 42.5 - 47.5 | 03/11/08 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| X-9D | 42.5 - 47.5 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9D | 42.5 - 47.5 | 08/29/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 6**
**Analytical Data Summary Table - GPL Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | 1,3-Dichlorobenzene | 1,4-Dichlorobenzene | 2-Butanone | 2-Hexanone | 4-Methyl-2-pentanone | Acetone | Benzene | Bromodichloromethane | Bromoform | Bromomethane | Carbon Disulfide | Carbon Tetrachloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 28 | 17 | 2,200 | 630,000 | NA | 1,700 | 200 | 180 | 890 | 4.2 | 34,000 | 38 |
| MW-117S1 | 24.2 - 29.2 | 06/20/95 | 1.0 U | 1.0 U | 50 U | R | 50 U | 50 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **0.50 J** | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 05/19/00 | -- | -- | 10 U | 10 U | 10 U | 10 U | **0.60 J** | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 06/19/01 | -- | -- | 10 U | 10 U | 5.0 U | 10 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 06/26/02 | 1.0 U | 1.0 U | 10 U | 10 U | 10 U | 10 UJ | **0.75 J** | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 06/19/03 | -- | -- | 2.0 U | 2.0 U | 2.0 U | 2.0 U | **0.58 J** | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 05/27/04 | -- | -- | 2.0 UJ | 2.0 U | 2.0 U | 2.0 UJ | **0.71 J** | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 06/23/05 | -- | -- | 25 U | 50 U | 50 U | 25 U | **0.66 J** | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 12/13/06 | 1.0 U | 1.0 U | 25 UJ | 50 UJ | 50 U | 25 UJ | **0.65 J** | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 UJ |
| MW-117S1 | 24.2 - 29.2 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117S1 | 24.2 - 29.2 | 11/13/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117S2 | 35 - 40 | 06/20/95 | 1.0 U | 1.0 U | 50 U | R | 50 U | 50 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **0.80 J** | 1.0 U |
| MW-117S2 | 35 - 40 | 05/20/00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117S2 | 35 - 40 | 12/13/06 | 1.0 U | 1.0 U | 25 UJ | 50 UJ | 50 U | 25 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 UJ |
| MW-117WT | 3 - 13 | 06/20/95 | 1.0 U | 1.0 U | 50 U | R | 50 U | 50 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 50 U | 1.0 U |
| MW-117WT | 3 - 13 | 05/19/00 | -- | -- | 10 U | 10 U | 10 U | 10 U | **0.13 J** | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 06/18/01 | -- | -- | 10 U | 10 U | 5.0 U | 10 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 06/26/02 | 1.0 U | 1.0 U | 10 U | 10 U | 10 U | 10 UJ | **0.16 J** | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 06/19/03 | -- | -- | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 12/09/04 | -- | -- | 25 U [25 U] | 50 UJ [50 UJ] | 50 U [50 U] | 25 U [25 U] | **0.23 J [0.25 J]** | 1.0 U [1.0 U] | 1.0 U [1.0 UJ] | 1.0 UJ [1.0 U] | 5.0 U [5.0 U] | 1.0 U [1.0 U] |
| MW-117WT | 3 - 13 | 06/23/05 | -- | -- | 25 U | 50 U | 50 U | 25 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 12/13/06 | 1.0 U | 1.0 U | 25 UJ | 50 UJ | 50 U | 25 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 UJ |
| MW-117WT | 3 - 13 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117WT | 3 - 13 | 10/13/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118S1 | 23.5 - 28.5 | 06/20/95 | 1.0 U | 1.0 U | 50 U | R | 50 U | 50 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.3** | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 05/17/00 | -- | -- | 10 U [10 U] | 10 U [10 U] | 10 U [10 U] | 10 U [10 U] | **0.47 J [0.46 J]** | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] |
| MW-118S1 | 23.5 - 28.5 | 06/19/01 | -- | -- | 10 U | 10 U | 5.0 U | 10 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 06/27/02 | 1.0 U | 1.0 U | 10 UJ | 10 U | 10 U | 10 U | **0.37 J** | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 06/19/03 | -- | -- | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 12/09/04 | -- | -- | 25 U | 50 UJ | 50 U | 25 U | **0.53 J** | 1.0 U | 1.0 UJ | 1.0 U | 5.0 U | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 06/23/05 | -- | -- | 25 U | 50 U | 50 U | 25 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 12/14/06 | 1.0 U | 1.0 U | 25 U | 50 U | 50 U | 25 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118S1 | 23.5 - 28.5 | 11/13/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118S2 | 38.5 - 43.5 | 06/20/95 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 50 U [50 U] | R [R] | 50 U [50 U] | 3.0 J [50 U] | 0.60 J [1.0 U] | 0.70 J [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | **6.0 J [2.0]** | 1.0 U [1.0 U] |
| MW-118S2 | 38.5 - 43.5 | 12/14/06 | 1.0 U | 1.0 U | 25 U | 50 U | 50 U | 25 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U |
| MW-118WT | 1.6 - 11.6 | 06/20/95 | 1.0 U | 1.0 U | 50 U | R | 50 U | 50 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 50 U | 1.0 U |
| MW-118WT | 1.6 - 11.6 | 05/17/00 | -- | -- | 10 U | 10 U | **28** | 10 U | **0.54 J** | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-118WT | 1.6 - 11.6 | 06/19/01 | -- | -- | 40 U [40 U] | 40 U [40 U] | **180 [180]** | 40 U [40 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] |
| MW-118WT | 1.6 - 11.6 | 06/27/02 | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 20 UJ [10 UJ] | 20 UJ [10 U] | **4.9 J [5.2 J]** | 20 UJ [10 U] | 0.34 J [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] |
| MW-118WT | 1.6 - 11.6 | 06/19/03 | -- | -- | 2.0 U [2.0 U] | 2.0 U [2.0 U] | **0.75 J [0.60 J]** | 2.0 U [2.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] |
| MW-118WT | 1.6 - 11.6 | 05/27/04 | -- | -- | 3.3 U | 3.3 UJ | 3.3 UJ | 3.3 UJ | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| MW-118WT | 1.6 - 11.6 | 06/23/05 | -- | -- | 25 U | 50 U | 50 U | 25 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U |
| MW-118WT | 1.6 - 11.6 | 12/14/06 | 1.0 U | 1.0 U | **2.1 J** | 50 U | 50 U | 25 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U |
| MW-118WT | 1.6 - 11.6 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118WT | 1.6 - 11.6 | 11/13/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-183WT | 6 - 16 | 08/17/00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-183WT | 6 - 16 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 6**
**Analytical Data Summary Table - GPL Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | 1,3-Dichlorobenzene | 1,4-Dichlorobenzene | 2-Butanone | 2-Hexanone | 4-Methyl-2-pentanone | Acetone | Benzene | Bromodichloromethane | Bromoform | Bromomethane | Carbon Disulfide | Carbon Tetrachloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 28 | 17 | 2,200 | 630,000 | NA | 1,700 | 200 | 180 | 890 | 4.2 | 34,000 | 38 |
| TWW-1 | 1.5 - 6.5 | 01/25/97 | -- | -- | 17,000 U | 17,000 U | 17,000 U | 33,000 U | 1,700 U | 330 U | 330 U | 330 U | 17,000 U | 330 U |
| TWW-1 | 1.5 - 6.5 | 08/08/98 | 200 U | 200 U | 2,000 U | 2,000 U | 2,000 U | 2,000 U | 1,000 U | 200 U | 200 U | 200 U | 1,000 U | 200 U |
| TWW-1 | 1.5 - 6.5 | 05/18/99 | -- | -- | 1,300 UD [1,300 UD] | 1,300 UD [1,300 UD] | 1,300 UD [1,300 UD] | 1,300 UJD [1,300 UJD] | 250 UD [250 UD] | 250 UD [250 UD] | 250 UD [250 UD] | 250 UJD [250 UD] | 250 UD [250 UD] | 250 UD [250 UD] |
| TWW-1 | 1.5 - 6.5 | 05/21/00 | -- | -- | 2,500 U | 2,500 U | 2,500 U | 2,500 U | 250 U | 250 U | 250 U | 250 U | 250 U | 250 U |
| TWW-1 | 1.5 - 6.5 | 09/29/10 | 71 U | 71 U | 1,800 U | 3,600 U | 3,600 U | 1,800 U | 71 U | 71 U | 71 U | 71 U | 360 U | 71 U |
| TWW-1 | 1.5 - 6.5 | 09/21/11 | 77 U [77 U] | 77 U [77 U] | 770 U [770 U] | 770 U [770 U] | 770 U [770 U] | 770 U [770 U] | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] |
| TWW-1 | 1.5 - 6.5 | 09/14/12 | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 40 U [40 U] | 40 U [40 U] | 40 U [40 U] | 40 U [40 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] |
| TWW-1 | 1.5 - 6.5 | 09/24/13 | 18 U [20 U] | 18 U [20 U] | 180 U [200 U] | 180 U [200 U] | 180 U [200 U] | **26 J [24 J]** | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] |
| TWW-1 | 1.5 - 6.5 | 09/23/14 | 25 U [25 U] | 25 U [25 U] | 250 U [250 U] | 250 U [250 U] | 250 U [250 U] | 250 U [250 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] |
| TWW-1 | 1.5 - 6.5 | 10/01/15 | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 50 U [50 U] | 50 U [50 U] | 50 U [50 U] | **6.5 J,B [50 U]** | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] |
| TWW-1 | 1.5 - 6.5 | 09/27/16 | **2.7 J** [7.7 U] | **3.3 J** [7.7 U] | 100 U [77 U] | 100 U [77 U] | 100 U [77 U] | 100 U [77 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] |
| TWW-1 Dup | 1.5 - 6.5 | 09/27/16 | 7.7 U | 7.7 U | 77 U | 77 U | 77 U | 77 U | 7.7 U | 7.7 U | 7.7 U | 7.7 U | 7.7 U | 7.7 U |
| TWW-1 | 1.5 - 6.5 | 08/30/17 | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 17 U [17 U] | 17 U [17 U] | 17 U [17 U] | 17 U [17 U] | 1.7 U [1.7 U] | -- | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] |
| TWW-1 Dup | 1.5 - 6.5 | 08/30/17 | 1.7 U | 1.7 U | 17 U | 17 U | 17 U | 17 U | 1.7 U | -- | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| TWW-1 | 1.5 - 6.5 | 09/25/18 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 10 U [10 U] | 10 U [10 U] | 10 U [10 U] | 10 U [10 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] |
| TWW-1 Dup | 1.5 - 6.5 | 09/25/18 | 1.0 U | 1.0 U | 10 U | 10 U | 10 U | 10 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| TWW-1 | 1.5 - 6.5 | 08/22/19 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 10 U [10 U] | 10 U [10 U] | 10 U [10 U] | 10 U [10 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] |
| TWW-1 Dup | 1.5 - 6.5 | 08/22/19 | 1.0 U | 1.0 U | 10 U | 10 U | 10 U | 10 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| TWW-1 | 1.5 - 6.5 | 08/12/20 | 1.0 U | 1.0 U | 10 U | 10 U | 10 U | 10 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| TWW-1 | 1.5 - 6.5 | 08/18/21 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 10 U [10 U] | 10 U [10 U] | 10 U [10 U] | 10 U [10 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] |
| TWW-1 | 1.5 - 6.5 | 09/23/22 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 10 U [10 U] | 10 U [10 U] | 10 U [10 U] | 10 U [10 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] |
| TW-242 | 2 - 7 | 09/25/18 | 1.0 U | 1.0 U | 10 U | 10 U | 10 U | 10 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| TW-242 | 2 - 7 | 08/22/19 | 1.0 U | 1.0 U | 10 U | 10 U | 10 U | 10 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| TW-242 | 2 - 7 | 08/12/20 | 1.0 U | 1.0 U | 10 U | 10 U | 10 U | 10 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| TW-242 | 2 - 7 | 08/18/21 | 1.0 U | 1.0 U | 10 U | 10 U | 10 U | 10 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| TW-242 | 2 - 7 | 09/23/22 | 1.0 U | 1.0 U | 10 U | 10 U | 10 U | 10 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| X-10BR | 26.3 - 31.3 | 07/24/95 | 1.0 U | 1.0 U | 50 U | 50 U | 50 U | 50 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 50 U | 1.0 U |
| X-10BR | 26.3 - 31.3 | 12/15/06 | 1.0 U | 1.0 U | 25 U | 50 U | 50 U | 25 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U |
| X-4A | 6.2 - 9.2 | 12/14/06 | 1.0 U | 1.0 U | 25 U | 50 U | 50 U | 25 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U |
| X-4AR | 3.3 - 8.3 | 07/24/95 | 1.0 U | 1.0 U | 50 UJ | 50 U | 50 U | 50 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 50 U | 1.0 U |
| X-4AR | 3.3 - 8.3 | 06/09/96 | 1.0 U | 1.0 U | 50 U | 50 U | 50 U | 100 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 50 U | 1.0 U |
| X-4AR | 3.3 - 8.3 | 03/05/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-4CAUG | 18 - 23 | 07/24/95 | 1.0 U | 1.0 U | 50 UJ | 50 U | 50 U | 50 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 50 U | 1.0 U |
| X-4CAUG | 18 - 23 | 06/08/96 | 1.0 U | 1.0 U | 50 U | 50 U | 50 U | 100 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 50 U | 1.0 U |
| X-4CAUGR | 14 - 19 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-4D | 40 - 45 | 01/09/08 | 1.0 U | 1.0 U | 25 U | 50 U | 50 U | 25 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | 5.0 U | 1.0 U |
| X-4D | 40 - 45 | 04/02/08 | 1.0 U | 1.0 U | 25 U | 50 U | 50 U | 25 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **0.45 J** | 1.0 U |
| X-4D | 40 - 45 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9AR | 3 - 13 | 07/24/95 | 1.0 U | 1.0 U | 50 UJ | 50 U | 50 U | 50 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 50 U | 1.0 U |
| X-9AR | 3 - 13 | 06/09/96 | 1.0 U | 1.0 U | 50 U | 50 U | 50 U | 100 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 50 U | 1.0 U |
| X-9AR | 3 - 13 | 03/05/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9AR | 3 - 13 | 12/15/06 | 1.0 U | 1.0 U | 25 U | 50 U | 50 U | 25 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U |
| X-9AR | 3 - 13 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9BR | 26 - 31 | 07/24/95 | 1.0 U | 1.0 U | 50 UJ | 50 U | 50 U | 50 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 50 U | 1.0 U |
| X-9BR | 26 - 31 | 06/08/96 | 1.0 U | 1.0 U | 50 U | 50 U | 50 U | 100 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 50 U | 1.0 U |
| X-9BR | 26 - 31 | 12/15/06 | 1.0 U | 1.0 U | 25 U | 50 U | 50 U | 25 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U |
| X-9BR | 26 - 31 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9CAUG | 20 - 25 | 07/24/95 | 1.0 U | 1.0 U | 50 UJ | 50 U | 50 U | 50 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 50 U | 1.0 U |
| X-9CAUG | 20 - 25 | 06/08/96 | 1.0 U | 1.0 U | 50 U | 50 U | 50 U | 100 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 50 U | 1.0 U |
| X-9CAUG | 20 - 25 | 12/15/06 | 1.0 U | 1.0 U | 25 U | 50 U | 50 U | 25 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 1.0 U |
| X-9CAUG | 20 - 25 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9D | 42.5 - 47.5 | 01/08/08 | 1.0 U | 1.0 U | 25 U | 50 U | 50 U | 25 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | 5.0 U | 1.0 U |
| X-9D | 42.5 - 47.5 | 03/11/08 | 1.0 U | 1.0 U | 25 U | 50 UJ | 50 UJ | 25 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | 5.0 U | 1.0 U |
| X-9D | 42.5 - 47.5 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9D | 42.5 - 47.5 | 08/29/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 6**
**Analytical Data Summary Table - GPL Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | Chlorobenzene | Chloroethane | Chloroform | Chloromethane | cis-1,2-Dichloroethene | cis-1,3-Dichloropropene | Cyclohexane | Dibromochloromethane | Dichlorodifluoromethane | Ethylbenzene | Isopropyl benzene | Methyl acetate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 25 | 1,100 | 630 | 7,300 | 150 | 9 | NA | 150 | 90,000 | 21 | 28 | NSL |
| MW-117S1 | 24.2 - 29.2 | 06/20/95 | 1.0 U | 1.0 U | **1.5** | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-117S1 | 24.2 - 29.2 | 05/19/00 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-117S1 | 24.2 - 29.2 | 06/19/01 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-117S1 | 24.2 - 29.2 | 06/26/02 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 10 U |
| MW-117S1 | 24.2 - 29.2 | 06/19/03 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-117S1 | 24.2 - 29.2 | 05/27/04 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-117S1 | 24.2 - 29.2 | 06/23/05 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **0.31 J** | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-117S1 | 24.2 - 29.2 | 12/13/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | 5.0 U | 10 U |
| MW-117S1 | 24.2 - 29.2 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117S1 | 24.2 - 29.2 | 11/13/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117S2 | 35 - 40 | 06/20/95 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-117S2 | 35 - 40 | 05/20/00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117S2 | 35 - 40 | 12/13/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | 5.0 U | 10 U |
| MW-117WT | 3 - 13 | 06/20/95 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-117WT | 3 - 13 | 05/19/00 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-117WT | 3 - 13 | 06/18/01 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-117WT | 3 - 13 | 06/26/02 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 10 U |
| MW-117WT | 3 - 13 | 06/19/03 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-117WT | 3 - 13 | 12/09/04 | 1.0 U [1.0 U] | 0.28 J [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | -- | 1.0 UJ [1.0 UJ] | -- | 1.0 U [1.0 U] | -- | -- |
| MW-117WT | 3 - 13 | 06/23/05 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-117WT | 3 - 13 | 12/13/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | 5.0 U | 10 U |
| MW-117WT | 3 - 13 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117WT | 3 - 13 | 10/13/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118S1 | 23.5 - 28.5 | 06/20/95 | 1.0 U | 1.0 U | **1.1** | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-118S1 | 23.5 - 28.5 | 05/17/00 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 0.50 U [0.50 U] | 1.0 U [1.0 U] | -- | 1.0 U [1.0 U] | -- | 1.0 U [1.0 U] | -- | -- |
| MW-118S1 | 23.5 - 28.5 | 06/19/01 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-118S1 | 23.5 - 28.5 | 06/27/02 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 10 U |
| MW-118S1 | 23.5 - 28.5 | 06/19/03 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-118S1 | 23.5 - 28.5 | 12/09/04 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 UJ | -- | 1.0 U | -- | -- |
| MW-118S1 | 23.5 - 28.5 | 06/23/05 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **0.25 J** | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-118S1 | 23.5 - 28.5 | 12/14/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | 5.0 U | 10 U |
| MW-118S1 | 23.5 - 28.5 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118S1 | 23.5 - 28.5 | 11/13/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118S2 | 38.5 - 43.5 | 06/20/95 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | **3.7 [1.2]** | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | -- | 1.0 U [1.0 U] | -- | 1.0 U [1.0 U] | -- | -- |
| MW-118S2 | 38.5 - 43.5 | 12/14/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | 5.0 U | 10 U |
| MW-118WT | 1.6 - 11.6 | 06/20/95 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-118WT | 1.6 - 11.6 | 05/17/00 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | -- | 1.0 U | -- | **0.10 J** | -- | -- |
| MW-118WT | 1.6 - 11.6 | 06/19/01 | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 2.0 U [2.0 U] | 4.0 U [4.0 U] | -- | 4.0 U [4.0 U] | -- | 4.0 U [4.0 U] | -- | -- |
| MW-118WT | 1.6 - 11.6 | 06/27/02 | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 1.0 U [0.50 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 20 U [10 U] |
| MW-118WT | 1.6 - 11.6 | 06/19/03 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | -- | 1.0 U [1.0 U] | -- | 1.0 U [1.0 U] | -- | -- |
| MW-118WT | 1.6 - 11.6 | 05/27/04 | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | -- | 1.7 U | -- | 1.7 U | -- | -- |
| MW-118WT | 1.6 - 11.6 | 06/23/05 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| MW-118WT | 1.6 - 11.6 | 12/14/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | **0.62 J** | 10 U |
| MW-118WT | 1.6 - 11.6 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118WT | 1.6 - 11.6 | 11/13/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-183WT | 6 - 16 | 08/17/00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-183WT | 6 - 16 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 6**
**Analytical Data Summary Table - GPL Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | Chlorobenzene | Chloroethane | Chloroform | Chloromethane | cis-1,2-Dichloroethene | cis-1,3-Dichloropropene | Cyclohexane | Dibromochloromethane | Dichlorodifluoromethane | Ethylbenzene | Isopropyl benzene | Methyl acetate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | 25 | 1,100 | 630 | 7,300 | 150 | 9 | NA | 150 | 90,000 | 21 | 28 | NSL |
| TWW-1 | 1.5 - 6.5 | 01/25/97 | 330 U | 330 U | 330 U | 330 U | **9,600** | 330 U | -- | 330 U | -- | 330 U | -- | -- |
| TWW-1 | 1.5 - 6.5 | 08/08/98 | 200 U | 200 U | 200 U | 200 U | -- | 200 U | -- | 200 U | -- | 200 U | -- | -- |
| TWW-1 | 1.5 - 6.5 | 05/18/99 | 250 UD [250 UD] | 250 UJD [250 UD] | 250 UD [250 UD] | 250 UJD [250 UD] | -- | 250 UD [250 UD] | -- | 250 UD [250 UD] | -- | 250 UD [250 UD] | -- | -- |
| TWW-1 | 1.5 - 6.5 | 05/21/00 | 250 U | 250 U | 250 U | 250 U | **8,800** | 250 U | -- | 250 U | -- | 250 U | -- | -- |
| TWW-1 | 1.5 - 6.5 | 09/29/10 | 71 U | 71 U | 71 U | 71 U | **230** | 71 U | 71 U | 71 U | 71 U | 71 U | 360 U | 710 U |
| TWW-1 | 1.5 - 6.5 | 09/21/11 | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | **1,800 [1,800]** | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | 770 U [770 U] |
| TWW-1 | 1.5 - 6.5 | 09/14/12 | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | **190 [200]** | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] |
| TWW-1 | 1.5 - 6.5 | 09/24/13 | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | **45 [41]** | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 180 U [200 U] |
| TWW-1 | 1.5 - 6.5 | 09/23/14 | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | **20 J [21 J]** | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 250 U [250 U] |
| TWW-1 | 1.5 - 6.5 | 10/01/15 | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | **1.7 J [5.0 U]** | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 50 U [50 U] |
| TWW-1 | 1.5 - 6.5 | 09/27/16 | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | **2.9 J [3.0 J]** | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | 100 U [77 U] |
| TWW-1 Dup | 1.5 - 6.5 | 09/27/16 | 7.7 U | 7.7 U | 7.7 U | 7.7 U | **3.0 J** | 7.7 U | 7.7 U | 7.7 U | 7.7 U | 7.7 U | 7.7 U | 77 U |
| TWW-1 | 1.5 - 6.5 | 08/30/17 | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | **2.8 [2.7]** | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 17 U [17 U] |
| TWW-1 Dup | 1.5 - 6.5 | 08/30/17 | 1.7 U | 1.7 U | 1.7 U | 1.7 U | **2.7** | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 17 U |
| TWW-1 | 1.5 - 6.5 | 09/25/18 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | **0.56 J [0.59 J]** | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 10 U [10 U] |
| TWW-1 Dup | 1.5 - 6.5 | 09/25/18 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **0.59 J** | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 10 U |
| TWW-1 | 1.5 - 6.5 | 08/22/19 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | **0.58 J [0.66 J]** | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 10 U [10 U] |
| TWW-1 Dup | 1.5 - 6.5 | 08/22/19 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **0.66 J** | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 10 U |
| TWW-1 | 1.5 - 6.5 | 08/12/20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.4** | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 10 U |
| TWW-1 | 1.5 - 6.5 | 08/18/21 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | **0.47 J** [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 10 U [10 U] |
| TWW-1 | 1.5 - 6.5 | 09/23/22 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | **0.88 J [0.79 J]** | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 11 U [10 U] |
| TW-242 | 2 - 7 | 09/25/18 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **0.24 J** | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 10 U |
| TW-242 | 2 - 7 | 08/22/19 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **0.42 J** | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 10 U |
| TW-242 | 2 - 7 | 08/12/20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U F1 * | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 10 U |
| TW-242 | 2 - 7 | 08/18/21 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 10 U |
| TW-242 | 2 - 7 | 09/23/22 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 10 U |
| X-10BR | 26.3 - 31.3 | 07/24/95 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| X-10BR | 26.3 - 31.3 | 12/15/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | 5.0 U | 10 U |
| X-4A | 6.2 - 9.2 | 12/14/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | 5.0 U | 10 U |
| X-4AR | 3.3 - 8.3 | 07/24/95 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| X-4AR | 3.3 - 8.3 | 06/09/96 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| X-4AR | 3.3 - 8.3 | 03/05/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-4CAUG | 18 - 23 | 07/24/95 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| X-4CAUG | 18 - 23 | 06/08/96 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| X-4CAUGR | 14 - 19 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-4D | 40 - 45 | 01/09/08 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 10 U |
| X-4D | 40 - 45 | 04/02/08 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 10 U |
| X-4D | 40 - 45 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9AR | 3 - 13 | 07/24/95 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| X-9AR | 3 - 13 | 06/09/96 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| X-9AR | 3 - 13 | 03/05/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9AR | 3 - 13 | 12/15/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | 5.0 U | 10 U |
| X-9AR | 3 - 13 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9BR | 26 - 31 | 07/24/95 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| X-9BR | 26 - 31 | 06/08/96 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| X-9BR | 26 - 31 | 12/15/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | 5.0 U | 10 U |
| X-9BR | 26 - 31 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9CAUG | 20 - 25 | 07/24/95 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| X-9CAUG | 20 - 25 | 06/08/96 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | -- | 1.0 U | -- | -- |
| X-9CAUG | 20 - 25 | 12/15/06 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | 5.0 U | 10 U |
| X-9CAUG | 20 - 25 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9D | 42.5 - 47.5 | 01/08/08 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 10 U |
| X-9D | 42.5 - 47.5 | 03/11/08 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 5.0 U | 10 U |
| X-9D | 42.5 - 47.5 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9D | 42.5 - 47.5 | 08/29/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 6**
**Analytical Data Summary Table - GPL Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | Methyl cyclohexane | Methyl tert-butyl ether | Methylene Chloride | Styrene | Tetrachloroethene | Toluene | trans-1,2-Dichloroethene | trans-1,3-Dichloropropene | Trichloroethene | Trichlorofluoromethane | Vinyl Chloride | Total Xylenes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| *Site-Specific Groundwater Surface Water Interface Criteria* | | | NA | 7,100 | 1,500 | 80 | 60 | 270 | 150 | 9 | 200 | NSL | 13 | 49 |
| MW-117S1 | 24.2 - 29.2 | 06/20/95 | -- | -- | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 3.0 U |
| MW-117S1 | 24.2 - 29.2 | 05/19/00 | -- | -- | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | 1.0 U | -- | **0.14 J** | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 06/19/01 | -- | -- | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 06/26/02 | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | 1.0 U | 1.0 U | **0.21 J** | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 06/19/03 | -- | -- | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 05/27/04 | -- | -- | 1.0 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | -- | 1.0 U | 1.0 U |
| MW-117S1 | 24.2 - 29.2 | 06/23/05 | -- | -- | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.7** | -- | 1.0 U | 2.0 U |
| MW-117S1 | 24.2 - 29.2 | 12/13/06 | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U |
| MW-117S1 | 24.2 - 29.2 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117S1 | 24.2 - 29.2 | 11/13/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117S2 | 35 - 40 | 06/20/95 | -- | -- | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 3.0 U |
| MW-117S2 | 35 - 40 | 05/20/00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117S2 | 35 - 40 | 12/13/06 | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U |
| MW-117WT | 3 - 13 | 06/20/95 | -- | -- | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 3.0 U |
| MW-117WT | 3 - 13 | 05/19/00 | -- | -- | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 06/18/01 | -- | -- | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 06/26/02 | 1.0 U | **0.38 J** | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 06/19/03 | -- | -- | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U |
| MW-117WT | 3 - 13 | 12/09/04 | -- | -- | 5.0 U [5.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | -- | 1.0 U [1.0 U] | 2.0 U [2.0 U] |
| MW-117WT | 3 - 13 | 06/23/05 | -- | -- | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.1** | -- | 1.0 U | 2.0 U |
| MW-117WT | 3 - 13 | 12/13/06 | 1.0 U | **0.20 J** | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U |
| MW-117WT | 3 - 13 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-117WT | 3 - 13 | 10/13/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118S1 | 23.5 - 28.5 | 06/20/95 | -- | -- | 1.0 U | 1.0 U | 1.0 U | **0.90 J** | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 3.0 U |
| MW-118S1 | 23.5 - 28.5 | 05/17/00 | -- | -- | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 0.50 U [0.50 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | -- | **0.33 J [0.33 J]** | 1.0 U [1.0 U] |
| MW-118S1 | 23.5 - 28.5 | 06/19/01 | -- | -- | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | 1.0 U | -- | **0.27 J** | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 06/27/02 | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | 1.0 U | 1.0 U | **0.27 J** | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 06/19/03 | -- | -- | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U |
| MW-118S1 | 23.5 - 28.5 | 12/09/04 | -- | -- | 5.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 1.0 U | -- | **0.26 J** | 2.0 U |
| MW-118S1 | 23.5 - 28.5 | 06/23/05 | -- | -- | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.1** | -- | 1.0 U | 2.0 U |
| MW-118S1 | 23.5 - 28.5 | 12/14/06 | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **0.23 J** | 2.0 U |
| MW-118S1 | 23.5 - 28.5 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118S1 | 23.5 - 28.5 | 11/13/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118S2 | 38.5 - 43.5 | 06/20/95 | -- | -- | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 0.70 J [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | -- | 1.0 U [1.0 U] | 3.0 U [3.0 U] |
| MW-118S2 | 38.5 - 43.5 | 12/14/06 | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U |
| MW-118WT | 1.6 - 11.6 | 06/20/95 | -- | -- | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 3.0 U |
| MW-118WT | 1.6 - 11.6 | 05/17/00 | -- | -- | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 0.50 U | 1.0 U | 1.0 U | -- | 1.0 U | **0.47 J** |
| MW-118WT | 1.6 - 11.6 | 06/19/01 | -- | -- | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 2.0 U [2.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | -- | 4.0 U [4.0 U] | 4.0 U [4.0 U] |
| MW-118WT | 1.6 - 11.6 | 06/27/02 | 2.0 U [1.0 U] | 0.49 J [5.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 1.0 U [0.50 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] | 2.0 U [1.0 U] |
| MW-118WT | 1.6 - 11.6 | 06/19/03 | -- | -- | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | -- | 1.0 U [1.0 U] | 1.0 U [1.0 U] |
| MW-118WT | 1.6 - 11.6 | 05/27/04 | -- | -- | 1.7 UJ | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | -- | 1.7 U | 1.7 U |
| MW-118WT | 1.6 - 11.6 | 06/23/05 | -- | -- | 5.0 U | 1.0 U | 1.0 U | **0.20 J** | 1.0 U | 1.0 U | **0.57 J** | -- | 1.0 U | 2.0 U |
| MW-118WT | 1.6 - 11.6 | 12/14/06 | 1.0 U | **0.31 J** | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **0.58 J** |
| MW-118WT | 1.6 - 11.6 | 09/27/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-118WT | 1.6 - 11.6 | 11/13/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-183WT | 6 - 16 | 08/17/00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-183WT | 6 - 16 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 6**
**Analytical Data Summary Table - GPL Organics**
**RACER Trust**
**Saginaw, MI**

| Sample ID: | Sample Depth (feet): | Date Collected: | Methyl cyclohexane | Methyl tert-butyl ether | Methylene Chloride | Styrene | Tetrachloroethene | Toluene | trans-1,2-Dichloroethene | trans-1,3-Dichloropropene | Trichloroethene | Trichlorofluoromethane | Vinyl Chloride | Total Xylenes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Units: | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| ***Site-Specific Groundwater Surface Water Interface Criteria*** | | | NA | 7,100 | 1,500 | 80 | 60 | 270 | 150 | 9 | 200 | NSL | 13 | 49 |
| TWW-1 | 1.5 - 6.5 | 01/25/97 | -- | -- | 1,700 U | 330 U | 330 U | 330 U | 330 U | 330 U | **630** | -- | **2,000** | 1,000 U |
| TWW-1 | 1.5 - 6.5 | 08/08/98 | -- | -- | 1,000 U | 200 U | 200 U | 200 U | -- | 200 U | 200 U | -- | **1,700** | 600 U |
| TWW-1 | 1.5 - 6.5 | 05/18/99 | -- | -- | 1,300 UJD [1,300 UJD] | 250 UD [250 UD] | 250 UD [250 UD] | 250 UD [250 UD] | -- | 250 UD [250 UD] | 250 UD [250 UD] | -- | **330 D [390 D]** | 500 U [500 U] |
| TWW-1 | 1.5 - 6.5 | 05/21/00 | -- | -- | 250 U | 250 U | 250 U | 250 U | **40 J** | 250 U | 250 U | -- | **2,300** | 250 U |
| TWW-1 | 1.5 - 6.5 | 09/29/10 | 71 U | 360 U | 360 U | 71 U | 71 U | 71 U | 71 U | 71 U | 71 U | 71 U | **1,700** | 140 U |
| TWW-1 | 1.5 - 6.5 | 09/21/11 | 77 U [77 U] | 380 U [380 U] | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | **19 [18]** | 77 U [77 U] | 77 U [77 U] | 77 U [77 U] | **500 [540]** | 150 U [150 U] |
| TWW-1 | 1.5 - 6.5 | 09/14/12 | 4.0 U [4.0 U] | 20 U [20 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | 4.0 U [4.0 U] | **2.2 J [1.3 J]** | 4.0 U [4.0 U] | **0.89 J** [4.0 U] | 4.0 U [4.0 U] | **40 [48]** | 8.0 U [8.0 U] |
| TWW-1 | 1.5 - 6.5 | 09/24/13 | 18 U [20 U] | 18 U [20 U] | **18 B [17 J,B]** | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | 18 U [20 U] | **390 [400]** | 36 U [40 U] |
| TWW-1 | 1.5 - 6.5 | 09/23/14 | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | **470 [450]** | 50 U [50 U] |
| TWW-1 | 1.5 - 6.5 | 10/01/15 | 5.0 U [5.0 U] | 5.0 U [5.0 U] | **4.7 J,B [3.1 J,B]** | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | 5.0 U [5.0 U] | **97 [90]** | 10 U [10 U] |
| TWW-1 | 1.5 - 6.5 | 09/27/16 | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | 10 U [7.7 U] | **140 [130]** | 20 U [15 U] |
| TWW-1 Dup | 1.5 - 6.5 | 09/27/16 | 7.7 U | 7.7 U | 7.7 U | 7.7 U | 7.7 U | 7.7 U | 7.7 U | 7.7 U | 7.7 U | 7.7 U | **130** | 15 U |
| TWW-1 | 1.5 - 6.5 | 08/30/17 | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 UJ [1.7 UJ] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | 1.7 U [1.7 U] | **43 [45]** | 3.3 U [3.3 U] |
| TWW-1 Dup | 1.5 - 6.5 | 08/30/17 | 1.7 U | 1.7 U | 1.7 UJ | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | **45** | 3.3 U |
| TWW-1 | 1.5 - 6.5 | 09/25/18 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 5.0 U [5.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | **10 [10]** | 2.0 U [2.0 U] |
| TWW-1 Dup | 1.5 - 6.5 | 09/25/18 | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **10** | 2.0 U |
| TWW-1 | 1.5 - 6.5 | 08/22/19 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 5.0 U [5.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | **1.4 [1.3]** | 2.0 U [2.0 U] |
| TWW-1 Dup | 1.5 - 6.5 | 08/22/19 | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.3** | 2.0 U |
| TWW-1 | 1.5 - 6.5 | 08/12/20 | 1.0 U * | 1.0 U | 5.0 U * | 1.0 U | 1.0 U | 1.0 U | 1.0 U * | 1.0 U | 1.0 U | 1.0 U | **1.6** | 2.0 U |
| TWW-1 | 1.5 - 6.5 | 08/18/21 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 5.0 U [5.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | **0.92 J [1.0]** | 2.0 U [2.0 U] |
| TWW-1 | 1.5 - 6.5 | 09/23/22 | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 5.0 U [5.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | 1.0 U [1.0 U] | **1.3 [1.2]** | 2.0 U [2.0 U] |
| TW-242 | 2 - 7 | 09/25/18 | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **0.42 J** | 1.0 U | 1.0 U | 2.0 U |
| TW-242 | 2 - 7 | 08/22/19 | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.0 U** | 1.0 U | 1.0 U | 2.0 U |
| TW-242 | 2 - 7 | 08/12/20 | 1.0 U * | 1.0 U | 5.0 U F1 * | 1.0 U | 1.0 U | 1.0 U | 1.0 U F1 * | 1.0 U | **0.42 J** | 1.0 U | 1.0 U | 2.0 U |
| TW-242 | 2 - 7 | 08/18/21 | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.0 U** | 1.0 U | 1.0 U | 2.0 U |
| TW-242 | 2 - 7 | 09/23/22 | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U |
| X-10BR | 26.3 - 31.3 | 07/24/95 | -- | -- | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | -- | 1.0 U | 3.0 U |
| X-10BR | 26.3 - 31.3 | 12/15/06 | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U |
| X-4A | 6.2 - 9.2 | 12/14/06 | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U |
| X-4AR | 3.3 - 8.3 | 07/24/95 | -- | -- | 1.0 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 3.0 U |
| X-4AR | 3.3 - 8.3 | 06/09/96 | -- | -- | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 3.0 U |
| X-4AR | 3.3 - 8.3 | 03/05/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-4CAUG | 18 - 23 | 07/24/95 | -- | -- | 1.0 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 3.0 U |
| X-4CAUG | 18 - 23 | 06/08/96 | -- | -- | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 3.0 U |
| X-4CAUGR | 14 - 19 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-4D | 40 - 45 | 01/09/08 | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U |
| X-4D | 40 - 45 | 04/02/08 | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U |
| X-4D | 40 - 45 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9AR | 3 - 13 | 07/24/95 | -- | -- | 1.0 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 3.0 U |
| X-9AR | 3 - 13 | 06/09/96 | -- | -- | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 3.0 U |
| X-9AR | 3 - 13 | 03/05/97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9AR | 3 - 13 | 12/15/06 | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U |
| X-9AR | 3 - 13 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9BR | 26 - 31 | 07/24/95 | -- | -- | 1.0 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 3.0 U |
| X-9BR | 26 - 31 | 06/08/96 | -- | -- | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 3.0 U |
| X-9BR | 26 - 31 | 12/15/06 | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U |
| X-9BR | 26 - 31 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9CAUG | 20 - 25 | 07/24/95 | -- | -- | 1.0 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 3.0 U |
| X-9CAUG | 20 - 25 | 06/08/96 | -- | -- | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | -- | 1.0 U | 3.0 U |
| X-9CAUG | 20 - 25 | 12/15/06 | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U |
| X-9CAUG | 20 - 25 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9D | 42.5 - 47.5 | 01/08/08 | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.0 U |
| X-9D | 42.5 - 47.5 | 03/11/08 | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 UJ | 1.0 U | 1.0 UJ | 1.0 UJ | 2.0 U |
| X-9D | 42.5 - 47.5 | 09/28/16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| X-9D | 42.5 - 47.5 | 08/29/17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 6**
**Analytical Data Summary Table - Notes**
**RACER Trust**
**Saginaw, MI**

**Notes:**
All results are in micrograms per liter (ug/L).
Criteria presented are the applicable site-specific criteria. Drinking water is not a complete pathway; therefore drinking water criteria are not presented.
Applicable site-specific criteria are the minimum Rule 57 criteria, excluding drinking water.
Hardness-dependent Rule 57 criteria are based on a hardness of 270 milligrams per liter for the Saginaw River, as analyzed in the October 2016 sampling event.
pH-dependent Rule 57 criteria are based on a default pH of 7.
Un-ionized ammonia is calculated based on the pH and temperature of the groundwater sample, using the following equaitons. When available, the field-measured pH was used.
Un-ionized ammonia (µg/L = Total Ammonia (µg/L) × Fraction un-ionized ammonia
Fraction un-ionized ammonia = $1/[10^{(pKa-pH)} + 1]$
pKa = 0.0901821+2729.92/T
T (in Kelvin) = T(°C) + 273.15
Bolded cells represent constitiuent concentrations with detections.
Duplicate results are presented in brackets.
Gray shaded cells represent constituent concentrations that exceed site-specific Groundwater/Surface Water Interface (GSI) Criteria.
MW-183WT, X-4CAUGR, X-9AR, X-9BR, X-9CAUG represent a groundwater surface water interface (GSI) perimeter monitoring well from Green Point Landfill.
MW-107WT, MW-107S1, MW-108S2, MW-110WTR, MW-111WT, MW-114S2, MW-114WT, MW-149WT, MW-185WT, and MW-186WT represent a GSI perimeter monitoring well from SMI.
* Venting groundwater discharge concentrations was recommended by MDEQ in a letter dated November 26, 2008 followed by a Mixing Zone Determination Request and based on a five year renewal approved by the MDEQ on October 21, 2021.

**Data Qualifiers:**

| | |
|---|---|
| ND = | Not detected. The value in parentheses represents the associated detection limit. |
| -- or NA = | Not analyzed for this constituent. |
| B = | Inorganics: the detected analyte is an estimated value between the instrument detection limit (IDL) and the reporting limit (RL). |
| B = | Organics: the compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect. |
| BJ = | The detected analyte is an estimated concentration between the IDL and the RL. |
| D = | Concentration is based on a diluted sample analysis. |
| F1= | MS and/or MSD Recovery is outside acceptance limits |
| H = | Sample was prepped or analyzed beyond the specified hold time. |
| J = | The compound/constituent was positively identified; however, the associated numerical value is an estimated concentration only. |
| L = | A negative instrument reading had an absolute value greater than the reporting limit. |
| M = | Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit. |
| R = | Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data shall not be used for any qualitative or quantitative purposes. |
| U = | The constituent was analyzed for but not detected. The associated value is the constituent quantitation limit. |
| UJ = | The constituent was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual result. |
| ^ = | ICV, CCV, ICB, CCB, ISA, ISB, CRI, CRA, DLCK, or MRL standard: instrument related QC exceeds the control limits. |
| * = | LCS (lab control sample) or LCSD (lab control sample duplicate) is outside acceptance limits. |

# Figures

Service Layer Credits: Esri, USDA Farm Service Agency 2020

MW-138WT
MW-103WT,S1,S2
NEW PARKING LOT
MW-140WT,S1,S2
MW-105WT,S1,S2
B-5R,BAUG,CAUG
RG1
MW-149WT
RECREATION PLAZA
MW-107WT,S1
QPTW-04R
QP-1R
QPTW-03R2
QP-2R
QP-3R
QPTW-01R
QPTW-13R
QPTW-05R
QPTW-10R
MW-134WT,S1,S2
MW-108WT,S1,S2,S3,S4
S5.6
X5.9
V3.6
V3.0
MW-110WTR
MW-131WT,S1,S2
MW-111WT,S1,S2,S3,S4
VIEWING PLATFORM
MW-185WT
MW-186WT
MW-143WT
B-3R,BAUG
SG1
MW-114WT,S1,S2,S3
X-2A
X-1A,B
X-1CR2
MW-115WT,S1,S2,S3*
MW-183WT
X-4AR,CAUGR,D
MW-117WT,S1
MW-118WT,S1
X-16A,B
VIEWING PLATFORM
X-10AR2
MW-128WT,S1
MW-2A,B,CAUG
X-9AR,BR,CAUG,D
MW-119WT,S1,S2
MW-3A,B
X-13AR,B,CAUG
TW-241
TWW-2
MW-127WT,S1
TW-242
TWW-1
X-12AR,B,CAUG
MW-120WT,S1,S2
PLANNED VIEWING PLATFORM
MW-121WT,S1,S2
MW-123WT,S1
MW-125WT
MW-124WT,S1
X-14A,B,CAUG
MW-122WT,S1,S2

**LEGEND**

- EXISTING MONITORING WELL
- INACCESSIBLE MONITORING WELL TO BE ABANDONED
- MANHOLE
- WELL TO BE GAUGED AND SAMPLED
- WELL TO BE GAUGED ONLY
- PERMANENT MARKER LOCATION
- SMI PROPERTY BOUNDARY
- GPL PROPERTY BOUNDARY
- PENINSULA PROPERTY BOUNDARY
- * POTENTIAL ALTERNATE SAMPLING LOCATION

NOTE: WELLS LISTED FOR SAMPLING AND/OR GAUGING IN ACCORDANCE WITH THE 2020 O&M PLAN

0 500 1,000
SCALE IN FEET

SAGINAW MALLEABLE INDUSTRIAL LAND,
GREEN POINT LANDFILL, AND PENINSULA PROPERTY
SAGINAW, MICHIGAN

# SITE LAYOUT MAP

ARCADIS

FIGURE 1

CITY: NOVI, MI DIV: ENV DB: TRY PIC: J. Barrett PM: S. Clearwater TM: A. Robinson TR: PROJECT NUMBER: 30121470 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
D:\GIS\Project Files\MotorsLiquidationCompany\SaginawDocuments\PFAS_2022\2022_01_SiteLayout_SMI_MixingMemo.mxd PLOTTED: 12/2/2022 3:24:42 PM BY: TYarbrough

FORMER RAILYARD AREA
SALT STREET
CENTER STREET
FORMER QUEEN STREET DUMP AREA
FORMER MELTING DEPARTMENT AREA
I27.7 MANHOLE AREA
FORMER INTAKE CHANNEL
TERMINATED TYPE III LANDFILL
SAGINAW RIVER
FORMER QUENCH PIT AREA
FORMER PARKING LOT NORTH OF THE BUFFER BASIN
STORMWATER POND
SOUTHWEST PLANT LNAPL AREA
PENINSULA PROPERTY EXPOSURE BARRIER
FORMER SECONDARY SETTLING POND
TERMINATED TYPE III LANDFILL
SEDIMENTATION BASIN
GREEN POINT LANDFILL
STORM WATER DETENTION BASIN
FORMER HILLOCK AREA
MITIGATION WETLAND
MITIGATION WETLAND

## LEGEND

**CAPS**

- INTRUSIVE ACTIVITY PROHIBITION AND SOIL COVER
- INTRUSIVE ACTIVITY PROHIBITION
- LNAPL AREA
- FORMER QUEEN STREET DUMP NOTIFICATION AREA
- PCB REMEDIATION WASTE/LOW OCCUPANCY AREA WITH A 1-FT SOIL COVER OVER IMPACTS ≤10 PPM PCBS
- PCB REMEDIATION WASTE/LOW OCCUPANCY AREA PCB CONCENTRATIONS >100 PPM AT >10 FT BGS
- MITIGATION WETLAND
- SMI PROPERTY BOUNDARY
- GPL PROPERTY BOUNDARY
- PENINSULA PROPERTY BOUNDARY
- SURFACE WATER BODIES
- STORM SEWER BULKHEAD LOCATIONS

SITEWIDE RESTRICTIONS IN PLACE ON LAND USE, GROUNDWATER USE, AND VAPOR INTRUSION.
GPL CAP IS A MULTI-LAYER COVER.

SMI: SAGINAW MALLEABLE INDUSTRIAL LAND
GPL: GREEN POINT LANDFILL
LNAPL: LIGHT NON-AQUEOUS PHASE LIQUID
PCB: POLYCHLORINATED BIPHENYLS

0 500 1,000
SCALE IN FEET

SAGINAW MALLEABLE INDUSTRIAL LAND,
GREEN POINT LANDFILL, AND PENINSULA PROPERTY
SAGINAW, MICHIGAN

# SITE RESTRICTION AREAS

ARCADIS

FIGURE
2

CITY: Novi DIV: ENV DB: TRY PIC: PM: TM: TR: PROJECT NUMBER: 30121470 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
D:\GIS\Project Files\MotorsLiquidationCompany\Saginaw\Documents\PFAS_2022\2022_02_Site Restriction Areas_2020_rev2.mxd PLOTTED: 12/2/2022 3:26:28 PM BY: TYarbrough

MW-138WT
596.15

MW-103WT
582.23

MW-103S1,S2

MW-140WT
585.11

MW-140S1,S2

MW-105S1,S2

MW-105WT
585.46

(SURFACE WATER)

B-5BAUG,CAUG

B-5R
586.02

MW-149WT
580.06

RG1

MW-107WT

MW-107S1
579.88

MW-134WT
586.67

MW-134S1,S2

QP-1R
589.12

QPTW-04R

QPTW-05R

QPTW-03R2

QP-2R

QPTW-10R
588.78

QP-3R

QPTW-01R

QPTW-13R
588.78

MW-108S1
580.47

MW-108WT,S2,S3,S4

MW-110WTR
579.24

MW-131WT
586.85

MW-131S1,S2

MW-111S1
580.52

MW-111WT,S2,S3,S4

MW-185WT
581.85

MW-186WT
581.53

MW-143WT
574.67*

B-3R,BAUG

SG1

MW-114WT,S2,S3,S4

MW-114S1
582.39

X-1B

X-2A
587.72

X-1A
585.13

X-1CR2

MW-183WT
580.63

X-4CAUGR,D

X-4AR
582.13

MW-117S1,S2

MW-117WT
582.27

MW-118S1,S2

MW-118WT
582.11

X-16A,B

MW-128WT
NA

MW-128S1

X-10AR2
585.66

X-9BR,CAUG,D

X-9AR
579.82

TW-241
581.46

TW-242
580.09

TWW-1
581.16

MW-124WT
NA

MW-125WT
582.08

MW-124S1

MW-122S1,S2

MW-122WT
581.49

594

592

590

588

586

584

582

582

## LEGEND

- MONITORING WELL
- 584 — GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- APPARENT GROUNDWATER FLOW DIRECTION
- SAGINAW MALLEABLE INDUSTRIAL (SMI) PROPERTY BOUNDARY
- GREEN POINT LANDFILL (GPL) PROPERTY BOUNDARY
- PENINSULA PROPERTY BOUNDARY
- NA — NOT AVAILABLE

GPL CAP IS A MULTI-LAYER COVER

NOTES:

1. DEPTH TO WATER ELEVATIONS WERE COLLECTED ON SEPTEMBER 20-22, 2022, AND MEASURED FROM TOP OF WELL CASING.
2. ALL GROUNDWATER ELEVATIONS AND MEASUREMENTS ARE IN FEET ABOVE MEAN SEA LEVEL (AMSL).
3. VERTICAL DATUM REFERENCED TO NGVD OF 1929, HORIZONTAL DATUM REFERENCED TO MICHIGAN SPC-NAD 1983.
4. GPL CAP IS A MULTI-LAYER COVER.

* ANOMALOUS GROUNDWATER ELEVATIONS NOT USED FOR CONTOURING.

0 500 1,000

SCALE IN FEET

SAGINAW MALLEABLE INDUSTRIAL LAND,
GREEN POINT LANDFILL, AND PENINSULA PROPERTY
SAGINAW, MICHIGAN

# GROUNDWATER ELEVATION CONTOUR MAP SHALLOW AQUIFER - SEPTEMBER 20, 2022

ARCADIS

FIGURE
3

CITY: Novi DIV: ENV DB: TRY PIC: J. BARRETT PM: S. CLEARWATER TM: A. ROBINSON PROJECT NUMBER: 30121470 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
D:\GIS\Project Files\MotorsLiquidationCompany\Saginaw\Documents\PFAS_2022\2022_03_GW_Elevation_2022_09.mxd PLOTTED: 12/6/2022 11:49:18 AM BY: TYarbrough

Service Layer Credits: Esri, USDA Farm Service Agency 2020

MW-138WT

MW-103WT,S1,S2

NEW PARKING LOT

MW-140WT,S1,S2

MW-105WT,S1,S2

B-5R,BAUG,CAUG

RECREATION PLAZA

MW-149WT

RG1

MW-107WT,S1

QPTW-05R
QPTW-04R
QP-1R
QPTW-03R2
QP-2R
QP-3R
QPTW-01R
QPTW-10R
QPTW-13R

MW-134WT,S1,S2

| MW-134WT | | | | |
|---|---|---|---|---|
| Sample Date | 12/18/2018 | 8/11/2020 | 8/19/2021 | 9/27/2022 |
| PFOA | 3.0 J | 2.0 J | 1.7 J | 3.6 J a |
| PFOS | 4.0 U | 1.9 U | 1.8 U | 1.9 U a |

MW-108WT;S1;S2;S3;S4

| QPTW-13R | | | | |
|---|---|---|---|---|
| Sample Date | 12/18/2018 | 8/11/2020 | 8/19/2021 | 9/26/2022 |
| PFOA | 8.38 | 4.7 J [5.1] | 3.8 a [4.0 a] | 3.9 a [4.8 a] |
| PFOS | 8.47 | 11.0 [10.6] | 6.6 [8.4] | 11.0 [12.8 a] |

| MW-108WT | | | |
|---|---|---|---|
| Sample Date | 12/18/2018 | 8/13/2020 | 8/19/2021 |
| PFOA | 3.66 J | 4.4 | 4.6 |
| PFOS | 2.63 J | 17.1 | 15.1 |

S5.6

X5.9

V3.6

V3.0

| MW-131WT | | | | |
|---|---|---|---|---|
| Sample Date | 12/18/2018 | 8/11/2020 | 8/19/2021 | 9/26/2022 |
| PFOA | 2.38 J | 3.6 J | 3.7 | 3.3 J |
| PFOS | 4.88 J | 7.9 | 11.0 | 14.6 a |

MW-110WTR

VIEWING PLATFORM

MW-131WT,S1,S2

MW-111WT,S1,S2,S3,S4

| TW98-111WT | |
|---|---|
| Sample Date | 12/18/2018 |
| PFOA | 6.36 |
| PFOS | 18 |

| B-3R | | | | |
|---|---|---|---|---|
| Sample Date | 12/18/2018 | 8/11/2020 | 8/19/2021 | 9/26/2022 |
| PFOA | 5.58 | 2.7 J | 2.7 J | 2.7 J a |
| PFOS | 15.6 | 14.4 | 13.7 | 14.3 |

| X-2A | | | | |
|---|---|---|---|---|
| Sample Date | 12/18/2018 | 9/8/2020 | 8/18/2021 | 9/21/2022 |
| PFOA | 50.6 [46.5] | 29.9 | 29.6 [27.7] | 23.6 a [23.2 a] |
| PFOS | 16.5 [14.6] | 14.5 | 15.8 [14.9] | 20.9 a [21.2 a] |

MW-185WT

MW-186WT

TW98-111WT

MW-143WT

B-3R,BAUG

| MW-183WT | | | | |
|---|---|---|---|---|
| Sample Date | 12/19/2018 | 8/18/2020 | 8/24/2021 | 9/26/2022 |
| PFOA | 2.07 J | 4.6 | 2.9 J | 4.0 |
| PFOS | 4.0 U | 3.5 J | 1.5 J | 1.9 U |

MW-114WT;S1;S2;S3

MW97-105WT

| MW97-105WT | |
|---|---|
| Sample Date | 12/18/2018 |
| PFOA | 22.1 |
| PFOS | 9.7 |

SG1

X-2A

MW-115WT;S1;S2;S3*

X-1A;B

X-1CR2

MW-183WT

| MW-117WT | | | | MW-117S1 | | |
|---|---|---|---|---|---|---|
| Sample Date | 8/13/2020 | 8/17/2021 | 9/22/2022 | 8/13/2020 | 8/17/2021 | 9/21/2022 |
| PFOA | 3.6 J | 5.5 | 1.9 U | 1.9 U | 1.8 U | 1.9 U |
| PFOS | 1.9 U | 1.8 U | 1.9 U a | 1.9 U | 1.8 U | 1.9 U a |

X-4AR,CAUGR,D

MW-117WT,S1

| MW-118WT | | | | MW-118S1 |
|---|---|---|---|---|
| Sample Date | 8/14/2020 | 8/17/2021 | 9/22/2022 | 12/18/2018 |
| PFOA | 2.4 J | 5.3 | 4.8 | 1.95 J |
| PFOS | 1.9 U | 1.8 U | 1.9 U a | 4.0 U |

MW-118WT,S1

X-16A,B

VIEWING PLATFORM

MW-128WT,S1

X-10AR2

MW-2A,B,CAUG

X-9AR,BR,CAUG,D

| X-10AR2 | | | | |
|---|---|---|---|---|
| Sample Date | 12/18/2018 | 9/8/2020 | 8/18/2021 | 9/22/2022 |
| PFOA | 2.13 J | 5.8 [5.6] | 6.1 | 6.3 |
| PFOS | 4.0 U | 1.7 U [1.7 U] | 1.8 U | 1.9 U |

MW-119WT,S1,S2

MW-3A,B

| X-9AR | | | | |
|---|---|---|---|---|
| Sample Date | 12/19/2018 | 8/17/2020 | 8/18/2021 | 9/22/2022 |
| PFOA | 2.0 U | 2.5 J | 1.5 J | 1.3 J |
| PFOS | 4.0 U | 1.9 U | 1.8 U | 1.9 U |

X-13AR,B,CAUG

TW-241

TWW-2*

MW-127WT,S1

TW-242

TWW-1

X-12AR,B,CAUG

MW-120WT,S1,S2

| TWW-1 | | | |
|---|---|---|---|
| Sample Date | 9/8/2020 | 8/18/2021 | 9/23/2022 |
| PFOA | 11.0 | 27.1 | 19.7 |
| PFOS | 1.8 U | 1.7 J | 3.6 J a |

PLANNED VIEWING PLATFORM

MW-121WT,S1,S2

MW-123WT,S1

MW-122WT,S1,S2

X-14A,B,CAUG

MW-125WT

MW-124WT,S1

| MW-125WT | |
|---|---|
| Sample Date | 9/8/2020 |
| PFOA | 4.3 |
| PFOS | 1.7 U |

| MW-122WT | | |
|---|---|---|
| Sample Date | 8/18/2021 | 9/23/2022 |
| PFOA | 3.1 J | 2.4 J |
| PFOS | 1.7 J | 1.9 U |

**LEGEND**

- EXISTING MONITORING WELL
- INACCESSIBLE MONITORING WELL TO BE ABANDONED
- MANHOLE
- WELL TO BE GAUGED AND SAMPLED
- WELL TO BE GAUGED ONLY
- PERMANENT MARKER LOCATION
- SMI PROPERTY BOUNDARY
- GPL PROPERTY BOUNDARY
- PENINSULA PROPERTY BOUNDARY
- * POTENTIAL ALTERNATE SAMPLING LOCATION

| MW-125WT | |
|---|---|
| Sample Date | 9/8/2020 |
| PFOA | 4.3 |
| PFOS | 1.7 U |

SAMPLE LOCATION
SAMPLING DATE
PFOA ANALYTICAL RESULT
PFOS ANALYTICAL RESULT

NOTES:
DATA BOXES ARE PRESENTED FOR ALL WELLS WITH SAMPLES ANALYZED FOR PFAS.

ALL VALUES ARE IN NANOGRAMS PER LITER (ng/L).

**BOLD** RESULT DENOTES DETECTION.

SHADED RESULT DENOTES DETECTION IS ABOVE THE EGLE GROUNDWATER SURFACE WATER CRITERIA.

RED RESULT DENOTES DETECTION IS ABOVE EGLE DRINKING WATER MAXIMUM CONTAMINANT LIMIT (MCL).

a = ASSOCIATED ID STANDARD OUTSIDE CONTROL LIMITS. CONFIRMED BY BATCH QC, RE-EXTRACTION AND/OR REANALYSIS.
J = ESTIMATED VALUE BETWEEN THE LIMIT OF QUANTITATION AND THE METHOD DETECTION LIMIT.
U = NOT DETECTED.
[ ] = DUPLICATE SAMPLE DETECTIONS
EGLE = ENVIRONMENT GREAT LAKES AND ENERGY
PFOA = PERFLUOROOCTANOIC ACID
PFOS = PERFLUOROOCTANESULFONIC ACID

WELLS LISTED FOR SAMPLING AND/OR GAUGING IN ACCORDANCE WITH THE 2020 O&M PLAN

0 500 1,000
SCALE IN FEET

SAGINAW MALLEABLE INDUSTRIAL LAND,
GREEN POINT LANDFILL, AND PENINSULA PROPERTY
SAGINAW, MICHIGAN

# PFAS SAMPLING RESULTS

ARCADIS

FIGURE 4

CITY: NOVI, MI DIV: ENV DB: TRY PIC: J. Barrett PM: S. Clearwater TM: A. Robinson TR: PROJECT NUMBER: 30121470 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
D:\GIS\Project Files\MotorsLiquidationCompany\Saginaw\Documents\PFAS 2022\2022 04 PFAS Sampling.mxd PLOTTED: 12/2/2022 3:28:10 PM BY: TYarbrough

# Attachment 1

**SMI Well Construction Logs, Sampling Parameters and Field Parameters**

**Attachment 1**
**Monitoring Well Sampling Plan and Construction Summary**
**2022 Annual Report**
**RACER Trust**
**Saginaw Malleable Industrial Land**
**Saginaw, Michigan**

| Well ID | Screen Interval (ft bgs)[1] | Screened Unit/Zone | Well Construction | Date Installed | TIC[2] Elevation (ft AMSL)[3] |
|---|---|---|---|---|---|
| B-3R | 16-26 | Upper Sand | 2” PVC | 5/22/1995 | 609.51 |
| MW-107WT | 4-9 | Water Table | 2" PVC | 12/23/1994 | 590.65 |
| MW-107S1 | 12.5-17.5 | Upper Sand | 2" PVC | 12/23/1994 | 590.74 |
| MW-108WT | 2.5-7.5 | Water Table | 2" PVC | 12/21/9194 | 590.53 |
| MW-108S2 | 22-27 | Upper Sand | 2" PVC | 12/21/1994 | 590.26 |
| MW-110WTR | 3-8 | Water Table | 2" PVC | 11/9/2001 | 591.52 |
| MW-111WT | 5.5-10.5 | Water Table | 2" PVC | 1/6/1995 | 590.95 |
| MW-114WT | 3.5-8.5 | Water Table | 2" PVC | 1/10/1995 | 591.12 |
| MW-114S2 | 22.5-27.5 | Upper Sand | 2" PVC | 1/10/1995 | 591.20 |
| MW-131WT | 2-12 | Water Table | 2" PVC | 1/13/1995 | 592.56 |
| MW-134WT | 4-9 | Water Table | 2" PVC | 1/9/1995 | 594.02 |
| MW-149WT | 7-17 | Water Table | 2" PVC | 9/21/1995 | 592.27 |
| MW-185WT | 3-8 | Water Table | 2" PVC | 11/8/2001 | 588.67 |
| MW-186WT | 8-18 | Water Table | 2" PVC | NA | 590.34 |
| QPTW-13R | 4-14 | Water Table | 2” PVC | 8/16/2017 | 594.04 |

**Notes:**

[1] Depths are in feet below ground surface (ft bgs)

[2] TIC = top of inner casing

[3] Elevations are in feet above mean sea level (ft AMSL)

“ PVC = inch polyvinyl chloride

NA = not available

# Attachment 2

## Laboratory Analytical Reports

The results set forth herein are provided by SGS North America Inc.

*e-Hardcopy 2.0*
*Automated Report*

## Technical Report for

Arcadis

Racer Saginaw; 77 W Center St, Saginaw, MI

30121470

SGS Job Number: FA99297

Sampling Dates: 09/21/22 - 09/26/22



Report to:

Arcadis
28550 Cabot Dr Suite 500
Novi, MI 48377
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amanda.robinson@arcadis.com; megan.humphrey@arcadis.com
ATTN: Scott Clearwater

Total number of pages in report: 45

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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how we can serve you better at:
EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

# Sample Summary

Arcadis

**Job No:** FA99297

Racer Saginaw; 77 W Center St, Saginaw, MI
Project No: 30121470

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| FA99297-1 | 09/21/22 | 11:40 | DPBC | 09/28/22 | AQ | Equipment Blank | EB-01_092122 |
| FA99297-2 | 09/21/22 | 14:25 | DPBC | 09/28/22 | AQ | Ground Water | MW-117SI_092122 |
| FA99297-3 | 09/21/22 | 17:55 | DPBC | 09/28/22 | AQ | Ground Water | X-2A_092122 |
| FA99297-4 | 09/21/22 | 00:00 | DPBC | 09/28/22 | AQ | Ground Water | DUP-01_092122 |
| FA99297-5 | 09/22/22 | 08:00 | DPBC | 09/28/22 | AQ | Ground Water | X-9AR_092222 |
| FA99297-6 | 09/22/22 | 10:40 | DPBC | 09/28/22 | AQ | Ground Water | MW-117WT_092222 |
| FA99297-7 | 09/22/22 | 13:20 | DPBC | 09/28/22 | AQ | Ground Water | MW-118WT_092222 |
| FA99297-8 | 09/22/22 | 18:00 | DPBC | 09/28/22 | AQ | Ground Water | X-10AR2_092222 |
| FA99297-8D | 09/22/22 | 18:00 | DPBC | 09/28/22 | AQ | Water Dup/MSD | X-10AR2_092222 |
| FA99297-8S | 09/22/22 | 18:00 | DPBC | 09/28/22 | AQ | Water Matrix Spike | X-10AR2_092222 |
| FA99297-9 | 09/23/22 | 08:20 | DPBC | 09/28/22 | AQ | Ground Water | MW-122WT_092322 |
| FA99297-10 | 09/23/22 | 11:35 | DPBC | 09/28/22 | AQ | Ground Water | TWW-1_092322 |
| FA99297-11 | 09/26/22 | 11:05 | DPBC | 09/28/22 | AQ | Ground Water | MW-183WT_092622 |

# Summary of Hits

**Job Number:** FA99297
**Account:** Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI
**Collected:** 09/21/22 thru 09/26/22

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | LOQ | LOD | Units | Method |
|---|---|---|---|---|---|---|
| **FA99297-1** | **EB-01_092122** | | | | | |
| No hits reported in this sample. | | | | | | |
| **FA99297-2** | **MW-117SI_092122** | | | | | |
| No hits reported in this sample. | | | | | | |
| **FA99297-3** | **X-2A_092122** | | | | | |
| Perfluorobutanoic acid [a] | | 11.5 | 7.4 | 3.7 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoroheptanoic acid [a] | | 1.8 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanoic acid [a] | | 23.6 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorohexanesulfonic acid [a] | | 4.3 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanesulfonic acid [a] | | 20.9 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| **FA99297-4** | **DUP-01_092122** | | | | | |
| Perfluorobutanoic acid [a] | | 11.0 | 7.4 | 3.7 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoroheptanoic acid [a] | | 4.2 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanoic acid [a] | | 23.2 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorohexanesulfonic acid [a] | | 5.0 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanesulfonic acid [a] | | 21.2 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| **FA99297-5** | **X-9AR_092222** | | | | | |
| Perfluorobutanoic acid | | 19.0 | 7.4 | 3.7 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoropentanoic acid | | 2.0 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorohexanoic acid | | 1.6 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoroheptanoic acid | | 1.6 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanoic acid | | 1.3 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorobutanesulfonic acid | | 1.4 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| **FA99297-6** | **MW-117WT_092222** | | | | | |
| Perfluorobutanoic acid | | 269 | 37 | 19 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoropentanoic acid | | 47.3 | 19 | 9.3 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorohexanoic acid | | 84.1 | 19 | 9.3 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoroheptanoic acid | | 10 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| **FA99297-7** | **MW-118WT_092222** | | | | | |
| Perfluorobutanoic acid [a] | | 48.8 | 7.4 | 3.7 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoropentanoic acid [a] | | 11.8 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorohexanoic acid [a] | | 19.4 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |

# Summary of Hits

**Job Number:** FA99297
**Account:** Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI
**Collected:** 09/21/22 thru 09/26/22

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | LOQ | LOD | Units | Method |
|---|---|---|---|---|---|---|
| Perfluoroheptanoic acid [a] | | 9.7 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanoic acid | | 4.8 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| **FA99297-8** | **X-10AR2_092222** | | | | | |
| Perfluorobutanoic acid | | 4.3 J | 7.4 | 3.7 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanoic acid | | 6.3 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorobutanesulfonic acid | | 1.1 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| **FA99297-9** | **MW-122WT_092322** | | | | | |
| Perfluorobutanoic acid | | 79.1 | 37 | 19 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoropentanoic acid | | 7.3 J | 19 | 9.3 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorohexanoic acid | | 5.6 J | 19 | 9.3 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoroheptanoic acid | | 1.7 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanoic acid | | 2.4 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorobutanesulfonic acid [a] | | 2.6 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| **FA99297-10** | **TWW-1_092322** | | | | | |
| Perfluorobutanoic acid | | 34.0 J | 37 | 19 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoropentanoic acid | | 7.8 J | 19 | 9.3 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorohexanoic acid | | 11.3 J | 19 | 9.3 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoroheptanoic acid | | 10.9 J | 19 | 9.3 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanoic acid | | 19.7 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorononanoic acid | | 1.1 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorobutanesulfonic acid [a] | | 2.9 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanesulfonic acid [a] | | 3.6 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| **FA99297-11** | **MW-183WT_092622** | | | | | |
| Perfluorobutanoic acid | | 11.4 | 7.4 | 3.7 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoropentanoic acid | | 3.4 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorohexanoic acid | | 1.3 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoroheptanoic acid | | 1.4 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanoic acid | | 4.0 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorobutanesulfonic acid | | 2.5 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorohexanesulfonic acid | | 2.1 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |

(a) Associated ID Standard outside control limits.

## Sample Results

Report of Analysis

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | EB-01_092122 | | |
| **Lab Sample ID:** | FA99297-1 | **Date Sampled:** | 09/21/22 |
| **Matrix:** | AQ - Equipment Blank | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100809.D | 1 | 10/22/22 15:44 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 [a] | 2Q101085.D | 5 | 10/27/22 07:11 | WH | 10/11/22 09:05 | OP93439 | S2Q1410 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 270 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2706-90-3 | Perfluoropentanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-24-4 | Perfluorohexanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-85-9 | Perfluoroheptanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-67-1 | Perfluorooctanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-95-1 | Perfluorononanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-76-2 | Perfluorodecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2706-91-4 | Perfluoropentanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 355-46-4 | Perfluorohexanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-92-8 | Perfluoroheptanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 68259-12-1 | Perfluorononanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | EB-01_092122 | | |
| **Lab Sample ID:** | FA99297-1 | **Date Sampled:** | 09/21/22 |
| **Matrix:** | AQ - Equipment Blank | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 919005-14-4 | ADONA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 61% | 64% | 50-150% |
| | 13C5-PFPeA | 61% | 65% | 50-150% |
| | 13C5-PFHxA | 60% | 64% | 50-150% |
| | 13C4-PFHpA | 61% | 65% | 50-150% |
| | 13C8-PFOA | 61% | 67% | 50-150% |
| | 13C9-PFNA | 58% | 60% | 50-150% |
| | 13C6-PFDA | 56% | 55% | 50-150% |
| | 13C7-PFUnDA | 57% | 58% | 50-150% |
| | 13C2-PFDoDA | 51% | 53% | 50-150% |
| | 13C2-PFTeDA | 45% [c] | 47% [c] | 50-150% |
| | 13C3-PFBS | 61% | 66% | 50-150% |
| | 13C3-PFHxS | 61% | 63% | 50-150% |
| | 13C8-PFOS | 54% | 60% | 50-150% |
| | 13C8-FOSA | 56% | 59% | 50-150% |
| | d3-MeFOSAA | 56% | 55% | 50-150% |
| | d5-EtFOSAA | 53% | 57% | 50-150% |
| | 13C2-4:2FTS | 59% | 63% | 50-150% |
| | 13C2-6:2FTS | 63% | 66% | 50-150% |
| | 13C2-8:2FTS | 51% | 51% | 50-150% |
| | 13C3-HFPO-DA | 57% | 60% | 50-150% |

(a) Confirmation run.
(b) Associated ID Standard outside control limits. Confirmed by re-analysis.
(c) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-117SI_092122 | | |
| **Lab Sample ID:** | FA99297-2 | **Date Sampled:** | 09/21/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100810.D | 1 | 10/22/22 16:01 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 [a] | 2Q101526.D | 1 | 11/04/22 15:57 | WH | 10/31/22 11:46 | OP93818 | S2Q1416 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 255 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2706-90-3 | Perfluoropentanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-24-4 | Perfluorohexanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-85-9 | Perfluoroheptanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-67-1 | Perfluorooctanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-95-1 | Perfluorononanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-76-2 | Perfluorodecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2706-91-4 | Perfluoropentanesulfonic aci [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 355-46-4 | Perfluorohexanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-92-8 | Perfluoroheptanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 68259-12-1 | Perfluorononanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA [c] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-117SI_092122 | | |
| **Lab Sample ID:** | FA99297-2 | **Date Sampled:** | 09/21/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) [c] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 919005-14-4 | ADONA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Mino [c] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 41% [d] | 50% | 50-150% |
| | 13C5-PFPeA | 41% [d] | 53% | 50-150% |
| | 13C5-PFHxA | 41% [d] | 52% | 50-150% |
| | 13C4-PFHpA | 44% [d] | 55% | 50-150% |
| | 13C8-PFOA | 51% | 65% | 50-150% |
| | 13C9-PFNA | 46% [d] | 59% | 50-150% |
| | 13C6-PFDA | 47% [d] | 57% | 50-150% |
| | 13C7-PFUnDA | 50% | 53% | 50-150% |
| | 13C2-PFDoDA | 43% [d] | 37% [d] | 50-150% |
| | 13C2-PFTeDA | 38% [d] | 22% [d] | 50-150% |
| | 13C3-PFBS | 44% [d] | 52% | 50-150% |
| | 13C3-PFHxS | 52% | 63% | 50-150% |
| | 13C8-PFOS | 43% [d] | 54% | 50-150% |
| | 13C8-FOSA | 31% [d] | 31% [d] | 50-150% |
| | d3-MeFOSAA | 52% | 55% | 50-150% |
| | d5-EtFOSAA | 47% [d] | 49% [d] | 50-150% |
| | 13C2-4:2FTS | 41% [d] | 49% [d] | 50-150% |
| | 13C2-6:2FTS | 54% | 65% | 50-150% |
| | 13C2-8:2FTS | 45% [d] | 56% | 50-150% |
| | 13C3-HFPO-DA | 39% [d] | 52% | 50-150% |

(a) Confirmation run.
(b) Associated ID Standard outside control limits.
(c) Associated ID Standard outside control limits. Confirmed by re-analysis.
(d) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | X-2A_092122 | | |
| **Lab Sample ID:** | FA99297-3 | **Date Sampled:** | 09/21/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100813.D | 1 | 10/22/22 16:51 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 [a] | 2Q101357.D | 1 | 11/02/22 16:39 | WH | 10/28/22 11:28 | OP93795 | S2Q1414 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 260 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid [b] | 11.5 | 7.4 | 3.7 | 1.9 | ng/l | |
| 2706-90-3 | Perfluoropentanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-24-4 | Perfluorohexanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-85-9 | Perfluoroheptanoic acid [b] | 1.8 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 335-67-1 | Perfluorooctanoic acid [b] | 23.6 | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-95-1 | Perfluorononanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-76-2 | Perfluorodecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2706-91-4 | Perfluoropentanesulfonic aci [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 355-46-4 | Perfluorohexanesulfonic acid [b] | 4.3 | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-92-8 | Perfluoroheptanesulfonic aci [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid [b] | 20.9 | 3.7 | 1.9 | 0.93 | ng/l | |
| 68259-12-1 | Perfluorononanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | X-2A_092122 | | |
| **Lab Sample ID:** | FA99297-3 | **Date Sampled:** | 09/21/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 919005-14-4 | ADONA [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 42% [c] | 50% | 50-150% |
| | 13C5-PFPeA | 39% [c] | 49% [c] | 50-150% |
| | 13C5-PFHxA | 38% [c] | 48% [c] | 50-150% |
| | 13C4-PFHpA | 41% [c] | 49% [c] | 50-150% |
| | 13C8-PFOA | 45% [c] | 53% | 50-150% |
| | 13C9-PFNA | 43% [c] | 50% | 50-150% |
| | 13C6-PFDA | 49% [c] | 53% | 50-150% |
| | 13C7-PFUnDA | 56% | 55% | 50-150% |
| | 13C2-PFDoDA | 50% | 43% [c] | 50-150% |
| | 13C2-PFTeDA | 41% [c] | 33% [c] | 50-150% |
| | 13C3-PFBS | 44% [c] | 52% | 50-150% |
| | 13C3-PFHxS | 48% [c] | 56% | 50-150% |
| | 13C8-PFOS | 43% [c] | 52% | 50-150% |
| | 13C8-FOSA | 15% [c] | 11% [c] | 50-150% |
| | d3-MeFOSAA | 59% | 56% | 50-150% |
| | d5-EtFOSAA | 60% | 59% | 50-150% |
| | 13C2-4:2FTS | 40% [c] | 46% [c] | 50-150% |
| | 13C2-6:2FTS | 50% | 58% | 50-150% |
| | 13C2-8:2FTS | 50% | 59% | 50-150% |
| | 13C3-HFPO-DA | 42% [c] | 52% | 50-150% |

(a) Confirmation run.
(b) Associated ID Standard outside control limits.
(c) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | DUP-01_092122 | | |
| **Lab Sample ID:** | FA99297-4 | **Date Sampled:** | 09/21/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100814.D | 1 | 10/22/22 17:07 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 [a] | 2Q101527.D | 1 | 11/04/22 16:13 | WH | 10/31/22 11:46 | OP93818 | S2Q1416 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 250 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid [b] | 11.0 | 7.4 | 3.7 | 1.9 | ng/l | |
| 2706-90-3 | Perfluoropentanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-24-4 | Perfluorohexanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-85-9 | Perfluoroheptanoic acid [b] | 4.2 | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-67-1 | Perfluorooctanoic acid [b] | 23.2 | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-95-1 | Perfluorononanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-76-2 | Perfluorodecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2706-91-4 | Perfluoropentanesulfonic aci [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 355-46-4 | Perfluorohexanesulfonic acid [b] | 5.0 | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-92-8 | Perfluoroheptanesulfonic aci [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid [b] | 21.2 | 3.7 | 1.9 | 0.93 | ng/l | |
| 68259-12-1 | Perfluorononanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | DUP-01_092122 | | |
| **Lab Sample ID:** | FA99297-4 | **Date Sampled:** | 09/21/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 919005-14-4 | ADONA [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Mino [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 36% [d] | 55% | 50-150% |
| | 13C5-PFPeA | 34% [d] | 53% | 50-150% |
| | 13C5-PFHxA | 33% [d] | 50% | 50-150% |
| | 13C4-PFHpA | 36% [d] | 52% | 50-150% |
| | 13C8-PFOA | 39% [d] | 58% | 50-150% |
| | 13C9-PFNA | 37% [d] | 54% | 50-150% |
| | 13C6-PFDA | 42% [d] | 54% | 50-150% |
| | 13C7-PFUnDA | 48% [d] | 51% | 50-150% |
| | 13C2-PFDoDA | 42% [d] | 31% [d] | 50-150% |
| | 13C2-PFTeDA | 34% [d] | 11% [d] | 50-150% |
| | 13C3-PFBS | 40% [d] | 55% | 50-150% |
| | 13C3-PFHxS | 41% [d] | 61% | 50-150% |
| | 13C8-PFOS | 38% [d] | 50% | 50-150% |
| | 13C8-FOSA | 13% [d] | 5% [d] | 50-150% |
| | d3-MeFOSAA | 51% | 57% | 50-150% |
| | d5-EtFOSAA | 54% | 54% | 50-150% |
| | 13C2-4:2FTS | 35% [d] | 48% [d] | 50-150% |
| | 13C2-6:2FTS | 44% [d] | 62% | 50-150% |
| | 13C2-8:2FTS | 43% [d] | 59% | 50-150% |
| | 13C3-HFPO-DA | 36% [d] | 56% | 50-150% |

(a) Confirmation run.
(b) Associated ID Standard outside control limits.
(c) Associated ID Standard outside control limits. Confirmed by re-analysis.
(d) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | X-9AR_092222 | | |
| **Lab Sample ID:** | FA99297-5 | **Date Sampled:** | 09/22/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100815.D | 1 | 10/22/22 17:24 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 [a] | 2Q101091.D | 5 | 10/27/22 08:50 | WH | 10/11/22 09:05 | OP93439 | S2Q1410 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 270 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid | 19.0 | 7.4 | 3.7 | 1.9 | ng/l | |
| 2706-90-3 | Perfluoropentanoic acid | 2.0 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 307-24-4 | Perfluorohexanoic acid | 1.6 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 375-85-9 | Perfluoroheptanoic acid | 1.6 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 335-67-1 | Perfluorooctanoic acid | 1.3 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 375-95-1 | Perfluorononanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-76-2 | Perfluorodecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid | 9.3 U [b] | 19 | 9.3 | 4.6 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid | 9.3 U [b] | 19 | 9.3 | 4.6 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid | 1.4 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 2706-91-4 | Perfluoropentanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 355-46-4 | Perfluorohexanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-92-8 | Perfluoroheptanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 68259-12-1 | Perfluorononanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | X-9AR_092222 | | |
| **Lab Sample ID:** | FA99297-5 | **Date Sampled:** | 09/22/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 919005-14-4 | ADONA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | 19 U [b] | 37 | 19 | 9.3 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 53% | 65% | 50-150% |
| | 13C5-PFPeA | 54% | 65% | 50-150% |
| | 13C5-PFHxA | 54% | 65% | 50-150% |
| | 13C4-PFHpA | 58% | 70% | 50-150% |
| | 13C8-PFOA | 65% | 73% | 50-150% |
| | 13C9-PFNA | 59% | 66% | 50-150% |
| | 13C6-PFDA | 57% | 60% | 50-150% |
| | 13C7-PFUnDA | 56% | 60% | 50-150% |
| | 13C2-PFDoDA | 49% [d] | 53% | 50-150% |
| | 13C2-PFTeDA | 37% [d] | 44% [d] | 50-150% |
| | 13C3-PFBS | 57% | 69% | 50-150% |
| | 13C3-PFHxS | 65% | 70% | 50-150% |
| | 13C8-PFOS | 53% | 67% | 50-150% |
| | 13C8-FOSA | 44% [d] | 49% [d] | 50-150% |
| | d3-MeFOSAA | 59% | 60% | 50-150% |
| | d5-EtFOSAA | 54% | 61% | 50-150% |
| | 13C2-4:2FTS | 54% | 65% | 50-150% |
| | 13C2-6:2FTS | 70% | 72% | 50-150% |
| | 13C2-8:2FTS | 52% | 59% | 50-150% |
| | 13C3-HFPO-DA | 51% | 60% | 50-150% |

(a) Dilution required (ID recovery standard failure).
(b) Result is from Run# 2
(c) Associated ID Standard outside control limits. Confirmed by re-analysis.
(d) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-117WT_092222 | | |
| **Lab Sample ID:** | FA99297-6 | **Date Sampled:** | 09/22/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100816.D | 1 | 10/22/22 17:40 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 | 2Q101092.D | 5 | 10/27/22 09:06 | WH | 10/11/22 09:05 | OP93439 | S2Q1410 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 270 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid | 269 [a] | 37 | 19 | 9.3 | ng/l | |
| 2706-90-3 | Perfluoropentanoic acid | 47.3 [a] | 19 | 9.3 | 4.6 | ng/l | |
| 307-24-4 | Perfluorohexanoic acid | 84.1 [a] | 19 | 9.3 | 4.6 | ng/l | |
| 375-85-9 | Perfluoroheptanoic acid | 10 | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-67-1 | Perfluorooctanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-95-1 | Perfluorononanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-76-2 | Perfluorodecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid | 9.3 U [a] | 19 | 9.3 | 4.6 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid | 9.3 U [a] | 19 | 9.3 | 4.6 | ng/l | |
| 2706-91-4 | Perfluoropentanesulfonic acid | 9.3 U [a] | 19 | 9.3 | 4.6 | ng/l | |
| 355-46-4 | Perfluorohexanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-92-8 | Perfluoroheptanesulfonic aci [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 68259-12-1 | Perfluorononanesulfonic acid | 9.3 U [a] | 19 | 9.3 | 4.6 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA | 9.3 U [a] | 19 | 9.3 | 4.6 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | 19 U [a] | 37 | 19 | 9.3 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-117WT_092222 | | |
| **Lab Sample ID:** | FA99297-6 | **Date Sampled:** | 09/22/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 919005-14-4 | ADONA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 34% [c] | 51% | 50-150% |
| | 13C5-PFPeA | 39% [c] | 60% | 50-150% |
| | 13C5-PFHxA | 45% [c] | 61% | 50-150% |
| | 13C4-PFHpA | 52% | 66% | 50-150% |
| | 13C8-PFOA | 62% | 74% | 50-150% |
| | 13C9-PFNA | 56% | 65% | 50-150% |
| | 13C6-PFDA | 56% | 59% | 50-150% |
| | 13C7-PFUnDA | 61% | 65% | 50-150% |
| | 13C2-PFDoDA | 54% | 60% | 50-150% |
| | 13C2-PFTeDA | 49% [c] | 52% | 50-150% |
| | 13C3-PFBS | 48% [c] | 64% | 50-150% |
| | 13C3-PFHxS | 60% | 73% | 50-150% |
| | 13C8-PFOS | 49% [c] | 55% | 50-150% |
| | 13C8-FOSA | 23% [c] | 40% | 50-150% |
| | d3-MeFOSAA | 61% | 66% | 50-150% |
| | d5-EtFOSAA | 59% | 70% | 50-150% |
| | 13C2-4:2FTS | 45% [c] | 61% | 50-150% |
| | 13C2-6:2FTS | 64% | 73% | 50-150% |
| | 13C2-8:2FTS | 54% | 56% | 50-150% |
| | 13C3-HFPO-DA | 50% | 60% | 50-150% |

(a) Result is from Run# 2

(b) Associated ID Standard outside control limits.

(c) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value

LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-118WT_092222 | | |
| **Lab Sample ID:** | FA99297-7 | **Date Sampled:** | 09/22/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100817.D | 1 | 10/22/22 17:57 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 [a] | 2Q101528.D | 1 | 11/04/22 16:30 | WH | 10/31/22 11:46 | OP93818 | S2Q1416 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 240 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid [b] | 48.8 | 7.4 | 3.7 | 1.9 | ng/l | |
| 2706-90-3 | Perfluoropentanoic acid [b] | 11.8 | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-24-4 | Perfluorohexanoic acid [b] | 19.4 | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-85-9 | Perfluoroheptanoic acid [b] | 9.7 | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-67-1 | Perfluorooctanoic acid | 4.8 | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-95-1 | Perfluorononanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-76-2 | Perfluorodecanoic acid [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2706-91-4 | Perfluoropentanesulfonic aci [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 355-46-4 | Perfluorohexanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-92-8 | Perfluoroheptanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 68259-12-1 | Perfluorononanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate [c] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-118WT_092222 | | |
| **Lab Sample ID:** | FA99297-7 | **Date Sampled:** | 09/22/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate [c] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 919005-14-4 | ADONA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) [c] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Mino [c] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 40% [d] | 54% | 50-150% |
| | 13C5-PFPeA | 40% [d] | 56% | 50-150% |
| | 13C5-PFHxA | 41% [d] | 54% | 50-150% |
| | 13C4-PFHpA | 43% [d] | 56% | 50-150% |
| | 13C8-PFOA | 50% | 65% | 50-150% |
| | 13C9-PFNA | 43% [d] | 59% | 50-150% |
| | 13C6-PFDA | 46% [d] | 53% | 50-150% |
| | 13C7-PFUnDA | 51% | 48% [d] | 50-150% |
| | 13C2-PFDoDA | 45% [d] | 37% [d] | 50-150% |
| | 13C2-PFTeDA | 42% [d] | 18% [d] | 50-150% |
| | 13C3-PFBS | 45% [d] | 54% | 50-150% |
| | 13C3-PFHxS | 50% | 64% | 50-150% |
| | 13C8-PFOS | 42% [d] | 49% [d] | 50-150% |
| | 13C8-FOSA | 17% [d] | 16% [d] | 50-150% |
| | d3-MeFOSAA | 53% | 50% | 50-150% |
| | d5-EtFOSAA | 51% | 46% [d] | 50-150% |
| | 13C2-4:2FTS | 41% [d] | 52% | 50-150% |
| | 13C2-6:2FTS | 52% | 67% | 50-150% |
| | 13C2-8:2FTS | 44% [d] | 54% | 50-150% |
| | 13C3-HFPO-DA | 41% [d] | 55% | 50-150% |

(a) Confirmation run.
(b) Associated ID Standard outside control limits.
(c) Associated ID Standard outside control limits. Confirmed by re-analysis.
(d) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | X-10AR2_092222 | | |
| **Lab Sample ID:** | FA99297-8 | **Date Sampled:** | 09/22/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100818.D | 1 | 10/22/22 18:13 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 [a] | 2Q101094.D | 5 | 10/27/22 09:40 | WH | 10/11/22 09:05 | OP93439 | S2Q1410 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 270 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid | 4.3 | 7.4 | 3.7 | 1.9 | ng/l | J |
| 2706-90-3 | Perfluoropentanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-24-4 | Perfluorohexanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-85-9 | Perfluoroheptanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-67-1 | Perfluorooctanoic acid | 6.3 | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-95-1 | Perfluorononanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-76-2 | Perfluorodecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid | 9.3 U [b] | 19 | 9.3 | 4.6 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid | 9.3 U [b] | 19 | 9.3 | 4.6 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid | 1.1 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 2706-91-4 | Perfluoropentanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 355-46-4 | Perfluorohexanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-92-8 | Perfluoroheptanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 68259-12-1 | Perfluorononanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | X-10AR2_092222 | | |
| **Lab Sample ID:** | FA99297-8 | **Date Sampled:** | 09/22/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 919005-14-4 | ADONA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | 19 U [b] | 37 | 19 | 9.3 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 56% | 65% | 50-150% |
| | 13C5-PFPeA | 56% | 66% | 50-150% |
| | 13C5-PFHxA | 56% | 64% | 50-150% |
| | 13C4-PFHpA | 59% | 67% | 50-150% |
| | 13C8-PFOA | 64% | 71% | 50-150% |
| | 13C9-PFNA | 58% | 64% | 50-150% |
| | 13C6-PFDA | 54% | 56% | 50-150% |
| | 13C7-PFUnDA | 55% | 58% | 50-150% |
| | 13C2-PFDoDA | 47% [d] | 51% | 50-150% |
| | 13C2-PFTeDA | 44% [d] | 49% [d] | 50-150% |
| | 13C3-PFBS | 57% | 66% | 50-150% |
| | 13C3-PFHxS | 62% | 67% | 50-150% |
| | 13C8-PFOS | 52% | 55% | 50-150% |
| | 13C8-FOSA | 40% [d] | 43% [d] | 50-150% |
| | d3-MeFOSAA | 55% | 58% | 50-150% |
| | d5-EtFOSAA | 51% | 54% | 50-150% |
| | 13C2-4:2FTS | 53% | 62% | 50-150% |
| | 13C2-6:2FTS | 65% | 69% | 50-150% |
| | 13C2-8:2FTS | 51% | 53% | 50-150% |
| | 13C3-HFPO-DA | 51% | 61% | 50-150% |

(a) Dilution required (ID recovery standard failure).
(b) Result is from Run# 2
(c) Associated ID Standard outside control limits. Confirmed by re-analysis.
(d) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





**Client Sample ID:** MW-122WT_092322
**Lab Sample ID:** FA99297-9
**Matrix:** AQ - Ground Water
**Method:** EPA 537M QSM5.3 B-15 EPA 537 MOD
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

**Date Sampled:** 09/23/22
**Date Received:** 09/28/22
**Percent Solids:** n/a

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100821.D | 1 | 10/22/22 19:03 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 | 2Q101097.D | 5 | 10/27/22 10:29 | WH | 10/11/22 09:05 | OP93439 | S2Q1410 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 270 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid | 79.1 [a] | 37 | 19 | 9.3 | ng/l | |
| 2706-90-3 | Perfluoropentanoic acid | 7.3 [a] | 19 | 9.3 | 4.6 | ng/l | J |
| 307-24-4 | Perfluorohexanoic acid | 5.6 [a] | 19 | 9.3 | 4.6 | ng/l | J |
| 375-85-9 | Perfluoroheptanoic acid | 1.7 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 335-67-1 | Perfluorooctanoic acid | 2.4 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 375-95-1 | Perfluorononanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-76-2 | Perfluorodecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid | 9.3 U [a] | 19 | 9.3 | 4.6 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid [b] | 2.6 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 2706-91-4 | Perfluoropentanesulfonic acid | 9.3 U [a] | 19 | 9.3 | 4.6 | ng/l | |
| 355-46-4 | Perfluorohexanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-92-8 | Perfluoroheptanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 68259-12-1 | Perfluorononanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA [c] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | 19 U [a] | 37 | 19 | 9.3 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-122WT_092322 | | |
| **Lab Sample ID:** | FA99297-9 | **Date Sampled:** | 09/23/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) | 19 U [a] | 37 | 19 | 9.3 | ng/l | |
| 919005-14-4 | ADONA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 44% [d] | 57% | 50-150% |
| | 13C5-PFPeA | 46% [d] | 58% | 50-150% |
| | 13C5-PFHxA | 47% [d] | 58% | 50-150% |
| | 13C4-PFHpA | 52% | 62% | 50-150% |
| | 13C8-PFOA | 58% | 65% | 50-150% |
| | 13C9-PFNA | 54% | 59% | 50-150% |
| | 13C6-PFDA | 54% | 55% | 50-150% |
| | 13C7-PFUnDA | 58% | 58% | 50-150% |
| | 13C2-PFDoDA | 52% | 53% | 50-150% |
| | 13C2-PFTeDA | 45% [d] | 51% | 50-150% |
| | 13C3-PFBS | 49% [d] | 59% | 50-150% |
| | 13C3-PFHxS | 57% | 66% | 50-150% |
| | 13C8-PFOS | 51% | 57% | 50-150% |
| | 13C8-FOSA | 31% [d] | 35% [d] | 50-150% |
| | d3-MeFOSAA | 59% | 60% | 50-150% |
| | d5-EtFOSAA | 55% | 54% | 50-150% |
| | 13C2-4:2FTS | 47% [d] | 60% | 50-150% |
| | 13C2-6:2FTS | 63% | 64% | 50-150% |
| | 13C2-8:2FTS | 51% | 50% | 50-150% |
| | 13C3-HFPO-DA | 45% [d] | 59% | 50-150% |

(a) Result is from Run# 2

(b) Associated ID Standard outside control limits.

(c) Associated ID Standard outside control limits. Confirmed by re-analysis.

(d) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value

LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TWW-1_092322 | | |
| **Lab Sample ID:** | FA99297-10 | **Date Sampled:** | 09/23/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100822.D | 1 | 10/22/22 19:20 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 | 2Q101098.D | 5 | 10/27/22 10:46 | WH | 10/11/22 09:05 | OP93439 | S2Q1410 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 270 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid | 34.0 [a] | 37 | 19 | 9.3 | ng/l | J |
| 2706-90-3 | Perfluoropentanoic acid | 7.8 [a] | 19 | 9.3 | 4.6 | ng/l | J |
| 307-24-4 | Perfluorohexanoic acid | 11.3 [a] | 19 | 9.3 | 4.6 | ng/l | J |
| 375-85-9 | Perfluoroheptanoic acid | 10.9 [a] | 19 | 9.3 | 4.6 | ng/l | J |
| 335-67-1 | Perfluorooctanoic acid | 19.7 | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-95-1 | Perfluorononanoic acid | 1.1 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 335-76-2 | Perfluorodecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid [c] | 2.9 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 2706-91-4 | Perfluoropentanesulfonic acid | 9.3 U [a] | 19 | 9.3 | 4.6 | ng/l | |
| 355-46-4 | Perfluorohexanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-92-8 | Perfluoroheptanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid [c] | 3.6 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 68259-12-1 | Perfluorononanesulfonic acid | 9.3 U [a] | 19 | 9.3 | 4.6 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | 19 U [a] | 37 | 19 | 9.3 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TWW-1_092322 | | |
| **Lab Sample ID:** | FA99297-10 | **Date Sampled:** | 09/23/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | 19 U [a] | 37 | 19 | 9.3 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) | 19 U [a] | 37 | 19 | 9.3 | ng/l | |
| 919005-14-4 | ADONA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 44% [d] | 59% | 50-150% |
| | 13C5-PFPeA | 44% [d] | 59% | 50-150% |
| | 13C5-PFHxA | 46% [d] | 57% | 50-150% |
| | 13C4-PFHpA | 48% [d] | 62% | 50-150% |
| | 13C8-PFOA | 55% | 65% | 50-150% |
| | 13C9-PFNA | 50% | 57% | 50-150% |
| | 13C6-PFDA | 51% | 55% | 50-150% |
| | 13C7-PFUnDA | 56% | 57% | 50-150% |
| | 13C2-PFDoDA | 50% | 53% | 50-150% |
| | 13C2-PFTeDA | 45% [d] | 48% [d] | 50-150% |
| | 13C3-PFBS | 47% [d] | 59% | 50-150% |
| | 13C3-PFHxS | 54% | 63% | 50-150% |
| | 13C8-PFOS | 45% [d] | 50% | 50-150% |
| | 13C8-FOSA | 25% [d] | 39% [d] | 50-150% |
| | d3-MeFOSAA | 60% | 57% | 50-150% |
| | d5-EtFOSAA | 57% | 52% | 50-150% |
| | 13C2-4:2FTS | 46% [d] | 57% | 50-150% |
| | 13C2-6:2FTS | 59% | 64% | 50-150% |
| | 13C2-8:2FTS | 49% [d] | 50% | 50-150% |
| | 13C3-HFPO-DA | 43% [d] | 58% | 50-150% |

(a) Result is from Run# 2
(b) Associated ID Standard outside control limits. Confirmed by re-analysis.
(c) Associated ID Standard outside control limits.
(d) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-183WT_092622 | | |
| **Lab Sample ID:** | FA99297-11 | **Date Sampled:** | 09/26/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100825.D | 1 | 10/22/22 20:09 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 [a] | 2Q101099.D | 5 | 10/27/22 11:47 | WH | 10/11/22 09:05 | OP93439 | S2Q1410 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 270 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid | 11.4 | 7.4 | 3.7 | 1.9 | ng/l | |
| 2706-90-3 | Perfluoropentanoic acid | 3.4 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 307-24-4 | Perfluorohexanoic acid | 1.3 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 375-85-9 | Perfluoroheptanoic acid | 1.4 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 335-67-1 | Perfluorooctanoic acid | 4.0 | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-95-1 | Perfluorononanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-76-2 | Perfluorodecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid | 2.5 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 2706-91-4 | Perfluoropentanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 355-46-4 | Perfluorohexanesulfonic acid | 2.1 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 375-92-8 | Perfluoroheptanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 68259-12-1 | Perfluorononanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA | 9.3 U [b] | 19 | 9.3 | 4.6 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-183WT_092622 | | |
| **Lab Sample ID:** | FA99297-11 | **Date Sampled:** | 09/26/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) [c] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 919005-14-4 | ADONA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 52% | 65% | 50-150% |
| | 13C5-PFPeA | 53% | 66% | 50-150% |
| | 13C5-PFHxA | 52% | 67% | 50-150% |
| | 13C4-PFHpA | 55% | 71% | 50-150% |
| | 13C8-PFOA | 62% | 73% | 50-150% |
| | 13C9-PFNA | 56% | 70% | 50-150% |
| | 13C6-PFDA | 58% | 70% | 50-150% |
| | 13C7-PFUnDA | 62% | 71% | 50-150% |
| | 13C2-PFDoDA | 57% | 66% | 50-150% |
| | 13C2-PFTeDA | 52% | 64% | 50-150% |
| | 13C3-PFBS | 55% | 69% | 50-150% |
| | 13C3-PFHxS | 64% | 69% | 50-150% |
| | 13C8-PFOS | 52% | 64% | 50-150% |
| | 13C8-FOSA | 44% [d] | 58% | 50-150% |
| | d3-MeFOSAA | 66% | 78% | 50-150% |
| | d5-EtFOSAA | 67% | 78% | 50-150% |
| | 13C2-4:2FTS | 52% | 67% | 50-150% |
| | 13C2-6:2FTS | 65% | 74% | 50-150% |
| | 13C2-8:2FTS | 56% | 67% | 50-150% |
| | 13C3-HFPO-DA | 49% [d] | 63% | 50-150% |

(a) Dilution required (ID recovery standard failure).
(b) Result is from Run# 2
(c) Associated ID Standard outside control limits.
(d) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

## Misc. Forms

### Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

# SGS North America Inc - Orlando
## Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com

FA99297

SGS - ORLANDO JOB # : PAGE 1 OF 1

| SGS - ORLANDO Quote # | SKIFF # |
|---|---|
| | |

**Client / Reporting Information**

Company Name: ARCADIS
Address: 28550 CABOT DR. Suite 500
City: NOVI State: MI Zip: 48377
Project Contact: Email:
Amanda Robinson @ arcadis-com
Phone #: 989-854-8672
Sampler(s) Name(s) (Printed)
Sampler 1: Dan Parker Sampler 2: Bill Cubeny

**Project Information**

Project Name: RACER SAGINAW (GPL)
Street 77 W. CENTER ST
City SAGINAW State MI
Project # 30121470
Fax #
Client Purchase Order #

**Analytical Information**

LCGSMSSIM120 (PAHs)

**Matrix Codes**

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

| SGS Orlando Sample # | Field ID / Point of Collection | COLLECTION DATE | TIME | SAMPLED BY: | MATRIX | TOTAL # OF BOTTLES | OTHER | NONE | HCl | NaOH | HNO3 | H2SO4 | NaOH+ZnAc | DI WATER | MeOH | LCGSMSSIM120 (PAHs) | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EB-01_092122 | 9/21/22 | 11:40 | DP | DW | 2 | | 2 | | | | | | | | 2 | |
| 2 | MW-117S1_092122 | 9/21/22 | 14:25 | DP | GW | 2 | | 2 | | | | | | | | 2 | |
| 3 | X-2A_092122 | 9/21/22 | 17:55 | BC | GW | 2 | | 2 | | | | | | | | 2 | |
| 4 | DUP-01_092122 | 9/21/22 | — | BC | GW | 2 | | 2 | | | | | | | | 2 | |
| 5 | X-9AR_092222 | 9/22/22 | 8:00 | BC | GW | 2 | | 2 | | | | | | | | 2 | |
| 6 | MW-117WT_092222 | 9/22/22 | 10:40 | DP | GW | 2 | | 2 | | | | | | | | 2 | |
| 7 | MW-118WT_092222 | 9/22/22 | 13:20 | DP | GW | 2 | | 2 | | | | | | | | 2 | |
| 8 | X-10AR2_092222 | 9/22/22 | 18:00 | BC | GW | 6 | | 6 | | | | | | | | 6 | |
| 9 | MW-122WT_092322 | 9/23/22 | 8:20 | BC | GW | 2 | | 2 | | | | | | | | 2 | |
| 10 | TWW-1_092322 | 9/23/22 | 11:35 | BC | GW | 2 | | 2 | | | | | | | | 2 | |
| 11 | MW-183WT_092622 | 9/26/22 | 11:05 | BC | GW | 2 | | 2 | | | | | | | | 2 | |
| | MW-118S1_092622 | 9/26/22 | 12:30 | DP | GW | 2 | | 2 | | | | | | | | 2 | NO SAMPLE |

JE 9-26-22

INITIAL ASSESSMENT

LABEL VERIFICATION ZB

**Turnaround Time ( Business days)**

10 Day (Business) Approved By: / Date:
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

**Data Deliverable Information**

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULLT1 (EPA LEVEL 4)
- [ ] EDD'S

**Comments / Remarks**

X-10AR2 = MSMSD

MW-118S1 - NO Sample

Sample Custody must be documented below each time samples change possession, including courier delivery.

| | Relinquished by Sampler/Affiliation | Date Time: | Received By/Affiliation | Relinquished By/Affiliation | Date Time: | Received By/Affiliation |
|---|---|---|---|---|---|---|
| 1 | ARCADIS | 9/27/22 15:45 | 2 | 3 | 9/28/22 | 4 |
| 5 | Relinquished by/Affiliation | Date Time: | Received By/Affiliation 6 | Relinquished By/Affiliation 7 | Date Time: 9/30 | Received By/Affiliation 8 |

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 0.1 4 CTRS

http://www.sgs.com/en/terms-and-conditions

ORLD-SMT-0001-03-FORM-COC (4).xls Rev 031318

**FA99297: Chain of Custody**
**Page 1 of 2**

# SGS Sample Receipt Summary

**Job Number:** FA99297 **Client:** ARCADIS **Project:** RACER SAGINAW (GPC)

**Date / Time Received:** 9/28/2022 9:30:00 AM **Delivery Method:** FX **Airbill #'s:**

**Therm ID:** IR 1; **Therm CF:** 0.6; **# of Coolers:** 1

**Cooler Temps (Raw Measured) °C:** Cooler 1: (0.4);

**Cooler Temps (Corrected) °C:** Cooler 1: (1.0);

| Cooler Information | Y | or | N |
|---|---|---|---|
| 1. Custody Seals Present | ☑ | | ☐ |
| 2. Custody Seals Intact | ☑ | | ☐ |
| 3. Temp criteria achieved | ☑ | | ☐ |
| 4. Cooler temp verification | IR Gun | | |
| 5. Cooler media | Ice (Bag) | | |

| Trip Blank Information | Y | or | N | N/A |
|---|---|---|---|---|
| 1. Trip Blank present / cooler | ☐ | | ☐ | ☑ |
| 2. Trip Blank listed on COC | ☐ | | ☐ | ☑ |

| | W | or | S | N/A |
|---|---|---|---|---|
| 3. Type Of TB Received | ☐ | | ☐ | ☑ |

| Sample Information | Y | or | N | N/A |
|---|---|---|---|---|
| 1. Sample labels present on bottles | ☑ | | ☐ | |
| 2. Samples preserved properly | ☑ | | ☐ | |
| 3. Sufficient volume/containers recvd for analysis: | ☑ | | ☐ | |
| 4. Condition of sample | Intact | | | |
| 5. Sample recvd within HT | ☑ | | ☐ | |
| 6. Dates/Times/IDs on COC match Sample Label | ☑ | | ☐ | |
| 7. VOCs have headspace | ☐ | | ☐ | ☑ |
| 8. Bottles received for unspecified tests | ☐ | | ☑ | |
| 9. Compositing instructions clear | ☐ | | ☐ | ☑ |
| 10. Voa Soil Kits/Jars received past 48hrs? | ☐ | | ☐ | ☑ |
| 11. % Solids Jar received? | ☐ | | ☐ | ☑ |
| 12. Residual Chlorine Present? | ☐ | | ☐ | ☑ |

**Misc. Information**

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: NATHANS Date: 9/28/2022 9:30:00 AM Reviewer: _____ Date: _____

**FA99297: Chain of Custody**
**Page 2 of 2**

# QC Evaluation: DOD QSM5.x Limits



**Job Number:** FA99297
**Account:** Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI
**Collected:** 09/21/22 thru 09/26/22



| QC Sample ID | CAS# | Analyte | Sample Type | Result Type | Result | Units | Limits |
|---|---|---|---|---|---|---|---|
| OP93439 | EPA 537M QSM5.3 B-15 | | | | | | |
| OP93439-BS | 375-22-4 | Perfluorobutanoic acid | BSP | REC | 108 | % | 73-129 |
| OP93439-BS | 2706-90-3 | Perfluoropentanoic acid | BSP | REC | 109 | % | 72-129 |
| OP93439-BS | 307-24-4 | Perfluorohexanoic acid | BSP | REC | 109 | % | 72-129 |
| OP93439-BS | 375-85-9 | Perfluoroheptanoic acid | BSP | REC | 108 | % | 72-130 |
| OP93439-BS | 335-67-1 | Perfluorooctanoic acid | BSP | REC | 107 | % | 71-133 |
| OP93439-BS | 375-95-1 | Perfluorononanoic acid | BSP | REC | 108 | % | 69-130 |
| OP93439-BS | 335-76-2 | Perfluorodecanoic acid | BSP | REC | 104 | % | 71-129 |
| OP93439-BS | 2058-94-8 | Perfluoroundecanoic acid | BSP | REC | 106 | % | 69-133 |
| OP93439-BS | 307-55-1 | Perfluorododecanoic acid | BSP | REC | 107 | % | 72-134 |
| OP93439-BS | 72629-94-8 | Perfluorotridecanoic acid | BSP | REC | 99 | % | 65-144 |
| OP93439-BS | 376-06-7 | Perfluorotetradecanoic acid | BSP | REC | 108 | % | 71-132 |
| OP93439-BS | 375-73-5 | Perfluorobutanesulfonic acid | BSP | REC | 108 | % | 72-130 |
| OP93439-BS | 2706-91-4 | Perfluoropentanesulfonic acid | BSP | REC | 108 | % | 71-127 |
| OP93439-BS | 355-46-4 | Perfluorohexanesulfonic acid | BSP | REC | 106 | % | 68-131 |
| OP93439-BS | 375-92-8 | Perfluoroheptanesulfonic acid | BSP | REC | 111 | % | 69-134 |
| OP93439-BS | 1763-23-1 | Perfluorooctanesulfonic acid | BSP | REC | 114 | % | 65-140 |
| OP93439-BS | 68259-12-1 | Perfluorononanesulfonic acid | BSP | REC | 112 | % | 69-127 |
| OP93439-BS | 335-77-3 | Perfluorodecanesulfonic acid | BSP | REC | 93 | % | 53-142 |
| OP93439-BS | 754-91-6 | PFOSA | BSP | REC | 110 | % | 67-137 |
| OP93439-BS | 2355-31-9 | MeFOSAA | BSP | REC | 109 | % | 65-136 |
| OP93439-BS | 2991-50-6 | EtFOSAA | BSP | REC | 105 | % | 61-135 |
| OP93439-BS | 757124-72-4 | 4:2 Fluorotelomer sulfonate | BSP | REC | 103 | % | 63-143 |
| OP93439-BS | 27619-97-2 | 6:2 Fluorotelomer sulfonate | BSP | REC | 108 | % | 64-140 |
| OP93439-BS | 39108-34-4 | 8:2 Fluorotelomer sulfonate | BSP | REC | 108 | % | 67-138 |
| OP93439-MS | 375-22-4 | Perfluorobutanoic acid | MS | REC | 111 | % | 73-129 |
| OP93439-MS | 2706-90-3 | Perfluoropentanoic acid | MS | REC | 110 | % | 72-129 |
| OP93439-MS | 307-24-4 | Perfluorohexanoic acid | MS | REC | 111 | % | 72-129 |
| OP93439-MS | 375-85-9 | Perfluoroheptanoic acid | MS | REC | 114 | % | 72-130 |
| OP93439-MS | 335-67-1 | Perfluorooctanoic acid | MS | REC | 106 | % | 71-133 |
| OP93439-MS | 375-95-1 | Perfluorononanoic acid | MS | REC | 109 | % | 69-130 |
| OP93439-MS | 335-76-2 | Perfluorodecanoic acid | MS | REC | 105 | % | 71-129 |
| OP93439-MS | 2058-94-8 | Perfluoroundecanoic acid | MS | REC | 105 | % | 69-133 |
| OP93439-MS | 307-55-1 | Perfluorododecanoic acid | MS | REC | 108 | % | 72-134 |
| OP93439-MS | 72629-94-8 | Perfluorotridecanoic acid | MS | REC | 104 | % | 65-144 |
| OP93439-MS | 376-06-7 | Perfluorotetradecanoic acid | MS | REC | 109 | % | 71-132 |
| OP93439-MS | 375-73-5 | Perfluorobutanesulfonic acid | MS | REC | 112 | % | 72-130 |
| OP93439-MS | 2706-91-4 | Perfluoropentanesulfonic acid | MS | REC | 110 | % | 71-127 |
| OP93439-MS | 355-46-4 | Perfluorohexanesulfonic acid | MS | REC | 109 | % | 68-131 |
| OP93439-MS | 375-92-8 | Perfluoroheptanesulfonic acid | MS | REC | 110 | % | 69-134 |
| OP93439-MS | 1763-23-1 | Perfluorooctanesulfonic acid | MS | REC | 105 | % | 65-140 |
| OP93439-MS | 68259-12-1 | Perfluorononanesulfonic acid | MS | REC | 99 | % | 69-127 |
| OP93439-MS | 335-77-3 | Perfluorodecanesulfonic acid | MS | REC | 112 | % | 53-142 |

* Sample used for QC is not from job FA99297

# QC Evaluation: DOD QSM5.x Limits

**Job Number:** FA99297
**Account:** Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI
**Collected:** 09/21/22 thru 09/26/22



| QC Sample ID | CAS# | Analyte | Sample Type | Result Type | Result | Units | Limits |
|---|---|---|---|---|---|---|---|
| OP93439-MS | 754-91-6 | PFOSA | MS | REC | 115 | % | 67-137 |
| OP93439-MS | 2355-31-9 | MeFOSAA | MS | REC | 107 | % | 65-136 |
| OP93439-MS | 2991-50-6 | EtFOSAA | MS | REC | 111 | % | 61-135 |
| OP93439-MS | 757124-72-4 | 4:2 Fluorotelomer sulfonate | MS | REC | 105 | % | 63-143 |
| OP93439-MS | 27619-97-2 | 6:2 Fluorotelomer sulfonate | MS | REC | 115 | % | 64-140 |
| OP93439-MS | 39108-34-4 | 8:2 Fluorotelomer sulfonate | MS | REC | 118 | % | 67-138 |
| OP93439-MSD | 375-22-4 | Perfluorobutanoic acid | MSD | REC | 112 | % | 73-129 |
| OP93439-MSD | 375-22-4 | Perfluorobutanoic acid | MSD | RPD | 1 | % | 30 |
| OP93439-MSD | 2706-90-3 | Perfluoropentanoic acid | MSD | REC | 109 | % | 72-129 |
| OP93439-MSD | 2706-90-3 | Perfluoropentanoic acid | MSD | RPD | 1 | % | 30 |
| OP93439-MSD | 307-24-4 | Perfluorohexanoic acid | MSD | REC | 111 | % | 72-129 |
| OP93439-MSD | 307-24-4 | Perfluorohexanoic acid | MSD | RPD | 0 | % | 30 |
| OP93439-MSD | 375-85-9 | Perfluoroheptanoic acid | MSD | REC | 110 | % | 72-130 |
| OP93439-MSD | 375-85-9 | Perfluoroheptanoic acid | MSD | RPD | 4 | % | 30 |
| OP93439-MSD | 335-67-1 | Perfluorooctanoic acid | MSD | REC | 107 | % | 71-133 |
| OP93439-MSD | 335-67-1 | Perfluorooctanoic acid | MSD | RPD | 1 | % | 30 |
| OP93439-MSD | 375-95-1 | Perfluorononanoic acid | MSD | REC | 111 | % | 69-130 |
| OP93439-MSD | 375-95-1 | Perfluorononanoic acid | MSD | RPD | 1 | % | 30 |
| OP93439-MSD | 335-76-2 | Perfluorodecanoic acid | MSD | REC | 104 | % | 71-129 |
| OP93439-MSD | 335-76-2 | Perfluorodecanoic acid | MSD | RPD | 1 | % | 30 |
| OP93439-MSD | 2058-94-8 | Perfluoroundecanoic acid | MSD | REC | 106 | % | 69-133 |
| OP93439-MSD | 2058-94-8 | Perfluoroundecanoic acid | MSD | RPD | 1 | % | 30 |
| OP93439-MSD | 307-55-1 | Perfluorododecanoic acid | MSD | REC | 108 | % | 72-134 |
| OP93439-MSD | 307-55-1 | Perfluorododecanoic acid | MSD | RPD | 0 | % | 30 |
| OP93439-MSD | 72629-94-8 | Perfluorotridecanoic acid | MSD | REC | 105 | % | 65-144 |
| OP93439-MSD | 72629-94-8 | Perfluorotridecanoic acid | MSD | RPD | 1 | % | 30 |
| OP93439-MSD | 376-06-7 | Perfluorotetradecanoic acid | MSD | REC | 109 | % | 71-132 |
| OP93439-MSD | 376-06-7 | Perfluorotetradecanoic acid | MSD | RPD | 0 | % | 30 |
| OP93439-MSD | 375-73-5 | Perfluorobutanesulfonic acid | MSD | REC | 108 | % | 72-130 |
| OP93439-MSD | 375-73-5 | Perfluorobutanesulfonic acid | MSD | RPD | 4 | % | 30 |
| OP93439-MSD | 2706-91-4 | Perfluoropentanesulfonic acid | MSD | REC | 108 | % | 71-127 |
| OP93439-MSD | 2706-91-4 | Perfluoropentanesulfonic acid | MSD | RPD | 2 | % | 30 |
| OP93439-MSD | 355-46-4 | Perfluorohexanesulfonic acid | MSD | REC | 109 | % | 68-131 |
| OP93439-MSD | 355-46-4 | Perfluorohexanesulfonic acid | MSD | RPD | 0 | % | 30 |
| OP93439-MSD | 375-92-8 | Perfluoroheptanesulfonic acid | MSD | REC | 111 | % | 69-134 |
| OP93439-MSD | 375-92-8 | Perfluoroheptanesulfonic acid | MSD | RPD | 1 | % | 30 |
| OP93439-MSD | 1763-23-1 | Perfluorooctanesulfonic acid | MSD | REC | 120 | % | 65-140 |
| OP93439-MSD | 1763-23-1 | Perfluorooctanesulfonic acid | MSD | RPD | 13 | % | 30 |
| OP93439-MSD | 68259-12-1 | Perfluorononanesulfonic acid | MSD | REC | 114 | % | 69-127 |
| OP93439-MSD | 68259-12-1 | Perfluorononanesulfonic acid | MSD | RPD | 13 | % | 30 |
| OP93439-MSD | 335-77-3 | Perfluorodecanesulfonic acid | MSD | REC | 119 | % | 53-142 |
| OP93439-MSD | 335-77-3 | Perfluorodecanesulfonic acid | MSD | RPD | 6 | % | 30 |
| OP93439-MSD | 754-91-6 | PFOSA | MSD | REC | 118 | % | 67-137 |
| OP93439-MSD | 754-91-6 | PFOSA | MSD | RPD | 3 [a] | % | 30 |
| OP93439-MSD | 2355-31-9 | MeFOSAA | MSD | REC | 115 | % | 65-136 |

* Sample used for QC is not from job FA99297

# QC Evaluation: DOD QSM5.x Limits

**Job Number:** FA99297
**Account:** Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI
**Collected:** 09/21/22 thru 09/26/22



| QC Sample ID | CAS# | Analyte | Sample Type | Result Type | Result | Units | Limits |
|---|---|---|---|---|---|---|---|
| OP93439-MSD | 2355-31-9 | MeFOSAA | MSD | RPD | 8 | % | 30 |
| OP93439-MSD | 2991-50-6 | EtFOSAA | MSD | REC | 118 | % | 61-135 |
| OP93439-MSD | 2991-50-6 | EtFOSAA | MSD | RPD | 6 | % | 30 |
| OP93439-MSD | 757124-72-4 | 4:2 Fluorotelomer sulfonate | MSD | REC | 104 | % | 63-143 |
| OP93439-MSD | 757124-72-4 | 4:2 Fluorotelomer sulfonate | MSD | RPD | 2 | % | 30 |
| OP93439-MSD | 27619-97-2 | 6:2 Fluorotelomer sulfonate | MSD | REC | 109 | % | 64-140 |
| OP93439-MSD | 27619-97-2 | 6:2 Fluorotelomer sulfonate | MSD | RPD | 6 | % | 30 |
| OP93439-MSD | 39108-34-4 | 8:2 Fluorotelomer sulfonate | MSD | REC | 105 | % | 67-138 |
| OP93439-MSD | 39108-34-4 | 8:2 Fluorotelomer sulfonate | MSD | RPD | 12 | % | 30 |

(a) Associated ID Standard outside control limits.

* Sample used for QC is not from job FA99297

## MS Semi-volatiles

### QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Instrument Blank



**Job Number:** FA99297
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| S2Q1407-IBLK | 2Q100797.D | 1 | 10/22/22 | WH | n/a | n/a | S2Q1407 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99297-1, FA99297-2, FA99297-3, FA99297-4, FA99297-5, FA99297-6, FA99297-7, FA99297-8, FA99297-9, FA99297-10, FA99297-11

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid | ND | 0.0080 | 0.0020 | ug/l | |
| 2706-90-3 | Perfluoropentanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 307-24-4 | Perfluorohexanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-85-9 | Perfluoroheptanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 335-67-1 | Perfluorooctanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-95-1 | Perfluorononanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 335-76-2 | Perfluorodecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 2058-94-8 | Perfluoroundecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 307-55-1 | Perfluorododecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 72629-94-8 | Perfluorotridecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 376-06-7 | Perfluorotetradecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-73-5 | Perfluorobutanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 2706-91-4 | Perfluoropentanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 355-46-4 | Perfluorohexanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-92-8 | Perfluoroheptanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 68259-12-1 | Perfluorononanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 754-91-6 | PFOSA | ND | 0.0040 | 0.0010 | ug/l | |
| 2355-31-9 | MeFOSAA | ND | 0.0080 | 0.0020 | ug/l | |
| 2991-50-6 | EtFOSAA | ND | 0.0080 | 0.0020 | ug/l | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 13252-13-6 | HFPO-DA (GenX) | ND | 0.0080 | 0.0020 | ug/l | |
| 919005-14-4 | ADONA | ND | 0.0080 | 0.0020 | ug/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | ND | 0.0080 | 0.0020 | ug/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | ND | 0.0080 | 0.0020 | ug/l | |

| CAS No. | ID Standard Recoveries | | Limits |
|---|---|---|---|
| | 13C4-PFBA | 76% | 50-150% |
| | 13C5-PFPeA | 76% | 50-150% |
| | 13C5-PFHxA | 74% | 50-150% |
| | 13C4-PFHpA | 75% | 50-150% |

# Instrument Blank



**Job Number:** FA99297
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| S2Q1407-IBLK | 2Q100797.D | 1 | 10/22/22 | WH | n/a | n/a | S2Q1407 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99297-1, FA99297-2, FA99297-3, FA99297-4, FA99297-5, FA99297-6, FA99297-7, FA99297-8, FA99297-9, FA99297-10, FA99297-11

| CAS No. | ID Standard Recoveries | | Limits |
|---|---|---|---|
| | 13C8-PFOA | 80% | 50-150% |
| | 13C9-PFNA | 75% | 50-150% |
| | 13C6-PFDA | 73% | 50-150% |
| | 13C7-PFUnDA | 80% | 50-150% |
| | 13C2-PFDoDA | 74% | 50-150% |
| | 13C2-PFTeDA | 73% | 50-150% |
| | 13C3-PFBS | 75% | 50-150% |
| | 13C3-PFHxS | 78% | 50-150% |
| | 13C8-PFOS | 70% | 50-150% |
| | 13C8-FOSA | 78% | 50-150% |
| | d3-MeFOSA | 79% | 50-150% |
| | d3-MeFOSAA | 81% | 50-150% |
| | d5-EtFOSAA | 78% | 50-150% |
| | 13C2-4:2FTS | 69% | 50-150% |
| | 13C2-6:2FTS | 78% | 50-150% |
| | 13C2-8:2FTS | 71% | 50-150% |
| | 13C3-HFPO-DA | 74% | 50-150% |

# Instrument Blank



**Job Number:** FA99297
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| S2Q1410-IBLK | 2Q101010.D | 1 | 10/26/22 | WH | n/a | n/a | S2Q1410 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99297-5, FA99297-6, FA99297-8, FA99297-9, FA99297-10, FA99297-11

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid | ND | 0.0080 | 0.0020 | ug/l | |
| 2706-90-3 | Perfluoropentanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 307-24-4 | Perfluorohexanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-85-9 | Perfluoroheptanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 307-55-1 | Perfluorododecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 72629-94-8 | Perfluorotridecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 376-06-7 | Perfluorotetradecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-73-5 | Perfluorobutanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 2706-91-4 | Perfluoropentanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 68259-12-1 | Perfluorononanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 754-91-6 | PFOSA | ND | 0.0040 | 0.0010 | ug/l | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 13252-13-6 | HFPO-DA (GenX) | ND | 0.0080 | 0.0020 | ug/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | ND | 0.0080 | 0.0020 | ug/l | |

| CAS No. | ID Standard Recoveries | | Limits |
|---|---|---|---|
| | 13C4-PFBA | 72% | 50-150% |
| | 13C5-PFPeA | 72% | 50-150% |
| | 13C5-PFHxA | 72% | 50-150% |
| | 13C4-PFHpA | 74% | 50-150% |
| | 13C8-PFOA | 77% | 50-150% |
| | 13C9-PFNA | 73% | 50-150% |
| | 13C6-PFDA | 71% | 50-150% |
| | 13C7-PFUnDA | 79% | 50-150% |
| | 13C2-PFDoDA | 72% | 50-150% |
| | 13C2-PFTeDA | 67% | 50-150% |
| | 13C3-PFBS | 73% | 50-150% |
| | 13C3-PFHxS | 76% | 50-150% |
| | 13C8-PFOS | 73% | 50-150% |
| | 13C8-FOSA | 74% | 50-150% |
| | d3-MeFOSA | 73% | 50-150% |
| | d3-MeFOSAA | 73% | 50-150% |
| | d5-EtFOSAA | 68% | 50-150% |

# Instrument Blank



**Job Number:** FA99297
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| S2Q1410-IBLK | 2Q101010.D | 1 | 10/26/22 | WH | n/a | n/a | S2Q1410 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99297-5, FA99297-6, FA99297-8, FA99297-9, FA99297-10, FA99297-11

| CAS No. | ID Standard Recoveries | | Limits |
|---|---|---|---|
| | 13C2-4:2FTS | 65% | 50-150% |
| | 13C2-6:2FTS | 72% | 50-150% |
| | 13C2-8:2FTS | 66% | 50-150% |
| | 13C3-HFPO-DA | 69% | 50-150% |

# Method Blank Summary



**Job Number:** FA99297
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP93439-MB | 2Q100802.D | 1 | 10/22/22 | WH | 10/11/22 | OP93439 | S2Q1407 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99297-1, FA99297-2, FA99297-3, FA99297-4, FA99297-5, FA99297-6, FA99297-7, FA99297-8, FA99297-9, FA99297-10, FA99297-11

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid | ND | 0.0080 | 0.0020 | ug/l | |
| 2706-90-3 | Perfluoropentanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 307-24-4 | Perfluorohexanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-85-9 | Perfluoroheptanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 335-67-1 | Perfluorooctanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-95-1 | Perfluorononanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 335-76-2 | Perfluorodecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 2058-94-8 | Perfluoroundecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 307-55-1 | Perfluorododecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 72629-94-8 | Perfluorotridecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 376-06-7 | Perfluorotetradecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-73-5 | Perfluorobutanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 2706-91-4 | Perfluoropentanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 355-46-4 | Perfluorohexanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-92-8 | Perfluoroheptanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 68259-12-1 | Perfluorononanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 754-91-6 | PFOSA | ND | 0.0040 | 0.0010 | ug/l | |
| 2355-31-9 | MeFOSAA | ND | 0.0080 | 0.0020 | ug/l | |
| 2991-50-6 | EtFOSAA | ND | 0.0080 | 0.0020 | ug/l | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 13252-13-6 | HFPO-DA (GenX) | ND | 0.0080 | 0.0020 | ug/l | |
| 919005-14-4 | ADONA | ND | 0.0080 | 0.0020 | ug/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | ND | 0.0080 | 0.0020 | ug/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | ND | 0.0080 | 0.0020 | ug/l | |

| CAS No. | ID Standard Recoveries | | Limits |
|---|---|---|---|
| | 13C4-PFBA | 70% | 50-150% |
| | 13C5-PFPeA | 71% | 50-150% |
| | 13C5-PFHxA | 70% | 50-150% |
| | 13C4-PFHpA | 71% | 50-150% |

# Method Blank Summary



**Job Number:** FA99297
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP93439-MB | 2Q100802.D | 1 | 10/22/22 | WH | 10/11/22 | OP93439 | S2Q1407 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99297-1, FA99297-2, FA99297-3, FA99297-4, FA99297-5, FA99297-6, FA99297-7, FA99297-8, FA99297-9, FA99297-10, FA99297-11

| CAS No. | ID Standard Recoveries | | Limits |
|---|---|---|---|
| | 13C8-PFOA | 73% | 50-150% |
| | 13C9-PFNA | 69% | 50-150% |
| | 13C6-PFDA | 68% | 50-150% |
| | 13C7-PFUnDA | 73% | 50-150% |
| | 13C2-PFDoDA | 63% | 50-150% |
| | 13C2-PFTeDA | 51% | 50-150% |
| | 13C3-PFBS | 70% | 50-150% |
| | 13C3-PFHxS | 73% | 50-150% |
| | 13C8-PFOS | 64% | 50-150% |
| | 13C8-FOSA | 63% | 50-150% |
| | d3-MeFOSAA | 72% | 50-150% |
| | d5-EtFOSAA | 69% | 50-150% |
| | 13C2-4:2FTS | 69% | 50-150% |
| | 13C2-6:2FTS | 73% | 50-150% |
| | 13C2-8:2FTS | 65% | 50-150% |
| | 13C3-HFPO-DA | 65% | 50-150% |

# Blank Spike Summary



**Job Number:** FA99297
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP93439-BS | 2Q100801.D | 1 | 10/22/22 | WH | 10/11/22 | OP93439 | S2Q1407 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99297-1, FA99297-2, FA99297-3, FA99297-4, FA99297-5, FA99297-6, FA99297-7, FA99297-8, FA99297-9, FA99297-10, FA99297-11

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid | 0.08 | 0.0860 | 108 | 73-129 |
| 2706-90-3 | Perfluoropentanoic acid | 0.08 | 0.0871 | 109 | 72-129 |
| 307-24-4 | Perfluorohexanoic acid | 0.08 | 0.0868 | 109 | 72-129 |
| 375-85-9 | Perfluoroheptanoic acid | 0.08 | 0.0862 | 108 | 72-130 |
| 335-67-1 | Perfluorooctanoic acid | 0.08 | 0.0859 | 107 | 71-133 |
| 375-95-1 | Perfluorononanoic acid | 0.08 | 0.0861 | 108 | 69-130 |
| 335-76-2 | Perfluorodecanoic acid | 0.08 | 0.0828 | 104 | 71-129 |
| 2058-94-8 | Perfluoroundecanoic acid | 0.08 | 0.0850 | 106 | 69-133 |
| 307-55-1 | Perfluorododecanoic acid | 0.08 | 0.0855 | 107 | 72-134 |
| 72629-94-8 | Perfluorotridecanoic acid | 0.08 | 0.0789 | 99 | 65-144 |
| 376-06-7 | Perfluorotetradecanoic acid | 0.08 | 0.0867 | 108 | 71-132 |
| 375-73-5 | Perfluorobutanesulfonic acid | 0.08 | 0.0867 | 108 | 72-130 |
| 2706-91-4 | Perfluoropentanesulfonic acid | 0.08 | 0.0866 | 108 | 71-127 |
| 355-46-4 | Perfluorohexanesulfonic acid | 0.08 | 0.0844 | 106 | 68-131 |
| 375-92-8 | Perfluoroheptanesulfonic acid | 0.08 | 0.0884 | 111 | 69-134 |
| 1763-23-1 | Perfluorooctanesulfonic acid | 0.08 | 0.0908 | 114 | 65-140 |
| 68259-12-1 | Perfluorononanesulfonic acid | 0.08 | 0.0896 | 112 | 69-127 |
| 335-77-3 | Perfluorodecanesulfonic acid | 0.08 | 0.0746 | 93 | 53-142 |
| 754-91-6 | PFOSA | 0.08 | 0.0879 | 110 | 67-137 |
| 2355-31-9 | MeFOSAA | 0.08 | 0.0869 | 109 | 65-136 |
| 2991-50-6 | EtFOSAA | 0.08 | 0.0838 | 105 | 61-135 |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | 0.08 | 0.0821 | 103 | 63-143 |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 0.08 | 0.0865 | 108 | 64-140 |
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | 0.08 | 0.0867 | 108 | 67-138 |
| 13252-13-6 | HFPO-DA (GenX) | 0.08 | 0.0856 | 107 | 60-140 |
| 919005-14-4 | ADONA | 0.08 | 0.0789 | 99 | 60-140 |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | 0.08 | 0.0783 | 98 | 60-140 |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | 0.08 | 0.0863 | 108 | 60-140 |

| CAS No. | ID Standard Recoveries | BSP | Limits |
|---|---|---|---|
| | 13C4-PFBA | 72% | 50-150% |
| | 13C5-PFPeA | 72% | 50-150% |
| | 13C5-PFHxA | 72% | 50-150% |
| | 13C4-PFHpA | 72% | 50-150% |

* = Outside of Control Limits.

# Blank Spike Summary



**Job Number:** FA99297
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP93439-BS | 2Q100801.D | 1 | 10/22/22 | WH | 10/11/22 | OP93439 | S2Q1407 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99297-1, FA99297-2, FA99297-3, FA99297-4, FA99297-5, FA99297-6, FA99297-7, FA99297-8, FA99297-9, FA99297-10, FA99297-11

| CAS No. | ID Standard Recoveries | BSP | Limits |
|---|---|---|---|
| | 13C8-PFOA | 73% | 50-150% |
| | 13C9-PFNA | 71% | 50-150% |
| | 13C6-PFDA | 71% | 50-150% |
| | 13C7-PFUnDA | 75% | 50-150% |
| | 13C2-PFDoDA | 65% | 50-150% |
| | 13C2-PFTeDA | 56% | 50-150% |
| | 13C3-PFBS | 72% | 50-150% |
| | 13C3-PFHxS | 74% | 50-150% |
| | 13C8-PFOS | 65% | 50-150% |
| | 13C8-FOSA | 64% | 50-150% |
| | d3-MeFOSAA | 74% | 50-150% |
| | d5-EtFOSAA | 72% | 50-150% |
| | 13C2-4:2FTS | 74% | 50-150% |
| | 13C2-6:2FTS | 78% | 50-150% |
| | 13C2-8:2FTS | 71% | 50-150% |
| | 13C3-HFPO-DA | 68% | 50-150% |

* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** FA99297
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP93439-MS | 2Q101095.D | 5 | 10/27/22 | WH | 10/11/22 | OP93439 | S2Q1410 |
| OP93439-MSD | 2Q101096.D | 5 | 10/27/22 | WH | 10/11/22 | OP93439 | S2Q1410 |
| FA99297-8 | 2Q100818.D | 1 | 10/22/22 | WH | 10/11/22 | OP93439 | S2Q1407 |
| FA99297-8 [a] | 2Q101094.D | 5 | 10/27/22 | WH | 10/11/22 | OP93439 | S2Q1410 |

**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99297-1, FA99297-2, FA99297-3, FA99297-4, FA99297-5, FA99297-6, FA99297-7, FA99297-8, FA99297-9, FA99297-10, FA99297-11

| CAS No. | Compound | FA99297-8 ug/l | Q | Spike ug/l | MS ug/l | MS % | Spike ug/l | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid | 0.0043 | J | 0.0741 | 0.0825 | 111 | 0.0741 | 0.0830 | 112 | 1 | 73-129/30 |
| 2706-90-3 | Perfluoropentanoic acid | 0.0037 U | | 0.0741 | 0.0813 | 110 | 0.0741 | 0.0804 | 109 | 1 | 72-129/30 |
| 307-24-4 | Perfluorohexanoic acid | 0.0037 U | | 0.0741 | 0.0823 | 111 | 0.0741 | 0.0822 | 111 | 0 | 72-129/30 |
| 375-85-9 | Perfluoroheptanoic acid | 0.0037 U | | 0.0741 | 0.0843 | 114 | 0.0741 | 0.0813 | 110 | 4 | 72-130/30 |
| 335-67-1 | Perfluorooctanoic acid | 0.0063 | | 0.0741 | 0.0852 | 106 | 0.0741 | 0.0858 | 107 | 1 | 71-133/30 |
| 375-95-1 | Perfluorononanoic acid | 0.0037 U | | 0.0741 | 0.0811 | 109 | 0.0741 | 0.0822 | 111 | 1 | 69-130/30 |
| 335-76-2 | Perfluorodecanoic acid | 0.0037 U | | 0.0741 | 0.0778 | 105 | 0.0741 | 0.0767 | 104 | 1 | 71-129/30 |
| 2058-94-8 | Perfluoroundecanoic acid | 0.0037 U | | 0.0741 | 0.0778 | 105 | 0.0741 | 0.0784 | 106 | 1 | 69-133/30 |
| 307-55-1 | Perfluorododecanoic acid | 0.019 U | b | 0.0741 | 0.0798 | 108 | 0.0741 | 0.0799 | 108 | 0 | 72-134/30 |
| 72629-94-8 | Perfluorotridecanoic acid | 0.019 U | b | 0.0741 | 0.0767 | 104 | 0.0741 | 0.0776 | 105 | 1 | 65-144/30 |
| 376-06-7 | Perfluorotetradecanoic acid | 0.0037 U | | 0.0741 | 0.0806 | 109 | 0.0741 | 0.0804 | 109 | 0 | 71-132/30 |
| 375-73-5 | Perfluorobutanesulfonic acid | 0.0011 | J | 0.0741 | 0.0830 | 112 | 0.0741 | 0.0800 | 108 | 4 | 72-130/30 |
| 2706-91-4 | Perfluoropentanesulfonic acid | 0.0037 U | | 0.0741 | 0.0815 | 110 | 0.0741 | 0.0797 | 108 | 2 | 71-127/30 |
| 355-46-4 | Perfluorohexanesulfonic acid | 0.0037 U | | 0.0741 | 0.0811 | 109 | 0.0741 | 0.0810 | 109 | 0 | 68-131/30 |
| 375-92-8 | Perfluoroheptanesulfonic acid | 0.0037 U | | 0.0741 | 0.0812 | 110 | 0.0741 | 0.0819 | 111 | 1 | 69-134/30 |
| 1763-23-1 | Perfluorooctanesulfonic acid | 0.0037 U | | 0.0741 | 0.0781 | 105 | 0.0741 | 0.0889 | 120 | 13 | 65-140/30 |
| 68259-12-1 | Perfluorononanesulfonic acid | 0.0037 U | | 0.0741 | 0.0737 | 99 | 0.0741 | 0.0842 | 114 | 13 | 69-127/30 |
| 335-77-3 | Perfluorodecanesulfonic acid | 0.0037 U | | 0.0741 | 0.0830 | 112 | 0.0741 | 0.0881 | 119 | 6 | 53-142/30 |
| 754-91-6 | PFOSA | 0.0037 U | | 0.0741 | 0.0850 | 115 | 0.0741 | 0.0875 | 118 | 3 [c] | 67-137/30 |
| 2355-31-9 | MeFOSAA | 0.0074 U | | 0.0741 | 0.0793 | 107 | 0.0741 | 0.0855 | 115 | 8 | 65-136/30 |
| 2991-50-6 | EtFOSAA | 0.0074 U | | 0.0741 | 0.0821 | 111 | 0.0741 | 0.0876 | 118 | 6 | 61-135/30 |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | 0.0074 U | | 0.0741 | 0.0781 | 105 | 0.0741 | 0.0767 | 104 | 2 | 63-143/30 |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 0.0074 U | | 0.0741 | 0.0853 | 115 | 0.0741 | 0.0804 | 109 | 6 | 64-140/30 |
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | 0.0074 U | | 0.0741 | 0.0874 | 118 | 0.0741 | 0.0778 | 105 | 12 | 67-138/30 |
| 13252-13-6 | HFPO-DA (GenX) | 0.0074 U | | 0.0741 | 0.0838 | 113 | 0.0741 | 0.0813 | 110 | 3 | 60-140/30 |
| 919005-14-4 | ADONA | 0.0074 U | | 0.0741 | 0.0740 | 100 | 0.0741 | 0.0734 | 99 | 1 | 60-140/30 |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | 0.0074 U | | 0.0741 | 0.0755 | 102 | 0.0741 | 0.0799 | 108 | 6 | 60-140/30 |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | 0.037 U | b | 0.0741 | 0.0870 | 117 | 0.0741 | 0.0916 | 124 | 5 | 60-140/30 |

| CAS No. | ID Standard Recoveries | MS | MSD | FA99297-8 | FA99297-8 | Limits |
|---|---|---|---|---|---|---|
| | 13C4-PFBA | 63% | 62% | 56% | 65% | 50-150% |
| | 13C5-PFPeA | 63% | 64% | 56% | 66% | 50-150% |
| | 13C5-PFHxA | 62% | 63% | 56% | 64% | 50-150% |
| | 13C4-PFHpA | 64% | 66% | 59% | 67% | 50-150% |

* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA99297
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP93439-MS | 2Q101095.D | 5 | 10/27/22 | WH | 10/11/22 | OP93439 | S2Q1410 |
| OP93439-MSD | 2Q101096.D | 5 | 10/27/22 | WH | 10/11/22 | OP93439 | S2Q1410 |
| FA99297-8 | 2Q100818.D | 1 | 10/22/22 | WH | 10/11/22 | OP93439 | S2Q1407 |
| FA99297-8 [a] | 2Q101094.D | 5 | 10/27/22 | WH | 10/11/22 | OP93439 | S2Q1410 |

**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99297-1, FA99297-2, FA99297-3, FA99297-4, FA99297-5, FA99297-6, FA99297-7, FA99297-8, FA99297-9, FA99297-10, FA99297-11

| CAS No. | ID Standard Recoveries | MS | MSD | FA99297-8 | FA99297-8 | Limits |
|---|---|---|---|---|---|---|
| | 13C8-PFOA | 67% | 67% | 64% | 71% | 50-150% |
| | 13C9-PFNA | 59% | 61% | 58% | 64% | 50-150% |
| | 13C6-PFDA | 55% | 57% | 54% | 56% | 50-150% |
| | 13C7-PFUnDA | 56% | 60% | 55% | 58% | 50-150% |
| | 13C2-PFDoDA | 51% | 56% | 47%* [d] | 51% | 50-150% |
| | 13C2-PFTeDA | 48%* [d] | 53% | 44%* [d] | 49%* [d] | 50-150% |
| | 13C3-PFBS | 64% | 67% | 57% | 66% | 50-150% |
| | 13C3-PFHxS | 67% | 67% | 62% | 67% | 50-150% |
| | 13C8-PFOS | 58% | 54% | 52% | 55% | 50-150% |
| | 13C8-FOSA | 43%* [d] | 39%* [d] | 40%* [d] | 43%* [d] | 50-150% |
| | d3-MeFOSAA | 56% | 58% | 55% | 58% | 50-150% |
| | d5-EtFOSAA | 55% | 59% | 51% | 54% | 50-150% |
| | 13C2-4:2FTS | 66% | 66% | 53% | 62% | 50-150% |
| | 13C2-6:2FTS | 68% | 70% | 65% | 69% | 50-150% |
| | 13C2-8:2FTS | 52% | 59% | 51% | 53% | 50-150% |
| | 13C3-HFPO-DA | 64% | 66% | 51% | 61% | 50-150% |

(a) Dilution required (ID recovery standard failure).
(b) Result is from Run #2.
(c) Associated ID Standard outside control limits.
(d) Outside control limits.

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

*e-Hardcopy 2.0*
*Automated Report*



## Technical Report for

Arcadis

Racer Saginaw; 77 W Center St, Saginaw, MI

30121470

SGS Job Number: FA99296

Sampling Dates: 09/26/22 - 09/27/22

Report to:

andrea.colby@sgs.com

Total number of pages in report: 38

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

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Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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Test results relate only to samples analyzed.



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SGS North America Inc.

# Sample Summary

Arcadis

**Job No:** FA99296

Racer Saginaw; 77 W Center St, Saginaw, MI
Project No: 30121470

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| FA99296-1 | 09/26/22 | 14:50 | BC | 09/28/22 | AQ | Equipment Blank | EB-02_092622 |
| FA99296-2 | 09/26/22 | 15:45 | BC | 09/28/22 | AQ | Ground Water | QPTW-13R_092622 |
| FA99296-3 | 09/26/22 | 17:10 | BC | 09/28/22 | AQ | Ground Water | B-3R_092622 |
| FA99296-4 | 09/26/22 | 18:15 | BC | 09/28/22 | AQ | Ground Water | MW-131WT_092622 |
| FA99296-5 | 09/27/22 | 08:45 | BC | 09/28/22 | AQ | Ground Water | MW-134WT_092722 |
| FA99296-6 | 09/26/22 | 00:00 | BC | 09/28/22 | AQ | Ground Water | DUP-05_092622 |

# Summary of Hits



**Job Number:** FA99296
**Account:** Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI
**Collected:** 09/26/22 thru 09/27/22

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | LOQ | LOD | Units | Method |
|---|---|---|---|---|---|---|
| **FA99296-1** | **EB-02_092622** | | | | | |
| No hits reported in this sample. | | | | | | |
| **FA99296-2** | **QPTW-13R_092622** | | | | | |
| Perfluorobutanoic acid [a] | | 16.2 | 7.4 | 3.7 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoroheptanoic acid [a] | | 5.1 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanoic acid [a] | | 3.9 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanesulfonic acid [a] | | 11.0 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| **FA99296-3** | **B-3R_092622** | | | | | |
| Perfluorohexanoic acid [a] | | 2.1 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanoic acid [a] | | 2.7 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanesulfonic acid [a] | | 14.3 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| **FA99296-4** | **MW-131WT_092622** | | | | | |
| Perfluorobutanoic acid [a] | | 7.4 | 7.4 | 3.7 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoropentanoic acid [a] | | 5.9 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorohexanoic acid [a] | | 1.6 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanoic acid | | 3.3 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorobutanesulfonic acid [a] | | 3.0 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoropentanesulfonic acid [a] | | 2.8 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorohexanesulfonic acid | | 8.3 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanesulfonic acid [a] | | 14.6 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| **FA99296-5** | **MW-134WT_092722** | | | | | |
| Perfluorobutanoic acid [a] | | 6.4 J | 7.4 | 3.7 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoropentanoic acid [a] | | 5.0 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorohexanoic acid [a] | | 2.4 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanoic acid [a] | | 3.6 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| **FA99296-6** | **DUP-05_092622** | | | | | |
| Perfluorobutanoic acid [a] | | 16.8 | 7.4 | 3.7 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluoroheptanoic acid [a] | | 1.8 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanoic acid [a] | | 4.8 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorohexanesulfonic acid [a] | | 2.6 J | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |
| Perfluorooctanesulfonic acid [a] | | 12.8 | 3.7 | 1.9 | ng/l | EPA 537M QSM5.3 B-15 |

(a) Associated ID Standard outside control limits.

## Sample Results

Report of Analysis

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | EB-02_092622 | | |
| **Lab Sample ID:** | FA99296-1 | **Date Sampled:** | 09/26/22 |
| **Matrix:** | AQ - Equipment Blank | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100803.D | 1 | 10/22/22 14:05 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 [a] | 2Q101079.D | 5 | 10/27/22 05:31 | WH | 10/11/22 09:05 | OP93439 | S2Q1410 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 270 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2706-90-3 | Perfluoropentanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-24-4 | Perfluorohexanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-85-9 | Perfluoroheptanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-67-1 | Perfluorooctanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-95-1 | Perfluorononanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-76-2 | Perfluorodecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2706-91-4 | Perfluoropentanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 355-46-4 | Perfluorohexanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-92-8 | Perfluoroheptanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 68259-12-1 | Perfluorononanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | EB-02_092622 | | |
| **Lab Sample ID:** | FA99296-1 | **Date Sampled:** | 09/26/22 |
| **Matrix:** | AQ - Equipment Blank | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 919005-14-4 | ADONA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 54% | 64% | 50-150% |
| | 13C5-PFPeA | 55% | 65% | 50-150% |
| | 13C5-PFHxA | 54% | 65% | 50-150% |
| | 13C4-PFHpA | 55% | 66% | 50-150% |
| | 13C8-PFOA | 56% | 67% | 50-150% |
| | 13C9-PFNA | 55% | 63% | 50-150% |
| | 13C6-PFDA | 53% | 59% | 50-150% |
| | 13C7-PFUnDA | 55% | 60% | 50-150% |
| | 13C2-PFDoDA | 50% | 55% | 50-150% |
| | 13C2-PFTeDA | 43% [c] | 48% [c] | 50-150% |
| | 13C3-PFBS | 57% | 67% | 50-150% |
| | 13C3-PFHxS | 57% | 68% | 50-150% |
| | 13C8-PFOS | 51% | 57% | 50-150% |
| | 13C8-FOSA | 52% | 59% | 50-150% |
| | d3-MeFOSAA | 54% | 60% | 50-150% |
| | d5-EtFOSAA | 52% | 61% | 50-150% |
| | 13C2-4:2FTS | 54% | 63% | 50-150% |
| | 13C2-6:2FTS | 58% | 68% | 50-150% |
| | 13C2-8:2FTS | 51% | 56% | 50-150% |
| | 13C3-HFPO-DA | 53% | 61% | 50-150% |

(a) Confirmation run.
(b) Associated ID Standard outside control limits. Confirmed by re-analysis.
(c) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | QPTW-13R_092622 | | |
| **Lab Sample ID:** | FA99296-2 | **Date Sampled:** | 09/26/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100804.D | 1 | 10/22/22 14:21 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 [a] | 2Q101354.D | 1 | 11/02/22 15:49 | WH | 10/28/22 11:28 | OP93795 | S2Q1414 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 220 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid [b] | 16.2 | 7.4 | 3.7 | 1.9 | ng/l | |
| 2706-90-3 | Perfluoropentanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-24-4 | Perfluorohexanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-85-9 | Perfluoroheptanoic acid [b] | 5.1 | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-67-1 | Perfluorooctanoic acid [b] | 3.9 | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-95-1 | Perfluorononanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-76-2 | Perfluorodecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2706-91-4 | Perfluoropentanesulfonic aci [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 355-46-4 | Perfluorohexanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-92-8 | Perfluoroheptanesulfonic aci [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid [b] | 11.0 | 3.7 | 1.9 | 0.93 | ng/l | |
| 68259-12-1 | Perfluorononanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | QPTW-13R_092622 | | |
| **Lab Sample ID:** | FA99296-2 | **Date Sampled:** | 09/26/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 919005-14-4 | ADONA [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Mino [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 34% [c] | 52% | 50-150% |
| | 13C5-PFPeA | 30% [c] | 47% [c] | 50-150% |
| | 13C5-PFHxA | 28% [c] | 43% [c] | 50-150% |
| | 13C4-PFHpA | 28% [c] | 41% [c] | 50-150% |
| | 13C8-PFOA | 29% [c] | 44% [c] | 50-150% |
| | 13C9-PFNA | 27% [c] | 41% [c] | 50-150% |
| | 13C6-PFDA | 30% [c] | 47% [c] | 50-150% |
| | 13C7-PFUnDA | 45% [c] | 52% | 50-150% |
| | 13C2-PFDoDA | 46% [c] | 39% [c] | 50-150% |
| | 13C2-PFTeDA | 39% [c] | 15% [c] | 50-150% |
| | 13C3-PFBS | 36% [c] | 53% | 50-150% |
| | 13C3-PFHxS | 36% [c] | 54% | 50-150% |
| | 13C8-PFOS | 33% [c] | 50% | 50-150% |
| | 13C8-FOSA | 7% [c] | 3% [c] | 50-150% |
| | d3-MeFOSAA | 27% [c] | 28% [c] | 50-150% |
| | d5-EtFOSAA | 28% [c] | 28% [c] | 50-150% |
| | 13C2-4:2FTS | 30% [c] | 43% [c] | 50-150% |
| | 13C2-6:2FTS | 34% [c] | 51% | 50-150% |
| | 13C2-8:2FTS | 38% [c] | 59% | 50-150% |
| | 13C3-HFPO-DA | 35% [c] | 52% | 50-150% |

(a) Confirmation run.
(b) Associated ID Standard outside control limits.
(c) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | B-3R_092622 | | |
| **Lab Sample ID:** | FA99296-3 | **Date Sampled:** | 09/26/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100805.D | 1 | 10/22/22 14:38 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 [a] | 2Q101355.D | 1 | 11/02/22 16:06 | WH | 10/28/22 11:28 | OP93795 | S2Q1414 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 185 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2706-90-3 | Perfluoropentanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-24-4 | Perfluorohexanoic acid [b] | 2.1 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 375-85-9 | Perfluoroheptanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-67-1 | Perfluorooctanoic acid [b] | 2.7 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 375-95-1 | Perfluorononanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-76-2 | Perfluorodecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2706-91-4 | Perfluoropentanesulfonic aci [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 355-46-4 | Perfluorohexanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-92-8 | Perfluoroheptanesulfonic aci [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid [b] | 14.3 | 3.7 | 1.9 | 0.93 | ng/l | |
| 68259-12-1 | Perfluorononanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | B-3R_092622 | | |
| **Lab Sample ID:** | FA99296-3 | **Date Sampled:** | 09/26/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 919005-14-4 | ADONA [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Mino [c] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 42% [d] | 61% | 50-150% |
| | 13C5-PFPeA | 40% [d] | 61% | 50-150% |
| | 13C5-PFHxA | 40% [d] | 60% | 50-150% |
| | 13C4-PFHpA | 44% [d] | 62% | 50-150% |
| | 13C8-PFOA | 48% [d] | 69% | 50-150% |
| | 13C9-PFNA | 45% [d] | 62% | 50-150% |
| | 13C6-PFDA | 48% [d] | 53% | 50-150% |
| | 13C7-PFUnDA | 58% | 48% [d] | 50-150% |
| | 13C2-PFDoDA | 48% [d] | 36% [d] | 50-150% |
| | 13C2-PFTeDA | 43% [d] | 20% [d] | 50-150% |
| | 13C3-PFBS | 45% [d] | 64% | 50-150% |
| | 13C3-PFHxS | 49% [d] | 70% | 50-150% |
| | 13C8-PFOS | 43% [d] | 53% | 50-150% |
| | 13C8-FOSA | 13% [d] | 13% [d] | 50-150% |
| | d3-MeFOSAA | 65% | 63% | 50-150% |
| | d5-EtFOSAA | 65% | 62% | 50-150% |
| | 13C2-4:2FTS | 43% [d] | 61% | 50-150% |
| | 13C2-6:2FTS | 53% | 78% | 50-150% |
| | 13C2-8:2FTS | 48% [d] | 58% | 50-150% |
| | 13C3-HFPO-DA | 45% [d] | 63% | 50-150% |

(a) Confirmation run.
(b) Associated ID Standard outside control limits.
(c) Associated ID Standard outside control limits. Confirmed by re-extraction and reanalysis.
(d) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-131WT_092622 | | |
| **Lab Sample ID:** | FA99296-4 | **Date Sampled:** | 09/26/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100806.D | 1 | 10/22/22 14:55 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 [a] | 2Q101524.D | 1 | 11/04/22 15:23 | WH | 10/31/22 11:46 | OP93818 | S2Q1416 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 240 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid [b] | 7.4 | 7.4 | 3.7 | 1.9 | ng/l | |
| 2706-90-3 | Perfluoropentanoic acid [b] | 5.9 | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-24-4 | Perfluorohexanoic acid [b] | 1.6 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 375-85-9 | Perfluoroheptanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-67-1 | Perfluorooctanoic acid | 3.3 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 375-95-1 | Perfluorononanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-76-2 | Perfluorodecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid [b] | 3.0 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 2706-91-4 | Perfluoropentanesulfonic aci [b] | 2.8 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 355-46-4 | Perfluorohexanesulfonic acid | 8.3 | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-92-8 | Perfluoroheptanesulfonic aci [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid [b] | 14.6 | 3.7 | 1.9 | 0.93 | ng/l | |
| 68259-12-1 | Perfluorononanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-131WT_092622 | | |
| **Lab Sample ID:** | FA99296-4 | **Date Sampled:** | 09/26/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 919005-14-4 | ADONA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Mino [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 47% [c] | 65% | 50-150% |
| | 13C5-PFPeA | 46% [c] | 67% | 50-150% |
| | 13C5-PFHxA | 45% [c] | 65% | 50-150% |
| | 13C4-PFHpA | 47% [c] | 66% | 50-150% |
| | 13C8-PFOA | 52% | 73% | 50-150% |
| | 13C9-PFNA | 48% [c] | 67% | 50-150% |
| | 13C6-PFDA | 49% [c] | 68% | 50-150% |
| | 13C7-PFUnDA | 54% | 67% | 50-150% |
| | 13C2-PFDoDA | 48% [c] | 45% [c] | 50-150% |
| | 13C2-PFTeDA | 44% [c] | 16% [c] | 50-150% |
| | 13C3-PFBS | 49% [c] | 64% | 50-150% |
| | 13C3-PFHxS | 54% | 72% | 50-150% |
| | 13C8-PFOS | 45% [c] | 63% | 50-150% |
| | 13C8-FOSA | 21% [c] | 20% [c] | 50-150% |
| | d3-MeFOSAA | 57% | 69% | 50-150% |
| | d5-EtFOSAA | 55% | 62% | 50-150% |
| | 13C2-4:2FTS | 46% [c] | 61% | 50-150% |
| | 13C2-6:2FTS | 55% | 75% | 50-150% |
| | 13C2-8:2FTS | 47% [c] | 67% | 50-150% |
| | 13C3-HFPO-DA | 45% [c] | 65% | 50-150% |

(a) Confirmation run.
(b) Associated ID Standard outside control limits.
(c) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





**Client Sample ID:** MW-134WT_092722
**Lab Sample ID:** FA99296-5
**Matrix:** AQ - Ground Water
**Method:** EPA 537M QSM5.3 B-15 EPA 537 MOD
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

**Date Sampled:** 09/27/22
**Date Received:** 09/28/22
**Percent Solids:** n/a

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100807.D | 1 | 10/22/22 15:11 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 [a] | 2Q101525.D | 1 | 11/04/22 15:40 | WH | 10/31/22 11:46 | OP93818 | S2Q1416 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 250 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid [b] | 6.4 | 7.4 | 3.7 | 1.9 | ng/l | J |
| 2706-90-3 | Perfluoropentanoic acid [b] | 5.0 | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-24-4 | Perfluorohexanoic acid [b] | 2.4 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 375-85-9 | Perfluoroheptanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-67-1 | Perfluorooctanoic acid [b] | 3.6 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 375-95-1 | Perfluorononanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-76-2 | Perfluorodecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2706-91-4 | Perfluoropentanesulfonic aci [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 355-46-4 | Perfluorohexanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-92-8 | Perfluoroheptanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 68259-12-1 | Perfluorononanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-134WT_092722 | | |
| **Lab Sample ID:** | FA99296-5 | **Date Sampled:** | 09/27/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 919005-14-4 | ADONA [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Mino [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 43% [c] | 63% | 50-150% |
| | 13C5-PFPeA | 42% [c] | 63% | 50-150% |
| | 13C5-PFHxA | 42% [c] | 60% | 50-150% |
| | 13C4-PFHpA | 44% [c] | 60% | 50-150% |
| | 13C8-PFOA | 49% [c] | 67% | 50-150% |
| | 13C9-PFNA | 44% [c] | 60% | 50-150% |
| | 13C6-PFDA | 47% [c] | 60% | 50-150% |
| | 13C7-PFUnDA | 54% | 62% | 50-150% |
| | 13C2-PFDoDA | 47% [c] | 47% [c] | 50-150% |
| | 13C2-PFTeDA | 42% [c] | 26% [c] | 50-150% |
| | 13C3-PFBS | 45% [c] | 59% | 50-150% |
| | 13C3-PFHxS | 52% | 68% | 50-150% |
| | 13C8-PFOS | 43% [c] | 58% | 50-150% |
| | 13C8-FOSA | 18% [c] | 16% [c] | 50-150% |
| | d3-MeFOSAA | 59% | 70% | 50-150% |
| | d5-EtFOSAA | 57% | 68% | 50-150% |
| | 13C2-4:2FTS | 43% [c] | 56% | 50-150% |
| | 13C2-6:2FTS | 52% | 71% | 50-150% |
| | 13C2-8:2FTS | 47% [c] | 63% | 50-150% |
| | 13C3-HFPO-DA | 41% [c] | 60% | 50-150% |

(a) Confirmation run.
(b) Associated ID Standard outside control limits.
(c) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | DUP-05_092622 | | |
| **Lab Sample ID:** | FA99296-6 | **Date Sampled:** | 09/26/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2Q100808.D | 1 | 10/22/22 15:28 | WH | 10/11/22 09:05 | OP93439 | S2Q1407 |
| Run #2 [a] | 2Q101356.D | 1 | 11/02/22 16:22 | WH | 10/28/22 11:28 | OP93795 | S2Q1414 |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 270 ml | 1.0 ml |
| Run #2 | 230 ml | 1.0 ml |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| **PERFLUOROALKYLCARBOXYLIC ACIDS** | | | | | | | |
| 375-22-4 | Perfluorobutanoic acid [b] | 16.8 | 7.4 | 3.7 | 1.9 | ng/l | |
| 2706-90-3 | Perfluoropentanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-24-4 | Perfluorohexanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-85-9 | Perfluoroheptanoic acid [b] | 1.8 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 335-67-1 | Perfluorooctanoic acid [b] | 4.8 | 3.7 | 1.9 | 0.93 | ng/l | |
| 375-95-1 | Perfluorononanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-76-2 | Perfluorodecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2058-94-8 | Perfluoroundecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 307-55-1 | Perfluorododecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 72629-94-8 | Perfluorotridecanoic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 376-06-7 | Perfluorotetradecanoic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROALKYLSULFONIC ACIDS** | | | | | | | |
| 375-73-5 | Perfluorobutanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 2706-91-4 | Perfluoropentanesulfonic aci [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 355-46-4 | Perfluorohexanesulfonic acid [b] | 2.6 | 3.7 | 1.9 | 0.93 | ng/l | J |
| 375-92-8 | Perfluoroheptanesulfonic aci [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid [b] | 12.8 | 3.7 | 1.9 | 0.93 | ng/l | |
| 68259-12-1 | Perfluorononanesulfonic acid [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDES** | | | | | | | |
| 754-91-6 | PFOSA [b] | 1.9 U | 3.7 | 1.9 | 0.93 | ng/l | |
| **PERFLUOROOCTANESULFONAMIDOACETIC ACIDS** | | | | | | | |
| 2355-31-9 | MeFOSAA [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 2991-50-6 | EtFOSAA [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **FLUOROTELOMER SULFONATES** | | | | | | | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | DUP-05_092622 | | |
| **Lab Sample ID:** | FA99296-6 | **Date Sampled:** | 09/26/22 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/28/22 |
| **Method:** | EPA 537M QSM5.3 B-15 EPA 537 MOD | **Percent Solids:** | n/a |
| **Project:** | Racer Saginaw; 77 W Center St, Saginaw, MI | | |

| CAS No. | Compound | Result | LOQ | LOD | DL | Units | Q |
|---|---|---|---|---|---|---|---|
| 39108-34-4 | 8:2 Fluorotelomer sulfonate [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| **NEXT GENERATION PFAS ANALYTES** | | | | | | | |
| 13252-13-6 | HFPO-DA (GenX) [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 919005-14-4 | ADONA [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) [b] | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | 3.7 U | 7.4 | 3.7 | 1.9 | ng/l | |

| CAS No. | ID Standard Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| | 13C4-PFBA | 38% [c] | 48% [c] | 50-150% |
| | 13C5-PFPeA | 33% [c] | 45% [c] | 50-150% |
| | 13C5-PFHxA | 30% [c] | 41% [c] | 50-150% |
| | 13C4-PFHpA | 30% [c] | 38% [c] | 50-150% |
| | 13C8-PFOA | 31% [c] | 40% [c] | 50-150% |
| | 13C9-PFNA | 29% [c] | 37% [c] | 50-150% |
| | 13C6-PFDA | 34% [c] | 40% [c] | 50-150% |
| | 13C7-PFUnDA | 50% | 49% [c] | 50-150% |
| | 13C2-PFDoDA | 52% | 43% [c] | 50-150% |
| | 13C2-PFTeDA | 45% [c] | 36% [c] | 50-150% |
| | 13C3-PFBS | 40% [c] | 50% | 50-150% |
| | 13C3-PFHxS | 42% [c] | 52% | 50-150% |
| | 13C8-PFOS | 36% [c] | 45% [c] | 50-150% |
| | 13C8-FOSA | 7% [c] | 8% [c] | 50-150% |
| | d3-MeFOSAA | 28% [c] | 27% [c] | 50-150% |
| | d5-EtFOSAA | 29% [c] | 27% [c] | 50-150% |
| | 13C2-4:2FTS | 33% [c] | 41% [c] | 50-150% |
| | 13C2-6:2FTS | 38% [c] | 46% [c] | 50-150% |
| | 13C2-8:2FTS | 42% [c] | 51% | 50-150% |
| | 13C3-HFPO-DA | 37% [c] | 49% [c] | 50-150% |

(a) Confirmation run.
(b) Associated ID Standard outside control limits.
(c) Outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

## Misc. Forms

### Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

# SGS North America Inc - Orlando

FA99296

## Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

**Client / Reporting Information**

Company Name: ARCADIS
Address: 28550 CABOT DRIVE SUITE 500
City: NOVI State: MI Zip: 48377
Project Contact: SCOTT.CLEARWATER@ARCADIS.COM Email:
Phone #: 248-346-5970
Sampler(s) Name(s) (Printed)
Sampler 1: Bill Cameron Sampler 2:

**Project Information**

Project Name: RACER SAGINAW (SM1)
Street 77 WEST CENTER ST
City SAGINAW State MI
Project # 30121470
Fax #
Client Purchase Order #

**Analytical Information**

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid

| SGS Orlando Sample # | Field ID / Point of Collection | COLLECTION DATE | TIME | SAMPLED BY: | MATRIX | TOTAL # OF BOTTLES | CONTAINER INFORMATION: OTHER | NONE | HCl | NaOH | HNO3 | H2SO4 | NAOH+ZNAC | DI WATER | MEOH | Wastewater (PFAS) | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EB-02-092622 | 9/26/22 | 14:50 | BC | W | 2 | | 2 | | | | | | | | 2 | |
| 2 | QPTW-13R_092622 | 9/26/22 | 15:45 | BC | GW | 2 | | 2 | | | | | | | | 2 | |
| 3 | B-3R_092622 | 9/26/22 | 17:10 | BC | GW | 2 | | 2 | | | | | | | | 2 | |
| 4 | MW-131WT_092622 | 9/26/22 | 18:15 | BC | GW | 2 | | 2 | | | | | | | | 2 | |
| 5 | MW-134WT_092722 | 9/27/22 | 8:45 | BC | GW | 2 | | 2 | | | | | | | | 2 | |

Ref: AC-091322-22 Date: 13Sep22
Dep: Wgt: 70.00 LBS
DV: 0.00
Svcs: PRIORITY OVERNIGHT TRCK: 6700 7364 5299

SHIPPING: 0.00
SPECIAL: 0.00
HANDLING: 0.00
TOTAL: 0.00

**Turnaround Time ( Business days)**

10 Day (Business) Approved By: / Date:
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

**Data Deliverable Information**

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULLT1 (EPA LEVEL 4)
- [ ] EDD'S

**Comments / Remarks**

INITIAL ASSESSMENT
LABEL VERIFICATION

Sample Custody must be documented below each time samples change possession, including courier delivery.

| | Relinquished by Sampler/Affiliation | Date Time: | Received By/Affiliation | Relinquished By/Affiliation | Date Time: | Received By/Affiliation |
|---|---|---|---|---|---|---|
| 1 | ARCADIS | 9/27/22 18:45 | 2 | 3 | 9/28/22 | 4 |
| | Relinquished by/Affiliation | Date Time: | Received By/Affiliation | Relinquished By/Affiliation | Date Time: | Received By/Affiliation |
| 5 | | | 6 | 7 | 9/28 | 8 |

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 0.4 CMY

http://www.sgs.com/en/terms-and-conditions

SGSORLANDOCOC Rev 031318

**FA99296: Chain of Custody**
**Page 1 of 3**

# SGS Sample Receipt Summary

**Job Number:** FA99296 **Client:** ARCADIS **Project:** RACER SAGINAW (SMI)

**Date / Time Received:** 9/28/2022 9:30:00 AM **Delivery Method:** FX **Airbill #'s:**

**Therm ID:** IR 1; **Therm CF:** 0.6; **# of Coolers:** 1

**Cooler Temps (Raw Measured) °C:** Cooler 1: (0.4);

**Cooler Temps (Corrected) °C:** Cooler 1: (1.0);

| Cooler Information | Y | or | N |
|---|---|---|---|
| 1. Custody Seals Present | ☑ | | ☐ |
| 2. Custody Seals Intact | ☑ | | ☐ |
| 3. Temp criteria achieved | ☑ | | ☐ |
| 4. Cooler temp verification | IR Gun | | |
| 5. Cooler media | Ice (Bag) | | |

| Trip Blank Information | Y | or | N | N/A |
|---|---|---|---|---|
| 1. Trip Blank present / cooler | ☐ | | ☐ | ☑ |
| 2. Trip Blank listed on COC | ☐ | | ☐ | ☑ |

| | W | or | S | N/A |
|---|---|---|---|---|
| 3. Type Of TB Received | ☐ | | ☐ | ☑ |

| Sample Information | Y | or | N | N/A |
|---|---|---|---|---|
| 1. Sample labels present on bottles | ☑ | | ☐ | |
| 2. Samples preserved properly | ☑ | | ☐ | |
| 3. Sufficient volume/containers recvd for analysis: | ☑ | | ☐ | |
| 4. Condition of sample | Intact | | | |
| 5. Sample recvd within HT | ☑ | | ☐ | |
| 6. Dates/Times/IDs on COC match Sample Label | ☑ | | ☐ | |
| 7. VOCs have headspace | ☐ | | ☐ | ☑ |
| 8. Bottles received for unspecified tests | ☐ | | ☑ | |
| 9. Compositing instructions clear | ☐ | | ☐ | ☑ |
| 10. Voa Soil Kits/Jars received past 48hrs? | ☐ | | ☐ | ☑ |
| 11. % Solids Jar received? | ☐ | | ☐ | ☑ |
| 12. Residual Chlorine Present? | ☐ | | ☐ | ☑ |

**Misc. Information**

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments SAMPLE # 6 NOT LISTED ON COC
2x 250ml N/P POLYS WITH ID: "DUP-05_092622" DATE: "9/26/22" TIME: "--------"

Technician: NATHANS Date: 9/28/2022 9:30:00 AM Reviewer: _____ Date: _____

SM001
Rev. Date 05/24/17

**CSR:** Andrea Colby **Response Date:** 10/3/22

**Response:** Please analyze the extra sample per Cindy Jeffers.



SM001
Rev. Date 05/24/17

## FA99296: Chain of Custody
## Page 3 of 3

# QC Evaluation: DOD QSM5.x Limits



**Job Number:** FA99296
**Account:** Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI
**Collected:** 09/26/22 thru 09/27/22



| QC Sample ID | CAS# | Analyte | Sample Type | Result Type | Result | Units | Limits |
|---|---|---|---|---|---|---|---|
| OP93439 | EPA 537M QSM5.3 B-15 | | | | | | |
| OP93439-BS | 375-22-4 | Perfluorobutanoic acid | BSP | REC | 108 | % | 73-129 |
| OP93439-BS | 2706-90-3 | Perfluoropentanoic acid | BSP | REC | 109 | % | 72-129 |
| OP93439-BS | 307-24-4 | Perfluorohexanoic acid | BSP | REC | 109 | % | 72-129 |
| OP93439-BS | 375-85-9 | Perfluoroheptanoic acid | BSP | REC | 108 | % | 72-130 |
| OP93439-BS | 335-67-1 | Perfluorooctanoic acid | BSP | REC | 107 | % | 71-133 |
| OP93439-BS | 375-95-1 | Perfluorononanoic acid | BSP | REC | 108 | % | 69-130 |
| OP93439-BS | 335-76-2 | Perfluorodecanoic acid | BSP | REC | 104 | % | 71-129 |
| OP93439-BS | 2058-94-8 | Perfluoroundecanoic acid | BSP | REC | 106 | % | 69-133 |
| OP93439-BS | 307-55-1 | Perfluorododecanoic acid | BSP | REC | 107 | % | 72-134 |
| OP93439-BS | 72629-94-8 | Perfluorotridecanoic acid | BSP | REC | 99 | % | 65-144 |
| OP93439-BS | 376-06-7 | Perfluorotetradecanoic acid | BSP | REC | 108 | % | 71-132 |
| OP93439-BS | 375-73-5 | Perfluorobutanesulfonic acid | BSP | REC | 108 | % | 72-130 |
| OP93439-BS | 2706-91-4 | Perfluoropentanesulfonic acid | BSP | REC | 108 | % | 71-127 |
| OP93439-BS | 355-46-4 | Perfluorohexanesulfonic acid | BSP | REC | 106 | % | 68-131 |
| OP93439-BS | 375-92-8 | Perfluoroheptanesulfonic acid | BSP | REC | 111 | % | 69-134 |
| OP93439-BS | 1763-23-1 | Perfluorooctanesulfonic acid | BSP | REC | 114 | % | 65-140 |
| OP93439-BS | 68259-12-1 | Perfluorononanesulfonic acid | BSP | REC | 112 | % | 69-127 |
| OP93439-BS | 335-77-3 | Perfluorodecanesulfonic acid | BSP | REC | 93 | % | 53-142 |
| OP93439-BS | 754-91-6 | PFOSA | BSP | REC | 110 | % | 67-137 |
| OP93439-BS | 2355-31-9 | MeFOSAA | BSP | REC | 109 | % | 65-136 |
| OP93439-BS | 2991-50-6 | EtFOSAA | BSP | REC | 105 | % | 61-135 |
| OP93439-BS | 757124-72-4 | 4:2 Fluorotelomer sulfonate | BSP | REC | 103 | % | 63-143 |
| OP93439-BS | 27619-97-2 | 6:2 Fluorotelomer sulfonate | BSP | REC | 108 | % | 64-140 |
| OP93439-BS | 39108-34-4 | 8:2 Fluorotelomer sulfonate | BSP | REC | 108 | % | 67-138 |
| OP93439-MS* | 375-22-4 | Perfluorobutanoic acid | MS | REC | 111 | % | 73-129 |
| OP93439-MS* | 2706-90-3 | Perfluoropentanoic acid | MS | REC | 110 | % | 72-129 |
| OP93439-MS* | 307-24-4 | Perfluorohexanoic acid | MS | REC | 111 | % | 72-129 |
| OP93439-MS* | 375-85-9 | Perfluoroheptanoic acid | MS | REC | 114 | % | 72-130 |
| OP93439-MS* | 335-67-1 | Perfluorooctanoic acid | MS | REC | 106 | % | 71-133 |
| OP93439-MS* | 375-95-1 | Perfluorononanoic acid | MS | REC | 109 | % | 69-130 |
| OP93439-MS* | 335-76-2 | Perfluorodecanoic acid | MS | REC | 105 | % | 71-129 |
| OP93439-MS* | 2058-94-8 | Perfluoroundecanoic acid | MS | REC | 105 | % | 69-133 |
| OP93439-MS* | 307-55-1 | Perfluorododecanoic acid | MS | REC | 108 | % | 72-134 |
| OP93439-MS* | 72629-94-8 | Perfluorotridecanoic acid | MS | REC | 104 | % | 65-144 |
| OP93439-MS* | 376-06-7 | Perfluorotetradecanoic acid | MS | REC | 109 | % | 71-132 |
| OP93439-MS* | 375-73-5 | Perfluorobutanesulfonic acid | MS | REC | 112 | % | 72-130 |
| OP93439-MS* | 2706-91-4 | Perfluoropentanesulfonic acid | MS | REC | 110 | % | 71-127 |
| OP93439-MS* | 355-46-4 | Perfluorohexanesulfonic acid | MS | REC | 109 | % | 68-131 |
| OP93439-MS* | 375-92-8 | Perfluoroheptanesulfonic acid | MS | REC | 110 | % | 69-134 |
| OP93439-MS* | 1763-23-1 | Perfluorooctanesulfonic acid | MS | REC | 105 | % | 65-140 |
| OP93439-MS* | 68259-12-1 | Perfluorononanesulfonic acid | MS | REC | 99 | % | 69-127 |
| OP93439-MS* | 335-77-3 | Perfluorodecanesulfonic acid | MS | REC | 112 | % | 53-142 |

* Sample used for QC is not from job FA99296

# QC Evaluation: DOD QSM5.x Limits

**Job Number:** FA99296
**Account:** Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI
**Collected:** 09/26/22 thru 09/27/22



| QC Sample ID | CAS# | Analyte | Sample Type | Result Type | Result | Units | Limits |
|---|---|---|---|---|---|---|---|
| OP93439-MS* | 754-91-6 | PFOSA | MS | REC | 115 | % | 67-137 |
| OP93439-MS* | 2355-31-9 | MeFOSAA | MS | REC | 107 | % | 65-136 |
| OP93439-MS* | 2991-50-6 | EtFOSAA | MS | REC | 111 | % | 61-135 |
| OP93439-MS* | 757124-72-4 | 4:2 Fluorotelomer sulfonate | MS | REC | 105 | % | 63-143 |
| OP93439-MS* | 27619-97-2 | 6:2 Fluorotelomer sulfonate | MS | REC | 115 | % | 64-140 |
| OP93439-MS* | 39108-34-4 | 8:2 Fluorotelomer sulfonate | MS | REC | 118 | % | 67-138 |
| OP93439-MSD* | 375-22-4 | Perfluorobutanoic acid | MSD | REC | 112 | % | 73-129 |
| OP93439-MSD* | 375-22-4 | Perfluorobutanoic acid | MSD | RPD | 1 | % | 30 |
| OP93439-MSD* | 2706-90-3 | Perfluoropentanoic acid | MSD | REC | 109 | % | 72-129 |
| OP93439-MSD* | 2706-90-3 | Perfluoropentanoic acid | MSD | RPD | 1 | % | 30 |
| OP93439-MSD* | 307-24-4 | Perfluorohexanoic acid | MSD | REC | 111 | % | 72-129 |
| OP93439-MSD* | 307-24-4 | Perfluorohexanoic acid | MSD | RPD | 0 | % | 30 |
| OP93439-MSD* | 375-85-9 | Perfluoroheptanoic acid | MSD | REC | 110 | % | 72-130 |
| OP93439-MSD* | 375-85-9 | Perfluoroheptanoic acid | MSD | RPD | 4 | % | 30 |
| OP93439-MSD* | 335-67-1 | Perfluorooctanoic acid | MSD | REC | 107 | % | 71-133 |
| OP93439-MSD* | 335-67-1 | Perfluorooctanoic acid | MSD | RPD | 1 | % | 30 |
| OP93439-MSD* | 375-95-1 | Perfluorononanoic acid | MSD | REC | 111 | % | 69-130 |
| OP93439-MSD* | 375-95-1 | Perfluorononanoic acid | MSD | RPD | 1 | % | 30 |
| OP93439-MSD* | 335-76-2 | Perfluorodecanoic acid | MSD | REC | 104 | % | 71-129 |
| OP93439-MSD* | 335-76-2 | Perfluorodecanoic acid | MSD | RPD | 1 | % | 30 |
| OP93439-MSD* | 2058-94-8 | Perfluoroundecanoic acid | MSD | REC | 106 | % | 69-133 |
| OP93439-MSD* | 2058-94-8 | Perfluoroundecanoic acid | MSD | RPD | 1 | % | 30 |
| OP93439-MSD* | 307-55-1 | Perfluorododecanoic acid | MSD | REC | 108 | % | 72-134 |
| OP93439-MSD* | 307-55-1 | Perfluorododecanoic acid | MSD | RPD | 0 | % | 30 |
| OP93439-MSD* | 72629-94-8 | Perfluorotridecanoic acid | MSD | REC | 105 | % | 65-144 |
| OP93439-MSD* | 72629-94-8 | Perfluorotridecanoic acid | MSD | RPD | 1 | % | 30 |
| OP93439-MSD* | 376-06-7 | Perfluorotetradecanoic acid | MSD | REC | 109 | % | 71-132 |
| OP93439-MSD* | 376-06-7 | Perfluorotetradecanoic acid | MSD | RPD | 0 | % | 30 |
| OP93439-MSD* | 375-73-5 | Perfluorobutanesulfonic acid | MSD | REC | 108 | % | 72-130 |
| OP93439-MSD* | 375-73-5 | Perfluorobutanesulfonic acid | MSD | RPD | 4 | % | 30 |
| OP93439-MSD* | 2706-91-4 | Perfluoropentanesulfonic acid | MSD | REC | 108 | % | 71-127 |
| OP93439-MSD* | 2706-91-4 | Perfluoropentanesulfonic acid | MSD | RPD | 2 | % | 30 |
| OP93439-MSD* | 355-46-4 | Perfluorohexanesulfonic acid | MSD | REC | 109 | % | 68-131 |
| OP93439-MSD* | 355-46-4 | Perfluorohexanesulfonic acid | MSD | RPD | 0 | % | 30 |
| OP93439-MSD* | 375-92-8 | Perfluoroheptanesulfonic acid | MSD | REC | 111 | % | 69-134 |
| OP93439-MSD* | 375-92-8 | Perfluoroheptanesulfonic acid | MSD | RPD | 1 | % | 30 |
| OP93439-MSD* | 1763-23-1 | Perfluorooctanesulfonic acid | MSD | REC | 120 | % | 65-140 |
| OP93439-MSD* | 1763-23-1 | Perfluorooctanesulfonic acid | MSD | RPD | 13 | % | 30 |
| OP93439-MSD* | 68259-12-1 | Perfluorononanesulfonic acid | MSD | REC | 114 | % | 69-127 |
| OP93439-MSD* | 68259-12-1 | Perfluorononanesulfonic acid | MSD | RPD | 13 | % | 30 |
| OP93439-MSD* | 335-77-3 | Perfluorodecanesulfonic acid | MSD | REC | 119 | % | 53-142 |
| OP93439-MSD* | 335-77-3 | Perfluorodecanesulfonic acid | MSD | RPD | 6 | % | 30 |
| OP93439-MSD* | 754-91-6 | PFOSA | MSD | REC | 118 | % | 67-137 |
| OP93439-MSD* | 754-91-6 | PFOSA | MSD | RPD | 3 [a] | % | 30 |
| OP93439-MSD* | 2355-31-9 | MeFOSAA | MSD | REC | 115 | % | 65-136 |

* Sample used for QC is not from job FA99296

# QC Evaluation: DOD QSM5.x Limits

**Job Number:** FA99296
**Account:** Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI
**Collected:** 09/26/22 thru 09/27/22



| QC Sample ID | CAS# | Analyte | Sample Type | Result Type | Result | Units | Limits |
|---|---|---|---|---|---|---|---|
| OP93439-MSD* | 2355-31-9 | MeFOSAA | MSD | RPD | 8 | % | 30 |
| OP93439-MSD* | 2991-50-6 | EtFOSAA | MSD | REC | 118 | % | 61-135 |
| OP93439-MSD* | 2991-50-6 | EtFOSAA | MSD | RPD | 6 | % | 30 |
| OP93439-MSD* | 757124-72-4 | 4:2 Fluorotelomer sulfonate | MSD | REC | 104 | % | 63-143 |
| OP93439-MSD* | 757124-72-4 | 4:2 Fluorotelomer sulfonate | MSD | RPD | 2 | % | 30 |
| OP93439-MSD* | 27619-97-2 | 6:2 Fluorotelomer sulfonate | MSD | REC | 109 | % | 64-140 |
| OP93439-MSD* | 27619-97-2 | 6:2 Fluorotelomer sulfonate | MSD | RPD | 6 | % | 30 |
| OP93439-MSD* | 39108-34-4 | 8:2 Fluorotelomer sulfonate | MSD | REC | 105 | % | 67-138 |
| OP93439-MSD* | 39108-34-4 | 8:2 Fluorotelomer sulfonate | MSD | RPD | 12 | % | 30 |

(a) Associated ID Standard outside control limits.

* Sample used for QC is not from job FA99296

## MS Semi-volatiles

### QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Instrument Blank



**Job Number:** FA99296
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| S2Q1407-IBLK | 2Q100797.D | 1 | 10/22/22 | WH | n/a | n/a | S2Q1407 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99296-1, FA99296-2, FA99296-3, FA99296-4, FA99296-5, FA99296-6

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid | ND | 0.0080 | 0.0020 | ug/l | |
| 2706-90-3 | Perfluoropentanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 307-24-4 | Perfluorohexanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-85-9 | Perfluoroheptanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 335-67-1 | Perfluorooctanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-95-1 | Perfluorononanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 335-76-2 | Perfluorodecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 2058-94-8 | Perfluoroundecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 307-55-1 | Perfluorododecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 72629-94-8 | Perfluorotridecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 376-06-7 | Perfluorotetradecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-73-5 | Perfluorobutanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 2706-91-4 | Perfluoropentanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 355-46-4 | Perfluorohexanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-92-8 | Perfluoroheptanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 68259-12-1 | Perfluorononanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 754-91-6 | PFOSA | ND | 0.0040 | 0.0010 | ug/l | |
| 2355-31-9 | MeFOSAA | ND | 0.0080 | 0.0020 | ug/l | |
| 2991-50-6 | EtFOSAA | ND | 0.0080 | 0.0020 | ug/l | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 13252-13-6 | HFPO-DA (GenX) | ND | 0.0080 | 0.0020 | ug/l | |
| 919005-14-4 | ADONA | ND | 0.0080 | 0.0020 | ug/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | ND | 0.0080 | 0.0020 | ug/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | ND | 0.0080 | 0.0020 | ug/l | |

| CAS No. | ID Standard Recoveries | | Limits |
|---|---|---|---|
| | 13C4-PFBA | 76% | 50-150% |
| | 13C5-PFPeA | 76% | 50-150% |
| | 13C5-PFHxA | 74% | 50-150% |
| | 13C4-PFHpA | 75% | 50-150% |

# Instrument Blank



**Job Number:** FA99296
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| S2Q1407-IBLK | 2Q100797.D | 1 | 10/22/22 | WH | n/a | n/a | S2Q1407 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99296-1, FA99296-2, FA99296-3, FA99296-4, FA99296-5, FA99296-6

| CAS No. | ID Standard Recoveries | | Limits |
|---|---|---|---|
| | 13C8-PFOA | 80% | 50-150% |
| | 13C9-PFNA | 75% | 50-150% |
| | 13C6-PFDA | 73% | 50-150% |
| | 13C7-PFUnDA | 80% | 50-150% |
| | 13C2-PFDoDA | 74% | 50-150% |
| | 13C2-PFTeDA | 73% | 50-150% |
| | 13C3-PFBS | 75% | 50-150% |
| | 13C3-PFHxS | 78% | 50-150% |
| | 13C8-PFOS | 70% | 50-150% |
| | 13C8-FOSA | 78% | 50-150% |
| | d3-MeFOSA | 79% | 50-150% |
| | d3-MeFOSAA | 81% | 50-150% |
| | d5-EtFOSAA | 78% | 50-150% |
| | 13C2-4:2FTS | 69% | 50-150% |
| | 13C2-6:2FTS | 78% | 50-150% |
| | 13C2-8:2FTS | 71% | 50-150% |
| | 13C3-HFPO-DA | 74% | 50-150% |

# Instrument Blank



**Job Number:** FA99296
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| S2Q1414-IBLK | 2Q101347.D | 1 | 11/02/22 | WH | n/a | n/a | S2Q1414 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99296-6

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|

| CAS No. | ID Standard Recoveries | | Limits |
|---|---|---|---|
| | 13C4-PFBA | 103% | 50-150% |
| | 13C5-PFPeA | 104% | 50-150% |
| | 13C5-PFHxA | 102% | 50-150% |
| | 13C4-PFHpA | 102% | 50-150% |
| | 13C8-PFOA | 105% | 50-150% |
| | 13C9-PFNA | 100% | 50-150% |
| | 13C6-PFDA | 99% | 50-150% |
| | 13C7-PFUnDA | 102% | 50-150% |
| | 13C2-PFDoDA | 101% | 50-150% |
| | 13C2-PFTeDA | 98% | 50-150% |
| | 13C3-PFBS | 101% | 50-150% |
| | 13C3-PFHxS | 104% | 50-150% |
| | 13C8-PFOS | 102% | 50-150% |
| | 13C8-FOSA | 108% | 50-150% |
| | d3-MeFOSA | 112% | 50-150% |
| | d3-MeFOSAA | 106% | 50-150% |
| | d5-EtFOSAA | 107% | 50-150% |
| | 13C2-4:2FTS | 93% | 50-150% |
| | 13C2-6:2FTS | 99% | 50-150% |
| | 13C2-8:2FTS | 94% | 50-150% |
| | 13C3-HFPO-DA | 100% | 50-150% |

# Method Blank Summary



**Job Number:** FA99296
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP93439-MB | 2Q100802.D | 1 | 10/22/22 | WH | 10/11/22 | OP93439 | S2Q1407 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99296-1, FA99296-2, FA99296-3, FA99296-4, FA99296-5, FA99296-6

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid | ND | 0.0080 | 0.0020 | ug/l | |
| 2706-90-3 | Perfluoropentanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 307-24-4 | Perfluorohexanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-85-9 | Perfluoroheptanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 335-67-1 | Perfluorooctanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-95-1 | Perfluorononanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 335-76-2 | Perfluorodecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 2058-94-8 | Perfluoroundecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 307-55-1 | Perfluorododecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 72629-94-8 | Perfluorotridecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 376-06-7 | Perfluorotetradecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-73-5 | Perfluorobutanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 2706-91-4 | Perfluoropentanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 355-46-4 | Perfluorohexanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-92-8 | Perfluoroheptanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 68259-12-1 | Perfluorononanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 754-91-6 | PFOSA | ND | 0.0040 | 0.0010 | ug/l | |
| 2355-31-9 | MeFOSAA | ND | 0.0080 | 0.0020 | ug/l | |
| 2991-50-6 | EtFOSAA | ND | 0.0080 | 0.0020 | ug/l | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 13252-13-6 | HFPO-DA (GenX) | ND | 0.0080 | 0.0020 | ug/l | |
| 919005-14-4 | ADONA | ND | 0.0080 | 0.0020 | ug/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | ND | 0.0080 | 0.0020 | ug/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | ND | 0.0080 | 0.0020 | ug/l | |

| CAS No. | ID Standard Recoveries | | Limits |
|---|---|---|---|
| | 13C4-PFBA | 70% | 50-150% |
| | 13C5-PFPeA | 71% | 50-150% |
| | 13C5-PFHxA | 70% | 50-150% |
| | 13C4-PFHpA | 71% | 50-150% |

# Method Blank Summary

**Job Number:** FA99296
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP93439-MB | 2Q100802.D | 1 | 10/22/22 | WH | 10/11/22 | OP93439 | S2Q1407 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99296-1, FA99296-2, FA99296-3, FA99296-4, FA99296-5, FA99296-6

| CAS No. | ID Standard Recoveries | | Limits |
|---|---|---|---|
| | 13C8-PFOA | 73% | 50-150% |
| | 13C9-PFNA | 69% | 50-150% |
| | 13C6-PFDA | 68% | 50-150% |
| | 13C7-PFUnDA | 73% | 50-150% |
| | 13C2-PFDoDA | 63% | 50-150% |
| | 13C2-PFTeDA | 51% | 50-150% |
| | 13C3-PFBS | 70% | 50-150% |
| | 13C3-PFHxS | 73% | 50-150% |
| | 13C8-PFOS | 64% | 50-150% |
| | 13C8-FOSA | 63% | 50-150% |
| | d3-MeFOSAA | 72% | 50-150% |
| | d5-EtFOSAA | 69% | 50-150% |
| | 13C2-4:2FTS | 69% | 50-150% |
| | 13C2-6:2FTS | 73% | 50-150% |
| | 13C2-8:2FTS | 65% | 50-150% |
| | 13C3-HFPO-DA | 65% | 50-150% |

# Method Blank Summary



**Job Number:** FA99296
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP93795-MB | 2Q101353.D | 1 | 11/02/22 | WH | 10/28/22 | OP93795 | S2Q1414 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99296-6

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|

| CAS No. | ID Standard Recoveries | | Limits |
|---|---|---|---|
| | 13C4-PFBA | 96% | 50-150% |
| | 13C5-PFPeA | 96% | 50-150% |
| | 13C5-PFHxA | 95% | 50-150% |
| | 13C4-PFHpA | 95% | 50-150% |
| | 13C8-PFOA | 96% | 50-150% |
| | 13C9-PFNA | 93% | 50-150% |
| | 13C6-PFDA | 92% | 50-150% |
| | 13C7-PFUnDA | 86% | 50-150% |
| | 13C2-PFDoDA | 73% | 50-150% |
| | 13C2-PFTeDA | 55% | 50-150% |
| | 13C3-PFBS | 93% | 50-150% |
| | 13C3-PFHxS | 95% | 50-150% |
| | 13C8-PFOS | 92% | 50-150% |
| | 13C8-FOSA | 76% | 50-150% |
| | d3-MeFOSAA | 90% | 50-150% |
| | d5-EtFOSAA | 87% | 50-150% |
| | 13C2-4:2FTS | 88% | 50-150% |
| | 13C2-6:2FTS | 93% | 50-150% |
| | 13C2-8:2FTS | 91% | 50-150% |
| | 13C3-HFPO-DA | 89% | 50-150% |

# Instrument Blank



**Job Number:** FA99296
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| S2Q1410-IBLK | 2Q101010.D | 1 | 10/26/22 | WH | n/a | n/a | S2Q1410 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

OP93439-MS, OP93439-MSD

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid | ND | 0.0080 | 0.0020 | ug/l | |
| 2706-90-3 | Perfluoropentanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 307-24-4 | Perfluorohexanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-85-9 | Perfluoroheptanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 335-67-1 | Perfluorooctanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-95-1 | Perfluorononanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 335-76-2 | Perfluorodecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 2058-94-8 | Perfluoroundecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 307-55-1 | Perfluorododecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 72629-94-8 | Perfluorotridecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 376-06-7 | Perfluorotetradecanoic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-73-5 | Perfluorobutanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 2706-91-4 | Perfluoropentanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 355-46-4 | Perfluorohexanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 375-92-8 | Perfluoroheptanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 1763-23-1 | Perfluorooctanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 68259-12-1 | Perfluorononanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 335-77-3 | Perfluorodecanesulfonic acid | ND | 0.0040 | 0.0010 | ug/l | |
| 754-91-6 | PFOSA | ND | 0.0040 | 0.0010 | ug/l | |
| 2355-31-9 | MeFOSAA | ND | 0.0080 | 0.0020 | ug/l | |
| 2991-50-6 | EtFOSAA | ND | 0.0080 | 0.0020 | ug/l | |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | ND | 0.0080 | 0.0020 | ug/l | |
| 13252-13-6 | HFPO-DA (GenX) | ND | 0.0080 | 0.0020 | ug/l | |
| 919005-14-4 | ADONA | ND | 0.0080 | 0.0020 | ug/l | |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | ND | 0.0080 | 0.0020 | ug/l | |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | ND | 0.0080 | 0.0020 | ug/l | |

| CAS No. | ID Standard Recoveries | | Limits |
|---|---|---|---|
| | 13C4-PFBA | 72% | 50-150% |
| | 13C5-PFPeA | 72% | 50-150% |
| | 13C5-PFHxA | 72% | 50-150% |
| | 13C4-PFHpA | 74% | 50-150% |

# Instrument Blank



**Job Number:** FA99296
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| S2Q1410-IBLK | 2Q101010.D | 1 | 10/26/22 | WH | n/a | n/a | S2Q1410 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

OP93439-MS, OP93439-MSD

| CAS No. | ID Standard Recoveries | | Limits |
|---|---|---|---|
| | 13C8-PFOA | 77% | 50-150% |
| | 13C9-PFNA | 73% | 50-150% |
| | 13C6-PFDA | 71% | 50-150% |
| | 13C7-PFUnDA | 79% | 50-150% |
| | 13C2-PFDoDA | 72% | 50-150% |
| | 13C2-PFTeDA | 67% | 50-150% |
| | 13C3-PFBS | 73% | 50-150% |
| | 13C3-PFHxS | 76% | 50-150% |
| | 13C8-PFOS | 73% | 50-150% |
| | 13C8-FOSA | 74% | 50-150% |
| | d3-MeFOSA | 73% | 50-150% |
| | d3-MeFOSAA | 73% | 50-150% |
| | d5-EtFOSAA | 68% | 50-150% |
| | 13C2-4:2FTS | 65% | 50-150% |
| | 13C2-6:2FTS | 72% | 50-150% |
| | 13C2-8:2FTS | 66% | 50-150% |
| | 13C3-HFPO-DA | 69% | 50-150% |

# Blank Spike Summary



**Job Number:** FA99296
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP93439-BS | 2Q100801.D | 1 | 10/22/22 | WH | 10/11/22 | OP93439 | S2Q1407 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99296-1, FA99296-2, FA99296-3, FA99296-4, FA99296-5, FA99296-6

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid | 0.08 | 0.0860 | 108 | 73-129 |
| 2706-90-3 | Perfluoropentanoic acid | 0.08 | 0.0871 | 109 | 72-129 |
| 307-24-4 | Perfluorohexanoic acid | 0.08 | 0.0868 | 109 | 72-129 |
| 375-85-9 | Perfluoroheptanoic acid | 0.08 | 0.0862 | 108 | 72-130 |
| 335-67-1 | Perfluorooctanoic acid | 0.08 | 0.0859 | 107 | 71-133 |
| 375-95-1 | Perfluorononanoic acid | 0.08 | 0.0861 | 108 | 69-130 |
| 335-76-2 | Perfluorodecanoic acid | 0.08 | 0.0828 | 104 | 71-129 |
| 2058-94-8 | Perfluoroundecanoic acid | 0.08 | 0.0850 | 106 | 69-133 |
| 307-55-1 | Perfluorododecanoic acid | 0.08 | 0.0855 | 107 | 72-134 |
| 72629-94-8 | Perfluorotridecanoic acid | 0.08 | 0.0789 | 99 | 65-144 |
| 376-06-7 | Perfluorotetradecanoic acid | 0.08 | 0.0867 | 108 | 71-132 |
| 375-73-5 | Perfluorobutanesulfonic acid | 0.08 | 0.0867 | 108 | 72-130 |
| 2706-91-4 | Perfluoropentanesulfonic acid | 0.08 | 0.0866 | 108 | 71-127 |
| 355-46-4 | Perfluorohexanesulfonic acid | 0.08 | 0.0844 | 106 | 68-131 |
| 375-92-8 | Perfluoroheptanesulfonic acid | 0.08 | 0.0884 | 111 | 69-134 |
| 1763-23-1 | Perfluorooctanesulfonic acid | 0.08 | 0.0908 | 114 | 65-140 |
| 68259-12-1 | Perfluorononanesulfonic acid | 0.08 | 0.0896 | 112 | 69-127 |
| 335-77-3 | Perfluorodecanesulfonic acid | 0.08 | 0.0746 | 93 | 53-142 |
| 754-91-6 | PFOSA | 0.08 | 0.0879 | 110 | 67-137 |
| 2355-31-9 | MeFOSAA | 0.08 | 0.0869 | 109 | 65-136 |
| 2991-50-6 | EtFOSAA | 0.08 | 0.0838 | 105 | 61-135 |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | 0.08 | 0.0821 | 103 | 63-143 |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 0.08 | 0.0865 | 108 | 64-140 |
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | 0.08 | 0.0867 | 108 | 67-138 |
| 13252-13-6 | HFPO-DA (GenX) | 0.08 | 0.0856 | 107 | 60-140 |
| 919005-14-4 | ADONA | 0.08 | 0.0789 | 99 | 60-140 |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | 0.08 | 0.0783 | 98 | 60-140 |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | 0.08 | 0.0863 | 108 | 60-140 |

| CAS No. | ID Standard Recoveries | BSP | Limits |
|---|---|---|---|
| | 13C4-PFBA | 72% | 50-150% |
| | 13C5-PFPeA | 72% | 50-150% |
| | 13C5-PFHxA | 72% | 50-150% |
| | 13C4-PFHpA | 72% | 50-150% |

* = Outside of Control Limits.

# Blank Spike Summary

**Job Number:** FA99296
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP93439-BS | 2Q100801.D | 1 | 10/22/22 | WH | 10/11/22 | OP93439 | S2Q1407 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99296-1, FA99296-2, FA99296-3, FA99296-4, FA99296-5, FA99296-6

| CAS No. | ID Standard Recoveries | BSP | Limits |
|---|---|---|---|
| | 13C8-PFOA | 73% | 50-150% |
| | 13C9-PFNA | 71% | 50-150% |
| | 13C6-PFDA | 71% | 50-150% |
| | 13C7-PFUnDA | 75% | 50-150% |
| | 13C2-PFDoDA | 65% | 50-150% |
| | 13C2-PFTeDA | 56% | 50-150% |
| | 13C3-PFBS | 72% | 50-150% |
| | 13C3-PFHxS | 74% | 50-150% |
| | 13C8-PFOS | 65% | 50-150% |
| | 13C8-FOSA | 64% | 50-150% |
| | d3-MeFOSAA | 74% | 50-150% |
| | d5-EtFOSAA | 72% | 50-150% |
| | 13C2-4:2FTS | 74% | 50-150% |
| | 13C2-6:2FTS | 78% | 50-150% |
| | 13C2-8:2FTS | 71% | 50-150% |
| | 13C3-HFPO-DA | 68% | 50-150% |

* = Outside of Control Limits.

# Blank Spike Summary



**Job Number:** FA99296
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP93795-BS | 2Q101352.D | 1 | 11/02/22 | WH | 10/28/22 | OP93795 | S2Q1414 |



**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99296-6

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|

| CAS No. | ID Standard Recoveries | BSP | Limits |
|---|---|---|---|
| | 13C4-PFBA | 96% | 50-150% |
| | 13C5-PFPeA | 95% | 50-150% |
| | 13C5-PFHxA | 94% | 50-150% |
| | 13C4-PFHpA | 93% | 50-150% |
| | 13C8-PFOA | 94% | 50-150% |
| | 13C9-PFNA | 91% | 50-150% |
| | 13C6-PFDA | 88% | 50-150% |
| | 13C7-PFUnDA | 83% | 50-150% |
| | 13C2-PFDoDA | 69% | 50-150% |
| | 13C2-PFTeDA | 53% | 50-150% |
| | 13C3-PFBS | 91% | 50-150% |
| | 13C3-PFHxS | 95% | 50-150% |
| | 13C8-PFOS | 90% | 50-150% |
| | 13C8-FOSA | 67% | 50-150% |
| | d3-MeFOSAA | 88% | 50-150% |
| | d5-EtFOSAA | 86% | 50-150% |
| | 13C2-4:2FTS | 92% | 50-150% |
| | 13C2-6:2FTS | 96% | 50-150% |
| | 13C2-8:2FTS | 94% | 50-150% |
| | 13C3-HFPO-DA | 85% | 50-150% |

* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** FA99296
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP93439-MS | 2Q101095.D | 5 | 10/27/22 | WH | 10/11/22 | OP93439 | S2Q1410 |
| OP93439-MSD | 2Q101096.D | 5 | 10/27/22 | WH | 10/11/22 | OP93439 | S2Q1410 |
| FA99297-8 | 2Q100818.D | 1 | 10/22/22 | WH | 10/11/22 | OP93439 | S2Q1407 |
| FA99297-8 [a] | 2Q101094.D | 5 | 10/27/22 | WH | 10/11/22 | OP93439 | S2Q1410 |

**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99296-1, FA99296-2, FA99296-3, FA99296-4, FA99296-5, FA99296-6

| CAS No. | Compound | FA99297-8 ug/l | Q | Spike ug/l | MS ug/l | MS % | Spike ug/l | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid | 0.0043 | J | 0.0741 | 0.0825 | 111 | 0.0741 | 0.0830 | 112 | 1 | 73-129/30 |
| 2706-90-3 | Perfluoropentanoic acid | 0.0037 U | | 0.0741 | 0.0813 | 110 | 0.0741 | 0.0804 | 109 | 1 | 72-129/30 |
| 307-24-4 | Perfluorohexanoic acid | 0.0037 U | | 0.0741 | 0.0823 | 111 | 0.0741 | 0.0822 | 111 | 0 | 72-129/30 |
| 375-85-9 | Perfluoroheptanoic acid | 0.0037 U | | 0.0741 | 0.0843 | 114 | 0.0741 | 0.0813 | 110 | 4 | 72-130/30 |
| 335-67-1 | Perfluorooctanoic acid | 0.0063 | | 0.0741 | 0.0852 | 106 | 0.0741 | 0.0858 | 107 | 1 | 71-133/30 |
| 375-95-1 | Perfluorononanoic acid | 0.0037 U | | 0.0741 | 0.0811 | 109 | 0.0741 | 0.0822 | 111 | 1 | 69-130/30 |
| 335-76-2 | Perfluorodecanoic acid | 0.0037 U | | 0.0741 | 0.0778 | 105 | 0.0741 | 0.0767 | 104 | 1 | 71-129/30 |
| 2058-94-8 | Perfluoroundecanoic acid | 0.0037 U | | 0.0741 | 0.0778 | 105 | 0.0741 | 0.0784 | 106 | 1 | 69-133/30 |
| 307-55-1 | Perfluorododecanoic acid | 0.019 U | b | 0.0741 | 0.0798 | 108 | 0.0741 | 0.0799 | 108 | 0 | 72-134/30 |
| 72629-94-8 | Perfluorotridecanoic acid | 0.019 U | b | 0.0741 | 0.0767 | 104 | 0.0741 | 0.0776 | 105 | 1 | 65-144/30 |
| 376-06-7 | Perfluorotetradecanoic acid | 0.0037 U | | 0.0741 | 0.0806 | 109 | 0.0741 | 0.0804 | 109 | 0 | 71-132/30 |
| 375-73-5 | Perfluorobutanesulfonic acid | 0.0011 | J | 0.0741 | 0.0830 | 112 | 0.0741 | 0.0800 | 108 | 4 | 72-130/30 |
| 2706-91-4 | Perfluoropentanesulfonic acid | 0.0037 U | | 0.0741 | 0.0815 | 110 | 0.0741 | 0.0797 | 108 | 2 | 71-127/30 |
| 355-46-4 | Perfluorohexanesulfonic acid | 0.0037 U | | 0.0741 | 0.0811 | 109 | 0.0741 | 0.0810 | 109 | 0 | 68-131/30 |
| 375-92-8 | Perfluoroheptanesulfonic acid | 0.0037 U | | 0.0741 | 0.0812 | 110 | 0.0741 | 0.0819 | 111 | 1 | 69-134/30 |
| 1763-23-1 | Perfluorooctanesulfonic acid | 0.0037 U | | 0.0741 | 0.0781 | 105 | 0.0741 | 0.0889 | 120 | 13 | 65-140/30 |
| 68259-12-1 | Perfluorononanesulfonic acid | 0.0037 U | | 0.0741 | 0.0737 | 99 | 0.0741 | 0.0842 | 114 | 13 | 69-127/30 |
| 335-77-3 | Perfluorodecanesulfonic acid | 0.0037 U | | 0.0741 | 0.0830 | 112 | 0.0741 | 0.0881 | 119 | 6 | 53-142/30 |
| 754-91-6 | PFOSA | 0.0037 U | | 0.0741 | 0.0850 | 115 | 0.0741 | 0.0875 | 118 | 3 [c] | 67-137/30 |
| 2355-31-9 | MeFOSAA | 0.0074 U | | 0.0741 | 0.0793 | 107 | 0.0741 | 0.0855 | 115 | 8 | 65-136/30 |
| 2991-50-6 | EtFOSAA | 0.0074 U | | 0.0741 | 0.0821 | 111 | 0.0741 | 0.0876 | 118 | 6 | 61-135/30 |
| 757124-72-4 | 4:2 Fluorotelomer sulfonate | 0.0074 U | | 0.0741 | 0.0781 | 105 | 0.0741 | 0.0767 | 104 | 2 | 63-143/30 |
| 27619-97-2 | 6:2 Fluorotelomer sulfonate | 0.0074 U | | 0.0741 | 0.0853 | 115 | 0.0741 | 0.0804 | 109 | 6 | 64-140/30 |
| 39108-34-4 | 8:2 Fluorotelomer sulfonate | 0.0074 U | | 0.0741 | 0.0874 | 118 | 0.0741 | 0.0778 | 105 | 12 | 67-138/30 |
| 13252-13-6 | HFPO-DA (GenX) | 0.0074 U | | 0.0741 | 0.0838 | 113 | 0.0741 | 0.0813 | 110 | 3 | 60-140/30 |
| 919005-14-4 | ADONA | 0.0074 U | | 0.0741 | 0.0740 | 100 | 0.0741 | 0.0734 | 99 | 1 | 60-140/30 |
| 756426-58-1 | 9Cl-PF3ONS (F-53B Major) | 0.0074 U | | 0.0741 | 0.0755 | 102 | 0.0741 | 0.0799 | 108 | 6 | 60-140/30 |
| 763051-92-9 | 11Cl-PF3OUdS (F-53B Minor) | 0.037 U | b | 0.0741 | 0.0870 | 117 | 0.0741 | 0.0916 | 124 | 5 | 60-140/30 |

| CAS No. | ID Standard Recoveries | MS | MSD | FA99297-8 | FA99297-8 | Limits |
|---|---|---|---|---|---|---|
| | 13C4-PFBA | 63% | 62% | 56% | 65% | 50-150% |
| | 13C5-PFPeA | 63% | 64% | 56% | 66% | 50-150% |
| | 13C5-PFHxA | 62% | 63% | 56% | 64% | 50-150% |
| | 13C4-PFHpA | 64% | 66% | 59% | 67% | 50-150% |

* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA99296
**Account:** ARCMIN Arcadis
**Project:** Racer Saginaw; 77 W Center St, Saginaw, MI

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP93439-MS | 2Q101095.D | 5 | 10/27/22 | WH | 10/11/22 | OP93439 | S2Q1410 |
| OP93439-MSD | 2Q101096.D | 5 | 10/27/22 | WH | 10/11/22 | OP93439 | S2Q1410 |
| FA99297-8 | 2Q100818.D | 1 | 10/22/22 | WH | 10/11/22 | OP93439 | S2Q1407 |
| FA99297-8 [a] | 2Q101094.D | 5 | 10/27/22 | WH | 10/11/22 | OP93439 | S2Q1410 |

**The QC reported here applies to the following samples:** **Method:** EPA 537M QSM5.3 B-15

FA99296-1, FA99296-2, FA99296-3, FA99296-4, FA99296-5, FA99296-6

| CAS No. | ID Standard Recoveries | MS | MSD | FA99297-8 | FA99297-8 | Limits |
|---|---|---|---|---|---|---|
| | 13C8-PFOA | 67% | 67% | 64% | 71% | 50-150% |
| | 13C9-PFNA | 59% | 61% | 58% | 64% | 50-150% |
| | 13C6-PFDA | 55% | 57% | 54% | 56% | 50-150% |
| | 13C7-PFUnDA | 56% | 60% | 55% | 58% | 50-150% |
| | 13C2-PFDoDA | 51% | 56% | 47%* [d] | 51% | 50-150% |
| | 13C2-PFTeDA | 48%* [d] | 53% | 44%* [d] | 49%* [d] | 50-150% |
| | 13C3-PFBS | 64% | 67% | 57% | 66% | 50-150% |
| | 13C3-PFHxS | 67% | 67% | 62% | 67% | 50-150% |
| | 13C8-PFOS | 58% | 54% | 52% | 55% | 50-150% |
| | 13C8-FOSA | 43%* [d] | 39%* [d] | 40%* [d] | 43%* [d] | 50-150% |
| | d3-MeFOSAA | 56% | 58% | 55% | 58% | 50-150% |
| | d5-EtFOSAA | 55% | 59% | 51% | 54% | 50-150% |
| | 13C2-4:2FTS | 66% | 66% | 53% | 62% | 50-150% |
| | 13C2-6:2FTS | 68% | 70% | 65% | 69% | 50-150% |
| | 13C2-8:2FTS | 52% | 59% | 51% | 53% | 50-150% |
| | 13C3-HFPO-DA | 64% | 66% | 51% | 61% | 50-150% |

(a) Dilution required (ID recovery standard failure).
(b) Result is from Run #2.
(c) Associated ID Standard outside control limits.
(d) Outside control limits.

* = Outside of Control Limits.

eurofins | Environment Testing



# ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-173403-1
Client Project/Site: Racer Saginaw
Revision: 1

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, Michigan 48377

Attn: Scott Clearwater

*Authorized for release by:*
*10/31/2022 11:04:07 AM*

Michael DelMonico, Project Manager I
(330)497-9396
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173403-1

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| U | Indicates the analyte was analyzed for but not detected. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| *- | LCS and/or LCSD is outside acceptance limits, low biased. |
| ^- | Continuing Calibration Verification (CCV) is outside acceptance limits, low biased. |
| H | Sample was prepped or analyzed beyond the specified holding time |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| U | Indicates the analyte was analyzed for but not detected. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

# Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173403-1

## Job ID: 240-173403-1

### Laboratory: Eurofins Canton

**Narrative**

**Job Narrative**
**240-173403-1**

The Dissolved Total Cyanide by SM 4500 CN E analysis was performed at the Eurofins Pittsburgh laboratory.

**Comments**
Report revised on 10/31/2022 to report Nitrate and Nitrite separately.

**Receipt**
The samples were received on 9/22/2022 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.3°C

**Metals**
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**General Chemistry**
Method 9056A: QC failed low. Sample to be rerun outside of hold with both in hold and out of hold results to be reported: X-4AR_092122 (240-173403-1), X-4D_092122 (240-173403-2), X-4CAUGR_092122 (240-173403-3) and MW-117SI_092122 (240-173403-4).

Method 9056A: Reanalysis of the following samples was performed outside of the analytical holding time due to failure of quality control parameters in the initial analysis: X-4AR_092122 (240-173403-1), X-4D_092122 (240-173403-2), X-4CAUGR_092122 (240-173403-3) and MW-117SI_092122 (240-173403-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

# Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173403-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010B | Metals (ICP) | SW846 | EET CAN |
| 2540 C-2011 | Total Dissolved Solids (Dried at 180 °C) | SM | EET CAN |
| 4500 CN E-2016 | Cyanide, Total | SM | EET PIT |
| 4500 NH3 H | Ammonia | SM | EET CAN |
| 9056A | Anions, Ion Chromatography | SW846 | EET CAN |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | EET CAN |
| SM 4500 CN C | Cyanide, Distillation | SM | EET PIT |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

# Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173403-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 240-173403-1 | X-4AR_092122 | Water | 09/21/22 12:30 | 09/22/22 09:45 |
| 240-173403-2 | X-4D_092122 | Water | 09/21/22 13:35 | 09/22/22 09:45 |
| 240-173403-3 | X-4CAUGR_092122 | Water | 09/21/22 15:00 | 09/22/22 09:45 |
| 240-173403-4 | MW-117SI_092122 | Water | 09/21/22 14:25 | 09/22/22 09:45 |

# Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173403-1

## Client Sample ID: X-4AR_092122 — Lab Sample ID: 240-173403-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 14 | J | 200 | 1.3 | ug/L | 1 | | 6010B | Total Recoverable |
| Iron | 130 | | 100 | 83 | ug/L | 1 | | 6010B | Total Recoverable |
| Manganese | 52 | | 15 | 6.2 | ug/L | 1 | | 6010B | Total Recoverable |
| Sodium | 26000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Total Recoverable |
| Total Dissolved Solids | 200 | | 10 | 7.8 | mg/L | 1 | | 2540 C-2011 | Total/NA |
| Chloride | 17 | | 1.0 | 0.28 | mg/L | 1 | | 9056A | Total/NA |
| Sulfate | 1.0 | | 1.0 | 0.35 | mg/L | 1 | | 9056A | Total/NA |
| Nitrate as N | 2.7 | ^- *- | 0.10 | 0.036 | mg/L | 1 | | 9056A | Total/NA |
| Nitrate as N - RA | 3.2 | H | 0.10 | 0.036 | mg/L | 1 | | 9056A | Total/NA |

## Client Sample ID: X-4D_092122 — Lab Sample ID: 240-173403-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 75 | J | 200 | 1.3 | ug/L | 1 | | 6010B | Total Recoverable |
| Iron | 900 | | 100 | 83 | ug/L | 1 | | 6010B | Total Recoverable |
| Manganese | 180 | | 15 | 6.2 | ug/L | 1 | | 6010B | Total Recoverable |
| Sodium | 620000 | | 25000 | 11000 | ug/L | 5 | | 6010B | Total Recoverable |
| Barium | 83 | J | 200 | 1.3 | ug/L | 1 | | 6010B | Dissolved |
| Iron | 1200 | | 100 | 83 | ug/L | 1 | | 6010B | Dissolved |
| Manganese | 160 | | 15 | 6.2 | ug/L | 1 | | 6010B | Dissolved |
| Sodium | 640000 | | 25000 | 11000 | ug/L | 5 | | 6010B | Dissolved |
| Total Dissolved Solids | 1800 | | 40 | 31 | mg/L | 1 | | 2540 C-2011 | Total/NA |
| Ammonia | 7.2 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Chloride | 1300 | | 10 | 2.8 | mg/L | 10 | | 9056A | Total/NA |
| Sulfate | 210 | | 2.0 | 0.70 | mg/L | 2 | | 9056A | Total/NA |

## Client Sample ID: X-4CAUGR_092122 — Lab Sample ID: 240-173403-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 58 | J | 200 | 1.3 | ug/L | 1 | | 6010B | Total Recoverable |
| Iron | 3200 | | 100 | 83 | ug/L | 1 | | 6010B | Total Recoverable |
| Manganese | 300 | | 15 | 6.2 | ug/L | 1 | | 6010B | Total Recoverable |
| Sodium | 12000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Total Recoverable |
| Barium | 55 | J | 200 | 1.3 | ug/L | 1 | | 6010B | Dissolved |
| Iron | 2800 | | 100 | 83 | ug/L | 1 | | 6010B | Dissolved |
| Manganese | 290 | | 15 | 6.2 | ug/L | 1 | | 6010B | Dissolved |
| Sodium | 12000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Dissolved |
| Total Dissolved Solids | 300 | | 10 | 7.8 | mg/L | 1 | | 2540 C-2011 | Total/NA |
| Ammonia | 0.33 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Chloride | 20 | | 1.0 | 0.28 | mg/L | 1 | | 9056A | Total/NA |
| Sulfate | 0.37 | J | 1.0 | 0.35 | mg/L | 1 | | 9056A | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173403-1

## Client Sample ID: MW-117SI_092122 — Lab Sample ID: 240-173403-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 1700 | | 200 | 1.3 | ug/L | 1 | | 6010B | Total Recoverable |
| Iron | 8400 | | 100 | 83 | ug/L | 1 | | 6010B | Total Recoverable |
| Manganese | 340 | | 15 | 6.2 | ug/L | 1 | | 6010B | Total Recoverable |
| Sodium | 120000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Total Recoverable |
| Barium | 1800 | | 200 | 1.3 | ug/L | 1 | | 6010B | Dissolved |
| Iron | 8200 | | 100 | 83 | ug/L | 1 | | 6010B | Dissolved |
| Manganese | 330 | | 15 | 6.2 | ug/L | 1 | | 6010B | Dissolved |
| Sodium | 120000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Dissolved |
| Total Dissolved Solids | 710 | | 20 | 16 | mg/L | 1 | | 2540 C-2011 | Total/NA |
| Ammonia | 7.0 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Chloride | 220 | | 5.0 | 1.4 | mg/L | 5 | | 9056A | Total/NA |
| Nitrite as N | 0.19 | ^- *- | 0.10 | 0.014 | mg/L | 1 | | 9056A | Total/NA |
| Sulfate | 0.71 | J | 1.0 | 0.35 | mg/L | 1 | | 9056A | Total/NA |

This Detection Summary does not include radiochemical test results.

# Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173403-1

## Client Sample ID: X-4AR_092122

**Date Collected: 09/21/22 12:30**
**Date Received: 09/22/22 09:45**

## Lab Sample ID: 240-173403-1

**Matrix: Water**

### Method: SW846 6010B - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/23/22 12:00 | 09/27/22 17:52 | 1 |
| **Barium** | **14** | **J** | 200 | 1.3 | ug/L | | 09/23/22 12:00 | 09/27/22 17:52 | 1 |
| **Iron** | **130** | | 100 | 83 | ug/L | | 09/23/22 12:00 | 09/27/22 17:52 | 1 |
| **Manganese** | **52** | | 15 | 6.2 | ug/L | | 09/23/22 12:00 | 09/27/22 17:52 | 1 |
| **Sodium** | **26000** | | 5000 | 2100 | ug/L | | 09/23/22 12:00 | 09/27/22 17:52 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/23/22 12:00 | 09/27/22 17:52 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids (SM 2540 C-2011)** | **200** | | 10 | 7.8 | mg/L | | | 09/28/22 08:27 | 1 |
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/03/22 14:30 | 10/04/22 11:14 | 1 |
| Ammonia (SM 4500 NH3 H) | 0.20 | U | 0.20 | 0.076 | mg/L | | | 09/27/22 12:43 | 1 |
| **Chloride (SW846 9056A)** | **17** | | 1.0 | 0.28 | mg/L | | | 09/24/22 20:30 | 1 |
| Nitrite as N (SW846 9056A) | 0.10 | U ^- *- | 0.10 | 0.014 | mg/L | | | 09/23/22 05:56 | 1 |
| **Sulfate (SW846 9056A)** | **1.0** | | 1.0 | 0.35 | mg/L | | | 09/24/22 20:30 | 1 |
| **Nitrate as N (SW846 9056A)** | **2.7** | **^- *-** | 0.10 | 0.036 | mg/L | | | 09/23/22 05:56 | 1 |

### General Chemistry - RA

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N (SW846 9056A) | 0.10 | U H | 0.10 | 0.014 | mg/L | | | 09/24/22 20:30 | 1 |
| **Nitrate as N (SW846 9056A)** | **3.2** | **H** | 0.10 | 0.036 | mg/L | | | 09/24/22 20:30 | 1 |

## Client Sample ID: X-4D_092122

**Date Collected: 09/21/22 13:35**
**Date Received: 09/22/22 09:45**

## Lab Sample ID: 240-173403-2

**Matrix: Water**

### Method: SW846 6010B - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/23/22 12:00 | 09/27/22 17:57 | 1 |
| **Barium** | **75** | **J** | 200 | 1.3 | ug/L | | 09/23/22 12:00 | 09/27/22 17:57 | 1 |
| **Iron** | **900** | | 100 | 83 | ug/L | | 09/23/22 12:00 | 09/27/22 17:57 | 1 |
| **Manganese** | **180** | | 15 | 6.2 | ug/L | | 09/23/22 12:00 | 09/27/22 17:57 | 1 |
| **Sodium** | **620000** | | 25000 | 11000 | ug/L | | 09/23/22 12:00 | 09/29/22 15:18 | 5 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/23/22 12:00 | 09/27/22 17:57 | 1 |

### Method: SW846 6010B - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/24/22 12:00 | 09/26/22 17:33 | 1 |
| **Barium** | **83** | **J** | 200 | 1.3 | ug/L | | 09/24/22 12:00 | 09/26/22 17:33 | 1 |
| **Iron** | **1200** | | 100 | 83 | ug/L | | 09/24/22 12:00 | 09/26/22 17:33 | 1 |
| **Manganese** | **160** | | 15 | 6.2 | ug/L | | 09/24/22 12:00 | 09/26/22 17:33 | 1 |
| **Sodium** | **640000** | | 25000 | 11000 | ug/L | | 09/24/22 12:00 | 09/27/22 18:18 | 5 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/24/22 12:00 | 09/26/22 17:33 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids (SM 2540 C-2011)** | **1800** | | 40 | 31 | mg/L | | | 09/28/22 08:27 | 1 |
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/03/22 14:30 | 10/04/22 11:16 | 1 |
| **Ammonia (SM 4500 NH3 H)** | **7.2** | | 0.20 | 0.076 | mg/L | | | 09/27/22 12:52 | 1 |
| **Chloride (SW846 9056A)** | **1300** | | 10 | 2.8 | mg/L | | | 09/29/22 07:52 | 10 |
| Nitrite as N (SW846 9056A) | 0.20 | U ^- *- | 0.20 | 0.028 | mg/L | | | 09/23/22 06:56 | 2 |
| **Sulfate (SW846 9056A)** | **210** | | 2.0 | 0.70 | mg/L | | | 09/24/22 21:30 | 2 |
| Nitrate as N (SW846 9056A) | 0.20 | U ^- *- | 0.20 | 0.072 | mg/L | | | 09/23/22 06:56 | 2 |

### General Chemistry - RA

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N (SW846 9056A) | 0.20 | U H | 0.20 | 0.028 | mg/L | | | 09/24/22 21:30 | 2 |
| Nitrate as N (SW846 9056A) | 0.20 | U H | 0.20 | 0.072 | mg/L | | | 09/24/22 21:30 | 2 |

### General Chemistry - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/03/22 14:30 | 10/04/22 11:31 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173403-1

## Client Sample ID: X-4CAUGR_092122

**Lab Sample ID: 240-173403-3**

**Date Collected: 09/21/22 15:00**

**Matrix: Water**

**Date Received: 09/22/22 09:45**

### Method: SW846 6010B - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/23/22 12:00 | 09/27/22 18:01 | 1 |
| **Barium** | **58** | **J** | 200 | 1.3 | ug/L | | 09/23/22 12:00 | 09/27/22 18:01 | 1 |
| **Iron** | **3200** | | 100 | 83 | ug/L | | 09/23/22 12:00 | 09/27/22 18:01 | 1 |
| **Manganese** | **300** | | 15 | 6.2 | ug/L | | 09/23/22 12:00 | 09/27/22 18:01 | 1 |
| **Sodium** | **12000** | | 5000 | 2100 | ug/L | | 09/23/22 12:00 | 09/27/22 18:01 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/23/22 12:00 | 09/27/22 18:01 | 1 |

### Method: SW846 6010B - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/24/22 12:00 | 09/26/22 17:37 | 1 |
| **Barium** | **55** | **J** | 200 | 1.3 | ug/L | | 09/24/22 12:00 | 09/26/22 17:37 | 1 |
| **Iron** | **2800** | | 100 | 83 | ug/L | | 09/24/22 12:00 | 09/26/22 17:37 | 1 |
| **Manganese** | **290** | | 15 | 6.2 | ug/L | | 09/24/22 12:00 | 09/26/22 17:37 | 1 |
| **Sodium** | **12000** | | 5000 | 2100 | ug/L | | 09/24/22 12:00 | 09/26/22 17:37 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/24/22 12:00 | 09/26/22 17:37 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids (SM 2540 C-2011)** | **300** | | 10 | 7.8 | mg/L | | | 09/28/22 08:27 | 1 |
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/03/22 14:30 | 10/04/22 11:17 | 1 |
| **Ammonia (SM 4500 NH3 H)** | **0.33** | | 0.20 | 0.076 | mg/L | | | 09/27/22 12:55 | 1 |
| **Chloride (SW846 9056A)** | **20** | | 1.0 | 0.28 | mg/L | | | 09/24/22 21:50 | 1 |
| Nitrite as N (SW846 9056A) | 0.10 | U ^- *- | 0.10 | 0.014 | mg/L | | | 09/23/22 08:16 | 1 |
| **Sulfate (SW846 9056A)** | **0.37** | **J** | 1.0 | 0.35 | mg/L | | | 09/24/22 21:50 | 1 |
| Nitrate as N (SW846 9056A) | 0.10 | U ^- *- | 0.10 | 0.036 | mg/L | | | 09/23/22 08:16 | 1 |

### General Chemistry - RA

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N (SW846 9056A) | 0.10 | U H | 0.10 | 0.014 | mg/L | | | 09/24/22 21:50 | 1 |
| Nitrate as N (SW846 9056A) | 0.10 | U H | 0.10 | 0.036 | mg/L | | | 09/24/22 21:50 | 1 |

### General Chemistry - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/03/22 14:30 | 10/04/22 11:32 | 1 |

## Client Sample ID: MW-117SI_092122

**Date Collected: 09/21/22 14:25**
**Date Received: 09/22/22 09:45**

## Lab Sample ID: 240-173403-4

**Matrix: Water**

### Method: SW846 6010B - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/23/22 12:00 | 09/27/22 18:05 | 1 |
| **Barium** | **1700** | | 200 | 1.3 | ug/L | | 09/23/22 12:00 | 09/27/22 18:05 | 1 |
| **Iron** | **8400** | | 100 | 83 | ug/L | | 09/23/22 12:00 | 09/27/22 18:05 | 1 |
| **Manganese** | **340** | | 15 | 6.2 | ug/L | | 09/23/22 12:00 | 09/27/22 18:05 | 1 |
| **Sodium** | **120000** | | 5000 | 2100 | ug/L | | 09/23/22 12:00 | 09/27/22 18:05 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/23/22 12:00 | 09/27/22 18:05 | 1 |

### Method: SW846 6010B - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/24/22 12:00 | 09/26/22 17:42 | 1 |
| **Barium** | **1800** | | 200 | 1.3 | ug/L | | 09/24/22 12:00 | 09/26/22 17:42 | 1 |
| **Iron** | **8200** | | 100 | 83 | ug/L | | 09/24/22 12:00 | 09/26/22 17:42 | 1 |
| **Manganese** | **330** | | 15 | 6.2 | ug/L | | 09/24/22 12:00 | 09/26/22 17:42 | 1 |
| **Sodium** | **120000** | | 5000 | 2100 | ug/L | | 09/24/22 12:00 | 09/26/22 17:42 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/24/22 12:00 | 09/26/22 17:42 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids (SM 2540 C-2011)** | **710** | | 20 | 16 | mg/L | | | 09/28/22 08:27 | 1 |
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/03/22 14:30 | 10/04/22 11:19 | 1 |
| **Ammonia (SM 4500 NH3 H)** | **7.0** | | 0.20 | 0.076 | mg/L | | | 09/27/22 12:58 | 1 |
| **Chloride (SW846 9056A)** | **220** | | 5.0 | 1.4 | mg/L | | | 09/29/22 08:12 | 5 |
| **Nitrite as N (SW846 9056A)** | **0.19** | **^- *-** | 0.10 | 0.014 | mg/L | | | 09/23/22 08:37 | 1 |
| **Sulfate (SW846 9056A)** | **0.71** | **J** | 1.0 | 0.35 | mg/L | | | 09/24/22 22:10 | 1 |
| Nitrate as N (SW846 9056A) | 0.10 | U ^- *- | 0.10 | 0.036 | mg/L | | | 09/23/22 08:37 | 1 |

### General Chemistry - RA

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N (SW846 9056A) | 0.10 | U H | 0.10 | 0.014 | mg/L | | | 09/24/22 22:10 | 1 |
| Nitrate as N (SW846 9056A) | 0.10 | U H | 0.10 | 0.036 | mg/L | | | 09/24/22 22:10 | 1 |

### General Chemistry - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/03/22 14:30 | 10/04/22 11:34 | 1 |

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 240-544097/1-A**
**Matrix: Water**
**Analysis Batch: 544515**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 544097**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/23/22 12:00 | 09/27/22 15:59 | 1 |
| Barium | 200 | U | 200 | 1.3 | ug/L | | 09/23/22 12:00 | 09/27/22 15:59 | 1 |
| Iron | 100 | U | 100 | 83 | ug/L | | 09/23/22 12:00 | 09/27/22 15:59 | 1 |
| Manganese | 15 | U | 15 | 6.2 | ug/L | | 09/23/22 12:00 | 09/27/22 15:59 | 1 |
| Sodium | 5000 | U | 5000 | 2100 | ug/L | | 09/23/22 12:00 | 09/27/22 15:59 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/23/22 12:00 | 09/27/22 15:59 | 1 |

**Lab Sample ID: LCS 240-544097/2-A**
**Matrix: Water**
**Analysis Batch: 544515**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 544097**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 2000 | 1980 | | ug/L | | 99 | 80 - 120 |
| Barium | 2000 | 1880 | | ug/L | | 94 | 80 - 120 |
| Iron | 10000 | 9610 | | ug/L | | 96 | 80 - 120 |
| Manganese | 1000 | 948 | | ug/L | | 95 | 80 - 120 |
| Sodium | 50000 | 48300 | | ug/L | | 97 | 80 - 120 |
| Selenium | 2000 | 1980 | | ug/L | | 99 | 80 - 120 |

**Lab Sample ID: MB 240-544158/1-A**
**Matrix: Water**
**Analysis Batch: 544353**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 544158**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/24/22 12:00 | 09/26/22 13:40 | 1 |
| Barium | 200 | U | 200 | 1.3 | ug/L | | 09/24/22 12:00 | 09/26/22 13:40 | 1 |
| Iron | 100 | U | 100 | 83 | ug/L | | 09/24/22 12:00 | 09/26/22 13:40 | 1 |
| Manganese | 15 | U | 15 | 6.2 | ug/L | | 09/24/22 12:00 | 09/26/22 13:40 | 1 |
| Sodium | 5000 | U | 5000 | 2100 | ug/L | | 09/24/22 12:00 | 09/26/22 13:40 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/24/22 12:00 | 09/26/22 13:40 | 1 |

**Lab Sample ID: LCS 240-544158/2-A**
**Matrix: Water**
**Analysis Batch: 544353**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 544158**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 2000 | 2060 | | ug/L | | 103 | 80 - 120 |
| Barium | 2000 | 1970 | | ug/L | | 99 | 80 - 120 |
| Iron | 10000 | 10200 | | ug/L | | 102 | 80 - 120 |
| Manganese | 1000 | 979 | | ug/L | | 98 | 80 - 120 |
| Sodium | 50000 | 51300 | | ug/L | | 103 | 80 - 120 |
| Selenium | 2000 | 2070 | | ug/L | | 104 | 80 - 120 |

## Method: 2540 C-2011 - Total Dissolved Solids (Dried at 180 °C)

**Lab Sample ID: MB 240-544604/1**
**Matrix: Water**
**Analysis Batch: 544604**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 10 | U | 10 | 7.8 | mg/L | | | 09/28/22 08:27 | 1 |

**Lab Sample ID: LCS 240-544604/2**
**Matrix: Water**
**Analysis Batch: 544604**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 493 | 426 | | mg/L | | 86 | 80 - 120 |

## Method: 4500 CN E-2016 - Cyanide, Total

**Lab Sample ID: MB 180-413925/4-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 413925**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/03/22 14:30 | 10/04/22 10:53 | 1 |

**Lab Sample ID: HLCS 180-413925/2-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 413925**

| Analyte | Spike Added | HLCS Result | HLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.250 | 0.259 | | mg/L | | 103 | 90 - 110 |

**Lab Sample ID: LCS 180-413925/3-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 413925**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.200 | 0.205 | | mg/L | | 102 | 90 - 110 |

**Lab Sample ID: LLCS 180-413925/1-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 413925**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.0500 | 0.0524 | | mg/L | | 105 | 90 - 110 |

## Method: 4500 NH3 H - Ammonia

**Lab Sample ID: MB 240-544549/14**
**Matrix: Water**
**Analysis Batch: 544549**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.20 | U | 0.20 | 0.076 | mg/L | | | 09/27/22 11:55 | 1 |

## Method: 4500 NH3 H - Ammonia (Continued)

**Lab Sample ID: LCS 240-544549/15**
**Matrix: Water**
**Analysis Batch: 544549**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia | | | 6.37 | 5.79 | | mg/L | | 91 | 90 - 110 | | |

**Lab Sample ID: 240-173403-1 MS**
**Matrix: Water**
**Analysis Batch: 544549**

**Client Sample ID: X-4AR_092122**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.20 | U | 2.50 | 2.29 | | mg/L | | 92 | 90 - 110 | | |

**Lab Sample ID: 240-173403-1 MSD**
**Matrix: Water**
**Analysis Batch: 544549**

**Client Sample ID: X-4AR_092122**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.20 | U | 2.50 | 2.27 | | mg/L | | 91 | 90 - 110 | 1 | 20 |

## Method: 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 240-544274/3**
**Matrix: Water**
**Analysis Batch: 544274**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.0 | U | 1.0 | 0.28 | mg/L | | | 09/24/22 15:28 | 1 |
| Sulfate | 1.0 | U | 1.0 | 0.35 | mg/L | | | 09/24/22 15:28 | 1 |

**Lab Sample ID: LCS 240-544274/4**
**Matrix: Water**
**Analysis Batch: 544274**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 50.1 | | mg/L | | 100 | 90 - 110 | | |
| Sulfate | | | 50.0 | 51.7 | | mg/L | | 103 | 90 - 110 | | |

**Lab Sample ID: 240-173403-1 MS**
**Matrix: Water**
**Analysis Batch: 544274**

**Client Sample ID: X-4AR_092122**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 17 | | 50.0 | 67.4 | | mg/L | | 101 | 80 - 120 | | |
| Sulfate | 1.0 | | 50.0 | 52.7 | | mg/L | | 103 | 80 - 120 | | |

**Lab Sample ID: 240-173403-1 MSD**
**Matrix: Water**
**Analysis Batch: 544274**

**Client Sample ID: X-4AR_092122**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 17 | | 50.0 | 67.6 | | mg/L | | 101 | 80 - 120 | 0 | 15 |
| Sulfate | 1.0 | | 50.0 | 53.0 | | mg/L | | 104 | 80 - 120 | 0 | 15 |

## Method: 9056A - Anions, Ion Chromatography (Continued)

**Lab Sample ID: MB 240-544275/3**
**Matrix: Water**
**Analysis Batch: 544275**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | 0.10 | U | 0.10 | 0.014 | mg/L | | | 09/24/22 15:28 | 1 |
| Nitrate as N | 0.10 | U | 0.10 | 0.036 | mg/L | | | 09/24/22 15:28 | 1 |

**Lab Sample ID: LCS 240-544275/4**
**Matrix: Water**
**Analysis Batch: 544275**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Nitrite as N | 2.50 | 2.60 | | mg/L | | 104 | 90 - 110 |
| Nitrate as N | 2.50 | 2.58 | | mg/L | | 103 | 90 - 110 |

**Lab Sample ID: 240-173403-1 MS**
**Matrix: Water**
**Analysis Batch: 544275**

**Client Sample ID: X-4AR_092122**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | 0.10 | U H | 2.50 | 2.72 | | mg/L | | 109 | 80 - 120 |
| Nitrate as N | 3.2 | H | 2.50 | 5.73 | | mg/L | | 102 | 80 - 120 |

**Lab Sample ID: 240-173403-1 MSD**
**Matrix: Water**
**Analysis Batch: 544275**

**Client Sample ID: X-4AR_092122**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | 0.10 | U H | 2.50 | 2.74 | | mg/L | | 110 | 80 - 120 | 1 | 15 |
| Nitrate as N | 3.2 | H | 2.50 | 5.73 | | mg/L | | 102 | 80 - 120 | 0 | 15 |

**Lab Sample ID: MB 240-544480/3**
**Matrix: Water**
**Analysis Batch: 544480**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.0 | U | 1.0 | 0.28 | mg/L | | | 09/29/22 07:11 | 1 |
| Sulfate | 1.0 | U | 1.0 | 0.35 | mg/L | | | 09/29/22 07:11 | 1 |

**Lab Sample ID: LCS 240-544480/4**
**Matrix: Water**
**Analysis Batch: 544480**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 50.2 | | mg/L | | 100 | 90 - 110 |
| Sulfate | 50.0 | 51.8 | | mg/L | | 104 | 90 - 110 |

**Lab Sample ID: 240-173403-4 MS**
**Matrix: Water**
**Analysis Batch: 544480**

**Client Sample ID: MW-117SI_092122**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 220 | | 250 | 447 | | mg/L | | 91 | 80 - 120 |
| Sulfate | 5.0 | U | 250 | 240 | | mg/L | | 96 | 80 - 120 |

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173403-1

## Method: 9056A - Anions, Ion Chromatography

**Lab Sample ID: 240-173403-4 MSD**
**Matrix: Water**
**Analysis Batch: 544480**

**Client Sample ID: MW-117SI_092122**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 220 | | 250 | 452 | | mg/L | | 93 | 80 - 120 | 1 | 15 |
| Sulfate | 5.0 | U | 250 | 243 | | mg/L | | 97 | 80 - 120 | 1 | 15 |

## Metals

### Prep Batch: 544097

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173403-1 | X-4AR_092122 | Total Recoverable | Water | 3005A | |
| 240-173403-2 | X-4D_092122 | Total Recoverable | Water | 3005A | |
| 240-173403-3 | X-4CAUGR_092122 | Total Recoverable | Water | 3005A | |
| 240-173403-4 | MW-117SI_092122 | Total Recoverable | Water | 3005A | |
| MB 240-544097/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 240-544097/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Prep Batch: 544158

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173403-2 | X-4D_092122 | Dissolved | Water | 3005A | |
| 240-173403-3 | X-4CAUGR_092122 | Dissolved | Water | 3005A | |
| 240-173403-4 | MW-117SI_092122 | Dissolved | Water | 3005A | |
| MB 240-544158/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 240-544158/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 544353

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173403-2 | X-4D_092122 | Dissolved | Water | 6010B | 544158 |
| 240-173403-3 | X-4CAUGR_092122 | Dissolved | Water | 6010B | 544158 |
| 240-173403-4 | MW-117SI_092122 | Dissolved | Water | 6010B | 544158 |
| MB 240-544158/1-A | Method Blank | Total Recoverable | Water | 6010B | 544158 |
| LCS 240-544158/2-A | Lab Control Sample | Total Recoverable | Water | 6010B | 544158 |

### Analysis Batch: 544515

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173403-1 | X-4AR_092122 | Total Recoverable | Water | 6010B | 544097 |
| 240-173403-2 | X-4D_092122 | Dissolved | Water | 6010B | 544158 |
| 240-173403-2 | X-4D_092122 | Total Recoverable | Water | 6010B | 544097 |
| 240-173403-3 | X-4CAUGR_092122 | Total Recoverable | Water | 6010B | 544097 |
| 240-173403-4 | MW-117SI_092122 | Total Recoverable | Water | 6010B | 544097 |
| MB 240-544097/1-A | Method Blank | Total Recoverable | Water | 6010B | 544097 |
| LCS 240-544097/2-A | Lab Control Sample | Total Recoverable | Water | 6010B | 544097 |

### Analysis Batch: 544933

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173403-2 | X-4D_092122 | Total Recoverable | Water | 6010B | 544097 |

## General Chemistry

### Prep Batch: 413925

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173403-1 | X-4AR_092122 | Total/NA | Water | SM 4500 CN C | |
| 240-173403-2 | X-4D_092122 | Dissolved | Water | SM 4500 CN C | |
| 240-173403-2 | X-4D_092122 | Total/NA | Water | SM 4500 CN C | |
| 240-173403-3 | X-4CAUGR_092122 | Dissolved | Water | SM 4500 CN C | |
| 240-173403-3 | X-4CAUGR_092122 | Total/NA | Water | SM 4500 CN C | |
| 240-173403-4 | MW-117SI_092122 | Dissolved | Water | SM 4500 CN C | |
| 240-173403-4 | MW-117SI_092122 | Total/NA | Water | SM 4500 CN C | |
| MB 180-413925/4-A | Method Blank | Total/NA | Water | SM 4500 CN C | |
| HLCS 180-413925/2-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |
| LCS 180-413925/3-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |

## General Chemistry (Continued)

### Prep Batch: 413925 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LLCS 180-413925/1-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |

### Analysis Batch: 414100

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173403-1 | X-4AR_092122 | Total/NA | Water | 4500 CN E-2016 | 413925 |
| 240-173403-2 | X-4D_092122 | Dissolved | Water | 4500 CN E-2016 | 413925 |
| 240-173403-2 | X-4D_092122 | Total/NA | Water | 4500 CN E-2016 | 413925 |
| 240-173403-3 | X-4CAUGR_092122 | Dissolved | Water | 4500 CN E-2016 | 413925 |
| 240-173403-3 | X-4CAUGR_092122 | Total/NA | Water | 4500 CN E-2016 | 413925 |
| 240-173403-4 | MW-117SI_092122 | Dissolved | Water | 4500 CN E-2016 | 413925 |
| 240-173403-4 | MW-117SI_092122 | Total/NA | Water | 4500 CN E-2016 | 413925 |
| MB 180-413925/4-A | Method Blank | Total/NA | Water | 4500 CN E-2016 | 413925 |
| HLCS 180-413925/2-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 413925 |
| LCS 180-413925/3-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 413925 |
| LLCS 180-413925/1-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 413925 |

### Analysis Batch: 543953

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173403-1 | X-4AR_092122 | Total/NA | Water | 9056A | |
| 240-173403-2 | X-4D_092122 | Total/NA | Water | 9056A | |
| 240-173403-3 | X-4CAUGR_092122 | Total/NA | Water | 9056A | |
| 240-173403-4 | MW-117SI_092122 | Total/NA | Water | 9056A | |

### Analysis Batch: 544274

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173403-1 | X-4AR_092122 | Total/NA | Water | 9056A | |
| 240-173403-2 | X-4D_092122 | Total/NA | Water | 9056A | |
| 240-173403-3 | X-4CAUGR_092122 | Total/NA | Water | 9056A | |
| 240-173403-4 | MW-117SI_092122 | Total/NA | Water | 9056A | |
| MB 240-544274/3 | Method Blank | Total/NA | Water | 9056A | |
| LCS 240-544274/4 | Lab Control Sample | Total/NA | Water | 9056A | |
| 240-173403-1 MS | X-4AR_092122 | Total/NA | Water | 9056A | |
| 240-173403-1 MSD | X-4AR_092122 | Total/NA | Water | 9056A | |

### Analysis Batch: 544275

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173403-1 - RA | X-4AR_092122 | Total/NA | Water | 9056A | |
| 240-173403-2 - RA | X-4D_092122 | Total/NA | Water | 9056A | |
| 240-173403-3 - RA | X-4CAUGR_092122 | Total/NA | Water | 9056A | |
| 240-173403-4 - RA | MW-117SI_092122 | Total/NA | Water | 9056A | |
| MB 240-544275/3 | Method Blank | Total/NA | Water | 9056A | |
| LCS 240-544275/4 | Lab Control Sample | Total/NA | Water | 9056A | |
| 240-173403-1 MS | X-4AR_092122 | Total/NA | Water | 9056A | |
| 240-173403-1 MSD | X-4AR_092122 | Total/NA | Water | 9056A | |

### Analysis Batch: 544480

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173403-2 | X-4D_092122 | Total/NA | Water | 9056A | |
| 240-173403-4 | MW-117SI_092122 | Total/NA | Water | 9056A | |
| MB 240-544480/3 | Method Blank | Total/NA | Water | 9056A | |
| LCS 240-544480/4 | Lab Control Sample | Total/NA | Water | 9056A | |

## General Chemistry (Continued)

### Analysis Batch: 544480 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173403-4 MS | MW-117SI_092122 | Total/NA | Water | 9056A | |
| 240-173403-4 MSD | MW-117SI_092122 | Total/NA | Water | 9056A | |

### Analysis Batch: 544549

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173403-1 | X-4AR_092122 | Total/NA | Water | 4500 NH3 H | |
| 240-173403-2 | X-4D_092122 | Total/NA | Water | 4500 NH3 H | |
| 240-173403-3 | X-4CAUGR_092122 | Total/NA | Water | 4500 NH3 H | |
| 240-173403-4 | MW-117SI_092122 | Total/NA | Water | 4500 NH3 H | |
| MB 240-544549/14 | Method Blank | Total/NA | Water | 4500 NH3 H | |
| LCS 240-544549/15 | Lab Control Sample | Total/NA | Water | 4500 NH3 H | |
| 240-173403-1 MS | X-4AR_092122 | Total/NA | Water | 4500 NH3 H | |
| 240-173403-1 MSD | X-4AR_092122 | Total/NA | Water | 4500 NH3 H | |

### Analysis Batch: 544604

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173403-1 | X-4AR_092122 | Total/NA | Water | 2540 C-2011 | |
| 240-173403-2 | X-4D_092122 | Total/NA | Water | 2540 C-2011 | |
| 240-173403-3 | X-4CAUGR_092122 | Total/NA | Water | 2540 C-2011 | |
| 240-173403-4 | MW-117SI_092122 | Total/NA | Water | 2540 C-2011 | |
| MB 240-544604/1 | Method Blank | Total/NA | Water | 2540 C-2011 | |
| LCS 240-544604/2 | Lab Control Sample | Total/NA | Water | 2540 C-2011 | |

# Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173403-1

## Client Sample ID: X-4AR_092122

**Lab Sample ID: 240-173403-1**

**Date Collected: 09/21/22 12:30**

**Matrix: Water**

**Date Received: 09/22/22 09:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 544097 | SHB | EET CAN | 09/23/22 12:00 |
| Total Recoverable | Analysis | 6010B | | 1 | 544515 | RKT | EET CAN | 09/27/22 17:52 |
| Total/NA | Analysis | 2540 C-2011 | | 1 | 544604 | MED | EET CAN | 09/28/22 08:27 |
| Total/NA | Prep | SM 4500 CN C | | | 413925 | CMR | EET PIT | 10/03/22 14:30 |
| Total/NA | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 11:14 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 544549 | AJ | EET CAN | 09/27/22 12:43 |
| Total/NA | Analysis | 9056A | | 1 | 543953 | JMB | EET CAN | 09/23/22 05:56 |
| Total/NA | Analysis | 9056A | | 1 | 544274 | JWW | EET CAN | 09/24/22 20:30 |
| Total/NA | Analysis | 9056A | RA | 1 | 544275 | JWW | EET CAN | 09/24/22 20:30 |

## Client Sample ID: X-4D_092122

**Lab Sample ID: 240-173403-2**

**Date Collected: 09/21/22 13:35**

**Matrix: Water**

**Date Received: 09/22/22 09:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3005A | | | 544158 | SHB | EET CAN | 09/24/22 12:00 |
| Dissolved | Analysis | 6010B | | 1 | 544353 | RKT | EET CAN | 09/26/22 17:33 |
| Dissolved | Prep | 3005A | | | 544158 | SHB | EET CAN | 09/24/22 12:00 |
| Dissolved | Analysis | 6010B | | 5 | 544515 | RKT | EET CAN | 09/27/22 18:18 |
| Total Recoverable | Prep | 3005A | | | 544097 | SHB | EET CAN | 09/23/22 12:00 |
| Total Recoverable | Analysis | 6010B | | 1 | 544515 | RKT | EET CAN | 09/27/22 17:57 |
| Total Recoverable | Prep | 3005A | | | 544097 | SHB | EET CAN | 09/23/22 12:00 |
| Total Recoverable | Analysis | 6010B | | 5 | 544933 | RKT | EET CAN | 09/29/22 15:18 |
| Total/NA | Analysis | 2540 C-2011 | | 1 | 544604 | MED | EET CAN | 09/28/22 08:27 |
| Dissolved | Prep | SM 4500 CN C | | | 413925 | CMR | EET PIT | 10/03/22 14:30 |
| Dissolved | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 11:31 |
| Total/NA | Prep | SM 4500 CN C | | | 413925 | CMR | EET PIT | 10/03/22 14:30 |
| Total/NA | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 11:16 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 544549 | AJ | EET CAN | 09/27/22 12:52 |
| Total/NA | Analysis | 9056A | | 2 | 543953 | JMB | EET CAN | 09/23/22 06:56 |
| Total/NA | Analysis | 9056A | | 2 | 544274 | JWW | EET CAN | 09/24/22 21:30 |
| Total/NA | Analysis | 9056A | RA | 2 | 544275 | JWW | EET CAN | 09/24/22 21:30 |
| Total/NA | Analysis | 9056A | | 10 | 544480 | JWW | EET CAN | 09/29/22 07:52 |

## Client Sample ID: X-4CAUGR_092122

**Lab Sample ID: 240-173403-3**

**Date Collected: 09/21/22 15:00**

**Matrix: Water**

**Date Received: 09/22/22 09:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3005A | | | 544158 | SHB | EET CAN | 09/24/22 12:00 |
| Dissolved | Analysis | 6010B | | 1 | 544353 | RKT | EET CAN | 09/26/22 17:37 |
| Total Recoverable | Prep | 3005A | | | 544097 | SHB | EET CAN | 09/23/22 12:00 |
| Total Recoverable | Analysis | 6010B | | 1 | 544515 | RKT | EET CAN | 09/27/22 18:01 |
| Total/NA | Analysis | 2540 C-2011 | | 1 | 544604 | MED | EET CAN | 09/28/22 08:27 |

# Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173403-1

## Client Sample ID: X-4CAUGR_092122

**Lab Sample ID: 240-173403-3**

**Date Collected: 09/21/22 15:00**

**Matrix: Water**

**Date Received: 09/22/22 09:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | SM 4500 CN C | | | 413925 | CMR | EET PIT | 10/03/22 14:30 |
| Dissolved | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 11:32 |
| Total/NA | Prep | SM 4500 CN C | | | 413925 | CMR | EET PIT | 10/03/22 14:30 |
| Total/NA | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 11:17 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 544549 | AJ | EET CAN | 09/27/22 12:55 |
| Total/NA | Analysis | 9056A | | 1 | 543953 | JMB | EET CAN | 09/23/22 08:16 |
| Total/NA | Analysis | 9056A | | 1 | 544274 | JWW | EET CAN | 09/24/22 21:50 |
| Total/NA | Analysis | 9056A | RA | 1 | 544275 | JWW | EET CAN | 09/24/22 21:50 |

## Client Sample ID: MW-117SI_092122

**Lab Sample ID: 240-173403-4**

**Date Collected: 09/21/22 14:25**

**Matrix: Water**

**Date Received: 09/22/22 09:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3005A | | | 544158 | SHB | EET CAN | 09/24/22 12:00 |
| Dissolved | Analysis | 6010B | | 1 | 544353 | RKT | EET CAN | 09/26/22 17:42 |
| Total Recoverable | Prep | 3005A | | | 544097 | SHB | EET CAN | 09/23/22 12:00 |
| Total Recoverable | Analysis | 6010B | | 1 | 544515 | RKT | EET CAN | 09/27/22 18:05 |
| Total/NA | Analysis | 2540 C-2011 | | 1 | 544604 | MED | EET CAN | 09/28/22 08:27 |
| Dissolved | Prep | SM 4500 CN C | | | 413925 | CMR | EET PIT | 10/03/22 14:30 |
| Dissolved | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 11:34 |
| Total/NA | Prep | SM 4500 CN C | | | 413925 | CMR | EET PIT | 10/03/22 14:30 |
| Total/NA | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 11:19 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 544549 | AJ | EET CAN | 09/27/22 12:58 |
| Total/NA | Analysis | 9056A | | 1 | 543953 | JMB | EET CAN | 09/23/22 08:37 |
| Total/NA | Analysis | 9056A | | 1 | 544274 | JWW | EET CAN | 09/24/22 22:10 |
| Total/NA | Analysis | 9056A | RA | 1 | 544275 | JWW | EET CAN | 09/24/22 22:10 |
| Total/NA | Analysis | 9056A | | 5 | 544480 | JWW | EET CAN | 09/29/22 08:12 |

**Laboratory References:**

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

# Accreditation/Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173403-1

## Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| California | State | 2927 | 02-27-23 |
| Connecticut | State | PH-0590 | 12-31-23 |
| Florida | NELAP | E87225 | 06-30-23 |
| Georgia | State | 4062 | 02-27-23 |
| Illinois | NELAP | 200004 | 07-31-23 |
| Iowa | State | 421 | 06-01-23 |
| Kentucky (UST) | State | 112225 | 02-27-23 |
| Kentucky (WW) | State | KY98016 | 12-31-22 |
| Minnesota | NELAP | 039-999-348 | 12-31-22 |
| Minnesota (Petrofund) | State | 3506 | 08-01-23 |
| New Jersey | NELAP | OH001 | 10-10-22 |
| New York | NELAP | 10975 | 04-01-23 |
| Ohio | State | 8303 | 10-12-22 |
| Ohio VAP | State | CL0024 | 02-27-23 |
| Oregon | NELAP | 4062 | 02-27-23 |
| Pennsylvania | NELAP | 68-00340 | 08-31-23 |
| Texas | NELAP | T104704517-22-17 | 08-31-23 |
| Virginia | NELAP | 460175 | 09-14-23 |
| Washington | State | C971 | 01-12-23 |
| West Virginia DEP | State | 210 | 12-31-22 |

## Laboratory: Eurofins Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Arkansas DEQ | State | 19-033-0 | 06-27-22 * |
| California | State | 2891 | 04-30-23 |
| Connecticut | State | PH-0688 | 09-30-22 * |
| Florida | NELAP | E871008 | 10-23-22 |
| Georgia | State | PA 02-00416 | 10-23-22 |
| Illinois | NELAP | 004375 | 10-23-22 |
| Kansas | NELAP | E-10350 | 10-23-22 |
| Kentucky (UST) | State | 162013 | 04-30-23 |
| Kentucky (WW) | State | KY98043 | 12-31-22 |
| Louisiana | NELAP | 04041 | 06-30-22 * |
| Louisiana (All) | NELAP | 04041 | 10-23-22 |
| Maine | State | PA00164 | 03-06-24 |
| Minnesota | NELAP | 042-999-482 | 10-23-22 |
| New Hampshire | NELAP | 2030 | 10-23-22 |
| New Jersey | NELAP | PA005 | 10-23-22 |
| New York | NELAP | 11182 | 10-23-22 |
| North Carolina (WW/SW) | State | 434 | 10-11-22 |
| North Dakota | State | R-227 | 10-23-22 |
| Oregon | NELAP | PA-2151 | 10-23-22 |
| Pennsylvania | NELAP | 02-00416 | 10-23-22 |
| Rhode Island | State | LAO00362 | 12-31-22 |
| South Carolina | State | 89014 | 04-20-23 |
| Texas | NELAP | T104704528 | 10-23-22 |
| USDA | US Federal Programs | P330-16-00211 | 06-21-24 |
| Utah | NELAP | PA001462019-8 | 10-23-22 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Accreditation/Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173403-1

## Laboratory: Eurofins Pittsburgh (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Virginia | NELAP | 10043 | 10-23-22 |
| West Virginia DEP | State | 142 | 10-23-22 |
| Wisconsin | State | 998027800 | 08-31-23 |

# Chain of Custody Record

596333 eurofins | Environment Testing TestAmerica

Address: _____

1.3/1.3

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

| Client Contact | Project Manager: SCOTT CLEARWATER | Site Contact: | Date: | COC No: |
|---|---|---|---|---|
| Company Name: ARCADIS | Tel/Email: 248-346-5970 | Lab Contact: | Carrier: | _____ of _____ COCs |
| Address: 28550 CABOT DR STE 500 | Analysis Turnaround Time | | | Sampler: |
| City/State/Zip: NOVI, MI 48377 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| Phone: 810 225 1921 | TAT if different from Below _____ | | | Walk-in Client: |
| Fax: | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: RACER SAGINAW | ☐ 1 week | | | |
| Site: | ☐ 2 days | | | Job / SDG No.: |
| PO# 30121470 | ☐ 1 day | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS / MSD (Y/N) | TOTAL TAL METALS | DISSOLVED TAL METALS | TOTAL CYANIDE | DISSOLVED CYANIDE | 1,4-DIOXANE (SIM) | AMMONIA AS NITROGEN | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X-4AR_092122 | 9/21/22 | 12:30 | G | GW | | | | 1 | | 1 | | 1 | 1 | |
| X-4D_092122 | 9/21/22 | 13:35 | G | GW | 6 | | | 1 | 1 | 1 | 1 | 1 | 1 | |
| X-4CAUGR_092122 | 9/21/22 | 15:00 | G | GW | 6 | | | 1 | 1 | 1 | 1 | 1 | 1 | |
| MW-11751_092122 | 9/21/22 | 14:25 | G | GW | 6 | | | 1 | 1 | 1 | 1 | 1 | 1 | |

240-173403 Chain of Custody

**Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other** _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:**

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| | ARCADIS | 9/21/22 17:30 | | | |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: 9-22-22 9:45 |

**Eurofins - Canton Sample Receipt Form/Narrative** **Login # :** _____
**Barberton Facility**

Client Arcadis Site Name _____ Cooler unpacked by: Charmek

Cooler Received on 9-22-22 Opened on 9-22-22

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

**Receipt After-hours: Drop-off Date/Time** _____ **Storage Location** _____

Eurofins Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-13 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #IR-15 (CF 0.0°C) Observed Cooler Temp. 1.3 °C Corrected Cooler Temp. 1.3 °C

| | | |
|---|---|---|
| 2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ | Yes | No |
| -Were the seals on the outside of the cooler(s) signed & dated? | Yes | No NA |
| -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? | Yes | No |
| -Were tamper/custody seals intact and uncompromised? | Yes | No NA |
| 3. Shippers' packing slip attached to the cooler(s)? | Yes | No |
| 4. Did custody papers accompany the sample(s)? | Yes | No |
| 5. Were the custody papers relinquished & signed in the appropriate place? | Yes | No |
| 6. Was/were the person(s) who collected the samples clearly identified on the COC? | Yes | No |
| 7. Did all bottles arrive in good condition (Unbroken)? | Yes | No |
| 8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? | Yes | No |
| 9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? | | |
| 10. Were correct bottle(s) used for the test(s) indicated? | Yes | No |
| 11. Sufficient quantity received to perform indicated analyses? | Yes | No |
| 12. Are these work share samples and all listed on the COC? | Yes | No |
| If yes, Questions 13-17 have been checked at the originating laboratory. | | |
| 13. Were all preserved sample(s) at the correct pH upon receipt? | Yes | No NA pH Strip Lot# HC286797 |
| 14. Were VOAs on the COC? | Yes | No |
| 15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this. | Yes | No NA |
| 16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ | Yes | No |
| 17. Was a LL Hg or Me Hg trip blank present? _____ | Yes | No |

**Tests that are not checked for pH by Receiving:**
**VOAs**
**Oil and Grease**
**TOC**

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

**18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES** ☐ additional next page

Samples processed by:

_____

_____

_____

_____

**19. SAMPLE CONDITION**

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

**20. SAMPLE PRESERVATION**

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

*WI-NC-099*

**Eurofins Canton**
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

# Chain of Custody Record


240-173403 Chain of Custody

Environment Testing America

| | | | |
|---|---|---|---|
| **Client Information (Sub Contract Lab)** | Sampler: | Lab PM: DelMonico, Michael | |
| Client Contact: Shipping/Receiving | Phone: | E-Mail: Michael.DelMonico@et.eurofinsus.com | State of Origin: Michigan |
| Company: Eurofins Environment Testing Northeast, | | Accreditations Required (See note): | Job #: 240-173403-1 |
| Address: 301 Alpha Drive, RIDC Park, | Due Date Requested: 10/5/2022 | | |
| City: Pittsburgh | TAT Requested (days): | | |
| State, Zip: PA, 15238 | | | |
| Phone: 412-963-7058(Tel) 412-963-2468(Fax) | PO #: | | |
| Email | WO #: | | |
| Project Name: RACER Saginaw | Project #: 24006824 | | |
| Site | SSOW#: | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA

M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 4500_CN_E/4500_CN_C | 4500_CN_E/FIELD_FLTRD | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | |
| X-4AR_092122 (240-173403-1) | 9/21/22 | 12:30 Eastern | | Water | | | X | | 1 | |
| X-4D_092122 (240-173403-2) | 9/21/22 | 13:35 Eastern | | Water | | | X | X | 2 | |
| X-4CAUGR_092122 (240-173403-3) | 9/21/22 | 15:00 Eastern | | Water | | | X | X | 2 | |
| MW-117SI_092122 (240-173403-4) | 9/21/22 | 14:25 Eastern | | Water | | | X | X | 2 | |

Note Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing North Central, LLC

| | |
|---|---|
| ***Possible Hazard Identification*** *Unconfirmed* | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |
| Empty Kit Relinquished by: Date: | Time: Method of Shipment: |

| | | | | | |
|---|---|---|---|---|---|
| Relinquished by: Mandy Black | Date/Time: 9-23-22 16.00 | Company: eurofins | Received by: MO | Date/Time: 9.24.22 9.30 | Company: eurofins |
| Relinquished by: | Date/Time: | Company: | Received by: | Date/Time: | Company: |
| Relinquished by: | Date/Time: | Company: | Received by: | Date/Time: | Company: |

| | | |
|---|---|---|
| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |

Ver: 06/08/2021

# Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 240-173403-1

**Login Number: 173403**
**List Number: 2**
**Creator: Watson, Debbie**

**List Source: Eurofins Pittsburgh**
**List Creation: 09/28/22 12:54 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing



# ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-173485-1
Client Project/Site: Racer Saginaw
Revision: 1

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, Michigan 48377

Attn: Scott Clearwater

*Authorized for release by:*
*10/31/2022 11:04:23 AM*

Michael DelMonico, Project Manager I
(330)497-9396
Michael.DelMonico@et.eurofinsus.com

LINKS
Review your project results through my EOL
Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173485-1

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| U | Indicates the analyte was analyzed for but not detected. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| *+ | LCS and/or LCSD is outside acceptance limits, high biased. |
| F1 | MS and/or MSD recovery exceeds control limits. |
| H | Sample was prepped or analyzed beyond the specified holding time |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| U | Indicates the analyte was analyzed for but not detected. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

## Job ID: 240-173485-1

### Laboratory: Eurofins Canton

**Narrative**

**Job Narrative**
**240-173485-1**

The Dissolved Total Cyanide by SM 4500 CN E analysis was performed at the Eurofins Pittsburgh laboratory.

**Comments**

Report revised on 10/31/2022 to report Nitrate and Nitrite separately.

**Receipt**

The samples were received on 9/23/2022 2:30 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.1°C and 1.4°C

**Metals**

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**General Chemistry**

Method 4500_CN_E: The laboratory control sample (LLCS) for preparation batch 180-413995 and analytical batch 180-414100 recovered outside control limits for the following analytes: total cyanide. These analytes were biased high in the LLCS and were not detected in the associated samples; therefore, the data have been reported.

Method 9056A: The following sample was diluted due to the nature of the sample matrix: MW-117WT_092222 (240-173485-3). Elevated reporting limits (RLs) are provided.

Method 9056A_28D: The following sample was diluted due to the nature of the sample matrix: MW-117WT_092222 (240-173485-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

# Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173485-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010B | Metals (ICP) | SW846 | EET CAN |
| 2540 C-2011 | Total Dissolved Solids (Dried at 180 °C) | SM | EET CAN |
| 4500 CN E-2016 | Cyanide, Total | SM | EET PIT |
| 4500 NH3 H | Ammonia | SM | EET CAN |
| 9056A | Anions, Ion Chromatography | SW846 | EET CAN |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | EET CAN |
| SM 4500 CN C | Cyanide, Distillation | SM | EET PIT |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

# Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173485-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 240-173485-1 | X-9AR_092222 | Water | 09/22/22 08:00 | 09/23/22 14:30 |
| 240-173485-2 | X-9BR_092222 | Water | 09/22/22 10:35 | 09/23/22 14:30 |
| 240-173485-3 | MW-117WT_092222 | Water | 09/22/22 10:40 | 09/23/22 14:30 |
| 240-173485-4 | X-9CAUG_092222 | Water | 09/22/22 12:25 | 09/23/22 14:30 |
| 240-173485-5 | X-9D_092222 | Water | 09/22/22 14:05 | 09/23/22 14:30 |
| 240-173485-6 | MW-118WT_092222 | Water | 09/22/22 13:20 | 09/23/22 14:30 |
| 240-173485-7 | DUP-02_092222 | Water | 09/22/22 00:00 | 09/23/22 14:30 |

# Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173485-1

## Client Sample ID: X-9AR_092222 — Lab Sample ID: 240-173485-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 13 | | 10 | 4.1 | ug/L | 1 | | 6010B | Total Recoverable |
| Barium | 67 | J | 200 | 1.3 | ug/L | 1 | | 6010B | Total Recoverable |
| Iron | 12000 | | 100 | 83 | ug/L | 1 | | 6010B | Total Recoverable |
| Manganese | 1900 | | 15 | 6.2 | ug/L | 1 | | 6010B | Total Recoverable |
| Sodium | 9600 | | 5000 | 2100 | ug/L | 1 | | 6010B | Total Recoverable |
| Arsenic | 14 | | 10 | 4.1 | ug/L | 1 | | 6010B | Dissolved |
| Barium | 75 | J | 200 | 1.3 | ug/L | 1 | | 6010B | Dissolved |
| Iron | 13000 | | 100 | 83 | ug/L | 1 | | 6010B | Dissolved |
| Manganese | 2100 | | 15 | 6.2 | ug/L | 1 | | 6010B | Dissolved |
| Sodium | 11000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Dissolved |
| Total Dissolved Solids | 370 | | 10 | 7.8 | mg/L | 1 | | 2540 C-2011 | Total/NA |
| Ammonia | 0.26 | F1 | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Chloride | 13 | | 1.0 | 0.28 | mg/L | 1 | | 9056A | Total/NA |
| Sulfate | 0.83 | J | 1.0 | 0.35 | mg/L | 1 | | 9056A | Total/NA |

## Client Sample ID: X-9BR_092222 — Lab Sample ID: 240-173485-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 100 | J | 200 | 1.3 | ug/L | 1 | | 6010B | Total Recoverable |
| Iron | 6700 | | 100 | 83 | ug/L | 1 | | 6010B | Total Recoverable |
| Manganese | 340 | | 15 | 6.2 | ug/L | 1 | | 6010B | Total Recoverable |
| Sodium | 120000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Total Recoverable |
| Barium | 97 | J | 200 | 1.3 | ug/L | 1 | | 6010B | Dissolved |
| Iron | 6300 | | 100 | 83 | ug/L | 1 | | 6010B | Dissolved |
| Manganese | 330 | | 15 | 6.2 | ug/L | 1 | | 6010B | Dissolved |
| Sodium | 150000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Dissolved |
| Total Dissolved Solids | 600 | | 20 | 16 | mg/L | 1 | | 2540 C-2011 | Total/NA |
| Ammonia | 3.8 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Chloride | 150 | | 1.0 | 0.28 | mg/L | 1 | | 9056A | Total/NA |
| Nitrite as N | 0.019 | J | 0.10 | 0.014 | mg/L | 1 | | 9056A | Total/NA |
| Sulfate | 3.1 | | 1.0 | 0.35 | mg/L | 1 | | 9056A | Total/NA |

## Client Sample ID: MW-117WT_092222 — Lab Sample ID: 240-173485-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 2300 | | 200 | 1.3 | ug/L | 1 | | 6010B | Total Recoverable |
| Iron | 100000 | | 100 | 83 | ug/L | 1 | | 6010B | Total Recoverable |
| Manganese | 4200 | | 15 | 6.2 | ug/L | 1 | | 6010B | Total Recoverable |
| Sodium | 470000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Total Recoverable |
| Barium | 2200 | | 200 | 1.3 | ug/L | 1 | | 6010B | Dissolved |
| Iron | 99000 | | 100 | 83 | ug/L | 1 | | 6010B | Dissolved |
| Manganese | 3900 | | 15 | 6.2 | ug/L | 1 | | 6010B | Dissolved |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-117WT_092222 (Continued) — Lab Sample ID: 240-173485-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Sodium | 440000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Dissolved |
| Total Dissolved Solids | 4900 | | 50 | 39 | mg/L | 1 | | 2540 C-2011 | Total/NA |
| Ammonia | 58 | | 2.0 | 0.76 | mg/L | 10 | | 4500 NH3 H | Total/NA |
| Chloride | 3800 | | 50 | 14 | mg/L | 50 | | 9056A | Total/NA |
| Sulfate | 2.0 | J | 5.0 | 1.7 | mg/L | 5 | | 9056A | Total/NA |

## Client Sample ID: X-9CAUG_092222 — Lab Sample ID: 240-173485-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 130 | J | 200 | 1.3 | ug/L | 1 | | 6010B | Total Recoverable |
| Iron | 7700 | | 100 | 83 | ug/L | 1 | | 6010B | Total Recoverable |
| Manganese | 570 | | 15 | 6.2 | ug/L | 1 | | 6010B | Total Recoverable |
| Sodium | 22000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Total Recoverable |
| Barium | 130 | J | 200 | 1.3 | ug/L | 1 | | 6010B | Dissolved |
| Iron | 7700 | | 100 | 83 | ug/L | 1 | | 6010B | Dissolved |
| Manganese | 560 | | 15 | 6.2 | ug/L | 1 | | 6010B | Dissolved |
| Sodium | 18000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Dissolved |
| Total Dissolved Solids | 550 | | 10 | 7.8 | mg/L | 1 | | 2540 C-2011 | Total/NA |
| Ammonia | 1.9 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Chloride | 35 | | 1.0 | 0.28 | mg/L | 1 | | 9056A | Total/NA |
| Nitrite as N | 0.022 | J | 0.10 | 0.014 | mg/L | 1 | | 9056A | Total/NA |
| Sulfate | 0.82 | J | 1.0 | 0.35 | mg/L | 1 | | 9056A | Total/NA |
| Nitrate as N | 0.054 | J | 0.10 | 0.036 | mg/L | 1 | | 9056A | Total/NA |

## Client Sample ID: X-9D_092222 — Lab Sample ID: 240-173485-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 33 | J | 200 | 1.3 | ug/L | 1 | | 6010B | Total Recoverable |
| Iron | 820 | | 100 | 83 | ug/L | 1 | | 6010B | Total Recoverable |
| Manganese | 220 | | 15 | 6.2 | ug/L | 1 | | 6010B | Total Recoverable |
| Sodium | 110000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Total Recoverable |
| Barium | 30 | J | 200 | 1.3 | ug/L | 1 | | 6010B | Dissolved |
| Manganese | 190 | | 15 | 6.2 | ug/L | 1 | | 6010B | Dissolved |
| Sodium | 110000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Dissolved |
| Total Dissolved Solids | 620 | | 10 | 7.8 | mg/L | 1 | | 2540 C-2011 | Total/NA |
| Ammonia | 0.16 | J | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Chloride | 260 | | 5.0 | 1.4 | mg/L | 5 | | 9056A | Total/NA |
| Sulfate | 50 | | 1.0 | 0.35 | mg/L | 1 | | 9056A | Total/NA |
| Nitrate as N | 0.23 | | 0.10 | 0.036 | mg/L | 1 | | 9056A | Total/NA |

## Client Sample ID: MW-118WT_092222 — Lab Sample ID: 240-173485-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11 | | 10 | 4.1 | ug/L | 1 | | 6010B | Total Recoverable |
| Barium | 330 | | 200 | 1.3 | ug/L | 1 | | 6010B | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-118WT_092222 (Continued) — Lab Sample ID: 240-173485-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Iron | 19000 | | 100 | 83 | ug/L | 1 | | 6010B | Total Recoverable |
| Manganese | 860 | | 15 | 6.2 | ug/L | 1 | | 6010B | Total Recoverable |
| Sodium | 92000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Total Recoverable |
| Arsenic | 10 | | 10 | 4.1 | ug/L | 1 | | 6010B | Dissolved |
| Barium | 340 | | 200 | 1.3 | ug/L | 1 | | 6010B | Dissolved |
| Iron | 18000 | | 100 | 83 | ug/L | 1 | | 6010B | Dissolved |
| Manganese | 850 | | 15 | 6.2 | ug/L | 1 | | 6010B | Dissolved |
| Sodium | 96000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Dissolved |
| Total Dissolved Solids | 1100 | | 20 | 16 | mg/L | 1 | | 2540 C-2011 | Total/NA |
| Ammonia | 15 | | 1.0 | 0.38 | mg/L | 5 | | 4500 NH3 H | Total/NA |
| Chloride | 310 | | 10 | 2.8 | mg/L | 10 | | 9056A | Total/NA |
| Nitrite as N | 0.076 | J | 0.10 | 0.014 | mg/L | 1 | | 9056A | Total/NA |
| Sulfate | 0.51 | J | 1.0 | 0.35 | mg/L | 1 | | 9056A | Total/NA |
| Nitrate as N | 0.085 | J | 0.10 | 0.036 | mg/L | 1 | | 9056A | Total/NA |

## Client Sample ID: DUP-02_092222 — Lab Sample ID: 240-173485-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 14 | | 10 | 4.1 | ug/L | 1 | | 6010B | Total Recoverable |
| Barium | 69 | J | 200 | 1.3 | ug/L | 1 | | 6010B | Total Recoverable |
| Iron | 12000 | | 100 | 83 | ug/L | 1 | | 6010B | Total Recoverable |
| Manganese | 2000 | | 15 | 6.2 | ug/L | 1 | | 6010B | Total Recoverable |
| Sodium | 9800 | | 5000 | 2100 | ug/L | 1 | | 6010B | Total Recoverable |
| Arsenic | 16 | | 10 | 4.1 | ug/L | 1 | | 6010B | Dissolved |
| Barium | 76 | J | 200 | 1.3 | ug/L | 1 | | 6010B | Dissolved |
| Iron | 13000 | | 100 | 83 | ug/L | 1 | | 6010B | Dissolved |
| Manganese | 2200 | | 15 | 6.2 | ug/L | 1 | | 6010B | Dissolved |
| Sodium | 11000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Dissolved |
| Total Dissolved Solids | 380 | | 10 | 7.8 | mg/L | 1 | | 2540 C-2011 | Total/NA |
| Cyanide, Total | 0.011 | | 0.010 | 0.0080 | mg/L | 1 | | 4500 CN E-2016 | Total/NA |
| Ammonia | 0.23 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Chloride | 13 | | 1.0 | 0.28 | mg/L | 1 | | 9056A | Total/NA |
| Nitrate as N | 0.048 | J H | 0.10 | 0.036 | mg/L | 1 | | 9056A | Total/NA |

This Detection Summary does not include radiochemical test results.

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173485-1

## Client Sample ID: X-9AR_092222

**Date Collected: 09/22/22 08:00**
**Date Received: 09/23/22 14:30**

## Lab Sample ID: 240-173485-1

**Matrix: Water**

### Method: SW846 6010B - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **13** | | 10 | 4.1 | ug/L | | 09/26/22 12:00 | 09/27/22 16:22 | 1 |
| **Barium** | **67** | **J** | 200 | 1.3 | ug/L | | 09/26/22 12:00 | 09/27/22 16:22 | 1 |
| **Iron** | **12000** | | 100 | 83 | ug/L | | 09/26/22 12:00 | 09/27/22 16:22 | 1 |
| **Manganese** | **1900** | | 15 | 6.2 | ug/L | | 09/26/22 12:00 | 09/27/22 16:22 | 1 |
| **Sodium** | **9600** | | 5000 | 2100 | ug/L | | 09/26/22 12:00 | 09/27/22 16:22 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/26/22 12:00 | 09/27/22 16:22 | 1 |

### Method: SW846 6010B - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **14** | | 10 | 4.1 | ug/L | | 09/26/22 12:00 | 09/27/22 16:47 | 1 |
| **Barium** | **75** | **J** | 200 | 1.3 | ug/L | | 09/26/22 12:00 | 09/27/22 16:47 | 1 |
| **Iron** | **13000** | | 100 | 83 | ug/L | | 09/26/22 12:00 | 09/27/22 16:47 | 1 |
| **Manganese** | **2100** | | 15 | 6.2 | ug/L | | 09/26/22 12:00 | 09/27/22 16:47 | 1 |
| **Sodium** | **11000** | | 5000 | 2100 | ug/L | | 09/26/22 12:00 | 09/27/22 16:47 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/26/22 12:00 | 09/27/22 16:47 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids (SM 2540 C-2011)** | **370** | | 10 | 7.8 | mg/L | | | 09/29/22 09:09 | 1 |
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/04/22 08:04 | 10/04/22 14:48 | 1 |
| **Ammonia (SM 4500 NH3 H)** | **0.26** | **F1** | 0.20 | 0.076 | mg/L | | | 09/27/22 13:31 | 1 |
| **Chloride (SW846 9056A)** | **13** | | 1.0 | 0.28 | mg/L | | | 09/24/22 05:55 | 1 |
| Nitrite as N (SW846 9056A) | 0.10 | U | 0.10 | 0.014 | mg/L | | | 09/24/22 05:55 | 1 |
| **Sulfate (SW846 9056A)** | **0.83** | **J** | 1.0 | 0.35 | mg/L | | | 09/24/22 05:55 | 1 |
| Nitrate as N (SW846 9056A) | 0.10 | U | 0.10 | 0.036 | mg/L | | | 09/24/22 05:55 | 1 |

### General Chemistry - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U *+ | 0.010 | 0.0080 | mg/L | | 10/04/22 11:00 | 10/04/22 15:41 | 1 |

## Client Sample ID: X-9BR_092222

**Date Collected: 09/22/22 10:35**
**Date Received: 09/23/22 14:30**

## Lab Sample ID: 240-173485-2

**Matrix: Water**

### Method: SW846 6010B - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/26/22 12:00 | 09/27/22 16:51 | 1 |
| **Barium** | **100** | **J** | 200 | 1.3 | ug/L | | 09/26/22 12:00 | 09/27/22 16:51 | 1 |
| **Iron** | **6700** | | 100 | 83 | ug/L | | 09/26/22 12:00 | 09/27/22 16:51 | 1 |
| **Manganese** | **340** | | 15 | 6.2 | ug/L | | 09/26/22 12:00 | 09/27/22 16:51 | 1 |
| **Sodium** | **120000** | | 5000 | 2100 | ug/L | | 09/26/22 12:00 | 09/27/22 16:51 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/26/22 12:00 | 09/27/22 16:51 | 1 |

### Method: SW846 6010B - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/26/22 12:00 | 09/27/22 16:56 | 1 |
| **Barium** | **97** | **J** | 200 | 1.3 | ug/L | | 09/26/22 12:00 | 09/27/22 16:56 | 1 |
| **Iron** | **6300** | | 100 | 83 | ug/L | | 09/26/22 12:00 | 09/27/22 16:56 | 1 |
| **Manganese** | **330** | | 15 | 6.2 | ug/L | | 09/26/22 12:00 | 09/27/22 16:56 | 1 |
| **Sodium** | **150000** | | 5000 | 2100 | ug/L | | 09/26/22 12:00 | 09/27/22 16:56 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/26/22 12:00 | 09/27/22 16:56 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids (SM 2540 C-2011)** | **600** | | 20 | 16 | mg/L | | | 09/29/22 09:09 | 1 |
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/04/22 08:04 | 10/04/22 14:50 | 1 |
| **Ammonia (SM 4500 NH3 H)** | **3.8** | | 0.20 | 0.076 | mg/L | | | 09/27/22 13:46 | 1 |
| **Chloride (SW846 9056A)** | **150** | | 1.0 | 0.28 | mg/L | | | 09/24/22 07:44 | 1 |
| **Nitrite as N (SW846 9056A)** | **0.019** | **J** | 0.10 | 0.014 | mg/L | | | 09/24/22 07:44 | 1 |
| **Sulfate (SW846 9056A)** | **3.1** | | 1.0 | 0.35 | mg/L | | | 09/24/22 07:44 | 1 |
| Nitrate as N (SW846 9056A) | 0.10 | U | 0.10 | 0.036 | mg/L | | | 09/24/22 07:44 | 1 |

### General Chemistry - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U *+ | 0.010 | 0.0080 | mg/L | | 10/04/22 11:00 | 10/04/22 15:42 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173485-1

## Client Sample ID: MW-117WT_092222

**Lab Sample ID: 240-173485-3**

**Date Collected: 09/22/22 10:40**

**Matrix: Water**

**Date Received: 09/23/22 14:30**

### Method: SW846 6010B - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/26/22 12:00 | 09/27/22 17:00 | 1 |
| **Barium** | **2300** | | 200 | 1.3 | ug/L | | 09/26/22 12:00 | 09/27/22 17:00 | 1 |
| **Iron** | **100000** | | 100 | 83 | ug/L | | 09/26/22 12:00 | 09/27/22 17:00 | 1 |
| **Manganese** | **4200** | | 15 | 6.2 | ug/L | | 09/26/22 12:00 | 09/27/22 17:00 | 1 |
| **Sodium** | **470000** | | 5000 | 2100 | ug/L | | 09/26/22 12:00 | 09/27/22 17:00 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/26/22 12:00 | 09/27/22 17:00 | 1 |

### Method: SW846 6010B - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/26/22 12:00 | 09/27/22 17:05 | 1 |
| **Barium** | **2200** | | 200 | 1.3 | ug/L | | 09/26/22 12:00 | 09/27/22 17:05 | 1 |
| **Iron** | **99000** | | 100 | 83 | ug/L | | 09/26/22 12:00 | 09/27/22 17:05 | 1 |
| **Manganese** | **3900** | | 15 | 6.2 | ug/L | | 09/26/22 12:00 | 09/27/22 17:05 | 1 |
| **Sodium** | **440000** | | 5000 | 2100 | ug/L | | 09/26/22 12:00 | 09/27/22 17:05 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/26/22 12:00 | 09/27/22 17:05 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids (SM 2540 C-2011)** | **4900** | | 50 | 39 | mg/L | | | 09/29/22 09:09 | 1 |
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/04/22 08:04 | 10/04/22 14:52 | 1 |
| **Ammonia (SM 4500 NH3 H)** | **58** | | 2.0 | 0.76 | mg/L | | | 09/27/22 16:16 | 10 |
| **Chloride (SW846 9056A)** | **3800** | | 50 | 14 | mg/L | | | 09/24/22 20:24 | 50 |
| Nitrite as N (SW846 9056A) | 0.50 | U | 0.50 | 0.070 | mg/L | | | 09/24/22 08:05 | 5 |
| **Sulfate (SW846 9056A)** | **2.0** | **J** | 5.0 | 1.7 | mg/L | | | 09/24/22 08:05 | 5 |
| Nitrate as N (SW846 9056A) | 0.50 | U | 0.50 | 0.18 | mg/L | | | 09/24/22 08:05 | 5 |

### General Chemistry - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U *+ | 0.010 | 0.0080 | mg/L | | 10/04/22 11:00 | 10/04/22 15:48 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173485-1

## Client Sample ID: X-9CAUG_092222

**Lab Sample ID: 240-173485-4**

**Date Collected: 09/22/22 12:25**

**Matrix: Water**

**Date Received: 09/23/22 14:30**

### Method: SW846 6010B - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/26/22 12:00 | 09/27/22 17:09 | 1 |
| **Barium** | **130** | **J** | 200 | 1.3 | ug/L | | 09/26/22 12:00 | 09/27/22 17:09 | 1 |
| **Iron** | **7700** | | 100 | 83 | ug/L | | 09/26/22 12:00 | 09/27/22 17:09 | 1 |
| **Manganese** | **570** | | 15 | 6.2 | ug/L | | 09/26/22 12:00 | 09/27/22 17:09 | 1 |
| **Sodium** | **22000** | | 5000 | 2100 | ug/L | | 09/26/22 12:00 | 09/27/22 17:09 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/26/22 12:00 | 09/27/22 17:09 | 1 |

### Method: SW846 6010B - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/26/22 12:00 | 09/27/22 17:13 | 1 |
| **Barium** | **130** | **J** | 200 | 1.3 | ug/L | | 09/26/22 12:00 | 09/27/22 17:13 | 1 |
| **Iron** | **7700** | | 100 | 83 | ug/L | | 09/26/22 12:00 | 09/27/22 17:13 | 1 |
| **Manganese** | **560** | | 15 | 6.2 | ug/L | | 09/26/22 12:00 | 09/27/22 17:13 | 1 |
| **Sodium** | **18000** | | 5000 | 2100 | ug/L | | 09/26/22 12:00 | 09/27/22 17:13 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/26/22 12:00 | 09/27/22 17:13 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids (SM 2540 C-2011)** | **550** | | 10 | 7.8 | mg/L | | | 09/29/22 09:09 | 1 |
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/04/22 08:04 | 10/04/22 14:54 | 1 |
| **Ammonia (SM 4500 NH3 H)** | **1.9** | | 0.20 | 0.076 | mg/L | | | 09/27/22 13:52 | 1 |
| **Chloride (SW846 9056A)** | **35** | | 1.0 | 0.28 | mg/L | | | 09/24/22 08:27 | 1 |
| **Nitrite as N (SW846 9056A)** | **0.022** | **J** | 0.10 | 0.014 | mg/L | | | 09/24/22 08:27 | 1 |
| **Sulfate (SW846 9056A)** | **0.82** | **J** | 1.0 | 0.35 | mg/L | | | 09/24/22 08:27 | 1 |
| **Nitrate as N (SW846 9056A)** | **0.054** | **J** | 0.10 | 0.036 | mg/L | | | 09/24/22 08:27 | 1 |

### General Chemistry - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U *+ | 0.010 | 0.0080 | mg/L | | 10/04/22 11:00 | 10/04/22 15:49 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173485-1

**Client Sample ID: X-9D_092222**
**Date Collected: 09/22/22 14:05**
**Date Received: 09/23/22 14:30**

**Lab Sample ID: 240-173485-5**
**Matrix: Water**

### Method: SW846 6010B - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/26/22 12:00 | 09/27/22 17:18 | 1 |
| **Barium** | **33** | **J** | 200 | 1.3 | ug/L | | 09/26/22 12:00 | 09/27/22 17:18 | 1 |
| **Iron** | **820** | | 100 | 83 | ug/L | | 09/26/22 12:00 | 09/27/22 17:18 | 1 |
| **Manganese** | **220** | | 15 | 6.2 | ug/L | | 09/26/22 12:00 | 09/27/22 17:18 | 1 |
| **Sodium** | **110000** | | 5000 | 2100 | ug/L | | 09/26/22 12:00 | 09/27/22 17:18 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/26/22 12:00 | 09/27/22 17:18 | 1 |

### Method: SW846 6010B - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/26/22 12:00 | 09/27/22 17:22 | 1 |
| **Barium** | **30** | **J** | 200 | 1.3 | ug/L | | 09/26/22 12:00 | 09/27/22 17:22 | 1 |
| Iron | 100 | U | 100 | 83 | ug/L | | 09/26/22 12:00 | 09/27/22 17:22 | 1 |
| **Manganese** | **190** | | 15 | 6.2 | ug/L | | 09/26/22 12:00 | 09/27/22 17:22 | 1 |
| **Sodium** | **110000** | | 5000 | 2100 | ug/L | | 09/26/22 12:00 | 09/27/22 17:22 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/26/22 12:00 | 09/27/22 17:22 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids (SM 2540 C-2011)** | **620** | | 10 | 7.8 | mg/L | | | 09/29/22 09:09 | 1 |
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/04/22 08:04 | 10/04/22 14:55 | 1 |
| **Ammonia (SM 4500 NH3 H)** | **0.16** | **J** | 0.20 | 0.076 | mg/L | | | 09/27/22 13:55 | 1 |
| **Chloride (SW846 9056A)** | **260** | | 5.0 | 1.4 | mg/L | | | 09/24/22 21:07 | 5 |
| Nitrite as N (SW846 9056A) | 0.10 | U | 0.10 | 0.014 | mg/L | | | 09/24/22 08:49 | 1 |
| **Sulfate (SW846 9056A)** | **50** | | 1.0 | 0.35 | mg/L | | | 09/24/22 08:49 | 1 |
| **Nitrate as N (SW846 9056A)** | **0.23** | | 0.10 | 0.036 | mg/L | | | 09/24/22 08:49 | 1 |

### General Chemistry - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U *+ | 0.010 | 0.0080 | mg/L | | 10/04/22 11:00 | 10/04/22 15:51 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173485-1

## Client Sample ID: MW-118WT_092222

**Lab Sample ID: 240-173485-6**

**Date Collected: 09/22/22 13:20**

**Matrix: Water**

**Date Received: 09/23/22 14:30**

### Method: SW846 6010B - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **11** | | 10 | 4.1 | ug/L | | 09/26/22 12:00 | 09/27/22 17:35 | 1 |
| **Barium** | **330** | | 200 | 1.3 | ug/L | | 09/26/22 12:00 | 09/27/22 17:35 | 1 |
| **Iron** | **19000** | | 100 | 83 | ug/L | | 09/26/22 12:00 | 09/27/22 17:35 | 1 |
| **Manganese** | **860** | | 15 | 6.2 | ug/L | | 09/26/22 12:00 | 09/27/22 17:35 | 1 |
| **Sodium** | **92000** | | 5000 | 2100 | ug/L | | 09/26/22 12:00 | 09/27/22 17:35 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/26/22 12:00 | 09/27/22 17:35 | 1 |

### Method: SW846 6010B - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **10** | | 10 | 4.1 | ug/L | | 09/26/22 12:00 | 09/27/22 17:39 | 1 |
| **Barium** | **340** | | 200 | 1.3 | ug/L | | 09/26/22 12:00 | 09/27/22 17:39 | 1 |
| **Iron** | **18000** | | 100 | 83 | ug/L | | 09/26/22 12:00 | 09/27/22 17:39 | 1 |
| **Manganese** | **850** | | 15 | 6.2 | ug/L | | 09/26/22 12:00 | 09/27/22 17:39 | 1 |
| **Sodium** | **96000** | | 5000 | 2100 | ug/L | | 09/26/22 12:00 | 09/27/22 17:39 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/26/22 12:00 | 09/27/22 17:39 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids (SM 2540 C-2011)** | **1100** | | 20 | 16 | mg/L | | | 09/29/22 09:09 | 1 |
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/04/22 08:04 | 10/04/22 14:57 | 1 |
| **Ammonia (SM 4500 NH3 H)** | **15** | | 1.0 | 0.38 | mg/L | | | 09/27/22 16:19 | 5 |
| **Chloride (SW846 9056A)** | **310** | | 10 | 2.8 | mg/L | | | 09/24/22 21:29 | 10 |
| **Nitrite as N (SW846 9056A)** | **0.076** | **J** | 0.10 | 0.014 | mg/L | | | 09/24/22 09:54 | 1 |
| **Sulfate (SW846 9056A)** | **0.51** | **J** | 1.0 | 0.35 | mg/L | | | 09/24/22 09:54 | 1 |
| **Nitrate as N (SW846 9056A)** | **0.085** | **J** | 0.10 | 0.036 | mg/L | | | 09/24/22 09:54 | 1 |

### General Chemistry - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/06/22 09:13 | 10/06/22 17:05 | 1 |

## Client Sample ID: DUP-02_092222

**Date Collected: 09/22/22 00:00**
**Date Received: 09/23/22 14:30**

## Lab Sample ID: 240-173485-7

**Matrix: Water**

### Method: SW846 6010B - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **14** | | 10 | 4.1 | ug/L | | 09/26/22 12:00 | 09/27/22 17:43 | 1 |
| **Barium** | **69** | **J** | 200 | 1.3 | ug/L | | 09/26/22 12:00 | 09/27/22 17:43 | 1 |
| **Iron** | **12000** | | 100 | 83 | ug/L | | 09/26/22 12:00 | 09/27/22 17:43 | 1 |
| **Manganese** | **2000** | | 15 | 6.2 | ug/L | | 09/26/22 12:00 | 09/27/22 17:43 | 1 |
| **Sodium** | **9800** | | 5000 | 2100 | ug/L | | 09/26/22 12:00 | 09/27/22 17:43 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/26/22 12:00 | 09/27/22 17:43 | 1 |

### Method: SW846 6010B - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **16** | | 10 | 4.1 | ug/L | | 09/26/22 12:00 | 09/27/22 17:48 | 1 |
| **Barium** | **76** | **J** | 200 | 1.3 | ug/L | | 09/26/22 12:00 | 09/27/22 17:48 | 1 |
| **Iron** | **13000** | | 100 | 83 | ug/L | | 09/26/22 12:00 | 09/27/22 17:48 | 1 |
| **Manganese** | **2200** | | 15 | 6.2 | ug/L | | 09/26/22 12:00 | 09/27/22 17:48 | 1 |
| **Sodium** | **11000** | | 5000 | 2100 | ug/L | | 09/26/22 12:00 | 09/27/22 17:48 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/26/22 12:00 | 09/27/22 17:48 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids (SM 2540 C-2011)** | **380** | | 10 | 7.8 | mg/L | | | 09/29/22 09:09 | 1 |
| **Cyanide, Total (SM 4500 CN E-2016)** | **0.011** | | 0.010 | 0.0080 | mg/L | | 10/04/22 08:04 | 10/04/22 14:59 | 1 |
| **Ammonia (SM 4500 NH3 H)** | **0.23** | | 0.20 | 0.076 | mg/L | | | 09/27/22 14:01 | 1 |
| **Chloride (SW846 9056A)** | **13** | | 1.0 | 0.28 | mg/L | | | 09/24/22 10:15 | 1 |
| Nitrite as N (SW846 9056A) | 0.10 | U H | 0.10 | 0.014 | mg/L | | | 09/24/22 10:15 | 1 |
| Sulfate (SW846 9056A) | 1.0 | U | 1.0 | 0.35 | mg/L | | | 09/24/22 10:15 | 1 |
| **Nitrate as N (SW846 9056A)** | **0.048** | **J H** | 0.10 | 0.036 | mg/L | | | 09/24/22 10:15 | 1 |

### General Chemistry - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U *+ | 0.010 | 0.0080 | mg/L | | 10/04/22 11:00 | 10/04/22 15:55 | 1 |

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 240-544341/1-A**
**Matrix: Water**
**Analysis Batch: 544575**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 544341**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/26/22 12:00 | 09/27/22 16:14 | 1 |
| Barium | 200 | U | 200 | 1.3 | ug/L | | 09/26/22 12:00 | 09/27/22 16:14 | 1 |
| Iron | 100 | U | 100 | 83 | ug/L | | 09/26/22 12:00 | 09/27/22 16:14 | 1 |
| Manganese | 15 | U | 15 | 6.2 | ug/L | | 09/26/22 12:00 | 09/27/22 16:14 | 1 |
| Sodium | 5000 | U | 5000 | 2100 | ug/L | | 09/26/22 12:00 | 09/27/22 16:14 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/26/22 12:00 | 09/27/22 16:14 | 1 |

**Lab Sample ID: LCS 240-544341/2-A**
**Matrix: Water**
**Analysis Batch: 544575**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 544341**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 2000 | 1900 | | ug/L | | 95 | 80 - 120 |
| Barium | 2000 | 1800 | | ug/L | | 90 | 80 - 120 |
| Iron | 10000 | 9150 | | ug/L | | 92 | 80 - 120 |
| Manganese | 1000 | 936 | | ug/L | | 94 | 80 - 120 |
| Sodium | 50000 | 45800 | | ug/L | | 92 | 80 - 120 |
| Selenium | 2000 | 1920 | | ug/L | | 96 | 80 - 120 |

**Lab Sample ID: 240-173485-1 MS**
**Matrix: Water**
**Analysis Batch: 544575**

**Client Sample ID: X-9AR_092222**
**Prep Type: Total Recoverable**
**Prep Batch: 544341**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 13 | | 2000 | 1920 | | ug/L | | 96 | 75 - 125 |
| Barium | 67 | J | 2000 | 1880 | | ug/L | | 90 | 75 - 125 |
| Iron | 12000 | | 10000 | 21300 | | ug/L | | 96 | 75 - 125 |
| Manganese | 1900 | | 1000 | 2910 | | ug/L | | 100 | 75 - 125 |
| Sodium | 9600 | | 50000 | 56300 | | ug/L | | 93 | 75 - 125 |
| Selenium | 15 | U | 2000 | 1930 | | ug/L | | 96 | 75 - 125 |

**Lab Sample ID: 240-173485-1 MSD**
**Matrix: Water**
**Analysis Batch: 544575**

**Client Sample ID: X-9AR_092222**
**Prep Type: Total Recoverable**
**Prep Batch: 544341**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 13 | | 2000 | 2000 | | ug/L | | 99 | 75 - 125 | 4 | 20 |
| Barium | 67 | J | 2000 | 1940 | | ug/L | | 94 | 75 - 125 | 3 | 20 |
| Iron | 12000 | | 10000 | 22000 | | ug/L | | 103 | 75 - 125 | 3 | 20 |
| Manganese | 1900 | | 1000 | 3030 | | ug/L | | 113 | 75 - 125 | 4 | 20 |
| Sodium | 9600 | | 50000 | 58100 | | ug/L | | 97 | 75 - 125 | 3 | 20 |
| Selenium | 15 | U | 2000 | 2000 | | ug/L | | 100 | 75 - 125 | 4 | 20 |

## Method: 2540 C-2011 - Total Dissolved Solids (Dried at 180 °C)

**Lab Sample ID: MB 240-544839/1**
**Matrix: Water**
**Analysis Batch: 544839**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 10 | U | 10 | 7.8 | mg/L | | | 09/29/22 09:09 | 1 |

**Lab Sample ID: LCS 240-544839/2**
**Matrix: Water**
**Analysis Batch: 544839**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 493 | 462 | | mg/L | | 94 | 80 - 120 |

## Method: 4500 CN E-2016 - Cyanide, Total

**Lab Sample ID: MB 180-413994/4-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 413994**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/04/22 08:04 | 10/04/22 14:24 | 1 |

**Lab Sample ID: HLCS 180-413994/2-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 413994**

| Analyte | Spike Added | HLCS Result | HLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.250 | 0.252 | | mg/L | | 101 | 90 - 110 |

**Lab Sample ID: LCS 180-413994/3-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 413994**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.200 | 0.198 | | mg/L | | 99 | 90 - 110 |

**Lab Sample ID: LLCS 180-413994/1-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 413994**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.0500 | 0.0526 | | mg/L | | 105 | 90 - 110 |

**Lab Sample ID: MB 180-413995/4-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 413995**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/04/22 11:00 | 10/04/22 15:18 | 1 |

## Method: 4500 CN E-2016 - Cyanide, Total (Continued)

**Lab Sample ID: HLCS 180-413995/2-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 413995**

| Analyte | Spike Added | HLCS Result | HLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.250 | 0.257 | | mg/L | | 103 | 90 - 110 |

**Lab Sample ID: LCS 180-413995/3-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 413995**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.200 | 0.203 | | mg/L | | 101 | 90 - 110 |

**Lab Sample ID: LLCS 180-413995/1-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 413995**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.0500 | 0.0572 | *+ | mg/L | | 114 | 90 - 110 |

**Lab Sample ID: MB 180-414288/4-A**
**Matrix: Water**
**Analysis Batch: 414406**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 414288**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/06/22 09:13 | 10/06/22 14:12 | 1 |

**Lab Sample ID: HLCS 180-414288/2-A**
**Matrix: Water**
**Analysis Batch: 414406**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 414288**

| Analyte | Spike Added | HLCS Result | HLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.250 | 0.261 | | mg/L | | 104 | 90 - 110 |

**Lab Sample ID: LCS 180-414288/3-A**
**Matrix: Water**
**Analysis Batch: 414406**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 414288**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.200 | 0.201 | | mg/L | | 100 | 90 - 110 |

**Lab Sample ID: LLCS 180-414288/1-A**
**Matrix: Water**
**Analysis Batch: 414406**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 414288**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.0500 | 0.0534 | | mg/L | | 107 | 90 - 110 |

## Method: 4500 NH3 H - Ammonia

**Lab Sample ID: MB 240-544549/44**
**Matrix: Water**
**Analysis Batch: 544549**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.20 | U | 0.20 | 0.076 | mg/L | | | 09/27/22 13:25 | 1 |

**Lab Sample ID: MB 240-544549/76**
**Matrix: Water**
**Analysis Batch: 544549**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.20 | U | 0.20 | 0.076 | mg/L | | | 09/27/22 15:01 | 1 |

**Lab Sample ID: LCS 240-544549/45**
**Matrix: Water**
**Analysis Batch: 544549**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Ammonia | 6.37 | 5.75 | | mg/L | | 90 | 90 - 110 |

**Lab Sample ID: LCS 240-544549/77**
**Matrix: Water**
**Analysis Batch: 544549**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Ammonia | 6.37 | 5.82 | | mg/L | | 91 | 90 - 110 |

**Lab Sample ID: 240-173485-1 MS**
**Matrix: Water**
**Analysis Batch: 544549**

**Client Sample ID: X-9AR_092222**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.26 | F1 | 2.50 | 2.41 | F1 | mg/L | | 86 | 90 - 110 |
| Ammonia | 0.26 | F1 | 2.50 | 2.41 | F1 | mg/L | | 86 | 90 - 110 |

**Lab Sample ID: 240-173485-1 MSD**
**Matrix: Water**
**Analysis Batch: 544549**

**Client Sample ID: X-9AR_092222**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.26 | F1 | 2.50 | 2.41 | F1 | mg/L | | 86 | 90 - 110 | 0 | 20 |
| Ammonia | 0.26 | F1 | 2.50 | 2.41 | F1 | mg/L | | 86 | 90 - 110 | 0 | 20 |

## Method: 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 240-544135/3**
**Matrix: Water**
**Analysis Batch: 544135**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.0 | U | 1.0 | 0.28 | mg/L | | | 09/23/22 22:19 | 1 |
| Sulfate | 1.0 | U | 1.0 | 0.35 | mg/L | | | 09/23/22 22:19 | 1 |

## Method: 9056A - Anions, Ion Chromatography (Continued)

**Lab Sample ID: MB 240-544135/33**
**Matrix: Water**
**Analysis Batch: 544135**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.0 | U | 1.0 | 0.28 | mg/L | | | 09/24/22 09:10 | 1 |
| Sulfate | 1.0 | U | 1.0 | 0.35 | mg/L | | | 09/24/22 09:10 | 1 |

**Lab Sample ID: LCS 240-544135/34**
**Matrix: Water**
**Analysis Batch: 544135**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 49.5 | | mg/L | | 99 | 90 - 110 | | |
| Sulfate | | | 50.0 | 50.7 | | mg/L | | 101 | 90 - 110 | | |

**Lab Sample ID: LCS 240-544135/4**
**Matrix: Water**
**Analysis Batch: 544135**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 49.5 | | mg/L | | 99 | 90 - 110 | | |
| Sulfate | | | 50.0 | 50.5 | | mg/L | | 101 | 90 - 110 | | |

**Lab Sample ID: 240-173485-1 MS**
**Matrix: Water**
**Analysis Batch: 544135**

**Client Sample ID: X-9AR_092222**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 13 | | 50.0 | 62.5 | | mg/L | | 99 | 80 - 120 | | |
| Sulfate | 0.83 | J | 50.0 | 52.2 | | mg/L | | 103 | 80 - 120 | | |

**Lab Sample ID: 240-173485-1 MSD**
**Matrix: Water**
**Analysis Batch: 544135**

**Client Sample ID: X-9AR_092222**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 13 | | 50.0 | 62.9 | | mg/L | | 100 | 80 - 120 | 1 | 15 |
| Sulfate | 0.83 | J | 50.0 | 52.2 | | mg/L | | 103 | 80 - 120 | 0 | 15 |

**Lab Sample ID: 240-173485-7 MS**
**Matrix: Water**
**Analysis Batch: 544135**

**Client Sample ID: DUP-02_092222**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 13 | | 50.0 | 61.5 | | mg/L | | 96 | 80 - 120 | | |
| Sulfate | 1.0 | U | 50.0 | 50.9 | | mg/L | | 102 | 80 - 120 | | |

**Lab Sample ID: 240-173485-7 MSD**
**Matrix: Water**
**Analysis Batch: 544135**

**Client Sample ID: DUP-02_092222**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 13 | | 50.0 | 62.0 | | mg/L | | 97 | 80 - 120 | 1 | 15 |
| Sulfate | 1.0 | U | 50.0 | 51.0 | | mg/L | | 102 | 80 - 120 | 0 | 15 |

## Method: 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 240-544136/3**
**Matrix: Water**
**Analysis Batch: 544136**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | 0.10 | U | 0.10 | 0.014 | mg/L | | | 09/23/22 22:19 | 1 |
| Nitrate as N | 0.10 | U | 0.10 | 0.036 | mg/L | | | 09/23/22 22:19 | 1 |

**Lab Sample ID: MB 240-544136/33**
**Matrix: Water**
**Analysis Batch: 544136**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | 0.10 | U | 0.10 | 0.014 | mg/L | | | 09/24/22 09:10 | 1 |
| Nitrate as N | 0.10 | U | 0.10 | 0.036 | mg/L | | | 09/24/22 09:10 | 1 |

**Lab Sample ID: LCS 240-544136/34**
**Matrix: Water**
**Analysis Batch: 544136**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | | | 2.50 | 2.49 | | mg/L | | 100 | 90 - 110 | | |
| Nitrate as N | | | 2.50 | 2.55 | | mg/L | | 102 | 90 - 110 | | |

**Lab Sample ID: LCS 240-544136/4**
**Matrix: Water**
**Analysis Batch: 544136**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | | | 2.50 | 2.49 | | mg/L | | 100 | 90 - 110 | | |
| Nitrate as N | | | 2.50 | 2.55 | | mg/L | | 102 | 90 - 110 | | |

**Lab Sample ID: 240-173485-1 MS**
**Matrix: Water**
**Analysis Batch: 544136**

**Client Sample ID: X-9AR_092222**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | 0.10 | U | 2.50 | 2.58 | | mg/L | | 103 | 80 - 120 | | |
| Nitrate as N | 0.10 | U | 2.50 | 2.68 | | mg/L | | 107 | 80 - 120 | | |

**Lab Sample ID: 240-173485-1 MSD**
**Matrix: Water**
**Analysis Batch: 544136**

**Client Sample ID: X-9AR_092222**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | 0.10 | U | 2.50 | 2.62 | | mg/L | | 105 | 80 - 120 | 1 | 15 |
| Nitrate as N | 0.10 | U | 2.50 | 2.65 | | mg/L | | 106 | 80 - 120 | 1 | 15 |

**Lab Sample ID: 240-173485-7 MS**
**Matrix: Water**
**Analysis Batch: 544136**

**Client Sample ID: DUP-02_092222**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | 0.10 | U H | 2.50 | 2.56 | | mg/L | | 102 | 80 - 120 | | |
| Nitrate as N | 0.048 | J H | 2.50 | 2.66 | | mg/L | | 104 | 80 - 120 | | |

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173485-1

## Method: 9056A - Anions, Ion Chromatography

**Lab Sample ID: 240-173485-7 MSD**
**Matrix: Water**
**Analysis Batch: 544136**

**Client Sample ID: DUP-02_092222**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | 0.10 | U H | 2.50 | 2.54 | | mg/L | | 101 | 80 - 120 | 1 | 15 |
| Nitrate as N | 0.048 | J H | 2.50 | 2.62 | | mg/L | | 103 | 80 - 120 | 2 | 15 |

# QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173485-1

## Metals

### Prep Batch: 544341

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173485-1 | X-9AR_092222 | Dissolved | Water | 3005A | |
| 240-173485-1 | X-9AR_092222 | Total Recoverable | Water | 3005A | |
| 240-173485-2 | X-9BR_092222 | Dissolved | Water | 3005A | |
| 240-173485-2 | X-9BR_092222 | Total Recoverable | Water | 3005A | |
| 240-173485-3 | MW-117WT_092222 | Dissolved | Water | 3005A | |
| 240-173485-3 | MW-117WT_092222 | Total Recoverable | Water | 3005A | |
| 240-173485-4 | X-9CAUG_092222 | Dissolved | Water | 3005A | |
| 240-173485-4 | X-9CAUG_092222 | Total Recoverable | Water | 3005A | |
| 240-173485-5 | X-9D_092222 | Dissolved | Water | 3005A | |
| 240-173485-5 | X-9D_092222 | Total Recoverable | Water | 3005A | |
| 240-173485-6 | MW-118WT_092222 | Dissolved | Water | 3005A | |
| 240-173485-6 | MW-118WT_092222 | Total Recoverable | Water | 3005A | |
| 240-173485-7 | DUP-02_092222 | Dissolved | Water | 3005A | |
| 240-173485-7 | DUP-02_092222 | Total Recoverable | Water | 3005A | |
| MB 240-544341/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 240-544341/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 240-173485-1 MS | X-9AR_092222 | Total Recoverable | Water | 3005A | |
| 240-173485-1 MSD | X-9AR_092222 | Total Recoverable | Water | 3005A | |

### Analysis Batch: 544575

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173485-1 | X-9AR_092222 | Dissolved | Water | 6010B | 544341 |
| 240-173485-1 | X-9AR_092222 | Total Recoverable | Water | 6010B | 544341 |
| 240-173485-2 | X-9BR_092222 | Dissolved | Water | 6010B | 544341 |
| 240-173485-2 | X-9BR_092222 | Total Recoverable | Water | 6010B | 544341 |
| 240-173485-3 | MW-117WT_092222 | Dissolved | Water | 6010B | 544341 |
| 240-173485-3 | MW-117WT_092222 | Total Recoverable | Water | 6010B | 544341 |
| 240-173485-4 | X-9CAUG_092222 | Dissolved | Water | 6010B | 544341 |
| 240-173485-4 | X-9CAUG_092222 | Total Recoverable | Water | 6010B | 544341 |
| 240-173485-5 | X-9D_092222 | Dissolved | Water | 6010B | 544341 |
| 240-173485-5 | X-9D_092222 | Total Recoverable | Water | 6010B | 544341 |
| 240-173485-6 | MW-118WT_092222 | Dissolved | Water | 6010B | 544341 |
| 240-173485-6 | MW-118WT_092222 | Total Recoverable | Water | 6010B | 544341 |
| 240-173485-7 | DUP-02_092222 | Dissolved | Water | 6010B | 544341 |
| 240-173485-7 | DUP-02_092222 | Total Recoverable | Water | 6010B | 544341 |
| MB 240-544341/1-A | Method Blank | Total Recoverable | Water | 6010B | 544341 |
| LCS 240-544341/2-A | Lab Control Sample | Total Recoverable | Water | 6010B | 544341 |
| 240-173485-1 MS | X-9AR_092222 | Total Recoverable | Water | 6010B | 544341 |
| 240-173485-1 MSD | X-9AR_092222 | Total Recoverable | Water | 6010B | 544341 |

## General Chemistry

### Prep Batch: 413994

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173485-1 | X-9AR_092222 | Total/NA | Water | SM 4500 CN C | |
| 240-173485-2 | X-9BR_092222 | Total/NA | Water | SM 4500 CN C | |
| 240-173485-3 | MW-117WT_092222 | Total/NA | Water | SM 4500 CN C | |
| 240-173485-4 | X-9CAUG_092222 | Total/NA | Water | SM 4500 CN C | |
| 240-173485-5 | X-9D_092222 | Total/NA | Water | SM 4500 CN C | |
| 240-173485-6 | MW-118WT_092222 | Total/NA | Water | SM 4500 CN C | |
| 240-173485-7 | DUP-02_092222 | Total/NA | Water | SM 4500 CN C | |

## General Chemistry (Continued)

### Prep Batch: 413994 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 180-413994/4-A | Method Blank | Total/NA | Water | SM 4500 CN C | |
| HLCS 180-413994/2-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |
| LCS 180-413994/3-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |
| LLCS 180-413994/1-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |

### Prep Batch: 413995

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173485-1 | X-9AR_092222 | Dissolved | Water | SM 4500 CN C | |
| 240-173485-2 | X-9BR_092222 | Dissolved | Water | SM 4500 CN C | |
| 240-173485-3 | MW-117WT_092222 | Dissolved | Water | SM 4500 CN C | |
| 240-173485-4 | X-9CAUG_092222 | Dissolved | Water | SM 4500 CN C | |
| 240-173485-5 | X-9D_092222 | Dissolved | Water | SM 4500 CN C | |
| 240-173485-7 | DUP-02_092222 | Dissolved | Water | SM 4500 CN C | |
| MB 180-413995/4-A | Method Blank | Total/NA | Water | SM 4500 CN C | |
| HLCS 180-413995/2-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |
| LCS 180-413995/3-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |
| LLCS 180-413995/1-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |

### Analysis Batch: 414100

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173485-1 | X-9AR_092222 | Dissolved | Water | 4500 CN E-2016 | 413995 |
| 240-173485-1 | X-9AR_092222 | Total/NA | Water | 4500 CN E-2016 | 413994 |
| 240-173485-2 | X-9BR_092222 | Dissolved | Water | 4500 CN E-2016 | 413995 |
| 240-173485-2 | X-9BR_092222 | Total/NA | Water | 4500 CN E-2016 | 413994 |
| 240-173485-3 | MW-117WT_092222 | Dissolved | Water | 4500 CN E-2016 | 413995 |
| 240-173485-3 | MW-117WT_092222 | Total/NA | Water | 4500 CN E-2016 | 413994 |
| 240-173485-4 | X-9CAUG_092222 | Dissolved | Water | 4500 CN E-2016 | 413995 |
| 240-173485-4 | X-9CAUG_092222 | Total/NA | Water | 4500 CN E-2016 | 413994 |
| 240-173485-5 | X-9D_092222 | Dissolved | Water | 4500 CN E-2016 | 413995 |
| 240-173485-5 | X-9D_092222 | Total/NA | Water | 4500 CN E-2016 | 413994 |
| 240-173485-6 | MW-118WT_092222 | Total/NA | Water | 4500 CN E-2016 | 413994 |
| 240-173485-7 | DUP-02_092222 | Dissolved | Water | 4500 CN E-2016 | 413995 |
| 240-173485-7 | DUP-02_092222 | Total/NA | Water | 4500 CN E-2016 | 413994 |
| MB 180-413994/4-A | Method Blank | Total/NA | Water | 4500 CN E-2016 | 413994 |
| MB 180-413995/4-A | Method Blank | Total/NA | Water | 4500 CN E-2016 | 413995 |
| HLCS 180-413994/2-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 413994 |
| HLCS 180-413995/2-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 413995 |
| LCS 180-413994/3-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 413994 |
| LCS 180-413995/3-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 413995 |
| LLCS 180-413994/1-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 413994 |
| LLCS 180-413995/1-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 413995 |

### Prep Batch: 414288

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173485-6 | MW-118WT_092222 | Dissolved | Water | SM 4500 CN C | |
| MB 180-414288/4-A | Method Blank | Total/NA | Water | SM 4500 CN C | |
| HLCS 180-414288/2-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |
| LCS 180-414288/3-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |
| LLCS 180-414288/1-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |

## General Chemistry

### Analysis Batch: 414406

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 180-414288/4-A | Method Blank | Total/NA | Water | 4500 CN E-2016 | 414288 |
| HLCS 180-414288/2-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 414288 |
| LCS 180-414288/3-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 414288 |
| LLCS 180-414288/1-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 414288 |

### Analysis Batch: 414407

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173485-6 | MW-118WT_092222 | Dissolved | Water | 4500 CN E-2016 | 414288 |

### Analysis Batch: 544135

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173485-1 | X-9AR_092222 | Total/NA | Water | 9056A | |
| 240-173485-2 | X-9BR_092222 | Total/NA | Water | 9056A | |
| 240-173485-3 | MW-117WT_092222 | Total/NA | Water | 9056A | |
| 240-173485-3 | MW-117WT_092222 | Total/NA | Water | 9056A | |
| 240-173485-4 | X-9CAUG_092222 | Total/NA | Water | 9056A | |
| 240-173485-5 | X-9D_092222 | Total/NA | Water | 9056A | |
| 240-173485-5 | X-9D_092222 | Total/NA | Water | 9056A | |
| 240-173485-6 | MW-118WT_092222 | Total/NA | Water | 9056A | |
| 240-173485-6 | MW-118WT_092222 | Total/NA | Water | 9056A | |
| 240-173485-7 | DUP-02_092222 | Total/NA | Water | 9056A | |
| MB 240-544135/3 | Method Blank | Total/NA | Water | 9056A | |
| MB 240-544135/33 | Method Blank | Total/NA | Water | 9056A | |
| LCS 240-544135/34 | Lab Control Sample | Total/NA | Water | 9056A | |
| LCS 240-544135/4 | Lab Control Sample | Total/NA | Water | 9056A | |
| 240-173485-1 MS | X-9AR_092222 | Total/NA | Water | 9056A | |
| 240-173485-1 MSD | X-9AR_092222 | Total/NA | Water | 9056A | |
| 240-173485-7 MS | DUP-02_092222 | Total/NA | Water | 9056A | |
| 240-173485-7 MSD | DUP-02_092222 | Total/NA | Water | 9056A | |

### Analysis Batch: 544136

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173485-1 | X-9AR_092222 | Total/NA | Water | 9056A | |
| 240-173485-2 | X-9BR_092222 | Total/NA | Water | 9056A | |
| 240-173485-3 | MW-117WT_092222 | Total/NA | Water | 9056A | |
| 240-173485-4 | X-9CAUG_092222 | Total/NA | Water | 9056A | |
| 240-173485-5 | X-9D_092222 | Total/NA | Water | 9056A | |
| 240-173485-6 | MW-118WT_092222 | Total/NA | Water | 9056A | |
| 240-173485-7 | DUP-02_092222 | Total/NA | Water | 9056A | |
| MB 240-544136/3 | Method Blank | Total/NA | Water | 9056A | |
| MB 240-544136/33 | Method Blank | Total/NA | Water | 9056A | |
| LCS 240-544136/34 | Lab Control Sample | Total/NA | Water | 9056A | |
| LCS 240-544136/4 | Lab Control Sample | Total/NA | Water | 9056A | |
| 240-173485-1 MS | X-9AR_092222 | Total/NA | Water | 9056A | |
| 240-173485-1 MSD | X-9AR_092222 | Total/NA | Water | 9056A | |
| 240-173485-7 MS | DUP-02_092222 | Total/NA | Water | 9056A | |
| 240-173485-7 MSD | DUP-02_092222 | Total/NA | Water | 9056A | |

### Analysis Batch: 544549

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173485-1 | X-9AR_092222 | Total/NA | Water | 4500 NH3 H | |

## General Chemistry (Continued)

### Analysis Batch: 544549 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173485-2 | X-9BR_092222 | Total/NA | Water | 4500 NH3 H | |
| 240-173485-3 | MW-117WT_092222 | Total/NA | Water | 4500 NH3 H | |
| 240-173485-4 | X-9CAUG_092222 | Total/NA | Water | 4500 NH3 H | |
| 240-173485-5 | X-9D_092222 | Total/NA | Water | 4500 NH3 H | |
| 240-173485-6 | MW-118WT_092222 | Total/NA | Water | 4500 NH3 H | |
| 240-173485-7 | DUP-02_092222 | Total/NA | Water | 4500 NH3 H | |
| MB 240-544549/44 | Method Blank | Total/NA | Water | 4500 NH3 H | |
| MB 240-544549/76 | Method Blank | Total/NA | Water | 4500 NH3 H | |
| LCS 240-544549/45 | Lab Control Sample | Total/NA | Water | 4500 NH3 H | |
| LCS 240-544549/77 | Lab Control Sample | Total/NA | Water | 4500 NH3 H | |
| 240-173485-1 MS | X-9AR_092222 | Total/NA | Water | 4500 NH3 H | |
| 240-173485-1 MSD | X-9AR_092222 | Total/NA | Water | 4500 NH3 H | |

### Analysis Batch: 544839

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173485-1 | X-9AR_092222 | Total/NA | Water | 2540 C-2011 | |
| 240-173485-2 | X-9BR_092222 | Total/NA | Water | 2540 C-2011 | |
| 240-173485-3 | MW-117WT_092222 | Total/NA | Water | 2540 C-2011 | |
| 240-173485-4 | X-9CAUG_092222 | Total/NA | Water | 2540 C-2011 | |
| 240-173485-5 | X-9D_092222 | Total/NA | Water | 2540 C-2011 | |
| 240-173485-6 | MW-118WT_092222 | Total/NA | Water | 2540 C-2011 | |
| 240-173485-7 | DUP-02_092222 | Total/NA | Water | 2540 C-2011 | |
| MB 240-544839/1 | Method Blank | Total/NA | Water | 2540 C-2011 | |
| LCS 240-544839/2 | Lab Control Sample | Total/NA | Water | 2540 C-2011 | |

# Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173485-1

## Client Sample ID: X-9AR_092222

**Lab Sample ID: 240-173485-1**

**Date Collected: 09/22/22 08:00**

**Matrix: Water**

**Date Received: 09/23/22 14:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3005A | | | 544341 | SHB | EET CAN | 09/26/22 12:00 |
| Dissolved | Analysis | 6010B | | 1 | 544575 | KLC | EET CAN | 09/27/22 16:47 |
| Total Recoverable | Prep | 3005A | | | 544341 | SHB | EET CAN | 09/26/22 12:00 |
| Total Recoverable | Analysis | 6010B | | 1 | 544575 | KLC | EET CAN | 09/27/22 16:22 |
| Total/NA | Analysis | 2540 C-2011 | | 1 | 544839 | MED | EET CAN | 09/29/22 09:09 |
| Dissolved | Prep | SM 4500 CN C | | | 413995 | CMR | EET PIT | 10/04/22 11:00 |
| Dissolved | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 15:41 |
| Total/NA | Prep | SM 4500 CN C | | | 413994 | CMR | EET PIT | 10/04/22 08:04 |
| Total/NA | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 14:48 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 544549 | AJ | EET CAN | 09/27/22 13:31 |
| Total/NA | Analysis | 9056A | | 1 | 544135 | JMB | EET CAN | 09/24/22 05:55 |
| Total/NA | Analysis | 9056A | | 1 | 544136 | JWW | EET CAN | 09/24/22 05:55 |

## Client Sample ID: X-9BR_092222

**Lab Sample ID: 240-173485-2**

**Date Collected: 09/22/22 10:35**

**Matrix: Water**

**Date Received: 09/23/22 14:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3005A | | | 544341 | SHB | EET CAN | 09/26/22 12:00 |
| Dissolved | Analysis | 6010B | | 1 | 544575 | KLC | EET CAN | 09/27/22 16:56 |
| Total Recoverable | Prep | 3005A | | | 544341 | SHB | EET CAN | 09/26/22 12:00 |
| Total Recoverable | Analysis | 6010B | | 1 | 544575 | KLC | EET CAN | 09/27/22 16:51 |
| Total/NA | Analysis | 2540 C-2011 | | 1 | 544839 | MED | EET CAN | 09/29/22 09:09 |
| Dissolved | Prep | SM 4500 CN C | | | 413995 | CMR | EET PIT | 10/04/22 11:00 |
| Dissolved | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 15:42 |
| Total/NA | Prep | SM 4500 CN C | | | 413994 | CMR | EET PIT | 10/04/22 08:04 |
| Total/NA | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 14:50 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 544549 | AJ | EET CAN | 09/27/22 13:46 |
| Total/NA | Analysis | 9056A | | 1 | 544135 | JMB | EET CAN | 09/24/22 07:44 |
| Total/NA | Analysis | 9056A | | 1 | 544136 | JWW | EET CAN | 09/24/22 07:44 |

## Client Sample ID: MW-117WT_092222

**Lab Sample ID: 240-173485-3**

**Date Collected: 09/22/22 10:40**

**Matrix: Water**

**Date Received: 09/23/22 14:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3005A | | | 544341 | SHB | EET CAN | 09/26/22 12:00 |
| Dissolved | Analysis | 6010B | | 1 | 544575 | KLC | EET CAN | 09/27/22 17:05 |
| Total Recoverable | Prep | 3005A | | | 544341 | SHB | EET CAN | 09/26/22 12:00 |
| Total Recoverable | Analysis | 6010B | | 1 | 544575 | KLC | EET CAN | 09/27/22 17:00 |
| Total/NA | Analysis | 2540 C-2011 | | 1 | 544839 | MED | EET CAN | 09/29/22 09:09 |
| Dissolved | Prep | SM 4500 CN C | | | 413995 | CMR | EET PIT | 10/04/22 11:00 |
| Dissolved | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 15:48 |

# Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173485-1

## Client Sample ID: MW-117WT_092222

**Lab Sample ID: 240-173485-3**

**Date Collected: 09/22/22 10:40**

**Matrix: Water**

**Date Received: 09/23/22 14:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | SM 4500 CN C | | | 413994 | CMR | EET PIT | 10/04/22 08:04 |
| Total/NA | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 14:52 |
| Total/NA | Analysis | 4500 NH3 H | | 10 | 544549 | AJ | EET CAN | 09/27/22 16:16 |
| Total/NA | Analysis | 9056A | | 5 | 544135 | JMB | EET CAN | 09/24/22 08:05 |
| Total/NA | Analysis | 9056A | | 5 | 544136 | JWW | EET CAN | 09/24/22 08:05 |
| Total/NA | Analysis | 9056A | | 50 | 544135 | JMB | EET CAN | 09/24/22 20:24 |

## Client Sample ID: X-9CAUG_092222

**Lab Sample ID: 240-173485-4**

**Date Collected: 09/22/22 12:25**

**Matrix: Water**

**Date Received: 09/23/22 14:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3005A | | | 544341 | SHB | EET CAN | 09/26/22 12:00 |
| Dissolved | Analysis | 6010B | | 1 | 544575 | KLC | EET CAN | 09/27/22 17:13 |
| Total Recoverable | Prep | 3005A | | | 544341 | SHB | EET CAN | 09/26/22 12:00 |
| Total Recoverable | Analysis | 6010B | | 1 | 544575 | KLC | EET CAN | 09/27/22 17:09 |
| Total/NA | Analysis | 2540 C-2011 | | 1 | 544839 | MED | EET CAN | 09/29/22 09:09 |
| Dissolved | Prep | SM 4500 CN C | | | 413995 | CMR | EET PIT | 10/04/22 11:00 |
| Dissolved | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 15:49 |
| Total/NA | Prep | SM 4500 CN C | | | 413994 | CMR | EET PIT | 10/04/22 08:04 |
| Total/NA | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 14:54 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 544549 | AJ | EET CAN | 09/27/22 13:52 |
| Total/NA | Analysis | 9056A | | 1 | 544135 | JMB | EET CAN | 09/24/22 08:27 |
| Total/NA | Analysis | 9056A | | 1 | 544136 | JWW | EET CAN | 09/24/22 08:27 |

## Client Sample ID: X-9D_092222

**Lab Sample ID: 240-173485-5**

**Date Collected: 09/22/22 14:05**

**Matrix: Water**

**Date Received: 09/23/22 14:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3005A | | | 544341 | SHB | EET CAN | 09/26/22 12:00 |
| Dissolved | Analysis | 6010B | | 1 | 544575 | KLC | EET CAN | 09/27/22 17:22 |
| Total Recoverable | Prep | 3005A | | | 544341 | SHB | EET CAN | 09/26/22 12:00 |
| Total Recoverable | Analysis | 6010B | | 1 | 544575 | KLC | EET CAN | 09/27/22 17:18 |
| Total/NA | Analysis | 2540 C-2011 | | 1 | 544839 | MED | EET CAN | 09/29/22 09:09 |
| Dissolved | Prep | SM 4500 CN C | | | 413995 | CMR | EET PIT | 10/04/22 11:00 |
| Dissolved | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 15:51 |
| Total/NA | Prep | SM 4500 CN C | | | 413994 | CMR | EET PIT | 10/04/22 08:04 |
| Total/NA | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 14:55 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 544549 | AJ | EET CAN | 09/27/22 13:55 |
| Total/NA | Analysis | 9056A | | 1 | 544135 | JMB | EET CAN | 09/24/22 08:49 |
| Total/NA | Analysis | 9056A | | 1 | 544136 | JWW | EET CAN | 09/24/22 08:49 |
| Total/NA | Analysis | 9056A | | 5 | 544135 | JMB | EET CAN | 09/24/22 21:07 |

# Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173485-1

## Client Sample ID: MW-118WT_092222

**Lab Sample ID: 240-173485-6**

**Date Collected: 09/22/22 13:20**

**Matrix: Water**

**Date Received: 09/23/22 14:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3005A | | | 544341 | SHB | EET CAN | 09/26/22 12:00 |
| Dissolved | Analysis | 6010B | | 1 | 544575 | KLC | EET CAN | 09/27/22 17:39 |
| Total Recoverable | Prep | 3005A | | | 544341 | SHB | EET CAN | 09/26/22 12:00 |
| Total Recoverable | Analysis | 6010B | | 1 | 544575 | KLC | EET CAN | 09/27/22 17:35 |
| Total/NA | Analysis | 2540 C-2011 | | 1 | 544839 | MED | EET CAN | 09/29/22 09:09 |
| Dissolved | Prep | SM 4500 CN C | | | 414288 | CMR | EET PIT | 10/06/22 09:13 |
| Dissolved | Analysis | 4500 CN E-2016 | | 1 | 414407 | CMR | EET PIT | 10/06/22 17:05 |
| Total/NA | Prep | SM 4500 CN C | | | 413994 | CMR | EET PIT | 10/04/22 08:04 |
| Total/NA | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 14:57 |
| Total/NA | Analysis | 4500 NH3 H | | 5 | 544549 | AJ | EET CAN | 09/27/22 16:19 |
| Total/NA | Analysis | 9056A | | 1 | 544135 | JMB | EET CAN | 09/24/22 09:54 |
| Total/NA | Analysis | 9056A | | 1 | 544136 | JWW | EET CAN | 09/24/22 09:54 |
| Total/NA | Analysis | 9056A | | 10 | 544135 | JMB | EET CAN | 09/24/22 21:29 |

## Client Sample ID: DUP-02_092222

**Lab Sample ID: 240-173485-7**

**Date Collected: 09/22/22 00:00**

**Matrix: Water**

**Date Received: 09/23/22 14:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3005A | | | 544341 | SHB | EET CAN | 09/26/22 12:00 |
| Dissolved | Analysis | 6010B | | 1 | 544575 | KLC | EET CAN | 09/27/22 17:48 |
| Total Recoverable | Prep | 3005A | | | 544341 | SHB | EET CAN | 09/26/22 12:00 |
| Total Recoverable | Analysis | 6010B | | 1 | 544575 | KLC | EET CAN | 09/27/22 17:43 |
| Total/NA | Analysis | 2540 C-2011 | | 1 | 544839 | MED | EET CAN | 09/29/22 09:09 |
| Dissolved | Prep | SM 4500 CN C | | | 413995 | CMR | EET PIT | 10/04/22 11:00 |
| Dissolved | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 15:55 |
| Total/NA | Prep | SM 4500 CN C | | | 413994 | CMR | EET PIT | 10/04/22 08:04 |
| Total/NA | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 14:59 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 544549 | AJ | EET CAN | 09/27/22 14:01 |
| Total/NA | Analysis | 9056A | | 1 | 544135 | JMB | EET CAN | 09/24/22 10:15 |
| Total/NA | Analysis | 9056A | | 1 | 544136 | JWW | EET CAN | 09/24/22 10:15 |

**Laboratory References:**

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

# Accreditation/Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173485-1

## Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| California | State | 2927 | 02-27-23 |
| Connecticut | State | PH-0590 | 12-31-23 |
| Florida | NELAP | E87225 | 06-30-23 |
| Georgia | State | 4062 | 02-27-23 |
| Illinois | NELAP | 200004 | 07-31-23 |
| Iowa | State | 421 | 06-01-23 |
| Kentucky (UST) | State | 112225 | 02-27-23 |
| Kentucky (WW) | State | KY98016 | 12-31-22 |
| Minnesota | NELAP | 039-999-348 | 12-31-22 |
| Minnesota (Petrofund) | State | 3506 | 08-01-23 |
| New Jersey | NELAP | OH001 | 10-10-22 |
| New York | NELAP | 10975 | 04-01-23 |
| Ohio | State | 8303 | 10-12-22 |
| Ohio VAP | State | CL0024 | 02-27-23 |
| Oregon | NELAP | 4062 | 02-27-23 |
| Pennsylvania | NELAP | 68-00340 | 08-31-23 |
| Texas | NELAP | T104704517-22-17 | 08-31-23 |
| Virginia | NELAP | 460175 | 09-14-23 |
| Washington | State | C971 | 01-12-23 |
| West Virginia DEP | State | 210 | 12-31-22 |

## Laboratory: Eurofins Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Arkansas DEQ | State | 19-033-0 | 06-27-22 * |
| California | State | 2891 | 04-30-23 |
| Connecticut | State | PH-0688 | 09-30-22 * |
| Florida | NELAP | E871008 | 10-23-22 |
| Georgia | State | PA 02-00416 | 10-23-22 |
| Illinois | NELAP | 004375 | 10-23-22 |
| Kansas | NELAP | E-10350 | 10-23-22 |
| Kentucky (UST) | State | 162013 | 04-30-23 |
| Kentucky (WW) | State | KY98043 | 12-31-22 |
| Louisiana | NELAP | 04041 | 06-30-22 * |
| Louisiana (All) | NELAP | 04041 | 10-23-22 |
| Maine | State | PA00164 | 03-06-24 |
| Minnesota | NELAP | 042-999-482 | 10-23-22 |
| New Hampshire | NELAP | 2030 | 10-23-22 |
| New Jersey | NELAP | PA005 | 10-23-22 |
| New York | NELAP | 11182 | 10-23-22 |
| North Carolina (WW/SW) | State | 434 | 10-11-22 |
| North Dakota | State | R-227 | 10-23-22 |
| Oregon | NELAP | PA-2151 | 10-23-22 |
| Pennsylvania | NELAP | 02-00416 | 10-23-22 |
| Rhode Island | State | LAO00362 | 12-31-22 |
| South Carolina | State | 89014 | 04-20-23 |
| Texas | NELAP | T104704528 | 10-23-22 |
| USDA | US Federal Programs | P330-16-00211 | 06-21-24 |
| Utah | NELAP | PA001462019-8 | 10-23-22 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Accreditation/Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173485-1

## Laboratory: Eurofins Pittsburgh (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Virginia | NELAP | 10043 | 10-23-22 |
| West Virginia DEP | State | 142 | 10-23-22 |
| Wisconsin | State | 998027800 | 08-31-23 |

0.1/0.1 1.4/1.4

# Chain of Custody Record

596334

eurofins | Environment Testing TestAmerica

Address: _____

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

| Client Contact | Project Manager: Scott Grammar | Site Contact: | Date: | COC No: |
|---|---|---|---|---|
| Company Name: ARCADIS | Tel/Email: 248-346-5970 | Lab Contact: | Carrier: | _____ of _____ COCs |
| Address: 28550 CABOT DR SUITE 500 | Analysis Turnaround Time | | | Sampler: |
| City/State/Zip: NOVI, MI 48377 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| Phone: 248-346-5970 | TAT if different from Below _____ | | | Walk-in Client: |
| Fax: | ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day | | | Lab Sampling: |
| Project Name: RACE SAGINAW | | | | Job / SDG No.: |
| Site: | | | | |
| PO# 30121470 | | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS / MSD (Y/N) | TOTAL TAL METALS | DISSOLVED TAL METALS | TOTAL CYANIDE | DISSOLVED CYANIDE PRESERVED WITH SULFIDE, CHLORINE, AND ASCORBIC ACID | AMMONIA NITROGEN | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X-9AR_092222 | 9/22/22 | 8:00 | G | GW | 6 | Y | N | 1 | 1 | 1 | 1 | 1 | 1 | |
| X-9BR_092222 | 9/22/22 | 10:35 | G | GW | 6 | Y | N | 1 | 1 | 1 | 1 | 1 | 1 | |
| MW-117WT_092222 | 9/22/22 | 10:40 | G | GW | 6 | Y | N | 1 | 1 | 1 | 1 | 1 | 1 | |
| X-9CAUGR_092222 | 9/22/22 | 12:25 | G | GW | 6 | Y | N | 1 | 1 | 1 | 1 | 1 | 1 | |
| X-9D_092222 | 9/22/22 | 14:05 | G | GW | 6 | Y | N | 1 | 1 | 1 | 1 | 1 | 1 | |
| MW-118WT_092222 | 9/22/22 | 13:20 | G | GW | 6 | Y | N | 1 | 1 | 1 | 1 | 1 | 1 | |
| DUP-02_092222 | 9/22/22 | — | G | GW | 6 | Y | N | 1 | 1 | 1 | 1 | 1 | 1 | |

240-173485 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:**

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| | ARCADIS | 9/22/22 17:30 | M. A. A. | EST NC | 9/23/22 14:30 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: |

**Eurofins - Canton Sample Receipt Form/Narrative** **Login # :** _____
**Barberton Facility**

Client ARCADIS Site Name _____ Cooler unpacked by: M. A. K.

Cooler Received on 9/23/22 Opened on 9/23/22

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

**Receipt After-hours:** Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam (Plastic Bag) None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form
   IR GUN# IR-13 (CF +0.7 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #IR-15 (CF 0.0°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

| | | |
|---|---|---|
| 2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 | (Yes) | No |
| -Were the seals on the outside of the cooler(s) signed & dated? | (Yes) | No NA |
| -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? | Yes | (No) |
| -Were tamper/custody seals intact and uncompromised? | (Yes) | No NA |
| 3. Shippers' packing slip attached to the cooler(s)? | (Yes) | No |
| 4. Did custody papers accompany the sample(s)? | (Yes) | No |
| 5. Were the custody papers relinquished & signed in the appropriate place? | (Yes) | No |
| 6. Was/were the person(s) who collected the samples clearly identified on the COC? | Yes | (No) |
| 7. Did all bottles arrive in good condition (Unbroken)? | (Yes) | No |
| 8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? | (Yes) | No |
| 9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? | | |
| 10. Were correct bottle(s) used for the test(s) indicated? | (Yes) | No |
| 11. Sufficient quantity received to perform indicated analyses? | (Yes) | No |
| 12. Are these work share samples and all listed on the COC? | Yes | (No) |
| If yes, Questions 13-17 have been checked at the originating laboratory. | | |
| 13. Were all preserved sample(s) at the correct pH upon receipt? | (Yes) | No NA pH Strip Lot# HC286797 |
| 14. Were VOAs on the COC? | Yes | (No) |
| 15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this. | Yes | No (NA) |
| 16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ | Yes | (No) |
| 17. Was a LL Hg or Me Hg trip blank present? _____ | Yes | (No) |

**Tests that are not checked for pH by Receiving:**
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

**18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES** ☐ additional next page

Samples processed by:

_____
_____
_____
_____

**19. SAMPLE CONDITION**

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

**20. SAMPLE PRESERVATION**

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

*WI-NC-099*

# Login Container Summary Report



Temperature readings: _____

| Client Sample ID | Lab ID | Container Type | Container pH | Container Temp | Preservative Added (mls) | Preservative Lot # |
|---|---|---|---|---|---|---|
| X-9AR_092222 | 240-173485-A-1 | Plastic 250ml - with Sodium Hydroxide | >12 | | | |
| X-9AR_092222 | 240-173485-B-1 | Plastic 250ml - with Sodium Hydroxide | >12 | | | |
| X-9AR_092222 | 240-173485-D-1 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| X-9AR_092222 | 240-173485-E-1 | Plastic 500ml - with Nitric Acid | <2 | | | |
| X-9AR_092222 | 240-173485-F-1 | Plastic 500ml - w/ Nitric - Dis. | <2 | | | |
| X-9BR_092222 | 240-173485-A-2 | Plastic 250ml - with Sodium Hydroxide | >12 | | | |
| X-9BR_092222 | 240-173485-B-2 | Plastic 250ml - with Sodium Hydroxide | >12 | | | |
| X-9BR_092222 | 240-173485-D-2 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| X-9BR_092222 | 240-173485-E-2 | Plastic 500ml - with Nitric Acid | <2 | | | |
| X-9BR_092222 | 240-173485-F-2 | Plastic 500ml - w/ Nitric - Dis. | <2 | | | |
| MW-117WT_092222 | 240-173485-A-3 | Plastic 250ml - with Sodium Hydroxide | >12 | | | |
| MW-117WT_092222 | 240-173485-B-3 | Plastic 250ml - with Sodium Hydroxide | >12 | | | |
| MW-117WT_092222 | 240-173485-D-3 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| MW-117WT_092222 | 240-173485-E-3 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-117WT_092222 | 240-173485-F-3 | Plastic 500ml - w/ Nitric - Dis. | <2 | | | |
| X-9CAVGR_092222 | 240-173485-A-4 | Plastic 250ml - with Sodium Hydroxide | >12 | | | |
| X-9CAVGR_092222 | 240-173485-B-4 | Plastic 250ml - with Sodium Hydroxide | >12 | | | |
| X-9CAVGR_092222 | 240-173485-D-4 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| X-9CAVGR_092222 | 240-173485-E-4 | Plastic 500ml - with Nitric Acid | <2 | | | |
| X-9CAVGR_092222 | 240-173485-F-4 | Plastic 500ml - w/ Nitric - Dis. | <2 | | | |
| X-9D_092222 | 240-173485-A-5 | Plastic 250ml - with Sodium Hydroxide | >12 | | | |
| X-9D_092222 | 240-173485-B-5 | Plastic 250ml - with Sodium Hydroxide | >12 | | | |
| X-9D_092222 | 240-173485-D-5 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| X-9D_092222 | 240-173485-E-5 | Plastic 500ml - with Nitric Acid | <2 | | | |
| X-9D_092222 | 240-173485-F-5 | Plastic 500ml - w/ Nitric - Dis. | <2 | | | |
| MW-118WT_092222 | 240-173485-A-6 | Plastic 250ml - with Sodium Hydroxide | >12 | | | |
| MW-118WT_092222 | 240-173485-B-6 | Plastic 250ml - with Sodium Hydroxide | >12 | | | |
| MW-118WT_092222 | 240-173485-D-6 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| MW-118WT_092222 | 240-173485-E-6 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-118WT_092222 | 240-173485-F-6 | Plastic 500ml - w/ Nitric - Dis. | <2 | | | |
| DUP-02_092222 | 240-173485-A-7 | Plastic 250ml - with Sodium Hydroxide | >12 | | | |
| DUP-02_092222 | 240-173485-B-7 | Plastic 250ml - with Sodium Hydroxide | >12 | | | |
| DUP-02_092222 | 240-173485-D-7 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| DUP-02_092222 | 240-173485-E-7 | Plastic 500ml - with Nitric Acid | <2 | | | |
| DUP-02_092222 | 240-173485-F-7 | Plastic 500ml - w/ Nitric - Dis. | <2 | | | |

| Client Sample ID | Lab ID | Container Type | Container pH | Container Temp | Preservative Added (mls) | Lot # |
|---|---|---|---|---|---|---|

Login # : _____

| Eurofins - Canton Sample Receipt Multiple Cooler Form | | | | |
|---|---|---|---|---|
| **Cooler Description (Circle)** | **IR Gun # (Circle)** | **Observed Temp °C** | **Corrected Temp °C** | **Coolant (Circle)** |
| (TA) Client Box Other | IR-13 (IR-15) | 0.1 | 0.1 | (Wet Ice) Blue Ice Dry Ice Water None |
| (TA) Client Box Other | IR-13 (IR-15) | 1.4 | 1.4 | (Wet Ice) Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
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| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
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| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| ☐ See Temperature Excursion Form | | | | |

*WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers*

**Eurofins Canton**
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

CN 268

# Chain of Custody Record

240-173485 Chain of Custody

Environment Testing America

| | | | | |
|---|---|---|---|---|
| **Client Information (Sub Contract Lab)** | Sampler: | Lab PM: DelMonico, Michael | | |
| Client Contact: Shipping/Receiving | Phone | E-Mail: Michael.DelMonico@et.eurofinsus.com | State of Origin: Michigan | Page 1 of 1 |
| Company: Eurofins Environment Testing Northeast, | | Accreditations Required (See note): | | Job #: 240-173485-1 |
| Address: 301 Alpha Drive, RIDC Park, | Due Date Requested: 10/6/2022 | | | |
| City: Pittsburgh | TAT Requested (days): | | | |
| State, Zip: PA, 15238 | | | | |
| Phone: 412-963-7058(Tel) 412-963-2468(Fax) | PO #: | | | |
| Email | WO #: | | | |
| Project Name: RACER SMI, Green Pt Landfill | Project #: 24006824 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 4500_CN_E/4500_CN_C | 4500_CN_E/FIELD_FLTRD | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | |
| X-9AR_092222 (240-173485-1) | 9/22/22 | 08:00 Eastern | | Water | | | X | X | 2 | |
| X-9BR_092222 (240-173485-2) | 9/22/22 | 10:35 Eastern | | Water | | | X | X | 2 | |
| MW-117WT_092222 (240-173485-3) | 9/22/22 | 10:40 Eastern | | Water | | | X | X | 2 | |
| X-9CAVGR_092222 (240-173485-4) | 9/22/22 | 12:25 Eastern | | Water | | | X | X | 2 | |
| X-9D_092222 (240-173485-5) | 9/22/22 | 14:05 Eastern | | Water | | | X | X | 2 | |
| MW-118WT_092222 (240-173485-6) | 9/22/22 | 13:20 Eastern | | Water | | | X | X | 2 | |
| DUP-02_092222 (240-173485-7) | 9/22/22 | Eastern | | Water | | | X | X | 2 | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Note Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing North Central, LLC

| | |
|---|---|
| ***Possible Hazard Identification*** *Unconfirmed* | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |
| Empty Kit Relinquished by: | Date: Time: Method of Shipment: |

| | Date/Time | Company | Received by | Date/Time | Company |
|---|---|---|---|---|---|
| Relinquished by: Mandaly Blanco | 9-23-22 16:00 | ccnc | | 9-27-22 935 | eurofins |
| Relinquished by: | Date/Time | Company | Received by: | Date/Time | Company |
| Relinquished by: | Date/Time | Company | Received by: | Date/Time | Company |

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

# Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 240-173485-1

**Login Number: 173485**
**List Number: 2**
**Creator: Watson, Debbie**

**List Source: Eurofins Pittsburgh**
**List Creation: 09/28/22 12:54 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing



# ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-173648-1
Client Project/Site: Racer Saginaw
Revision: 1

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, Michigan 48377

Attn: Scott Clearwater

*Authorized for release by:*
*10/31/2022 11:04:37 AM*

Michael DelMonico, Project Manager I
(330)497-9396
Michael.DelMonico@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| E | Result exceeded calibration range. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| U | Indicates the analyte was analyzed for but not detected. |

### Metals

| Qualifier | Qualifier Description |
|---|---|
| B | Compound was found in the blank and sample. |
| F1 | MS and/or MSD recovery exceeds control limits. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| U | Indicates the analyte was analyzed for but not detected. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| *+ | LCS and/or LCSD is outside acceptance limits, high biased. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| U | Indicates the analyte was analyzed for but not detected. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

## Job ID: 240-173648-1

### Laboratory: Eurofins Canton

**Narrative**

**Job Narrative**
**240-173648-1**

The SM 4500 CN E Dissolved Total Cyanide analysis was performed at the Eurofins Pittsburgh laboratory.

**Comments**

Report revised on 10/31/2022 to report Nitrate and Nitrite separately.

**Receipt**

The samples were received on 9/27/2022 4:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C

**GC/MS VOA**

Method 8260B: The continuing calibration verification (CCV), laboratory control sample (LCS) and matrix spike (MS) exceeded calibration range but passed the % recovery limits. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. The samples associated with the standards were non-detects for Bromomethane; therefore, the data have been reported. The associated samples are impacted: TW-242_092322 (240-173648-1[MS]), (CCVIS 240-545680/4) and (LCS 240-545680/5). TW-242_092322 (240-173648-1[MS]), (CCVIS 240-545680/4) and (LCS 240-545680/5)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Metals**

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**General Chemistry**

Method 4500_CN_E: The laboratory control sample (LLCS) for preparation batch 180-413995 and analytical batch 180-414100 recovered outside control limits for the following analytes: total cyanide. These analytes were biased high in the LLCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

# Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B | Volatile Organic Compounds (GC/MS) | SW846 | EET CAN |
| 6010B | Metals (ICP) | SW846 | EET CAN |
| 2540 C-2011 | Total Dissolved Solids (Dried at 180 °C) | SM | EET CAN |
| 4500 CN E-2016 | Cyanide, Total | SM | EET PIT |
| 4500 NH3 H | Ammonia | SM | EET CAN |
| 9056A | Anions, Ion Chromatography | SW846 | EET CAN |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | EET CAN |
| 5030B | Purge and Trap | SW846 | EET CAN |
| SM 4500 CN C | Cyanide, Distillation | SM | EET PIT |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

# Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 240-173648-1 | TW-242_092322 | Water | 09/23/22 10:10 | 09/27/22 16:00 |
| 240-173648-2 | TWW-1_092322 | Water | 09/23/22 11:35 | 09/27/22 16:00 |
| 240-173648-3 | DUP-03_092322 | Water | 09/23/22 00:00 | 09/27/22 16:00 |
| 240-173648-4 | TRIP BLANK_092322 | Water | 09/23/22 00:00 | 09/27/22 16:00 |
| 240-173648-5 | MW-183WT_092622 | Water | 09/26/22 11:05 | 09/27/22 16:00 |
| 240-173648-6 | MW-118S1_092622 | Water | 09/26/22 12:30 | 09/27/22 16:00 |

# Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

## Client Sample ID: TW-242_092322 — Lab Sample ID: 240-173648-1

No Detections.

## Client Sample ID: TWW-1_092322 — Lab Sample ID: 240-173648-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.77 | J | 1.0 | 0.47 | ug/L | 1 | | 8260B | Total/NA |
| Vinyl chloride | 1.3 | | 1.0 | 0.45 | ug/L | 1 | | 8260B | Total/NA |
| cis-1,2-Dichloroethene | 0.88 | J | 1.0 | 0.46 | ug/L | 1 | | 8260B | Total/NA |

## Client Sample ID: DUP-03_092322 — Lab Sample ID: 240-173648-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.75 | J | 1.0 | 0.47 | ug/L | 1 | | 8260B | Total/NA |
| Vinyl chloride | 1.2 | | 1.0 | 0.45 | ug/L | 1 | | 8260B | Total/NA |
| cis-1,2-Dichloroethene | 0.79 | J | 1.0 | 0.46 | ug/L | 1 | | 8260B | Total/NA |

## Client Sample ID: TRIP BLANK_092322 — Lab Sample ID: 240-173648-4

No Detections.

## Client Sample ID: MW-183WT_092622 — Lab Sample ID: 240-173648-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 13 | | 10 | 4.1 | ug/L | 1 | | 6010B | Total Recoverable |
| Barium | 36 | J B | 200 | 1.3 | ug/L | 1 | | 6010B | Total Recoverable |
| Iron | 5100 | F1 | 100 | 83 | ug/L | 1 | | 6010B | Total Recoverable |
| Manganese | 1200 | F1 | 15 | 6.2 | ug/L | 1 | | 6010B | Total Recoverable |
| Sodium | 22000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Total Recoverable |
| Arsenic | 11 | | 10 | 4.1 | ug/L | 1 | | 6010B | Dissolved |
| Barium | 34 | J B | 200 | 1.3 | ug/L | 1 | | 6010B | Dissolved |
| Iron | 4700 | | 100 | 83 | ug/L | 1 | | 6010B | Dissolved |
| Manganese | 1200 | | 15 | 6.2 | ug/L | 1 | | 6010B | Dissolved |
| Sodium | 24000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Dissolved |
| Total Dissolved Solids | 330 | | 10 | 7.8 | mg/L | 1 | | 2540 C-2011 | Total/NA |
| Ammonia | 0.11 | J | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Chloride | 15 | | 1.0 | 0.28 | mg/L | 1 | | 9056A | Total/NA |
| Sulfate | 0.48 | J | 1.0 | 0.35 | mg/L | 1 | | 9056A | Total/NA |

## Client Sample ID: MW-118S1_092622 — Lab Sample ID: 240-173648-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 4.7 | J | 10 | 4.1 | ug/L | 1 | | 6010B | Total Recoverable |
| Barium | 72 | J B | 200 | 1.3 | ug/L | 1 | | 6010B | Total Recoverable |
| Iron | 9700 | | 100 | 83 | ug/L | 1 | | 6010B | Total Recoverable |
| Manganese | 940 | | 15 | 6.2 | ug/L | 1 | | 6010B | Total Recoverable |
| Sodium | 45000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Total Recoverable |
| Arsenic | 4.4 | J | 10 | 4.1 | ug/L | 1 | | 6010B | Dissolved |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-118S1_092622 (Continued)

## Lab Sample ID: 240-173648-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 69 | J B | 200 | 1.3 | ug/L | 1 | | 6010B | Dissolved |
| Iron | 8700 | | 100 | 83 | ug/L | 1 | | 6010B | Dissolved |
| Manganese | 850 | | 15 | 6.2 | ug/L | 1 | | 6010B | Dissolved |
| Sodium | 46000 | | 5000 | 2100 | ug/L | 1 | | 6010B | Dissolved |
| Total Dissolved Solids | 440 | | 10 | 7.8 | mg/L | 1 | | 2540 C-2011 | Total/NA |
| Ammonia | 2.1 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Chloride | 120 | | 1.0 | 0.28 | mg/L | 1 | | 9056A | Total/NA |

This Detection Summary does not include radiochemical test results.

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

**Client Sample ID: TW-242_092322**
**Date Collected: 09/23/22 10:10**
**Date Received: 09/27/22 16:00**

**Lab Sample ID: 240-173648-1**
**Matrix: Water**

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 10 | U | 10 | 5.4 | ug/L | | | 10/05/22 16:02 | 1 |
| Benzene | 1.0 | U | 1.0 | 0.42 | ug/L | | | 10/05/22 16:02 | 1 |
| Dichlorobromomethane | 1.0 | U | 1.0 | 0.17 | ug/L | | | 10/05/22 16:02 | 1 |
| Bromoform | 1.0 | U | 1.0 | 0.76 | ug/L | | | 10/05/22 16:02 | 1 |
| Bromomethane | 1.0 | U | 1.0 | 0.42 | ug/L | | | 10/05/22 16:02 | 1 |
| 2-Butanone (MEK) | 10 | U | 10 | 1.2 | ug/L | | | 10/05/22 16:02 | 1 |
| Carbon disulfide | 1.0 | U | 1.0 | 0.59 | ug/L | | | 10/05/22 16:02 | 1 |
| Carbon tetrachloride | 1.0 | U | 1.0 | 0.26 | ug/L | | | 10/05/22 16:02 | 1 |
| Chlorobenzene | 1.0 | U | 1.0 | 0.38 | ug/L | | | 10/05/22 16:02 | 1 |
| Chloroethane | 1.0 | U | 1.0 | 0.83 | ug/L | | | 10/05/22 16:02 | 1 |
| Chloroform | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 16:02 | 1 |
| Chloromethane | 1.0 | U | 1.0 | 0.63 | ug/L | | | 10/05/22 16:02 | 1 |
| 1,1-Dichloroethane | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 16:02 | 1 |
| 1,2-Dichloroethane | 1.0 | U | 1.0 | 0.21 | ug/L | | | 10/05/22 16:02 | 1 |
| 1,1-Dichloroethene | 1.0 | U | 1.0 | 0.49 | ug/L | | | 10/05/22 16:02 | 1 |
| 1,2-Dichloropropane | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 16:02 | 1 |
| cis-1,3-Dichloropropene | 1.0 | U | 1.0 | 0.61 | ug/L | | | 10/05/22 16:02 | 1 |
| trans-1,3-Dichloropropene | 1.0 | U | 1.0 | 0.67 | ug/L | | | 10/05/22 16:02 | 1 |
| Ethylbenzene | 1.0 | U | 1.0 | 0.42 | ug/L | | | 10/05/22 16:02 | 1 |
| 2-Hexanone | 10 | U | 10 | 1.1 | ug/L | | | 10/05/22 16:02 | 1 |
| Methylene Chloride | 5.0 | U | 5.0 | 2.6 | ug/L | | | 10/05/22 16:02 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 10 | U | 10 | 0.99 | ug/L | | | 10/05/22 16:02 | 1 |
| Styrene | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 16:02 | 1 |
| 1,1,2,2-Tetrachloroethane | 1.0 | U | 1.0 | 0.60 | ug/L | | | 10/05/22 16:02 | 1 |
| Tetrachloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 10/05/22 16:02 | 1 |
| Toluene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 10/05/22 16:02 | 1 |
| Trichloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 10/05/22 16:02 | 1 |
| Vinyl chloride | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 16:02 | 1 |
| Xylenes, Total | 2.0 | U | 2.0 | 0.42 | ug/L | | | 10/05/22 16:02 | 1 |
| 1,1,1-Trichloroethane | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 16:02 | 1 |
| 1,1,2-Trichloroethane | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 16:02 | 1 |
| Cyclohexane | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 16:02 | 1 |
| 1,2-Dibromo-3-Chloropropane | 2.0 | U | 2.0 | 0.91 | ug/L | | | 10/05/22 16:02 | 1 |
| Ethylene Dibromide | 1.0 | U | 1.0 | 0.41 | ug/L | | | 10/05/22 16:02 | 1 |
| Dichlorodifluoromethane | 1.0 | U | 1.0 | 0.35 | ug/L | | | 10/05/22 16:02 | 1 |
| cis-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.46 | ug/L | | | 10/05/22 16:02 | 1 |
| trans-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.51 | ug/L | | | 10/05/22 16:02 | 1 |
| Isopropylbenzene | 1.0 | U | 1.0 | 0.49 | ug/L | | | 10/05/22 16:02 | 1 |
| Methyl acetate | 10 | U | 10 | 1.7 | ug/L | | | 10/05/22 16:02 | 1 |
| Methyl tert-butyl ether | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 16:02 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0 | U | 1.0 | 0.41 | ug/L | | | 10/05/22 16:02 | 1 |
| 1,2,4-Trichlorobenzene | 1.0 | U | 1.0 | 0.77 | ug/L | | | 10/05/22 16:02 | 1 |
| 1,2-Dichlorobenzene | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 16:02 | 1 |
| 1,3-Dichlorobenzene | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 16:02 | 1 |
| 1,4-Dichlorobenzene | 1.0 | U | 1.0 | 0.41 | ug/L | | | 10/05/22 16:02 | 1 |
| Trichlorofluoromethane | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 16:02 | 1 |
| Chlorodibromomethane | 1.0 | U | 1.0 | 0.39 | ug/L | | | 10/05/22 16:02 | 1 |
| Methylcyclohexane | 1.0 | U | 1.0 | 0.33 | ug/L | | | 10/05/22 16:02 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

**Client Sample ID: TW-242_092322**
**Date Collected: 09/23/22 10:10**
**Date Received: 09/27/22 16:00**

**Lab Sample ID: 240-173648-1**
**Matrix: Water**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 (Surr) | 93 | | 62 - 137 | | 10/05/22 16:02 | 1 |
| 4-Bromofluorobenzene (Surr) | 97 | | 56 - 136 | | 10/05/22 16:02 | 1 |
| Toluene-d8 (Surr) | 91 | | 78 - 122 | | 10/05/22 16:02 | 1 |
| Dibromofluoromethane (Surr) | 110 | | 73 - 120 | | 10/05/22 16:02 | 1 |

**Client Sample ID: TWW-1_092322**
**Date Collected: 09/23/22 11:35**
**Date Received: 09/27/22 16:00**

**Lab Sample ID: 240-173648-2**
**Matrix: Water**

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 10 | U | 10 | 5.4 | ug/L | | | 10/05/22 17:21 | 1 |
| Benzene | 1.0 | U | 1.0 | 0.42 | ug/L | | | 10/05/22 17:21 | 1 |
| Dichlorobromomethane | 1.0 | U | 1.0 | 0.17 | ug/L | | | 10/05/22 17:21 | 1 |
| Bromoform | 1.0 | U | 1.0 | 0.76 | ug/L | | | 10/05/22 17:21 | 1 |
| Bromomethane | 1.0 | U | 1.0 | 0.42 | ug/L | | | 10/05/22 17:21 | 1 |
| 2-Butanone (MEK) | 10 | U | 10 | 1.2 | ug/L | | | 10/05/22 17:21 | 1 |
| Carbon disulfide | 1.0 | U | 1.0 | 0.59 | ug/L | | | 10/05/22 17:21 | 1 |
| Carbon tetrachloride | 1.0 | U | 1.0 | 0.26 | ug/L | | | 10/05/22 17:21 | 1 |
| Chlorobenzene | 1.0 | U | 1.0 | 0.38 | ug/L | | | 10/05/22 17:21 | 1 |
| Chloroethane | 1.0 | U | 1.0 | 0.83 | ug/L | | | 10/05/22 17:21 | 1 |
| Chloroform | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 17:21 | 1 |
| Chloromethane | 1.0 | U | 1.0 | 0.63 | ug/L | | | 10/05/22 17:21 | 1 |
| **1,1-Dichloroethane** | **0.77** | **J** | 1.0 | 0.47 | ug/L | | | 10/05/22 17:21 | 1 |
| 1,2-Dichloroethane | 1.0 | U | 1.0 | 0.21 | ug/L | | | 10/05/22 17:21 | 1 |
| 1,1-Dichloroethene | 1.0 | U | 1.0 | 0.49 | ug/L | | | 10/05/22 17:21 | 1 |
| 1,2-Dichloropropane | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 17:21 | 1 |
| cis-1,3-Dichloropropene | 1.0 | U | 1.0 | 0.61 | ug/L | | | 10/05/22 17:21 | 1 |
| trans-1,3-Dichloropropene | 1.0 | U | 1.0 | 0.67 | ug/L | | | 10/05/22 17:21 | 1 |
| Ethylbenzene | 1.0 | U | 1.0 | 0.42 | ug/L | | | 10/05/22 17:21 | 1 |
| 2-Hexanone | 10 | U | 10 | 1.1 | ug/L | | | 10/05/22 17:21 | 1 |
| Methylene Chloride | 5.0 | U | 5.0 | 2.6 | ug/L | | | 10/05/22 17:21 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 10 | U | 10 | 0.99 | ug/L | | | 10/05/22 17:21 | 1 |
| Styrene | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 17:21 | 1 |
| 1,1,2,2-Tetrachloroethane | 1.0 | U | 1.0 | 0.60 | ug/L | | | 10/05/22 17:21 | 1 |
| Tetrachloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 10/05/22 17:21 | 1 |
| Toluene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 10/05/22 17:21 | 1 |
| Trichloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 10/05/22 17:21 | 1 |
| **Vinyl chloride** | **1.3** | | 1.0 | 0.45 | ug/L | | | 10/05/22 17:21 | 1 |
| Xylenes, Total | 2.0 | U | 2.0 | 0.42 | ug/L | | | 10/05/22 17:21 | 1 |
| 1,1,1-Trichloroethane | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 17:21 | 1 |
| 1,1,2-Trichloroethane | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 17:21 | 1 |
| Cyclohexane | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 17:21 | 1 |
| 1,2-Dibromo-3-Chloropropane | 2.0 | U | 2.0 | 0.91 | ug/L | | | 10/05/22 17:21 | 1 |
| Ethylene Dibromide | 1.0 | U | 1.0 | 0.41 | ug/L | | | 10/05/22 17:21 | 1 |
| Dichlorodifluoromethane | 1.0 | U | 1.0 | 0.35 | ug/L | | | 10/05/22 17:21 | 1 |
| **cis-1,2-Dichloroethene** | **0.88** | **J** | 1.0 | 0.46 | ug/L | | | 10/05/22 17:21 | 1 |
| trans-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.51 | ug/L | | | 10/05/22 17:21 | 1 |
| Isopropylbenzene | 1.0 | U | 1.0 | 0.49 | ug/L | | | 10/05/22 17:21 | 1 |
| Methyl acetate | 10 | U | 10 | 1.7 | ug/L | | | 10/05/22 17:21 | 1 |
| Methyl tert-butyl ether | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 17:21 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0 | U | 1.0 | 0.41 | ug/L | | | 10/05/22 17:21 | 1 |
| 1,2,4-Trichlorobenzene | 1.0 | U | 1.0 | 0.77 | ug/L | | | 10/05/22 17:21 | 1 |
| 1,2-Dichlorobenzene | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 17:21 | 1 |
| 1,3-Dichlorobenzene | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 17:21 | 1 |
| 1,4-Dichlorobenzene | 1.0 | U | 1.0 | 0.41 | ug/L | | | 10/05/22 17:21 | 1 |
| Trichlorofluoromethane | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 17:21 | 1 |
| Chlorodibromomethane | 1.0 | U | 1.0 | 0.39 | ug/L | | | 10/05/22 17:21 | 1 |
| Methylcyclohexane | 1.0 | U | 1.0 | 0.33 | ug/L | | | 10/05/22 17:21 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

**Client Sample ID: TWW-1_092322**
**Date Collected: 09/23/22 11:35**
**Date Received: 09/27/22 16:00**

**Lab Sample ID: 240-173648-2**
**Matrix: Water**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 (Surr) | 90 | | 62 - 137 | | 10/05/22 17:21 | 1 |
| 4-Bromofluorobenzene (Surr) | 99 | | 56 - 136 | | 10/05/22 17:21 | 1 |
| Toluene-d8 (Surr) | 92 | | 78 - 122 | | 10/05/22 17:21 | 1 |
| Dibromofluoromethane (Surr) | 105 | | 73 - 120 | | 10/05/22 17:21 | 1 |

**Client Sample ID: DUP-03_092322**
**Date Collected: 09/23/22 00:00**
**Date Received: 09/27/22 16:00**

**Lab Sample ID: 240-173648-3**
**Matrix: Water**

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 10 | U | 10 | 5.4 | ug/L | | | 10/05/22 17:47 | 1 |
| Benzene | 1.0 | U | 1.0 | 0.42 | ug/L | | | 10/05/22 17:47 | 1 |
| Dichlorobromomethane | 1.0 | U | 1.0 | 0.17 | ug/L | | | 10/05/22 17:47 | 1 |
| Bromoform | 1.0 | U | 1.0 | 0.76 | ug/L | | | 10/05/22 17:47 | 1 |
| Bromomethane | 1.0 | U | 1.0 | 0.42 | ug/L | | | 10/05/22 17:47 | 1 |
| 2-Butanone (MEK) | 10 | U | 10 | 1.2 | ug/L | | | 10/05/22 17:47 | 1 |
| Carbon disulfide | 1.0 | U | 1.0 | 0.59 | ug/L | | | 10/05/22 17:47 | 1 |
| Carbon tetrachloride | 1.0 | U | 1.0 | 0.26 | ug/L | | | 10/05/22 17:47 | 1 |
| Chlorobenzene | 1.0 | U | 1.0 | 0.38 | ug/L | | | 10/05/22 17:47 | 1 |
| Chloroethane | 1.0 | U | 1.0 | 0.83 | ug/L | | | 10/05/22 17:47 | 1 |
| Chloroform | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 17:47 | 1 |
| Chloromethane | 1.0 | U | 1.0 | 0.63 | ug/L | | | 10/05/22 17:47 | 1 |
| **1,1-Dichloroethane** | **0.75** | **J** | 1.0 | 0.47 | ug/L | | | 10/05/22 17:47 | 1 |
| 1,2-Dichloroethane | 1.0 | U | 1.0 | 0.21 | ug/L | | | 10/05/22 17:47 | 1 |
| 1,1-Dichloroethene | 1.0 | U | 1.0 | 0.49 | ug/L | | | 10/05/22 17:47 | 1 |
| 1,2-Dichloropropane | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 17:47 | 1 |
| cis-1,3-Dichloropropene | 1.0 | U | 1.0 | 0.61 | ug/L | | | 10/05/22 17:47 | 1 |
| trans-1,3-Dichloropropene | 1.0 | U | 1.0 | 0.67 | ug/L | | | 10/05/22 17:47 | 1 |
| Ethylbenzene | 1.0 | U | 1.0 | 0.42 | ug/L | | | 10/05/22 17:47 | 1 |
| 2-Hexanone | 10 | U | 10 | 1.1 | ug/L | | | 10/05/22 17:47 | 1 |
| Methylene Chloride | 5.0 | U | 5.0 | 2.6 | ug/L | | | 10/05/22 17:47 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 10 | U | 10 | 0.99 | ug/L | | | 10/05/22 17:47 | 1 |
| Styrene | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 17:47 | 1 |
| 1,1,2,2-Tetrachloroethane | 1.0 | U | 1.0 | 0.60 | ug/L | | | 10/05/22 17:47 | 1 |
| Tetrachloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 10/05/22 17:47 | 1 |
| Toluene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 10/05/22 17:47 | 1 |
| Trichloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 10/05/22 17:47 | 1 |
| **Vinyl chloride** | **1.2** | | 1.0 | 0.45 | ug/L | | | 10/05/22 17:47 | 1 |
| Xylenes, Total | 2.0 | U | 2.0 | 0.42 | ug/L | | | 10/05/22 17:47 | 1 |
| 1,1,1-Trichloroethane | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 17:47 | 1 |
| 1,1,2-Trichloroethane | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 17:47 | 1 |
| Cyclohexane | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 17:47 | 1 |
| 1,2-Dibromo-3-Chloropropane | 2.0 | U | 2.0 | 0.91 | ug/L | | | 10/05/22 17:47 | 1 |
| Ethylene Dibromide | 1.0 | U | 1.0 | 0.41 | ug/L | | | 10/05/22 17:47 | 1 |
| Dichlorodifluoromethane | 1.0 | U | 1.0 | 0.35 | ug/L | | | 10/05/22 17:47 | 1 |
| **cis-1,2-Dichloroethene** | **0.79** | **J** | 1.0 | 0.46 | ug/L | | | 10/05/22 17:47 | 1 |
| trans-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.51 | ug/L | | | 10/05/22 17:47 | 1 |
| Isopropylbenzene | 1.0 | U | 1.0 | 0.49 | ug/L | | | 10/05/22 17:47 | 1 |
| Methyl acetate | 10 | U | 10 | 1.7 | ug/L | | | 10/05/22 17:47 | 1 |
| Methyl tert-butyl ether | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 17:47 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0 | U | 1.0 | 0.41 | ug/L | | | 10/05/22 17:47 | 1 |
| 1,2,4-Trichlorobenzene | 1.0 | U | 1.0 | 0.77 | ug/L | | | 10/05/22 17:47 | 1 |
| 1,2-Dichlorobenzene | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 17:47 | 1 |
| 1,3-Dichlorobenzene | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 17:47 | 1 |
| 1,4-Dichlorobenzene | 1.0 | U | 1.0 | 0.41 | ug/L | | | 10/05/22 17:47 | 1 |
| Trichlorofluoromethane | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 17:47 | 1 |
| Chlorodibromomethane | 1.0 | U | 1.0 | 0.39 | ug/L | | | 10/05/22 17:47 | 1 |
| Methylcyclohexane | 1.0 | U | 1.0 | 0.33 | ug/L | | | 10/05/22 17:47 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

**Client Sample ID: DUP-03_092322**
**Date Collected: 09/23/22 00:00**
**Date Received: 09/27/22 16:00**

**Lab Sample ID: 240-173648-3**
**Matrix: Water**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 (Surr) | 96 | | 62 - 137 | | 10/05/22 17:47 | 1 |
| 4-Bromofluorobenzene (Surr) | 102 | | 56 - 136 | | 10/05/22 17:47 | 1 |
| Toluene-d8 (Surr) | 96 | | 78 - 122 | | 10/05/22 17:47 | 1 |
| Dibromofluoromethane (Surr) | 109 | | 73 - 120 | | 10/05/22 17:47 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

**Client Sample ID: TRIP BLANK_092322**
**Date Collected: 09/23/22 00:00**
**Date Received: 09/27/22 16:00**

**Lab Sample ID: 240-173648-4**
**Matrix: Water**

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 10 | U | 10 | 5.4 | ug/L | | | 10/05/22 18:14 | 1 |
| Benzene | 1.0 | U | 1.0 | 0.42 | ug/L | | | 10/05/22 18:14 | 1 |
| Dichlorobromomethane | 1.0 | U | 1.0 | 0.17 | ug/L | | | 10/05/22 18:14 | 1 |
| Bromoform | 1.0 | U | 1.0 | 0.76 | ug/L | | | 10/05/22 18:14 | 1 |
| Bromomethane | 1.0 | U | 1.0 | 0.42 | ug/L | | | 10/05/22 18:14 | 1 |
| 2-Butanone (MEK) | 10 | U | 10 | 1.2 | ug/L | | | 10/05/22 18:14 | 1 |
| Carbon disulfide | 1.0 | U | 1.0 | 0.59 | ug/L | | | 10/05/22 18:14 | 1 |
| Carbon tetrachloride | 1.0 | U | 1.0 | 0.26 | ug/L | | | 10/05/22 18:14 | 1 |
| Chlorobenzene | 1.0 | U | 1.0 | 0.38 | ug/L | | | 10/05/22 18:14 | 1 |
| Chloroethane | 1.0 | U | 1.0 | 0.83 | ug/L | | | 10/05/22 18:14 | 1 |
| Chloroform | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 18:14 | 1 |
| Chloromethane | 1.0 | U | 1.0 | 0.63 | ug/L | | | 10/05/22 18:14 | 1 |
| 1,1-Dichloroethane | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 18:14 | 1 |
| 1,2-Dichloroethane | 1.0 | U | 1.0 | 0.21 | ug/L | | | 10/05/22 18:14 | 1 |
| 1,1-Dichloroethene | 1.0 | U | 1.0 | 0.49 | ug/L | | | 10/05/22 18:14 | 1 |
| 1,2-Dichloropropane | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 18:14 | 1 |
| cis-1,3-Dichloropropene | 1.0 | U | 1.0 | 0.61 | ug/L | | | 10/05/22 18:14 | 1 |
| trans-1,3-Dichloropropene | 1.0 | U | 1.0 | 0.67 | ug/L | | | 10/05/22 18:14 | 1 |
| Ethylbenzene | 1.0 | U | 1.0 | 0.42 | ug/L | | | 10/05/22 18:14 | 1 |
| 2-Hexanone | 10 | U | 10 | 1.1 | ug/L | | | 10/05/22 18:14 | 1 |
| Methylene Chloride | 5.0 | U | 5.0 | 2.6 | ug/L | | | 10/05/22 18:14 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 10 | U | 10 | 0.99 | ug/L | | | 10/05/22 18:14 | 1 |
| Styrene | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 18:14 | 1 |
| 1,1,2,2-Tetrachloroethane | 1.0 | U | 1.0 | 0.60 | ug/L | | | 10/05/22 18:14 | 1 |
| Tetrachloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 10/05/22 18:14 | 1 |
| Toluene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 10/05/22 18:14 | 1 |
| Trichloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 10/05/22 18:14 | 1 |
| Vinyl chloride | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 18:14 | 1 |
| Xylenes, Total | 2.0 | U | 2.0 | 0.42 | ug/L | | | 10/05/22 18:14 | 1 |
| 1,1,1-Trichloroethane | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 18:14 | 1 |
| 1,1,2-Trichloroethane | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 18:14 | 1 |
| Cyclohexane | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 18:14 | 1 |
| 1,2-Dibromo-3-Chloropropane | 2.0 | U | 2.0 | 0.91 | ug/L | | | 10/05/22 18:14 | 1 |
| Ethylene Dibromide | 1.0 | U | 1.0 | 0.41 | ug/L | | | 10/05/22 18:14 | 1 |
| Dichlorodifluoromethane | 1.0 | U | 1.0 | 0.35 | ug/L | | | 10/05/22 18:14 | 1 |
| cis-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.46 | ug/L | | | 10/05/22 18:14 | 1 |
| trans-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.51 | ug/L | | | 10/05/22 18:14 | 1 |
| Isopropylbenzene | 1.0 | U | 1.0 | 0.49 | ug/L | | | 10/05/22 18:14 | 1 |
| Methyl acetate | 10 | U | 10 | 1.7 | ug/L | | | 10/05/22 18:14 | 1 |
| Methyl tert-butyl ether | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 18:14 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0 | U | 1.0 | 0.41 | ug/L | | | 10/05/22 18:14 | 1 |
| 1,2,4-Trichlorobenzene | 1.0 | U | 1.0 | 0.77 | ug/L | | | 10/05/22 18:14 | 1 |
| 1,2-Dichlorobenzene | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 18:14 | 1 |
| 1,3-Dichlorobenzene | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 18:14 | 1 |
| 1,4-Dichlorobenzene | 1.0 | U | 1.0 | 0.41 | ug/L | | | 10/05/22 18:14 | 1 |
| Trichlorofluoromethane | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 18:14 | 1 |
| Chlorodibromomethane | 1.0 | U | 1.0 | 0.39 | ug/L | | | 10/05/22 18:14 | 1 |
| Methylcyclohexane | 1.0 | U | 1.0 | 0.33 | ug/L | | | 10/05/22 18:14 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

**Client Sample ID: TRIP BLANK_092322**
**Date Collected: 09/23/22 00:00**
**Date Received: 09/27/22 16:00**

**Lab Sample ID: 240-173648-4**
**Matrix: Water**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 (Surr) | 92 | | 62 - 137 | | 10/05/22 18:14 | 1 |
| 4-Bromofluorobenzene (Surr) | 96 | | 56 - 136 | | 10/05/22 18:14 | 1 |
| Toluene-d8 (Surr) | 93 | | 78 - 122 | | 10/05/22 18:14 | 1 |
| Dibromofluoromethane (Surr) | 108 | | 73 - 120 | | 10/05/22 18:14 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

**Client Sample ID: MW-183WT_092622**
**Date Collected: 09/26/22 11:05**
**Date Received: 09/27/22 16:00**

**Lab Sample ID: 240-173648-5**
**Matrix: Water**

### Method: SW846 6010B - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **13** | | 10 | 4.1 | ug/L | | 09/28/22 12:00 | 09/29/22 16:13 | 1 |
| **Barium** | **36** | **J B** | 200 | 1.3 | ug/L | | 09/28/22 12:00 | 09/29/22 16:13 | 1 |
| **Iron** | **5100** | **F1** | 100 | 83 | ug/L | | 09/28/22 12:00 | 09/29/22 16:13 | 1 |
| **Manganese** | **1200** | **F1** | 15 | 6.2 | ug/L | | 09/28/22 12:00 | 09/29/22 16:13 | 1 |
| **Sodium** | **22000** | | 5000 | 2100 | ug/L | | 09/28/22 12:00 | 09/29/22 16:13 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/28/22 12:00 | 09/29/22 16:13 | 1 |

### Method: SW846 6010B - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **11** | | 10 | 4.1 | ug/L | | 09/28/22 12:00 | 09/29/22 16:41 | 1 |
| **Barium** | **34** | **J B** | 200 | 1.3 | ug/L | | 09/28/22 12:00 | 09/29/22 16:41 | 1 |
| **Iron** | **4700** | | 100 | 83 | ug/L | | 09/28/22 12:00 | 09/29/22 16:41 | 1 |
| **Manganese** | **1200** | | 15 | 6.2 | ug/L | | 09/28/22 12:00 | 09/29/22 16:41 | 1 |
| **Sodium** | **24000** | | 5000 | 2100 | ug/L | | 09/28/22 12:00 | 09/29/22 16:41 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/28/22 12:00 | 09/29/22 16:41 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids (SM 2540 C-2011)** | **330** | | 10 | 7.8 | mg/L | | | 09/30/22 09:38 | 1 |
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/04/22 08:04 | 10/04/22 15:00 | 1 |
| **Ammonia (SM 4500 NH3 H)** | **0.11** | **J** | 0.20 | 0.076 | mg/L | | | 09/30/22 15:25 | 1 |
| **Chloride (SW846 9056A)** | **15** | | 1.0 | 0.28 | mg/L | | | 09/27/22 23:40 | 1 |
| Nitrite as N (SW846 9056A) | 0.10 | U | 0.10 | 0.014 | mg/L | | | 09/27/22 23:40 | 1 |
| **Sulfate (SW846 9056A)** | **0.48** | **J** | 1.0 | 0.35 | mg/L | | | 09/27/22 23:40 | 1 |
| Nitrate as N (SW846 9056A) | 0.10 | U | 0.10 | 0.036 | mg/L | | | 09/27/22 23:40 | 1 |

### General Chemistry - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U *+ | 0.010 | 0.0080 | mg/L | | 10/04/22 11:00 | 10/04/22 15:56 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

## Client Sample ID: MW-118S1_092622

**Lab Sample ID: 240-173648-6**

**Date Collected: 09/26/22 12:30**

**Matrix: Water**

**Date Received: 09/27/22 16:00**

### Method: SW846 6010B - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.7** | **J** | 10 | 4.1 | ug/L | | 09/28/22 12:00 | 09/29/22 16:54 | 1 |
| **Barium** | **72** | **J B** | 200 | 1.3 | ug/L | | 09/28/22 12:00 | 09/29/22 16:54 | 1 |
| **Iron** | **9700** | | 100 | 83 | ug/L | | 09/28/22 12:00 | 09/29/22 16:54 | 1 |
| **Manganese** | **940** | | 15 | 6.2 | ug/L | | 09/28/22 12:00 | 09/29/22 16:54 | 1 |
| **Sodium** | **45000** | | 5000 | 2100 | ug/L | | 09/28/22 12:00 | 09/29/22 16:54 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/28/22 12:00 | 09/29/22 16:54 | 1 |

### Method: SW846 6010B - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.4** | **J** | 10 | 4.1 | ug/L | | 09/28/22 12:00 | 09/29/22 16:58 | 1 |
| **Barium** | **69** | **J B** | 200 | 1.3 | ug/L | | 09/28/22 12:00 | 09/29/22 16:58 | 1 |
| **Iron** | **8700** | | 100 | 83 | ug/L | | 09/28/22 12:00 | 09/29/22 16:58 | 1 |
| **Manganese** | **850** | | 15 | 6.2 | ug/L | | 09/28/22 12:00 | 09/29/22 16:58 | 1 |
| **Sodium** | **46000** | | 5000 | 2100 | ug/L | | 09/28/22 12:00 | 09/29/22 16:58 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/28/22 12:00 | 09/29/22 16:58 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids (SM 2540 C-2011)** | **440** | | 10 | 7.8 | mg/L | | | 09/30/22 09:38 | 1 |
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/04/22 08:04 | 10/04/22 15:11 | 1 |
| **Ammonia (SM 4500 NH3 H)** | **2.1** | | 0.20 | 0.076 | mg/L | | | 09/30/22 15:07 | 1 |
| **Chloride (SW846 9056A)** | **120** | | 1.0 | 0.28 | mg/L | | | 09/28/22 01:41 | 1 |
| Nitrite as N (SW846 9056A) | 0.10 | U | 0.10 | 0.014 | mg/L | | | 09/28/22 01:41 | 1 |
| Sulfate (SW846 9056A) | 1.0 | U | 1.0 | 0.35 | mg/L | | | 09/28/22 01:41 | 1 |
| Nitrate as N (SW846 9056A) | 0.10 | U | 0.10 | 0.036 | mg/L | | | 09/28/22 01:41 | 1 |

### General Chemistry - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total (SM 4500 CN E-2016) | 0.010 | U *+ | 0.010 | 0.0080 | mg/L | | 10/04/22 11:00 | 10/04/22 16:03 | 1 |

# Surrogate Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | DCA | BFB | TOL | DBFM |
| Lab Sample ID | Client Sample ID | (62-137) | (56-136) | (78-122) | (73-120) |
| 240-173648-1 | TW-242_092322 | 93 | 97 | 91 | 110 |
| 240-173648-1 MS | TW-242_092322 | 81 | 111 | 97 | 97 |
| 240-173648-1 MSD | TW-242_092322 | 80 | 111 | 97 | 97 |
| 240-173648-2 | TWW-1_092322 | 90 | 99 | 92 | 105 |
| 240-173648-3 | DUP-03_092322 | 96 | 102 | 96 | 109 |
| 240-173648-4 | TRIP BLANK_092322 | 92 | 96 | 93 | 108 |
| LCS 240-545680/5 | Lab Control Sample | 82 | 110 | 95 | 98 |
| MB 240-545680/8 | Method Blank | 90 | 98 | 92 | 105 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 240-545680/8**
**Matrix: Water**
**Analysis Batch: 545680**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 10 | U | 10 | 5.4 | ug/L | | | 10/05/22 14:42 | 1 |
| Benzene | 1.0 | U | 1.0 | 0.42 | ug/L | | | 10/05/22 14:42 | 1 |
| Dichlorobromomethane | 1.0 | U | 1.0 | 0.17 | ug/L | | | 10/05/22 14:42 | 1 |
| Bromoform | 1.0 | U | 1.0 | 0.76 | ug/L | | | 10/05/22 14:42 | 1 |
| Bromomethane | 1.0 | U | 1.0 | 0.42 | ug/L | | | 10/05/22 14:42 | 1 |
| 2-Butanone (MEK) | 10 | U | 10 | 1.2 | ug/L | | | 10/05/22 14:42 | 1 |
| Carbon disulfide | 1.0 | U | 1.0 | 0.59 | ug/L | | | 10/05/22 14:42 | 1 |
| Carbon tetrachloride | 1.0 | U | 1.0 | 0.26 | ug/L | | | 10/05/22 14:42 | 1 |
| Chlorobenzene | 1.0 | U | 1.0 | 0.38 | ug/L | | | 10/05/22 14:42 | 1 |
| Chloroethane | 1.0 | U | 1.0 | 0.83 | ug/L | | | 10/05/22 14:42 | 1 |
| Chloroform | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 14:42 | 1 |
| Chloromethane | 1.0 | U | 1.0 | 0.63 | ug/L | | | 10/05/22 14:42 | 1 |
| 1,1-Dichloroethane | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 14:42 | 1 |
| 1,2-Dichloroethane | 1.0 | U | 1.0 | 0.21 | ug/L | | | 10/05/22 14:42 | 1 |
| 1,1-Dichloroethene | 1.0 | U | 1.0 | 0.49 | ug/L | | | 10/05/22 14:42 | 1 |
| 1,2-Dichloropropane | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 14:42 | 1 |
| cis-1,3-Dichloropropene | 1.0 | U | 1.0 | 0.61 | ug/L | | | 10/05/22 14:42 | 1 |
| trans-1,3-Dichloropropene | 1.0 | U | 1.0 | 0.67 | ug/L | | | 10/05/22 14:42 | 1 |
| Ethylbenzene | 1.0 | U | 1.0 | 0.42 | ug/L | | | 10/05/22 14:42 | 1 |
| 2-Hexanone | 10 | U | 10 | 1.1 | ug/L | | | 10/05/22 14:42 | 1 |
| Methylene Chloride | 5.0 | U | 5.0 | 2.6 | ug/L | | | 10/05/22 14:42 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 10 | U | 10 | 0.99 | ug/L | | | 10/05/22 14:42 | 1 |
| Styrene | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 14:42 | 1 |
| 1,1,2,2-Tetrachloroethane | 1.0 | U | 1.0 | 0.60 | ug/L | | | 10/05/22 14:42 | 1 |
| Tetrachloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 10/05/22 14:42 | 1 |
| Toluene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 10/05/22 14:42 | 1 |
| Trichloroethene | 1.0 | U | 1.0 | 0.44 | ug/L | | | 10/05/22 14:42 | 1 |
| Vinyl chloride | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 14:42 | 1 |
| Xylenes, Total | 2.0 | U | 2.0 | 0.42 | ug/L | | | 10/05/22 14:42 | 1 |
| 1,1,1-Trichloroethane | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 14:42 | 1 |
| 1,1,2-Trichloroethane | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 14:42 | 1 |
| Cyclohexane | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 14:42 | 1 |
| 1,2-Dibromo-3-Chloropropane | 2.0 | U | 2.0 | 0.91 | ug/L | | | 10/05/22 14:42 | 1 |
| Ethylene Dibromide | 1.0 | U | 1.0 | 0.41 | ug/L | | | 10/05/22 14:42 | 1 |
| Dichlorodifluoromethane | 1.0 | U | 1.0 | 0.35 | ug/L | | | 10/05/22 14:42 | 1 |
| cis-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.46 | ug/L | | | 10/05/22 14:42 | 1 |
| trans-1,2-Dichloroethene | 1.0 | U | 1.0 | 0.51 | ug/L | | | 10/05/22 14:42 | 1 |
| Isopropylbenzene | 1.0 | U | 1.0 | 0.49 | ug/L | | | 10/05/22 14:42 | 1 |
| Methyl acetate | 10 | U | 10 | 1.7 | ug/L | | | 10/05/22 14:42 | 1 |
| Methyl tert-butyl ether | 1.0 | U | 1.0 | 0.47 | ug/L | | | 10/05/22 14:42 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0 | U | 1.0 | 0.41 | ug/L | | | 10/05/22 14:42 | 1 |
| 1,2,4-Trichlorobenzene | 1.0 | U | 1.0 | 0.77 | ug/L | | | 10/05/22 14:42 | 1 |
| 1,2-Dichlorobenzene | 1.0 | U | 1.0 | 0.48 | ug/L | | | 10/05/22 14:42 | 1 |
| 1,3-Dichlorobenzene | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 14:42 | 1 |
| 1,4-Dichlorobenzene | 1.0 | U | 1.0 | 0.41 | ug/L | | | 10/05/22 14:42 | 1 |
| Trichlorofluoromethane | 1.0 | U | 1.0 | 0.45 | ug/L | | | 10/05/22 14:42 | 1 |
| Chlorodibromomethane | 1.0 | U | 1.0 | 0.39 | ug/L | | | 10/05/22 14:42 | 1 |
| Methylcyclohexane | 1.0 | U | 1.0 | 0.33 | ug/L | | | 10/05/22 14:42 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 240-545680/8**
**Matrix: Water**
**Analysis Batch: 545680**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 (Surr) | 90 | | 62 - 137 | | 10/05/22 14:42 | 1 |
| 4-Bromofluorobenzene (Surr) | 98 | | 56 - 136 | | 10/05/22 14:42 | 1 |
| Toluene-d8 (Surr) | 92 | | 78 - 122 | | 10/05/22 14:42 | 1 |
| Dibromofluoromethane (Surr) | 105 | | 73 - 120 | | 10/05/22 14:42 | 1 |

**Lab Sample ID: LCS 240-545680/5**
**Matrix: Water**
**Analysis Batch: 545680**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Acetone | 40.0 | 36.9 | | ug/L | | 92 | 50 - 149 |
| Benzene | 20.0 | 20.5 | | ug/L | | 103 | 77 - 123 |
| Dichlorobromomethane | 20.0 | 17.9 | | ug/L | | 90 | 69 - 126 |
| Bromoform | 20.0 | 15.9 | | ug/L | | 79 | 57 - 129 |
| Bromomethane | 20.0 | 26.4 | E | ug/L | | 132 | 36 - 142 |
| 2-Butanone (MEK) | 40.0 | 39.6 | | ug/L | | 99 | 54 - 156 |
| Carbon disulfide | 20.0 | 18.3 | | ug/L | | 91 | 43 - 140 |
| Carbon tetrachloride | 20.0 | 18.2 | | ug/L | | 91 | 55 - 137 |
| Chlorobenzene | 20.0 | 19.0 | | ug/L | | 95 | 80 - 121 |
| Chloroethane | 20.0 | 22.6 | | ug/L | | 113 | 38 - 152 |
| Chloroform | 20.0 | 19.7 | | ug/L | | 99 | 74 - 122 |
| Chloromethane | 20.0 | 17.9 | | ug/L | | 89 | 47 - 143 |
| 1,1-Dichloroethane | 20.0 | 19.1 | | ug/L | | 95 | 72 - 127 |
| 1,2-Dichloroethane | 20.0 | 17.3 | | ug/L | | 86 | 66 - 128 |
| 1,1-Dichloroethene | 20.0 | 20.7 | | ug/L | | 103 | 63 - 134 |
| 1,2-Dichloropropane | 20.0 | 20.2 | | ug/L | | 101 | 75 - 133 |
| cis-1,3-Dichloropropene | 20.0 | 16.9 | | ug/L | | 84 | 64 - 130 |
| trans-1,3-Dichloropropene | 20.0 | 13.9 | | ug/L | | 69 | 57 - 129 |
| Ethylbenzene | 20.0 | 18.6 | | ug/L | | 93 | 80 - 121 |
| 2-Hexanone | 40.0 | 33.8 | | ug/L | | 84 | 43 - 167 |
| Methylene Chloride | 20.0 | 20.5 | | ug/L | | 102 | 71 - 125 |
| 4-Methyl-2-pentanone (MIBK) | 40.0 | 35.8 | | ug/L | | 90 | 46 - 158 |
| Styrene | 20.0 | 17.7 | | ug/L | | 88 | 80 - 135 |
| 1,1,2,2-Tetrachloroethane | 20.0 | 18.1 | | ug/L | | 91 | 58 - 157 |
| Tetrachloroethene | 20.0 | 18.6 | | ug/L | | 93 | 76 - 123 |
| Toluene | 20.0 | 17.9 | | ug/L | | 90 | 80 - 123 |
| Trichloroethene | 20.0 | 21.0 | | ug/L | | 105 | 70 - 122 |
| Vinyl chloride | 20.0 | 16.2 | | ug/L | | 81 | 60 - 144 |
| Xylenes, Total | 40.0 | 36.6 | | ug/L | | 92 | 80 - 121 |
| 1,1,1-Trichloroethane | 20.0 | 17.2 | | ug/L | | 86 | 64 - 131 |
| 1,1,2-Trichloroethane | 20.0 | 18.5 | | ug/L | | 93 | 70 - 138 |
| Cyclohexane | 20.0 | 19.6 | | ug/L | | 98 | 58 - 146 |
| 1,2-Dibromo-3-Chloropropane | 20.0 | 14.8 | | ug/L | | 74 | 53 - 135 |
| Ethylene Dibromide | 20.0 | 18.0 | | ug/L | | 90 | 71 - 134 |
| Dichlorodifluoromethane | 20.0 | 20.3 | | ug/L | | 102 | 34 - 153 |
| cis-1,2-Dichloroethene | 20.0 | 20.2 | | ug/L | | 101 | 77 - 123 |
| trans-1,2-Dichloroethene | 20.0 | 21.2 | | ug/L | | 106 | 75 - 124 |
| Isopropylbenzene | 20.0 | 17.5 | | ug/L | | 88 | 74 - 128 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 240-545680/5**
**Matrix: Water**
**Analysis Batch: 545680**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Methyl acetate | 40.0 | 40.5 | | ug/L | | 101 | 42 - 169 |
| Methyl tert-butyl ether | 20.0 | 16.5 | | ug/L | | 83 | 65 - 126 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 22.5 | | ug/L | | 112 | 51 - 146 |
| 1,2,4-Trichlorobenzene | 20.0 | 15.5 | | ug/L | | 77 | 44 - 147 |
| 1,2-Dichlorobenzene | 20.0 | 18.0 | | ug/L | | 90 | 78 - 120 |
| 1,3-Dichlorobenzene | 20.0 | 17.7 | | ug/L | | 89 | 80 - 120 |
| 1,4-Dichlorobenzene | 20.0 | 17.8 | | ug/L | | 89 | 80 - 120 |
| Trichlorofluoromethane | 20.0 | 19.5 | | ug/L | | 97 | 30 - 170 |
| Chlorodibromomethane | 20.0 | 17.3 | | ug/L | | 87 | 70 - 124 |
| Methylcyclohexane | 20.0 | 20.3 | | ug/L | | 101 | 62 - 136 |
| m-Xylene & p-Xylene | 20.0 | 18.6 | | ug/L | | 93 | 80 - 120 |
| o-Xylene | 20.0 | 18.0 | | ug/L | | 90 | 80 - 123 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *82* | | *62 - 137* |
| *4-Bromofluorobenzene (Surr)* | *110* | | *56 - 136* |
| *Toluene-d8 (Surr)* | *95* | | *78 - 122* |
| *Dibromofluoromethane (Surr)* | *98* | | *73 - 120* |

**Lab Sample ID: 240-173648-1 MS**
**Matrix: Water**
**Analysis Batch: 545680**

**Client Sample ID: TW-242_092322**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 10 | U | 40.0 | 34.1 | | ug/L | | 85 | 33 - 149 |
| Benzene | 1.0 | U | 20.0 | 20.2 | | ug/L | | 101 | 64 - 128 |
| Dichlorobromomethane | 1.0 | U | 20.0 | 17.6 | | ug/L | | 88 | 62 - 125 |
| Bromoform | 1.0 | U | 20.0 | 15.5 | | ug/L | | 77 | 47 - 125 |
| Bromomethane | 1.0 | U | 20.0 | 23.6 | E | ug/L | | 118 | 28 - 150 |
| 2-Butanone (MEK) | 10 | U | 40.0 | 37.9 | | ug/L | | 95 | 40 - 151 |
| Carbon disulfide | 1.0 | U | 20.0 | 18.1 | | ug/L | | 90 | 38 - 140 |
| Carbon tetrachloride | 1.0 | U | 20.0 | 17.8 | | ug/L | | 89 | 51 - 133 |
| Chlorobenzene | 1.0 | U | 20.0 | 18.5 | | ug/L | | 93 | 74 - 121 |
| Chloroethane | 1.0 | U | 20.0 | 22.9 | | ug/L | | 115 | 10 - 199 |
| Chloroform | 1.0 | U | 20.0 | 19.3 | | ug/L | | 97 | 70 - 122 |
| Chloromethane | 1.0 | U | 20.0 | 17.3 | | ug/L | | 86 | 32 - 149 |
| 1,1-Dichloroethane | 1.0 | U | 20.0 | 18.9 | | ug/L | | 95 | 68 - 125 |
| 1,2-Dichloroethane | 1.0 | U | 20.0 | 17.2 | | ug/L | | 86 | 63 - 126 |
| 1,1-Dichloroethene | 1.0 | U | 20.0 | 19.5 | | ug/L | | 97 | 56 - 135 |
| 1,2-Dichloropropane | 1.0 | U | 20.0 | 20.1 | | ug/L | | 100 | 69 - 130 |
| cis-1,3-Dichloropropene | 1.0 | U | 20.0 | 14.7 | | ug/L | | 74 | 47 - 125 |
| trans-1,3-Dichloropropene | 1.0 | U | 20.0 | 13.7 | | ug/L | | 69 | 47 - 120 |
| Ethylbenzene | 1.0 | U | 20.0 | 18.0 | | ug/L | | 90 | 67 - 127 |
| 2-Hexanone | 10 | U | 40.0 | 33.8 | | ug/L | | 84 | 35 - 156 |
| Methylene Chloride | 5.0 | U | 20.0 | 20.4 | | ug/L | | 102 | 62 - 129 |
| 4-Methyl-2-pentanone (MIBK) | 10 | U | 40.0 | 34.1 | | ug/L | | 85 | 31 - 153 |
| Styrene | 1.0 | U | 20.0 | 17.4 | | ug/L | | 87 | 70 - 139 |
| 1,1,2,2-Tetrachloroethane | 1.0 | U | 20.0 | 17.6 | | ug/L | | 88 | 54 - 145 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 240-173648-1 MS**
**Matrix: Water**
**Analysis Batch: 545680**

**Client Sample ID: TW-242_092322**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 1.0 | U | 20.0 | 18.6 | | ug/L | | 93 | 62 - 131 |
| Toluene | 1.0 | U | 20.0 | 18.2 | | ug/L | | 91 | 58 - 135 |
| Trichloroethene | 1.0 | U | 20.0 | 19.8 | | ug/L | | 99 | 61 - 124 |
| Vinyl chloride | 1.0 | U | 20.0 | 15.0 | | ug/L | | 75 | 43 - 157 |
| Xylenes, Total | 2.0 | U | 40.0 | 34.7 | | ug/L | | 87 | 71 - 123 |
| 1,1,1-Trichloroethane | 1.0 | U | 20.0 | 16.7 | | ug/L | | 84 | 60 - 130 |
| 1,1,2-Trichloroethane | 1.0 | U | 20.0 | 19.3 | | ug/L | | 96 | 69 - 131 |
| Cyclohexane | 1.0 | U | 20.0 | 16.1 | | ug/L | | 81 | 42 - 147 |
| 1,2-Dibromo-3-Chloropropane | 2.0 | U | 20.0 | 14.1 | | ug/L | | 71 | 41 - 129 |
| Ethylene Dibromide | 1.0 | U | 20.0 | 17.6 | | ug/L | | 88 | 69 - 125 |
| Dichlorodifluoromethane | 1.0 | U | 20.0 | 18.1 | | ug/L | | 90 | 38 - 139 |
| cis-1,2-Dichloroethene | 1.0 | U | 20.0 | 20.2 | | ug/L | | 101 | 66 - 128 |
| trans-1,2-Dichloroethene | 1.0 | U | 20.0 | 20.6 | | ug/L | | 103 | 56 - 136 |
| Isopropylbenzene | 1.0 | U | 20.0 | 16.5 | | ug/L | | 83 | 64 - 129 |
| Methyl acetate | 10 | U | 40.0 | 38.9 | | ug/L | | 97 | 37 - 155 |
| Methyl tert-butyl ether | 1.0 | U | 20.0 | 15.7 | | ug/L | | 78 | 47 - 134 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0 | U | 20.0 | 17.6 | | ug/L | | 88 | 41 - 147 |
| 1,2,4-Trichlorobenzene | 1.0 | U | 20.0 | 13.7 | | ug/L | | 68 | 29 - 156 |
| 1,2-Dichlorobenzene | 1.0 | U | 20.0 | 17.1 | | ug/L | | 85 | 73 - 120 |
| 1,3-Dichlorobenzene | 1.0 | U | 20.0 | 16.8 | | ug/L | | 84 | 73 - 120 |
| 1,4-Dichlorobenzene | 1.0 | U | 20.0 | 17.3 | | ug/L | | 86 | 74 - 120 |
| Trichlorofluoromethane | 1.0 | U | 20.0 | 19.3 | | ug/L | | 96 | 24 - 177 |
| Chlorodibromomethane | 1.0 | U | 20.0 | 17.1 | | ug/L | | 86 | 65 - 120 |
| Methylcyclohexane | 1.0 | U | 20.0 | 15.1 | | ug/L | | 75 | 39 - 144 |
| m-Xylene & p-Xylene | 2.0 | U | 20.0 | 17.4 | | ug/L | | 87 | 71 - 123 |
| o-Xylene | 1.0 | U | 20.0 | 17.3 | | ug/L | | 86 | 70 - 125 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *81* | | *62 - 137* |
| *4-Bromofluorobenzene (Surr)* | *111* | | *56 - 136* |
| *Toluene-d8 (Surr)* | *97* | | *78 - 122* |
| *Dibromofluoromethane (Surr)* | *97* | | *73 - 120* |

**Lab Sample ID: 240-173648-1 MSD**
**Matrix: Water**
**Analysis Batch: 545680**

**Client Sample ID: TW-242_092322**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | 10 | U | 40.0 | 43.6 | | ug/L | | 109 | 33 - 149 | 25 | 34 |
| Benzene | 1.0 | U | 20.0 | 21.6 | | ug/L | | 108 | 64 - 128 | 6 | 14 |
| Dichlorobromomethane | 1.0 | U | 20.0 | 18.8 | | ug/L | | 94 | 62 - 125 | 6 | 13 |
| Bromoform | 1.0 | U | 20.0 | 17.1 | | ug/L | | 85 | 47 - 125 | 10 | 15 |
| Bromomethane | 1.0 | U | 20.0 | 18.9 | | ug/L | | 94 | 28 - 150 | 22 | 26 |
| 2-Butanone (MEK) | 10 | U | 40.0 | 44.4 | | ug/L | | 111 | 40 - 151 | 16 | 20 |
| Carbon disulfide | 1.0 | U | 20.0 | 20.4 | | ug/L | | 102 | 38 - 140 | 12 | 23 |
| Carbon tetrachloride | 1.0 | U | 20.0 | 18.9 | | ug/L | | 94 | 51 - 133 | 6 | 24 |
| Chlorobenzene | 1.0 | U | 20.0 | 20.0 | | ug/L | | 100 | 74 - 121 | 8 | 14 |
| Chloroethane | 1.0 | U | 20.0 | 22.1 | | ug/L | | 110 | 10 - 199 | 4 | 30 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 240-173648-1 MSD**
**Matrix: Water**
**Analysis Batch: 545680**

**Client Sample ID: TW-242_092322**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 1.0 | U | 20.0 | 20.5 | | ug/L | | 103 | 70 - 122 | 6 | 14 |
| Chloromethane | 1.0 | U | 20.0 | 17.1 | | ug/L | | 86 | 32 - 149 | 1 | 27 |
| 1,1-Dichloroethane | 1.0 | U | 20.0 | 20.6 | | ug/L | | 103 | 68 - 125 | 8 | 13 |
| 1,2-Dichloroethane | 1.0 | U | 20.0 | 18.5 | | ug/L | | 92 | 63 - 126 | 7 | 12 |
| 1,1-Dichloroethene | 1.0 | U | 20.0 | 21.5 | | ug/L | | 107 | 56 - 135 | 10 | 26 |
| 1,2-Dichloropropane | 1.0 | U | 20.0 | 22.1 | | ug/L | | 111 | 69 - 130 | 10 | 13 |
| cis-1,3-Dichloropropene | 1.0 | U | 20.0 | 16.5 | | ug/L | | 82 | 47 - 125 | 11 | 13 |
| trans-1,3-Dichloropropene | 1.0 | U | 20.0 | 15.5 | | ug/L | | 77 | 47 - 120 | 12 | 14 |
| Ethylbenzene | 1.0 | U | 20.0 | 19.2 | | ug/L | | 96 | 67 - 127 | 6 | 15 |
| 2-Hexanone | 10 | U | 40.0 | 38.7 | | ug/L | | 97 | 35 - 156 | 14 | 17 |
| Methylene Chloride | 5.0 | U | 20.0 | 21.7 | | ug/L | | 109 | 62 - 129 | 6 | 17 |
| 4-Methyl-2-pentanone (MIBK) | 10 | U | 40.0 | 39.4 | | ug/L | | 99 | 31 - 153 | 14 | 15 |
| Styrene | 1.0 | U | 20.0 | 18.8 | | ug/L | | 94 | 70 - 139 | 7 | 18 |
| 1,1,2,2-Tetrachloroethane | 1.0 | U | 20.0 | 19.9 | | ug/L | | 99 | 54 - 145 | 12 | 15 |
| Tetrachloroethene | 1.0 | U | 20.0 | 20.3 | | ug/L | | 101 | 62 - 131 | 9 | 20 |
| Toluene | 1.0 | U | 20.0 | 19.5 | | ug/L | | 97 | 58 - 135 | 7 | 14 |
| Trichloroethene | 1.0 | U | 20.0 | 21.9 | | ug/L | | 109 | 61 - 124 | 10 | 15 |
| Vinyl chloride | 1.0 | U | 20.0 | 15.3 | | ug/L | | 77 | 43 - 157 | 2 | 24 |
| Xylenes, Total | 2.0 | U | 40.0 | 37.9 | | ug/L | | 95 | 71 - 123 | 9 | 15 |
| 1,1,1-Trichloroethane | 1.0 | U | 20.0 | 18.1 | | ug/L | | 91 | 60 - 130 | 8 | 17 |
| 1,1,2-Trichloroethane | 1.0 | U | 20.0 | 20.6 | | ug/L | | 103 | 69 - 131 | 7 | 14 |
| Cyclohexane | 1.0 | U | 20.0 | 20.1 | | ug/L | | 101 | 42 - 147 | 22 | 35 |
| 1,2-Dibromo-3-Chloropropane | 2.0 | U | 20.0 | 15.9 | | ug/L | | 79 | 41 - 129 | 12 | 22 |
| Ethylene Dibromide | 1.0 | U | 20.0 | 19.0 | | ug/L | | 95 | 69 - 125 | 8 | 14 |
| Dichlorodifluoromethane | 1.0 | U | 20.0 | 19.8 | | ug/L | | 99 | 38 - 139 | 9 | 35 |
| cis-1,2-Dichloroethene | 1.0 | U | 20.0 | 21.9 | | ug/L | | 110 | 66 - 128 | 8 | 14 |
| trans-1,2-Dichloroethene | 1.0 | U | 20.0 | 22.7 | | ug/L | | 113 | 56 - 136 | 9 | 15 |
| Isopropylbenzene | 1.0 | U | 20.0 | 17.9 | | ug/L | | 89 | 64 - 129 | 8 | 18 |
| Methyl acetate | 10 | U | 40.0 | 45.4 | | ug/L | | 113 | 37 - 155 | 15 | 18 |
| Methyl tert-butyl ether | 1.0 | U | 20.0 | 17.6 | | ug/L | | 88 | 47 - 134 | 11 | 16 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.0 | U | 20.0 | 23.6 | | ug/L | | 118 | 41 - 147 | 29 | 35 |
| 1,2,4-Trichlorobenzene | 1.0 | U | 20.0 | 14.5 | | ug/L | | 72 | 29 - 156 | 6 | 19 |
| 1,2-Dichlorobenzene | 1.0 | U | 20.0 | 18.4 | | ug/L | | 92 | 73 - 120 | 8 | 14 |
| 1,3-Dichlorobenzene | 1.0 | U | 20.0 | 18.2 | | ug/L | | 91 | 73 - 120 | 8 | 14 |
| 1,4-Dichlorobenzene | 1.0 | U | 20.0 | 18.3 | | ug/L | | 92 | 74 - 120 | 6 | 15 |
| Trichlorofluoromethane | 1.0 | U | 20.0 | 19.3 | | ug/L | | 97 | 24 - 177 | 0 | 34 |
| Chlorodibromomethane | 1.0 | U | 20.0 | 18.5 | | ug/L | | 93 | 65 - 120 | 8 | 13 |
| Methylcyclohexane | 1.0 | U | 20.0 | 19.7 | | ug/L | | 99 | 39 - 144 | 27 | 35 |
| m-Xylene & p-Xylene | 2.0 | U | 20.0 | 18.8 | | ug/L | | 94 | 71 - 123 | 8 | 16 |
| o-Xylene | 1.0 | U | 20.0 | 19.1 | | ug/L | | 95 | 70 - 125 | 10 | 15 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *80* | | *62 - 137* |
| *4-Bromofluorobenzene (Surr)* | *111* | | *56 - 136* |
| *Toluene-d8 (Surr)* | *97* | | *78 - 122* |
| *Dibromofluoromethane (Surr)* | *97* | | *73 - 120* |

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 240-544675/1-A**
**Matrix: Water**
**Analysis Batch: 544933**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 544675**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | U | 10 | 4.1 | ug/L | | 09/28/22 12:00 | 09/29/22 16:05 | 1 |
| Barium | 3.01 | J | 200 | 1.3 | ug/L | | 09/28/22 12:00 | 09/29/22 16:05 | 1 |
| Iron | 100 | U | 100 | 83 | ug/L | | 09/28/22 12:00 | 09/29/22 16:05 | 1 |
| Manganese | 15 | U | 15 | 6.2 | ug/L | | 09/28/22 12:00 | 09/29/22 16:05 | 1 |
| Sodium | 5000 | U | 5000 | 2100 | ug/L | | 09/28/22 12:00 | 09/29/22 16:05 | 1 |
| Selenium | 15 | U | 15 | 6.0 | ug/L | | 09/28/22 12:00 | 09/29/22 16:05 | 1 |

**Lab Sample ID: LCS 240-544675/2-A**
**Matrix: Water**
**Analysis Batch: 544933**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 544675**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 2000 | 1980 | | ug/L | | 99 | 80 - 120 |
| Barium | 2000 | 1870 | | ug/L | | 93 | 80 - 120 |
| Iron | 10000 | 8870 | | ug/L | | 89 | 80 - 120 |
| Manganese | 1000 | 915 | | ug/L | | 92 | 80 - 120 |
| Sodium | 50000 | 45200 | | ug/L | | 90 | 80 - 120 |
| Selenium | 2000 | 2000 | | ug/L | | 100 | 80 - 120 |

**Lab Sample ID: 240-173648-5 MS**
**Matrix: Water**
**Analysis Batch: 544933**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Total Recoverable**
**Prep Batch: 544675**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 13 | | 2000 | 1790 | | ug/L | | 89 | 75 - 125 |
| Barium | 36 | J B | 2000 | 1690 | | ug/L | | 83 | 75 - 125 |
| Iron | 5100 | F1 | 10000 | 12400 | F1 | ug/L | | 73 | 75 - 125 |
| Manganese | 1200 | F1 | 1000 | 1890 | F1 | ug/L | | 71 | 75 - 125 |
| Sodium | 22000 | | 50000 | 60300 | | ug/L | | 76 | 75 - 125 |
| Selenium | 15 | U | 2000 | 1790 | | ug/L | | 89 | 75 - 125 |

**Lab Sample ID: 240-173648-5 MSD**
**Matrix: Water**
**Analysis Batch: 544933**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Total Recoverable**
**Prep Batch: 544675**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 13 | | 2000 | 1890 | | ug/L | | 94 | 75 - 125 | 5 | 20 |
| Barium | 36 | J B | 2000 | 1800 | | ug/L | | 88 | 75 - 125 | 6 | 20 |
| Iron | 5100 | F1 | 10000 | 13100 | | ug/L | | 80 | 75 - 125 | 5 | 20 |
| Manganese | 1200 | F1 | 1000 | 1990 | | ug/L | | 81 | 75 - 125 | 5 | 20 |
| Sodium | 22000 | | 50000 | 63900 | | ug/L | | 84 | 75 - 125 | 6 | 20 |
| Selenium | 15 | U | 2000 | 1880 | | ug/L | | 94 | 75 - 125 | 5 | 20 |

**Lab Sample ID: 240-173648-5 MS**
**Matrix: Water**
**Analysis Batch: 544933**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Dissolved**
**Prep Batch: 544675**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11 | | 2000 | 2020 | | ug/L | | 100 | 75 - 125 |

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: 240-173648-5 MS**
**Matrix: Water**
**Analysis Batch: 544933**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Dissolved**
**Prep Batch: 544675**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 34 | J B | 2000 | 1910 | | ug/L | | 94 | 75 - 125 |
| Iron | 4700 | | 10000 | 13600 | | ug/L | | 88 | 75 - 125 |
| Manganese | 1200 | | 1000 | 2070 | | ug/L | | 91 | 75 - 125 |
| Sodium | 24000 | | 50000 | 69200 | | ug/L | | 91 | 75 - 125 |
| Selenium | 15 | U | 2000 | 2010 | | ug/L | | 101 | 75 - 125 |

**Lab Sample ID: 240-173648-5 MSD**
**Matrix: Water**
**Analysis Batch: 544933**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Dissolved**
**Prep Batch: 544675**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11 | | 2000 | 1940 | | ug/L | | 96 | 75 - 125 | 4 | 20 |
| Barium | 34 | J B | 2000 | 1840 | | ug/L | | 90 | 75 - 125 | 4 | 20 |
| Iron | 4700 | | 10000 | 13000 | | ug/L | | 83 | 75 - 125 | 4 | 20 |
| Manganese | 1200 | | 1000 | 1980 | | ug/L | | 83 | 75 - 125 | 4 | 20 |
| Sodium | 24000 | | 50000 | 66200 | | ug/L | | 85 | 75 - 125 | 4 | 20 |
| Selenium | 15 | U | 2000 | 1930 | | ug/L | | 97 | 75 - 125 | 4 | 20 |

## Method: 2540 C-2011 - Total Dissolved Solids (Dried at 180 °C)

**Lab Sample ID: MB 240-545047/1**
**Matrix: Water**
**Analysis Batch: 545047**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 10 | U | 10 | 7.8 | mg/L | | | 09/30/22 09:38 | 1 |

**Lab Sample ID: LCS 240-545047/2**
**Matrix: Water**
**Analysis Batch: 545047**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 493 | 428 | | mg/L | | 87 | 80 - 120 |

**Lab Sample ID: 240-173648-5 DU**
**Matrix: Water**
**Analysis Batch: 545047**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 330 | | 325 | | mg/L | | NC | 20 |

## Method: 4500 CN E-2016 - Cyanide, Total

**Lab Sample ID: MB 180-413994/4-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 413994**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/04/22 08:04 | 10/04/22 14:24 | 1 |

## Method: 4500 CN E-2016 - Cyanide, Total (Continued)

**Lab Sample ID: HLCS 180-413994/2-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 413994**

| Analyte | | | Spike Added | HLCS Result | HLCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | | | 0.250 | 0.252 | | mg/L | | 101 | 90 - 110 | | |

**Lab Sample ID: LCS 180-413994/3-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 413994**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | | | 0.200 | 0.198 | | mg/L | | 99 | 90 - 110 | | |

**Lab Sample ID: LLCS 180-413994/1-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 413994**

| Analyte | | | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | | | 0.0500 | 0.0526 | | mg/L | | 105 | 90 - 110 | | |

**Lab Sample ID: 240-173648-5 MS**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Total/NA**
**Prep Batch: 413994**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.010 | U | 0.200 | 0.204 | | mg/L | | 102 | 90 - 110 | | |

**Lab Sample ID: 240-173648-5 MSD**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Total/NA**
**Prep Batch: 413994**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.010 | U | 0.200 | 0.202 | | mg/L | | 101 | 90 - 110 | 1 | 20 |

**Lab Sample ID: 240-173648-5 DU**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Total/NA**
**Prep Batch: 413994**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.010 | U | 0.010 | U | mg/L | | NC | 20 |

**Lab Sample ID: MB 180-413995/4-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 413995**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.010 | U | 0.010 | 0.0080 | mg/L | | 10/04/22 11:00 | 10/04/22 15:18 | 1 |

**Lab Sample ID: HLCS 180-413995/2-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 413995**

| Analyte | | | Spike Added | HLCS Result | HLCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | | | 0.250 | 0.257 | | mg/L | | 103 | 90 - 110 | | |

## Method: 4500 CN E-2016 - Cyanide, Total

**Lab Sample ID: LCS 180-413995/3-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 413995**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.200 | 0.203 | | mg/L | | 101 | 90 - 110 |

**Lab Sample ID: LLCS 180-413995/1-A**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 413995**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.0500 | 0.0572 | *+ | mg/L | | 114 | 90 - 110 |

**Lab Sample ID: 240-173648-5 MS**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Dissolved**
**Prep Batch: 413995**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.010 | U *+ | 0.200 | 0.205 | | mg/L | | 102 | 90 - 110 |

**Lab Sample ID: 240-173648-5 MSD**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Dissolved**
**Prep Batch: 413995**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.010 | U *+ | 0.200 | 0.218 | | mg/L | | 109 | 90 - 110 | 6 | 20 |

**Lab Sample ID: 240-173648-5 DU**
**Matrix: Water**
**Analysis Batch: 414100**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Dissolved**
**Prep Batch: 413995**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | 0.010 | U *+ | 0.010 | U *+ | mg/L | | NC | 20 |

## Method: 4500 NH3 H - Ammonia

**Lab Sample ID: MB 240-545147/44**
**Matrix: Water**
**Analysis Batch: 545147**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.20 | U | 0.20 | 0.076 | mg/L | | | 09/30/22 13:43 | 1 |

**Lab Sample ID: MB 240-545147/76**
**Matrix: Water**
**Analysis Batch: 545147**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.20 | U | 0.20 | 0.076 | mg/L | | | 09/30/22 15:19 | 1 |

## Method: 4500 NH3 H - Ammonia (Continued)

**Lab Sample ID: LCS 240-545147/45**
**Matrix: Water**
**Analysis Batch: 545147**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Ammonia | 6.37 | 6.16 | | mg/L | | 97 | 90 - 110 |

**Lab Sample ID: LCS 240-545147/77**
**Matrix: Water**
**Analysis Batch: 545147**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Ammonia | 6.37 | 6.06 | | mg/L | | 95 | 90 - 110 |

**Lab Sample ID: 240-173648-5 MS**
**Matrix: Water**
**Analysis Batch: 545147**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.11 | J | 2.50 | 2.35 | | mg/L | | 90 | 90 - 110 |

**Lab Sample ID: 240-173648-5 MSD**
**Matrix: Water**
**Analysis Batch: 545147**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.11 | J | 2.50 | 2.36 | | mg/L | | 90 | 90 - 110 | 0 | 20 |

## Method: 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 240-544532/3**
**Matrix: Water**
**Analysis Batch: 544532**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.0 | U | 1.0 | 0.28 | mg/L | | | 09/27/22 19:58 | 1 |
| Sulfate | 1.0 | U | 1.0 | 0.35 | mg/L | | | 09/27/22 19:58 | 1 |

**Lab Sample ID: LCS 240-544532/4**
**Matrix: Water**
**Analysis Batch: 544532**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 49.5 | | mg/L | | 99 | 90 - 110 |
| Sulfate | 50.0 | 51.0 | | mg/L | | 102 | 90 - 110 |

**Lab Sample ID: 240-173648-5 MS**
**Matrix: Water**
**Analysis Batch: 544532**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 15 | | 50.0 | 64.2 | | mg/L | | 98 | 80 - 120 |
| Sulfate | 0.48 | J | 50.0 | 50.7 | | mg/L | | 100 | 80 - 120 |

## Method: 9056A - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 240-173648-5 MSD**
**Matrix: Water**
**Analysis Batch: 544532**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 15 | | 50.0 | 64.6 | | mg/L | | 98 | 80 - 120 | 1 | 15 |
| Sulfate | 0.48 | J | 50.0 | 51.1 | | mg/L | | 101 | 80 - 120 | 1 | 15 |

**Lab Sample ID: MB 240-544533/3**
**Matrix: Water**
**Analysis Batch: 544533**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | 0.10 | U | 0.10 | 0.014 | mg/L | | | 09/27/22 19:58 | 1 |
| Nitrate as N | 0.10 | U | 0.10 | 0.036 | mg/L | | | 09/27/22 19:58 | 1 |

**Lab Sample ID: LCS 240-544533/4**
**Matrix: Water**
**Analysis Batch: 544533**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Nitrite as N | 2.50 | 2.54 | | mg/L | | 101 | 90 - 110 |
| Nitrate as N | 2.50 | 2.56 | | mg/L | | 102 | 90 - 110 |

**Lab Sample ID: 240-173648-5 MS**
**Matrix: Water**
**Analysis Batch: 544533**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | 0.10 | U | 2.50 | 2.64 | | mg/L | | 105 | 80 - 120 |
| Nitrate as N | 0.10 | U | 2.50 | 2.52 | | mg/L | | 101 | 80 - 120 |

**Lab Sample ID: 240-173648-5 MS**
**Matrix: Water**
**Analysis Batch: 544533**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | 0.50 | U | 12.5 | 12.1 | | mg/L | | 97 | 80 - 120 |
| Nitrate as N | 0.50 | U | 12.5 | 12.2 | | mg/L | | 98 | 80 - 120 |

**Lab Sample ID: 240-173648-5 MSD**
**Matrix: Water**
**Analysis Batch: 544533**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | 0.10 | U | 2.50 | 2.59 | | mg/L | | 103 | 80 - 120 | 2 | 15 |
| Nitrate as N | 0.10 | U | 2.50 | 2.53 | | mg/L | | 101 | 80 - 120 | 1 | 15 |

**Lab Sample ID: 240-173648-5 MSD**
**Matrix: Water**
**Analysis Batch: 544533**

**Client Sample ID: MW-183WT_092622**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | 0.50 | U | 12.5 | 12.4 | | mg/L | | 99 | 80 - 120 | 2 | 15 |
| Nitrate as N | 0.50 | U | 12.5 | 12.4 | | mg/L | | 99 | 80 - 120 | 1 | 15 |

# QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

## GC/MS VOA

### Analysis Batch: 545680

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173648-1 | TW-242_092322 | Total/NA | Water | 8260B | |
| 240-173648-2 | TWW-1_092322 | Total/NA | Water | 8260B | |
| 240-173648-3 | DUP-03_092322 | Total/NA | Water | 8260B | |
| 240-173648-4 | TRIP BLANK_092322 | Total/NA | Water | 8260B | |
| MB 240-545680/8 | Method Blank | Total/NA | Water | 8260B | |
| LCS 240-545680/5 | Lab Control Sample | Total/NA | Water | 8260B | |
| 240-173648-1 MS | TW-242_092322 | Total/NA | Water | 8260B | |
| 240-173648-1 MSD | TW-242_092322 | Total/NA | Water | 8260B | |

## Metals

### Prep Batch: 544675

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173648-5 | MW-183WT_092622 | Dissolved | Water | 3005A | |
| 240-173648-5 | MW-183WT_092622 | Total Recoverable | Water | 3005A | |
| 240-173648-6 | MW-118S1_092622 | Dissolved | Water | 3005A | |
| 240-173648-6 | MW-118S1_092622 | Total Recoverable | Water | 3005A | |
| MB 240-544675/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 240-544675/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 240-173648-5 MS | MW-183WT_092622 | Dissolved | Water | 3005A | |
| 240-173648-5 MS | MW-183WT_092622 | Total Recoverable | Water | 3005A | |
| 240-173648-5 MSD | MW-183WT_092622 | Dissolved | Water | 3005A | |
| 240-173648-5 MSD | MW-183WT_092622 | Total Recoverable | Water | 3005A | |

### Analysis Batch: 544933

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173648-5 | MW-183WT_092622 | Dissolved | Water | 6010B | 544675 |
| 240-173648-5 | MW-183WT_092622 | Total Recoverable | Water | 6010B | 544675 |
| 240-173648-6 | MW-118S1_092622 | Dissolved | Water | 6010B | 544675 |
| 240-173648-6 | MW-118S1_092622 | Total Recoverable | Water | 6010B | 544675 |
| MB 240-544675/1-A | Method Blank | Total Recoverable | Water | 6010B | 544675 |
| LCS 240-544675/2-A | Lab Control Sample | Total Recoverable | Water | 6010B | 544675 |
| 240-173648-5 MS | MW-183WT_092622 | Dissolved | Water | 6010B | 544675 |
| 240-173648-5 MS | MW-183WT_092622 | Total Recoverable | Water | 6010B | 544675 |
| 240-173648-5 MSD | MW-183WT_092622 | Dissolved | Water | 6010B | 544675 |
| 240-173648-5 MSD | MW-183WT_092622 | Total Recoverable | Water | 6010B | 544675 |

## General Chemistry

### Prep Batch: 413994

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173648-5 | MW-183WT_092622 | Total/NA | Water | SM 4500 CN C | |
| 240-173648-6 | MW-118S1_092622 | Total/NA | Water | SM 4500 CN C | |
| MB 180-413994/4-A | Method Blank | Total/NA | Water | SM 4500 CN C | |
| HLCS 180-413994/2-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |
| LCS 180-413994/3-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |
| LLCS 180-413994/1-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |
| 240-173648-5 MS | MW-183WT_092622 | Total/NA | Water | SM 4500 CN C | |
| 240-173648-5 MSD | MW-183WT_092622 | Total/NA | Water | SM 4500 CN C | |
| 240-173648-5 DU | MW-183WT_092622 | Total/NA | Water | SM 4500 CN C | |

## General Chemistry

### Prep Batch: 413995

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173648-5 | MW-183WT_092622 | Dissolved | Water | SM 4500 CN C | |
| 240-173648-6 | MW-118S1_092622 | Dissolved | Water | SM 4500 CN C | |
| MB 180-413995/4-A | Method Blank | Total/NA | Water | SM 4500 CN C | |
| HLCS 180-413995/2-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |
| LCS 180-413995/3-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |
| LLCS 180-413995/1-A | Lab Control Sample | Total/NA | Water | SM 4500 CN C | |
| 240-173648-5 MS | MW-183WT_092622 | Dissolved | Water | SM 4500 CN C | |
| 240-173648-5 MSD | MW-183WT_092622 | Dissolved | Water | SM 4500 CN C | |
| 240-173648-5 DU | MW-183WT_092622 | Dissolved | Water | SM 4500 CN C | |

### Analysis Batch: 414100

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173648-5 | MW-183WT_092622 | Dissolved | Water | 4500 CN E-2016 | 413995 |
| 240-173648-5 | MW-183WT_092622 | Total/NA | Water | 4500 CN E-2016 | 413994 |
| 240-173648-6 | MW-118S1_092622 | Dissolved | Water | 4500 CN E-2016 | 413995 |
| 240-173648-6 | MW-118S1_092622 | Total/NA | Water | 4500 CN E-2016 | 413994 |
| MB 180-413994/4-A | Method Blank | Total/NA | Water | 4500 CN E-2016 | 413994 |
| MB 180-413995/4-A | Method Blank | Total/NA | Water | 4500 CN E-2016 | 413995 |
| HLCS 180-413994/2-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 413994 |
| HLCS 180-413995/2-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 413995 |
| LCS 180-413994/3-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 413994 |
| LCS 180-413995/3-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 413995 |
| LLCS 180-413994/1-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 413994 |
| LLCS 180-413995/1-A | Lab Control Sample | Total/NA | Water | 4500 CN E-2016 | 413995 |
| 240-173648-5 MS | MW-183WT_092622 | Dissolved | Water | 4500 CN E-2016 | 413995 |
| 240-173648-5 MS | MW-183WT_092622 | Total/NA | Water | 4500 CN E-2016 | 413994 |
| 240-173648-5 MSD | MW-183WT_092622 | Dissolved | Water | 4500 CN E-2016 | 413995 |
| 240-173648-5 MSD | MW-183WT_092622 | Total/NA | Water | 4500 CN E-2016 | 413994 |
| 240-173648-5 DU | MW-183WT_092622 | Dissolved | Water | 4500 CN E-2016 | 413995 |
| 240-173648-5 DU | MW-183WT_092622 | Total/NA | Water | 4500 CN E-2016 | 413994 |

### Analysis Batch: 544532

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173648-5 | MW-183WT_092622 | Total/NA | Water | 9056A | |
| 240-173648-6 | MW-118S1_092622 | Total/NA | Water | 9056A | |
| MB 240-544532/3 | Method Blank | Total/NA | Water | 9056A | |
| LCS 240-544532/4 | Lab Control Sample | Total/NA | Water | 9056A | |
| 240-173648-5 MS | MW-183WT_092622 | Total/NA | Water | 9056A | |
| 240-173648-5 MSD | MW-183WT_092622 | Total/NA | Water | 9056A | |

### Analysis Batch: 544533

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173648-5 | MW-183WT_092622 | Total/NA | Water | 9056A | |
| 240-173648-6 | MW-118S1_092622 | Total/NA | Water | 9056A | |
| MB 240-544533/3 | Method Blank | Total/NA | Water | 9056A | |
| LCS 240-544533/4 | Lab Control Sample | Total/NA | Water | 9056A | |
| 240-173648-5 MS | MW-183WT_092622 | Total/NA | Water | 9056A | |
| 240-173648-5 MS | MW-183WT_092622 | Total/NA | Water | 9056A | |
| 240-173648-5 MSD | MW-183WT_092622 | Total/NA | Water | 9056A | |
| 240-173648-5 MSD | MW-183WT_092622 | Total/NA | Water | 9056A | |

## General Chemistry

### Analysis Batch: 545047

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173648-5 | MW-183WT_092622 | Total/NA | Water | 2540 C-2011 | |
| 240-173648-6 | MW-118S1_092622 | Total/NA | Water | 2540 C-2011 | |
| MB 240-545047/1 | Method Blank | Total/NA | Water | 2540 C-2011 | |
| LCS 240-545047/2 | Lab Control Sample | Total/NA | Water | 2540 C-2011 | |
| 240-173648-5 DU | MW-183WT_092622 | Total/NA | Water | 2540 C-2011 | |

### Analysis Batch: 545147

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173648-5 | MW-183WT_092622 | Total/NA | Water | 4500 NH3 H | |
| 240-173648-6 | MW-118S1_092622 | Total/NA | Water | 4500 NH3 H | |
| MB 240-545147/44 | Method Blank | Total/NA | Water | 4500 NH3 H | |
| MB 240-545147/76 | Method Blank | Total/NA | Water | 4500 NH3 H | |
| LCS 240-545147/45 | Lab Control Sample | Total/NA | Water | 4500 NH3 H | |
| LCS 240-545147/77 | Lab Control Sample | Total/NA | Water | 4500 NH3 H | |
| 240-173648-5 MS | MW-183WT_092622 | Total/NA | Water | 4500 NH3 H | |
| 240-173648-5 MSD | MW-183WT_092622 | Total/NA | Water | 4500 NH3 H | |

# Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

## Client Sample ID: TW-242_092322
**Date Collected: 09/23/22 10:10**
**Date Received: 09/27/22 16:00**

## Lab Sample ID: 240-173648-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 545680 | LEE | EET CAN | 10/05/22 16:02 |

## Client Sample ID: TWW-1_092322
**Date Collected: 09/23/22 11:35**
**Date Received: 09/27/22 16:00**

## Lab Sample ID: 240-173648-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 545680 | LEE | EET CAN | 10/05/22 17:21 |

## Client Sample ID: DUP-03_092322
**Date Collected: 09/23/22 00:00**
**Date Received: 09/27/22 16:00**

## Lab Sample ID: 240-173648-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 545680 | LEE | EET CAN | 10/05/22 17:47 |

## Client Sample ID: TRIP BLANK_092322
**Date Collected: 09/23/22 00:00**
**Date Received: 09/27/22 16:00**

## Lab Sample ID: 240-173648-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 545680 | LEE | EET CAN | 10/05/22 18:14 |

## Client Sample ID: MW-183WT_092622
**Date Collected: 09/26/22 11:05**
**Date Received: 09/27/22 16:00**

## Lab Sample ID: 240-173648-5
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3005A | | | 544675 | SHB | EET CAN | 09/28/22 12:00 |
| Dissolved | Analysis | 6010B | | 1 | 544933 | RKT | EET CAN | 09/29/22 16:41 |
| Total Recoverable | Prep | 3005A | | | 544675 | SHB | EET CAN | 09/28/22 12:00 |
| Total Recoverable | Analysis | 6010B | | 1 | 544933 | RKT | EET CAN | 09/29/22 16:13 |
| Total/NA | Analysis | 2540 C-2011 | | 1 | 545047 | MED | EET CAN | 09/30/22 09:38 |
| Dissolved | Prep | SM 4500 CN C | | | 413995 | CMR | EET PIT | 10/04/22 11:00 |
| Dissolved | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 15:56 |
| Total/NA | Prep | SM 4500 CN C | | | 413994 | CMR | EET PIT | 10/04/22 08:04 |
| Total/NA | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 15:00 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 545147 | AJ | EET CAN | 09/30/22 15:25 |
| Total/NA | Analysis | 9056A | | 1 | 544532 | JMB | EET CAN | 09/27/22 23:40 |
| Total/NA | Analysis | 9056A | | 1 | 544533 | JMB | EET CAN | 09/27/22 23:40 |

# Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

## Client Sample ID: MW-118S1_092622

**Date Collected: 09/26/22 12:30**
**Date Received: 09/27/22 16:00**

## Lab Sample ID: 240-173648-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3005A | | | 544675 | SHB | EET CAN | 09/28/22 12:00 |
| Dissolved | Analysis | 6010B | | 1 | 544933 | RKT | EET CAN | 09/29/22 16:58 |
| Total Recoverable | Prep | 3005A | | | 544675 | SHB | EET CAN | 09/28/22 12:00 |
| Total Recoverable | Analysis | 6010B | | 1 | 544933 | RKT | EET CAN | 09/29/22 16:54 |
| Total/NA | Analysis | 2540 C-2011 | | 1 | 545047 | MED | EET CAN | 09/30/22 09:38 |
| Dissolved | Prep | SM 4500 CN C | | | 413995 | CMR | EET PIT | 10/04/22 11:00 |
| Dissolved | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 16:03 |
| Total/NA | Prep | SM 4500 CN C | | | 413994 | CMR | EET PIT | 10/04/22 08:04 |
| Total/NA | Analysis | 4500 CN E-2016 | | 1 | 414100 | CMR | EET PIT | 10/04/22 15:11 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 545147 | AJ | EET CAN | 09/30/22 15:07 |
| Total/NA | Analysis | 9056A | | 1 | 544532 | JMB | EET CAN | 09/28/22 01:41 |
| Total/NA | Analysis | 9056A | | 1 | 544533 | JMB | EET CAN | 09/28/22 01:41 |

**Laboratory References:**

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

# Accreditation/Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

## Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| California | State | 2927 | 02-27-23 |
| Connecticut | State | PH-0590 | 12-31-23 |
| Florida | NELAP | E87225 | 06-30-23 |
| Georgia | State | 4062 | 02-27-23 |
| Illinois | NELAP | 200004 | 07-31-23 |
| Iowa | State | 421 | 06-01-23 |
| Kentucky (UST) | State | 112225 | 02-27-23 |
| Kentucky (WW) | State | KY98016 | 12-31-22 |
| Minnesota | NELAP | 039-999-348 | 12-31-22 |
| Minnesota (Petrofund) | State | 3506 | 08-01-23 |
| New Jersey | NELAP | OH001 | 10-10-22 |
| New York | NELAP | 10975 | 04-01-23 |
| Ohio | State | 8303 | 10-12-22 |
| Ohio VAP | State | CL0024 | 02-27-23 |
| Oregon | NELAP | 4062 | 02-27-23 |
| Pennsylvania | NELAP | 68-00340 | 08-31-23 |
| Texas | NELAP | T104704517-22-17 | 08-31-23 |
| Virginia | NELAP | 460175 | 09-14-23 |
| Washington | State | C971 | 01-12-23 |
| West Virginia DEP | State | 210 | 12-31-22 |

## Laboratory: Eurofins Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Arkansas DEQ | State | 19-033-0 | 06-27-22 * |
| California | State | 2891 | 04-30-23 |
| Connecticut | State | PH-0688 | 09-30-22 * |
| Florida | NELAP | E871008 | 10-23-22 |
| Georgia | State | PA 02-00416 | 10-23-22 |
| Illinois | NELAP | 004375 | 10-23-22 |
| Kansas | NELAP | E-10350 | 10-23-22 |
| Kentucky (UST) | State | 162013 | 04-30-23 |
| Kentucky (WW) | State | KY98043 | 12-31-22 |
| Louisiana | NELAP | 04041 | 06-30-22 * |
| Louisiana (All) | NELAP | 04041 | 10-23-22 |
| Maine | State | PA00164 | 03-06-24 |
| Minnesota | NELAP | 042-999-482 | 10-23-22 |
| New Hampshire | NELAP | 2030 | 10-23-22 |
| New Jersey | NELAP | PA005 | 10-23-22 |
| New York | NELAP | 11182 | 10-23-22 |
| North Carolina (WW/SW) | State | 434 | 10-11-22 |
| North Dakota | State | R-227 | 10-23-22 |
| Oregon | NELAP | PA-2151 | 10-23-22 |
| Pennsylvania | NELAP | 02-00416 | 10-23-22 |
| Rhode Island | State | LAO00362 | 12-31-22 |
| South Carolina | State | 89014 | 04-20-23 |
| Texas | NELAP | T104704528 | 10-23-22 |
| USDA | US Federal Programs | P330-16-00211 | 06-21-24 |
| Utah | NELAP | PA001462019-8 | 10-23-22 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Accreditation/Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Saginaw

Job ID: 240-173648-1

## Laboratory: Eurofins Pittsburgh (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Virginia | NELAP | 10043 | 10-23-22 |
| West Virginia DEP | State | 142 | 10-23-22 |
| Wisconsin | State | 998027800 | 08-31-23 |

Address: 5050

# Chain of Custody Record

596331 eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

| Client Contact | Project Manager: | Site Contact: | Date: | COC No: |
|---|---|---|---|---|
| Company Name: ARCADIS | Tel/Email: | Lab Contact: | Carrier: | ____ of ____ COCs |
| Address: 28550 CABOT DR. SUITE 500 | Analysis Turnaround Time | | | Sampler: |
| City/State/Zip: NOVI, MI 48377 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| Phone: 989-854-8672 | TAT if different from Below ____ | | | Walk-in Client: |
| Fax: | ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day | | | Lab Sampling: |
| Project Name: RACER SAGINAW | | | | Job / SDG No.: |
| Site: GDC | | | | |
| PO# 30121470 | | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS / MSD (Y/N) | VOC 8260B | Total TAL Metals | Dissolved TAL Metals | Total Cyanide | Dissolved Cyanide | Pos. Sulfide, Chemical Methods, Nitrate | Ammonia Nitrogen | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TW-242_092322 | 9/23/22 | 10:10 | G | GW | 9 | N | Y | 9 | | | | | | | TW-242 = MSMSD |
| TWW-1_092322 | 9/23/22 | 11:35 | G | GW | 3 | N | N | 3 | | | | | | | |
| DUP-03_092322 | 9/23/22 | — | G | GW | 3 | N | N | 3 | | | | | | | |
| TRIP BLANK_092322 | — | — | G | W | 2 | N | N | 2 | | | | | | | |
| MW-183WT_092622 | 9/26/22 | 11:05 | G | GW | 18 | Y | Y | | 3 | 3 | 3 | 3 | 3 | 1 | MW-183WT = MSMSD |
| MW-1185_092622 | 9/26/22 | 12:30 | G | GW | 6 | Y | N | | 1 | 1 | 1 | 1 | 1 | 1 | |

240-173648 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

**Special Instructions/QC Requirements & Comments:**
MW-183WT = MSMSD For All But Ammonia Nitrogen

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | | Therm ID No.: ____ |
|---|---|---|---|---|---|
| Relinquished by: | Company: ARCADIS | Date/Time: 9-26-22 16:30 | Received by: | Company: TA | Date/Time: 9-27-22 1600 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: |

**Eurofins - Canton Sample Receipt Form/Narrative** **Login # :** _____
**Barberton Facility**

Client Arcadis Site Name _____ Cooler unpacked by: Brandon

Cooler Received on 9-27-22 Opened on 9-27-22

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

Eurofins Cooler # 14 Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-13 (CF +0.7 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #IR-15 (CF 0.0°C) Observed Cooler Temp. 5.2 °C Corrected Cooler Temp. 5.0 °C

| | | |
|---|---|---|
| 2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity_____ | Yes | No |
| -Were the seals on the outside of the cooler(s) signed & dated? | Yes | No NA |
| -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? | Yes | No |
| -Were tamper/custody seals intact and uncompromised? | Yes | No NA |
| 3. Shippers' packing slip attached to the cooler(s)? | Yes | No |
| 4. Did custody papers accompany the sample(s)? | Yes | No |
| 5. Were the custody papers relinquished & signed in the appropriate place? | Yes | No |
| 6. Was/were the person(s) who collected the samples clearly identified on the COC? | Yes | No |
| 7. Did all bottles arrive in good condition (Unbroken)? | Yes | No |
| 8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? | Yes | No |
| 9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)? | | |
| 10. Were correct bottle(s) used for the test(s) indicated? | Yes | No |
| 11. Sufficient quantity received to perform indicated analyses? | Yes | No |
| 12. Are these work share samples and all listed on the COC? | Yes | No |
| If yes, Questions 13-17 have been checked at the originating laboratory. | | |
| 13. Were all preserved sample(s) at the correct pH upon receipt? | Yes | No NA pH Strip Lot# HC286797 |
| 14. Were VOAs on the COC? | Yes | No |
| 15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this. | Yes | No NA |
| 16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ | Yes | No |
| 17. Was a LL Hg or Me Hg trip blank present? _____ | Yes | No |

**Tests that are not checked for pH by Receiving:**
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

**18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES** ☐ additional next page

Samples processed by:

_____
_____
_____
_____

**19. SAMPLE CONDITION**

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

**20. SAMPLE PRESERVATION**

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

# Login Container Summary Report



Temperature readings: _____

| Client Sample ID | Lab ID | Container Type | Container pH | Container Temp | Preservative Added (mls) | Lot # |
|---|---|---|---|---|---|---|
| MW-183WT_092622 | 240-173648-A-5 | Plastic 250ml - with Sodium Hydroxide | | | | |
| MW-183WT_092622 | 240-173648-B-5 | Plastic 250ml - with Sodium Hydroxide | | | | |
| MW-183WT_092622 | 240-173648-C-5 | Plastic 250ml - with Sodium Hydroxide | | | | |
| MW-183WT_092622 | 240-173648-D-5 | Plastic 250ml - with Sodium Hydroxide | | | | |
| MW-183WT_092622 | 240-173648-E-5 | Plastic 250ml - with Sodium Hydroxide | | | | |
| MW-183WT_092622 | 240-173648-F-5 | Plastic 250ml - with Sodium Hydroxide | | | | |
| MW-183WT_092622 | 240-173648-J-5 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| MW-183WT_092622 | 240-173648-K-5 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-183WT_092622 | 240-173648-L-5 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-183WT_092622 | 240-173648-M-5 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-183WT_092622 | 240-173648-N-5 | Plastic 500ml - w/ Nitric - Dis. | <2 | | | |
| MW-183WT_092622 | 240-173648-O-5 | Plastic 500ml - w/ Nitric - Dis. | <2 | | | |
| MW-183WT_092622 | 240-173648-P-5 | Plastic 500ml - w/ Nitric - Dis. | <2 | | | |
| MW-118S1_092622 | 240-173648-A-6 | Plastic 250ml - with Sodium Hydroxide | | | | |
| MW-118S1_092622 | 240-173648-B-6 | Plastic 250ml - with Sodium Hydroxide | | | | |
| MW-118S1_092622 | 240-173648-D-6 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| MW-118S1_092622 | 240-173648-E-6 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-118S1_092622 | 240-173648-F-6 | Plastic 500ml - w/ Nitric - Dis. | <2 | | | |

**Eurofins Canton**
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

# Chain of Custody Record




Eurofins | Environment Testing America

| | | | |
|---|---|---|---|
| **Client Information (Sub Contract Lab)** | Sampler: | Lab PM: DelMonico, Michael | 7753.1 |
| Client Contact: Shipping/Receiving | Phone: | E-Mail: Michael.DelMonico@et.eurofinsus.com | State: Michigan |
| Company: Eurofins Environment Testing Northeast, | | Accreditations Required (See note): | Page: Page 1 of 1 |
| Address: 301 Alpha Drive, RIDC Park, | Due Date Requested: 10/10/2022 | | Job #: 240-173648-1 |
| City: Pittsburgh | TAT Requested (days): | | |
| State, Zip: PA, 15238 | | | |
| Phone: 412-963-7058(Tel) 412-963-2468(Fax) | PO #: | | |
| Email: | WO #: | | |
| Project Name: RACER SMI, Green Pt Landfill | Project #: 24006824 | | |
| Site: | SSOW#: | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 4500_CN_E/4500_CN_C | 4500_CN_E/FIELD_FLTRD | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | |
| MW-183WT_092622 (240-173648-5) | 9/26/22 | 11:05 Eastern | | Water | | | X | X | 6 | |
| MW-183WT_092622 (240-173648-5MS) | 9/26/22 | 11:05 Eastern | MS | Water | | | X | X | 1 | |
| MW-183WT_092622 (240-173648-5MSD) | 9/26/22 | 11:05 Eastern | MSD | Water | | | X | X | 1 | |
| MW-118S1_092622 (240-173648-6) | 9/26/22 | 12:30 Eastern | | Water | | | X | X | 2 | |

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing North Central, LLC

| | |
|---|---|
| ***Possible Hazard Identification*** *Unconfirmed* | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| | | | | | | |
|---|---|---|---|---|---|---|
| Empty Kit Relinquished by: | | Date: | Time: | | Method of Shipment: | |
| Relinquished by: | Date/Time: 9-27-22 17:00 | Company | Received by: | Date/Time: 9-28-22 1030 | Company | |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company | |
| Relinquished by: | Date/Time. | Company | Received by: | Date/Time: | Company | |

| | |
|---|---|
| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: |
| | Cooler Temperature(s) °C and Other Remarks: |

# Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 240-173648-1

**Login Number: 173648**
**List Number: 2**
**Creator: Kovitch, Christina M**

**List Source: Eurofins Pittsburgh**
**List Creation: 09/28/22 07:34 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing



# ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-173822-1
Client Project/Site: RACER SMI
Revision: 3

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, Michigan 48377

Attn: Scott Clearwater

*Authorized for release by:*
*11/11/2022 11:48:27 AM*

Michael DelMonico, Project Manager I
(330)497-9396
Michael.DelMonico@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the {0} Project Manager.

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# Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Qualifiers

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| F2 | MS/MSD RPD exceeds control limits |
| U | Indicates the analyte was analyzed for but not detected. |

### Metals

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| U | Indicates the analyte was analyzed for but not detected. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| B | Compound was found in the blank and sample. |
| F1 | MS and/or MSD recovery exceeds control limits. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| U | Indicates the analyte was analyzed for but not detected. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

## Job ID: 240-173822-1

### Laboratory: Eurofins Canton

**Narrative**

**Job Narrative**
**240-173822-1**

**Receipt**
Report revised on 10/28/2022 to correct ID of sample 1 and 5.

The samples were received on 9/29/2022 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 0.9°C, 2.4°C, 3.1°C, 3.3°C, 4.6°C and 7.4°C

**PCBs**
Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: MW-110WTR_09272022 (240-173822-5), MW-185WT_09272022 (240-173822-6), MW-186WT_09282022 (240-173822-7), MW-114WT_09282022 (240-173822-9), DUP-08_09272022 (240-173822-15), (LCS 240-546081/22-A) and (MB 240-546081/21-A).591710555019705372416

Method 8082A: The following samples appear to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: MW-111WT_09272022 (240-173822-10) and DUP-08_09272022 (240-173822-15). The samples have been quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Metals**
Method 6010C: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: MW-149WT_09262022 (240-173822-2), DUP-04_09272022 (240-173822-11) and MW-107WT_09272022 (240-173822-14)The continuing calibration blanks and method blanks may not support the lower PQL.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**General Chemistry**
Method SM4500_NH3_H: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for the following sample associated with analytical batch 240-545640 were outside control limits: MW-107WT_09272022 MS (240-173822-14[MS]) and MW-107WT_09272022 MSD (240-173822-14[MSD]). The associated laboratory control sample (LCS) recovery met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

# Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8082A | Polychlorinated Biphenyls (PCBs) by Gas Chromatography | SW846 | EET CAN |
| 6010C | Metals (ICP) | SW846 | EET CAN |
| 4500 NH3 H | Ammonia | SM | EET CAN |
| SM4500 P E-2011 | Phosphorus | SM | EET CAN |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | EET CAN |
| 3510C | Liquid-Liquid Extraction (Separatory Funnel) | SW846 | EET CAN |
| FILTRATION | Sample Filtration | None | EET CAN |

**Protocol References:**

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

# Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 240-173822-1 | MW-107S1_09262022 | Water | 09/26/22 14:26 | 09/29/22 09:45 |
| 240-173822-2 | MW-149WT_09262022 | Water | 09/26/22 09:11 | 09/29/22 09:45 |
| 240-173822-3 | MW-108S2_09272022 | Water | 09/27/22 10:45 | 09/29/22 09:45 |
| 240-173822-4 | MW-114S2_09272022 | Water | 09/27/22 12:05 | 09/29/22 09:45 |
| 240-173822-5 | MW-110WTR_09272022 | Water | 09/27/22 14:26 | 09/29/22 09:45 |
| 240-173822-6 | MW-185WT_09272022 | Water | 09/27/22 13:50 | 09/29/22 09:45 |
| 240-173822-7 | MW-186WT_09282022 | Water | 09/28/22 10:41 | 09/29/22 09:45 |
| 240-173822-8 | MW-114WT_09272022 | Water | 09/27/22 16:10 | 09/29/22 09:45 |
| 240-173822-9 | MW-114WT_09282022 | Water | 09/28/22 07:30 | 09/29/22 09:45 |
| 240-173822-10 | MW-111WT_09272022 | Water | 09/27/22 12:05 | 09/29/22 09:45 |
| 240-173822-11 | DUP-04_09272022 | Water | 09/27/22 00:00 | 09/29/22 09:45 |
| 240-173822-12 | DUP-06_09272022 | Water | 09/27/22 00:00 | 09/29/22 09:45 |
| 240-173822-13 | DUP-07_09272022 | Water | 09/27/22 00:00 | 09/29/22 09:45 |
| 240-173822-14 | MW-107WT_09272022 | Water | 09/27/22 11:00 | 09/29/22 09:45 |
| 240-173822-15 | DUP-08_09272022 | Water | 09/27/22 00:00 | 09/29/22 09:45 |

# Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: MW-107S1_09262022 — Lab Sample ID: 240-173822-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 1.2 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |

## Client Sample ID: MW-149WT_09262022 — Lab Sample ID: 240-173822-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 30 | | 15 | 4.1 | ug/L | 1 | | 6010C | Total Recoverable |
| Dissolved Arsenic | 8.7 | | 4.1 | 4.1 | ug/L | 1 | | 6010C | Dissolved |
| Ammonia | 2.6 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Total Phosphorus as P | 1.2 | B | 0.50 | 0.085 | mg/L | 5 | | SM4500 P E-2011 | Total/NA |

## Client Sample ID: MW-108S2_09272022 — Lab Sample ID: 240-173822-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 5.7 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |

## Client Sample ID: MW-114S2_09272022 — Lab Sample ID: 240-173822-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 1.8 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |

## Client Sample ID: MW-110WTR_09272022 — Lab Sample ID: 240-173822-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 2300 | | 15 | 6.2 | ug/L | 1 | | 6010C | Total Recoverable |
| Total Phosphorus as P | 0.32 | B | 0.10 | 0.017 | mg/L | 1 | | SM4500 P E-2011 | Total/NA |

## Client Sample ID: MW-185WT_09272022 — Lab Sample ID: 240-173822-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 330 | | 15 | 6.2 | ug/L | 1 | | 6010C | Total Recoverable |
| Ammonia | 0.20 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Total Phosphorus as P | 0.087 | J B | 0.10 | 0.017 | mg/L | 1 | | SM4500 P E-2011 | Total/NA |

## Client Sample ID: MW-186WT_09282022 — Lab Sample ID: 240-173822-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 700 | | 15 | 6.2 | ug/L | 1 | | 6010C | Total Recoverable |
| Ammonia | 1.3 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Total Phosphorus as P | 0.49 | B | 0.10 | 0.017 | mg/L | 1 | | SM4500 P E-2011 | Total/NA |

## Client Sample ID: MW-114WT_09272022 — Lab Sample ID: 240-173822-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 390 | | 15 | 6.2 | ug/L | 1 | | 6010C | Total Recoverable |
| Ammonia | 0.50 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Total Phosphorus as P | 0.20 | B | 0.10 | 0.017 | mg/L | 1 | | SM4500 P E-2011 | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins Canton

# Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: MW-114WT_09282022 — Lab Sample ID: 240-173822-9

No Detections.

## Client Sample ID: MW-111WT_09272022 — Lab Sample ID: 240-173822-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1248 | 0.22 | | 0.095 | 0.048 | ug/L | 1 | | 8082A | Total/NA |
| Aroclor-1248 | 0.52 | | 0.095 | 0.048 | ug/L | 1 | | 8082A | Dissolved |
| Manganese | 1200 | | 15 | 6.2 | ug/L | 1 | | 6010C | Total Recoverable |
| Ammonia | 1.3 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Total Phosphorus as P | 0.87 | B | 0.10 | 0.017 | mg/L | 1 | | SM4500 P E-2011 | Total/NA |

## Client Sample ID: DUP-04_09272022 — Lab Sample ID: 240-173822-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 32 | | 15 | 4.1 | ug/L | 1 | | 6010C | Total Recoverable |
| Dissolved Arsenic | 8.3 | | 4.1 | 4.1 | ug/L | 1 | | 6010C | Dissolved |
| Ammonia | 2.6 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Total Phosphorus as P | 1.4 | B | 0.50 | 0.085 | mg/L | 5 | | SM4500 P E-2011 | Total/NA |

## Client Sample ID: DUP-06_09272022 — Lab Sample ID: 240-173822-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 5.8 | | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |

## Client Sample ID: DUP-07_09272022 — Lab Sample ID: 240-173822-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 2200 | | 15 | 6.2 | ug/L | 1 | | 6010C | Total Recoverable |

## Client Sample ID: MW-107WT_09272022 — Lab Sample ID: 240-173822-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 480 | | 15 | 6.2 | ug/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 8.0 | J | 15 | 4.1 | ug/L | 1 | | 6010C | Total Recoverable |
| Dissolved Arsenic | 9.2 | | 4.1 | 4.1 | ug/L | 1 | | 6010C | Dissolved |
| Ammonia | 0.62 | F1 | 0.20 | 0.076 | mg/L | 1 | | 4500 NH3 H | Total/NA |
| Total Phosphorus as P | 0.12 | B | 0.10 | 0.017 | mg/L | 1 | | SM4500 P E-2011 | Total/NA |

## Client Sample ID: DUP-08_09272022 — Lab Sample ID: 240-173822-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1248 | 0.46 | | 0.095 | 0.048 | ug/L | 1 | | 8082A | Dissolved |

This Detection Summary does not include radiochemical test results.

# Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

**Client Sample ID: MW-107S1_09262022**
**Date Collected: 09/26/22 14:26**
**Date Received: 09/29/22 09:45**

**Lab Sample ID: 240-173822-1**
**Matrix: Water**

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia (SM 4500 NH3 H) | 1.2 | | 0.20 | 0.076 | mg/L | | | 10/04/22 14:07 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: MW-149WT_09262022

**Date Collected: 09/26/22 09:11**
**Date Received: 09/29/22 09:45**

## Lab Sample ID: 240-173822-2

**Matrix: Water**

### Method: SW846 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **30** | | 15 | 4.1 | ug/L | | 10/03/22 12:00 | 10/04/22 11:38 | 1 |
| Thallium | 20 | U | 20 | 2.7 | ug/L | | 10/03/22 12:00 | 10/04/22 11:38 | 1 |

### Method: SW846 6010C - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Dissolved Arsenic** | **8.7** | | 4.1 | 4.1 | ug/L | | 10/03/22 12:00 | 10/04/22 18:32 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Ammonia (SM 4500 NH3 H)** | **2.6** | | 0.20 | 0.076 | mg/L | | | 10/04/22 14:22 | 1 |
| **Total Phosphorus as P (SM4500 P E-2011)** | **1.2** | **B** | 0.50 | 0.085 | mg/L | | | 10/12/22 08:57 | 5 |

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

**Client Sample ID: MW-108S2_09272022**
**Date Collected: 09/27/22 10:45**
**Date Received: 09/29/22 09:45**

**Lab Sample ID: 240-173822-3**
**Matrix: Water**

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia (SM 4500 NH3 H) | 5.7 | | 0.20 | 0.076 | mg/L | | | 10/04/22 14:25 | 1 |

# Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

**Client Sample ID: MW-114S2_09272022**
**Date Collected: 09/27/22 12:05**
**Date Received: 09/29/22 09:45**

**Lab Sample ID: 240-173822-4**
**Matrix: Water**

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia (SM 4500 NH3 H) | 1.8 | | 0.20 | 0.076 | mg/L | | | 10/04/22 14:28 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: MW-110WTR_09272022

**Date Collected: 09/27/22 14:26**
**Date Received: 09/29/22 09:45**

## Lab Sample ID: 240-173822-5

**Matrix: Water**

### Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.10 | U | 0.10 | 0.057 | ug/L | | 10/07/22 09:50 | 10/10/22 16:12 | 1 |
| Aroclor-1221 | 0.10 | U | 0.10 | 0.058 | ug/L | | 10/07/22 09:50 | 10/10/22 16:12 | 1 |
| Aroclor-1232 | 0.10 | U | 0.10 | 0.076 | ug/L | | 10/07/22 09:50 | 10/10/22 16:12 | 1 |
| Aroclor-1242 | 0.10 | U | 0.10 | 0.078 | ug/L | | 10/07/22 09:50 | 10/10/22 16:12 | 1 |
| Aroclor-1248 | 0.10 | U | 0.10 | 0.051 | ug/L | | 10/07/22 09:50 | 10/10/22 16:12 | 1 |
| Aroclor-1254 | 0.10 | U | 0.10 | 0.041 | ug/L | | 10/07/22 09:50 | 10/10/22 16:12 | 1 |
| Aroclor-1260 | 0.10 | U | 0.10 | 0.047 | ug/L | | 10/07/22 09:50 | 10/10/22 16:12 | 1 |
| Aroclor-1262 | 0.10 | U | 0.10 | 0.059 | ug/L | | 10/07/22 09:50 | 10/10/22 16:12 | 1 |
| Aroclor-1268 | 0.10 | U | 0.10 | 0.063 | ug/L | | 10/07/22 09:50 | 10/10/22 16:12 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *68* | | *10 - 149* | *10/07/22 09:50* | *10/10/22 16:12* | *1* |
| *DCB Decachlorobiphenyl* | *73* | | *10 - 174* | *10/07/22 09:50* | *10/10/22 16:12* | *1* |

### Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.095 | U | 0.095 | 0.053 | ug/L | | 10/11/22 10:44 | 10/13/22 16:58 | 1 |
| Aroclor-1221 | 0.095 | U | 0.095 | 0.054 | ug/L | | 10/11/22 10:44 | 10/13/22 16:58 | 1 |
| Aroclor-1232 | 0.095 | U | 0.095 | 0.070 | ug/L | | 10/11/22 10:44 | 10/13/22 16:58 | 1 |
| Aroclor-1242 | 0.095 | U | 0.095 | 0.072 | ug/L | | 10/11/22 10:44 | 10/13/22 16:58 | 1 |
| Aroclor-1248 | 0.095 | U | 0.095 | 0.048 | ug/L | | 10/11/22 10:44 | 10/13/22 16:58 | 1 |
| Aroclor-1254 | 0.095 | U | 0.095 | 0.038 | ug/L | | 10/11/22 10:44 | 10/13/22 16:58 | 1 |
| Aroclor-1260 | 0.095 | U | 0.095 | 0.044 | ug/L | | 10/11/22 10:44 | 10/13/22 16:58 | 1 |
| Aroclor-1262 | 0.095 | U | 0.095 | 0.055 | ug/L | | 10/11/22 10:44 | 10/13/22 16:58 | 1 |
| Aroclor-1268 | 0.095 | U | 0.095 | 0.059 | ug/L | | 10/11/22 10:44 | 10/13/22 16:58 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *71* | | *10 - 149* | *10/11/22 10:44* | *10/13/22 16:58* | *1* |
| *DCB Decachlorobiphenyl* | *37* | | *10 - 174* | *10/11/22 10:44* | *10/13/22 16:58* | *1* |

### Method: SW846 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Manganese** | **2300** | | 15 | 6.2 | ug/L | | 10/03/22 12:00 | 10/04/22 11:50 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia (SM 4500 NH3 H) | 0.20 | U | 0.20 | 0.076 | mg/L | | | 10/04/22 14:31 | 1 |
| **Total Phosphorus as P (SM4500 P E-2011)** | **0.32** | **B** | 0.10 | 0.017 | mg/L | | | 10/12/22 08:57 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: MW-185WT_09272022

**Date Collected: 09/27/22 13:50**
**Date Received: 09/29/22 09:45**

## Lab Sample ID: 240-173822-6

**Matrix: Water**

### Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.10 | U | 0.10 | 0.056 | ug/L | | 10/07/22 09:50 | 10/10/22 16:29 | 1 |
| Aroclor-1221 | 0.10 | U | 0.10 | 0.057 | ug/L | | 10/07/22 09:50 | 10/10/22 16:29 | 1 |
| Aroclor-1232 | 0.10 | U | 0.10 | 0.074 | ug/L | | 10/07/22 09:50 | 10/10/22 16:29 | 1 |
| Aroclor-1242 | 0.10 | U | 0.10 | 0.076 | ug/L | | 10/07/22 09:50 | 10/10/22 16:29 | 1 |
| Aroclor-1248 | 0.10 | U | 0.10 | 0.050 | ug/L | | 10/07/22 09:50 | 10/10/22 16:29 | 1 |
| Aroclor-1254 | 0.10 | U | 0.10 | 0.040 | ug/L | | 10/07/22 09:50 | 10/10/22 16:29 | 1 |
| Aroclor-1260 | 0.10 | U | 0.10 | 0.046 | ug/L | | 10/07/22 09:50 | 10/10/22 16:29 | 1 |
| Aroclor-1262 | 0.10 | U | 0.10 | 0.058 | ug/L | | 10/07/22 09:50 | 10/10/22 16:29 | 1 |
| Aroclor-1268 | 0.10 | U | 0.10 | 0.062 | ug/L | | 10/07/22 09:50 | 10/10/22 16:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *77* | | *10 - 149* | *10/07/22 09:50* | *10/10/22 16:29* | *1* |
| *DCB Decachlorobiphenyl* | *91* | | *10 - 174* | *10/07/22 09:50* | *10/10/22 16:29* | *1* |

### Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.095 | U | 0.095 | 0.053 | ug/L | | 10/11/22 10:44 | 10/13/22 17:14 | 1 |
| Aroclor-1221 | 0.095 | U | 0.095 | 0.054 | ug/L | | 10/11/22 10:44 | 10/13/22 17:14 | 1 |
| Aroclor-1232 | 0.095 | U | 0.095 | 0.070 | ug/L | | 10/11/22 10:44 | 10/13/22 17:14 | 1 |
| Aroclor-1242 | 0.095 | U | 0.095 | 0.072 | ug/L | | 10/11/22 10:44 | 10/13/22 17:14 | 1 |
| Aroclor-1248 | 0.095 | U | 0.095 | 0.048 | ug/L | | 10/11/22 10:44 | 10/13/22 17:14 | 1 |
| Aroclor-1254 | 0.095 | U | 0.095 | 0.038 | ug/L | | 10/11/22 10:44 | 10/13/22 17:14 | 1 |
| Aroclor-1260 | 0.095 | U | 0.095 | 0.044 | ug/L | | 10/11/22 10:44 | 10/13/22 17:14 | 1 |
| Aroclor-1262 | 0.095 | U | 0.095 | 0.055 | ug/L | | 10/11/22 10:44 | 10/13/22 17:14 | 1 |
| Aroclor-1268 | 0.095 | U | 0.095 | 0.059 | ug/L | | 10/11/22 10:44 | 10/13/22 17:14 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *68* | | *10 - 149* | *10/11/22 10:44* | *10/13/22 17:14* | *1* |
| *DCB Decachlorobiphenyl* | *76* | | *10 - 174* | *10/11/22 10:44* | *10/13/22 17:14* | *1* |

### Method: SW846 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Manganese** | **330** | | 15 | 6.2 | ug/L | | 10/03/22 12:00 | 10/04/22 12:25 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Ammonia (SM 4500 NH3 H)** | **0.20** | | 0.20 | 0.076 | mg/L | | | 10/04/22 13:10 | 1 |
| **Total Phosphorus as P (SM4500 P E-2011)** | **0.087** | **J B** | 0.10 | 0.017 | mg/L | | | 10/12/22 08:57 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: MW-186WT_09282022

**Date Collected: 09/28/22 10:41**
**Date Received: 09/29/22 09:45**

## Lab Sample ID: 240-173822-7

**Matrix: Water**

### Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.095 | U | 0.095 | 0.053 | ug/L | | 10/07/22 09:50 | 10/10/22 17:34 | 1 |
| Aroclor-1221 | 0.095 | U | 0.095 | 0.054 | ug/L | | 10/07/22 09:50 | 10/10/22 17:34 | 1 |
| Aroclor-1232 | 0.095 | U | 0.095 | 0.070 | ug/L | | 10/07/22 09:50 | 10/10/22 17:34 | 1 |
| Aroclor-1242 | 0.095 | U | 0.095 | 0.072 | ug/L | | 10/07/22 09:50 | 10/10/22 17:34 | 1 |
| Aroclor-1248 | 0.095 | U | 0.095 | 0.048 | ug/L | | 10/07/22 09:50 | 10/10/22 17:34 | 1 |
| Aroclor-1254 | 0.095 | U | 0.095 | 0.038 | ug/L | | 10/07/22 09:50 | 10/10/22 17:34 | 1 |
| Aroclor-1260 | 0.095 | U | 0.095 | 0.044 | ug/L | | 10/07/22 09:50 | 10/10/22 17:34 | 1 |
| Aroclor-1262 | 0.095 | U | 0.095 | 0.055 | ug/L | | 10/07/22 09:50 | 10/10/22 17:34 | 1 |
| Aroclor-1268 | 0.095 | U | 0.095 | 0.059 | ug/L | | 10/07/22 09:50 | 10/10/22 17:34 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *73* | | *10 - 149* | *10/07/22 09:50* | *10/10/22 17:34* | *1* |
| *DCB Decachlorobiphenyl* | *52* | | *10 - 174* | *10/07/22 09:50* | *10/10/22 17:34* | *1* |

### Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.095 | U | 0.095 | 0.053 | ug/L | | 10/11/22 10:44 | 10/13/22 17:31 | 1 |
| Aroclor-1221 | 0.095 | U | 0.095 | 0.054 | ug/L | | 10/11/22 10:44 | 10/13/22 17:31 | 1 |
| Aroclor-1232 | 0.095 | U | 0.095 | 0.070 | ug/L | | 10/11/22 10:44 | 10/13/22 17:31 | 1 |
| Aroclor-1242 | 0.095 | U | 0.095 | 0.072 | ug/L | | 10/11/22 10:44 | 10/13/22 17:31 | 1 |
| Aroclor-1248 | 0.095 | U | 0.095 | 0.048 | ug/L | | 10/11/22 10:44 | 10/13/22 17:31 | 1 |
| Aroclor-1254 | 0.095 | U | 0.095 | 0.038 | ug/L | | 10/11/22 10:44 | 10/13/22 17:31 | 1 |
| Aroclor-1260 | 0.095 | U | 0.095 | 0.044 | ug/L | | 10/11/22 10:44 | 10/13/22 17:31 | 1 |
| Aroclor-1262 | 0.095 | U | 0.095 | 0.055 | ug/L | | 10/11/22 10:44 | 10/13/22 17:31 | 1 |
| Aroclor-1268 | 0.095 | U | 0.095 | 0.059 | ug/L | | 10/11/22 10:44 | 10/13/22 17:31 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *72* | | *10 - 149* | *10/11/22 10:44* | *10/13/22 17:31* | *1* |
| *DCB Decachlorobiphenyl* | *50* | | *10 - 174* | *10/11/22 10:44* | *10/13/22 17:31* | *1* |

### Method: SW846 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Manganese** | **700** | | 15 | 6.2 | ug/L | | 10/03/22 12:00 | 10/04/22 12:30 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Ammonia (SM 4500 NH3 H)** | **1.3** | | 0.20 | 0.076 | mg/L | | | 10/04/22 14:37 | 1 |
| **Total Phosphorus as P (SM4500 P E-2011)** | **0.49** | **B** | 0.10 | 0.017 | mg/L | | | 10/12/22 08:57 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: MW-114WT_09272022

**Lab Sample ID: 240-173822-8**

**Date Collected: 09/27/22 16:10**

**Matrix: Water**

**Date Received: 09/29/22 09:45**

### Method: SW846 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 390 | | 15 | 6.2 | ug/L | | 10/03/22 12:00 | 10/04/22 12:34 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia (SM 4500 NH3 H) | 0.50 | | 0.20 | 0.076 | mg/L | | | 10/04/22 14:40 | 1 |
| Total Phosphorus as P (SM4500 P E-2011) | 0.20 | B | 0.10 | 0.017 | mg/L | | | 10/12/22 08:57 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: MW-114WT_09282022

**Date Collected: 09/28/22 07:30**
**Date Received: 09/29/22 09:45**

## Lab Sample ID: 240-173822-9

**Matrix: Water**

### Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.095 | U | 0.095 | 0.053 | ug/L | | 10/07/22 09:50 | 10/10/22 17:51 | 1 |
| Aroclor-1221 | 0.095 | U | 0.095 | 0.054 | ug/L | | 10/07/22 09:50 | 10/10/22 17:51 | 1 |
| Aroclor-1232 | 0.095 | U | 0.095 | 0.070 | ug/L | | 10/07/22 09:50 | 10/10/22 17:51 | 1 |
| Aroclor-1242 | 0.095 | U | 0.095 | 0.072 | ug/L | | 10/07/22 09:50 | 10/10/22 17:51 | 1 |
| Aroclor-1248 | 0.095 | U | 0.095 | 0.048 | ug/L | | 10/07/22 09:50 | 10/10/22 17:51 | 1 |
| Aroclor-1254 | 0.095 | U | 0.095 | 0.038 | ug/L | | 10/07/22 09:50 | 10/10/22 17:51 | 1 |
| Aroclor-1260 | 0.095 | U | 0.095 | 0.044 | ug/L | | 10/07/22 09:50 | 10/10/22 17:51 | 1 |
| Aroclor-1262 | 0.095 | U | 0.095 | 0.055 | ug/L | | 10/07/22 09:50 | 10/10/22 17:51 | 1 |
| Aroclor-1268 | 0.095 | U | 0.095 | 0.059 | ug/L | | 10/07/22 09:50 | 10/10/22 17:51 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *76* | | *10 - 149* | *10/07/22 09:50* | *10/10/22 17:51* | *1* |
| *DCB Decachlorobiphenyl* | *64* | | *10 - 174* | *10/07/22 09:50* | *10/10/22 17:51* | *1* |

### Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.095 | U | 0.095 | 0.053 | ug/L | | 10/11/22 10:44 | 10/13/22 17:47 | 1 |
| Aroclor-1221 | 0.095 | U | 0.095 | 0.054 | ug/L | | 10/11/22 10:44 | 10/13/22 17:47 | 1 |
| Aroclor-1232 | 0.095 | U | 0.095 | 0.070 | ug/L | | 10/11/22 10:44 | 10/13/22 17:47 | 1 |
| Aroclor-1242 | 0.095 | U | 0.095 | 0.072 | ug/L | | 10/11/22 10:44 | 10/13/22 17:47 | 1 |
| Aroclor-1248 | 0.095 | U | 0.095 | 0.048 | ug/L | | 10/11/22 10:44 | 10/13/22 17:47 | 1 |
| Aroclor-1254 | 0.095 | U | 0.095 | 0.038 | ug/L | | 10/11/22 10:44 | 10/13/22 17:47 | 1 |
| Aroclor-1260 | 0.095 | U | 0.095 | 0.044 | ug/L | | 10/11/22 10:44 | 10/13/22 17:47 | 1 |
| Aroclor-1262 | 0.095 | U | 0.095 | 0.055 | ug/L | | 10/11/22 10:44 | 10/13/22 17:47 | 1 |
| Aroclor-1268 | 0.095 | U | 0.095 | 0.059 | ug/L | | 10/11/22 10:44 | 10/13/22 17:47 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *66* | | *10 - 149* | *10/11/22 10:44* | *10/13/22 17:47* | *1* |
| *DCB Decachlorobiphenyl* | *59* | | *10 - 174* | *10/11/22 10:44* | *10/13/22 17:47* | *1* |

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: MW-111WT_09272022

**Lab Sample ID: 240-173822-10**

**Date Collected: 09/27/22 12:05**

**Matrix: Water**

**Date Received: 09/29/22 09:45**

### Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.095 | U F2 | 0.095 | 0.053 | ug/L | | 10/07/22 09:50 | 10/10/22 13:26 | 1 |
| Aroclor-1221 | 0.095 | U | 0.095 | 0.054 | ug/L | | 10/07/22 09:50 | 10/10/22 13:26 | 1 |
| Aroclor-1232 | 0.095 | U | 0.095 | 0.070 | ug/L | | 10/07/22 09:50 | 10/10/22 13:26 | 1 |
| Aroclor-1242 | 0.095 | U | 0.095 | 0.072 | ug/L | | 10/07/22 09:50 | 10/10/22 13:26 | 1 |
| **Aroclor-1248** | **0.22** | | 0.095 | 0.048 | ug/L | | 10/07/22 09:50 | 10/10/22 13:26 | 1 |
| Aroclor-1254 | 0.095 | U | 0.095 | 0.038 | ug/L | | 10/07/22 09:50 | 10/10/22 13:26 | 1 |
| Aroclor-1260 | 0.095 | U | 0.095 | 0.044 | ug/L | | 10/07/22 09:50 | 10/10/22 13:26 | 1 |
| Aroclor-1262 | 0.095 | U | 0.095 | 0.055 | ug/L | | 10/07/22 09:50 | 10/10/22 13:26 | 1 |
| Aroclor-1268 | 0.095 | U | 0.095 | 0.059 | ug/L | | 10/07/22 09:50 | 10/10/22 13:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *85* | | *10 - 149* | *10/07/22 09:50* | *10/10/22 13:26* | *1* |
| *DCB Decachlorobiphenyl* | *32* | | *10 - 174* | *10/07/22 09:50* | *10/10/22 13:26* | *1* |

### Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.095 | U | 0.095 | 0.053 | ug/L | | 10/11/22 10:44 | 10/13/22 16:08 | 1 |
| Aroclor-1221 | 0.095 | U | 0.095 | 0.054 | ug/L | | 10/11/22 10:44 | 10/13/22 16:08 | 1 |
| Aroclor-1232 | 0.095 | U | 0.095 | 0.070 | ug/L | | 10/11/22 10:44 | 10/13/22 16:08 | 1 |
| Aroclor-1242 | 0.095 | U | 0.095 | 0.072 | ug/L | | 10/11/22 10:44 | 10/13/22 16:08 | 1 |
| **Aroclor-1248** | **0.52** | | 0.095 | 0.048 | ug/L | | 10/11/22 10:44 | 10/13/22 16:08 | 1 |
| Aroclor-1254 | 0.095 | U | 0.095 | 0.038 | ug/L | | 10/11/22 10:44 | 10/13/22 16:08 | 1 |
| Aroclor-1260 | 0.095 | U | 0.095 | 0.044 | ug/L | | 10/11/22 10:44 | 10/13/22 16:08 | 1 |
| Aroclor-1262 | 0.095 | U | 0.095 | 0.055 | ug/L | | 10/11/22 10:44 | 10/13/22 16:08 | 1 |
| Aroclor-1268 | 0.095 | U | 0.095 | 0.059 | ug/L | | 10/11/22 10:44 | 10/13/22 16:08 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *62* | | *10 - 149* | *10/11/22 10:44* | *10/13/22 16:08* | *1* |
| *DCB Decachlorobiphenyl* | *22* | | *10 - 174* | *10/11/22 10:44* | *10/13/22 16:08* | *1* |

### Method: SW846 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Manganese** | **1200** | | 15 | 6.2 | ug/L | | 10/03/22 12:00 | 10/04/22 12:38 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Ammonia (SM 4500 NH3 H)** | **1.3** | | 0.20 | 0.076 | mg/L | | | 10/04/22 15:04 | 1 |
| **Total Phosphorus as P (SM4500 P E-2011)** | **0.87** | **B** | 0.10 | 0.017 | mg/L | | | 10/12/22 08:57 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: DUP-04_09272022

**Date Collected: 09/27/22 00:00**
**Date Received: 09/29/22 09:45**

## Lab Sample ID: 240-173822-11

**Matrix: Water**

### Method: SW846 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 32 | | 15 | 4.1 | ug/L | | 10/03/22 12:00 | 10/04/22 12:42 | 1 |
| Thallium | 20 | U | 20 | 2.7 | ug/L | | 10/03/22 12:00 | 10/04/22 12:42 | 1 |

### Method: SW846 6010C - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dissolved Arsenic | 8.3 | | 4.1 | 4.1 | ug/L | | 10/03/22 12:00 | 10/04/22 18:36 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia (SM 4500 NH3 H) | 2.6 | | 0.20 | 0.076 | mg/L | | | 10/04/22 16:49 | 1 |
| Total Phosphorus as P (SM4500 P E-2011) | 1.4 | B | 0.50 | 0.085 | mg/L | | | 10/12/22 08:57 | 5 |

# Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

**Client Sample ID: DUP-06_09272022**
**Date Collected: 09/27/22 00:00**
**Date Received: 09/29/22 09:45**

**Lab Sample ID: 240-173822-12**
**Matrix: Water**

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia (SM 4500 NH3 H) | 5.8 | | 0.20 | 0.076 | mg/L | | | 10/04/22 16:52 | 1 |

# Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: DUP-07_09272022

**Lab Sample ID: 240-173822-13**

**Date Collected: 09/27/22 00:00**

**Matrix: Water**

**Date Received: 09/29/22 09:45**

### Method: SW846 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 2200 | | 15 | 6.2 | ug/L | | 10/03/22 12:00 | 10/04/22 12:46 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: MW-107WT_09272022

**Lab Sample ID: 240-173822-14**

**Date Collected: 09/27/22 11:00**

**Matrix: Water**

**Date Received: 09/29/22 09:45**

### Method: SW846 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 480 | | 15 | 6.2 | ug/L | | 10/03/22 12:00 | 10/04/22 10:39 | 1 |
| Arsenic | 8.0 | J | 15 | 4.1 | ug/L | | 10/03/22 12:00 | 10/04/22 10:39 | 1 |

### Method: SW846 6010C - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dissolved Arsenic | 9.2 | | 4.1 | 4.1 | ug/L | | 10/03/22 12:00 | 10/04/22 18:12 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia (SM 4500 NH3 H) | 0.62 | F1 | 0.20 | 0.076 | mg/L | | | 10/04/22 14:55 | 1 |
| Total Phosphorus as P (SM4500 P E-2011) | 0.12 | B | 0.10 | 0.017 | mg/L | | | 10/12/22 08:57 | 1 |

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: DUP-08_09272022

**Lab Sample ID: 240-173822-15**

**Date Collected: 09/27/22 00:00**

**Matrix: Water**

**Date Received: 09/29/22 09:45**

### Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.095 | U | 0.095 | 0.053 | ug/L | | 10/07/22 09:50 | 10/10/22 18:07 | 1 |
| Aroclor-1221 | 0.095 | U | 0.095 | 0.054 | ug/L | | 10/07/22 09:50 | 10/10/22 18:07 | 1 |
| Aroclor-1232 | 0.095 | U | 0.095 | 0.070 | ug/L | | 10/07/22 09:50 | 10/10/22 18:07 | 1 |
| Aroclor-1242 | 0.095 | U | 0.095 | 0.072 | ug/L | | 10/07/22 09:50 | 10/10/22 18:07 | 1 |
| Aroclor-1248 | 0.095 | U | 0.095 | 0.048 | ug/L | | 10/07/22 09:50 | 10/10/22 18:07 | 1 |
| Aroclor-1254 | 0.095 | U | 0.095 | 0.038 | ug/L | | 10/07/22 09:50 | 10/10/22 18:07 | 1 |
| Aroclor-1260 | 0.095 | U | 0.095 | 0.044 | ug/L | | 10/07/22 09:50 | 10/10/22 18:07 | 1 |
| Aroclor-1262 | 0.095 | U | 0.095 | 0.055 | ug/L | | 10/07/22 09:50 | 10/10/22 18:07 | 1 |
| Aroclor-1268 | 0.095 | U | 0.095 | 0.059 | ug/L | | 10/07/22 09:50 | 10/10/22 18:07 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *78* | | *10 - 149* | *10/07/22 09:50* | *10/10/22 18:07* | *1* |
| *DCB Decachlorobiphenyl* | *97* | | *10 - 174* | *10/07/22 09:50* | *10/10/22 18:07* | *1* |

### Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.095 | U | 0.095 | 0.053 | ug/L | | 10/11/22 10:44 | 10/13/22 18:04 | 1 |
| Aroclor-1221 | 0.095 | U | 0.095 | 0.054 | ug/L | | 10/11/22 10:44 | 10/13/22 18:04 | 1 |
| Aroclor-1232 | 0.095 | U | 0.095 | 0.070 | ug/L | | 10/11/22 10:44 | 10/13/22 18:04 | 1 |
| Aroclor-1242 | 0.095 | U | 0.095 | 0.072 | ug/L | | 10/11/22 10:44 | 10/13/22 18:04 | 1 |
| **Aroclor-1248** | **0.46** | | 0.095 | 0.048 | ug/L | | 10/11/22 10:44 | 10/13/22 18:04 | 1 |
| Aroclor-1254 | 0.095 | U | 0.095 | 0.038 | ug/L | | 10/11/22 10:44 | 10/13/22 18:04 | 1 |
| Aroclor-1260 | 0.095 | U | 0.095 | 0.044 | ug/L | | 10/11/22 10:44 | 10/13/22 18:04 | 1 |
| Aroclor-1262 | 0.095 | U | 0.095 | 0.055 | ug/L | | 10/11/22 10:44 | 10/13/22 18:04 | 1 |
| Aroclor-1268 | 0.095 | U | 0.095 | 0.059 | ug/L | | 10/11/22 10:44 | 10/13/22 18:04 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *65* | | *10 - 149* | *10/11/22 10:44* | *10/13/22 18:04* | *1* |
| *DCB Decachlorobiphenyl* | *50* | | *10 - 174* | *10/11/22 10:44* | *10/13/22 18:04* | *1* |

# Surrogate Summary

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | TCX2 | DCBP2 |
| Lab Sample ID | Client Sample ID | (10-149) | (10-174) |
| 240-173822-5 | MW-110WTR_09272022 | 68 | 73 |
| 240-173822-6 | MW-185WT_09272022 | 77 | 91 |
| 240-173822-7 | MW-186WT_09282022 | 73 | 52 |
| 240-173822-9 | MW-114WT_09282022 | 76 | 64 |
| 240-173822-10 | MW-111WT_09272022 | 85 | 32 |
| 240-173822-10 MS | MW-111WT_09272022 MS | 80 | 34 |
| 240-173822-10 MSD | MW-111WT_09272022 MSD | 66 | 65 |
| 240-173822-15 | DUP-08_09272022 | 78 | 97 |
| LCS 240-546081/22-A | Lab Control Sample | 77 | 102 |
| MB 240-546081/21-A | Method Blank | 79 | 81 |

**Surrogate Legend**

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | TCX1 | DCBP1 |
| Lab Sample ID | Client Sample ID | (10-149) | (10-174) |
| LCS 240-546521/22-A | Lab Control Sample | 78 | 88 |
| MB 240-546521/21-A | Method Blank | 85 | 91 |

**Surrogate Legend**

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Matrix: Water** **Prep Type: Dissolved**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | TCX1 | DCBP1 |
| Lab Sample ID | Client Sample ID | (10-149) | (10-174) |
| 240-173822-5 | MW-110WTR_09272022 | 71 | 37 |
| 240-173822-6 | MW-185WT_09272022 | 68 | 76 |
| 240-173822-7 | MW-186WT_09282022 | 72 | 50 |
| 240-173822-9 | MW-114WT_09282022 | 66 | 59 |
| 240-173822-10 | MW-111WT_09272022 | 62 | 22 |
| 240-173822-10 MS | MW-111WT_09272022 MS | 55 | 58 |
| 240-173822-10 MSD | MW-111WT_09272022 MSD | 60 | 62 |
| 240-173822-15 | DUP-08_09272022 | 65 | 50 |

**Surrogate Legend**

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Lab Sample ID: MB 240-546081/21-A**
**Matrix: Water**
**Analysis Batch: 546227**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 546081**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.10 | U | 0.10 | 0.056 | ug/L | | 10/07/22 09:50 | 10/10/22 16:45 | 1 |
| Aroclor-1221 | 0.10 | U | 0.10 | 0.057 | ug/L | | 10/07/22 09:50 | 10/10/22 16:45 | 1 |
| Aroclor-1232 | 0.10 | U | 0.10 | 0.074 | ug/L | | 10/07/22 09:50 | 10/10/22 16:45 | 1 |
| Aroclor-1242 | 0.10 | U | 0.10 | 0.076 | ug/L | | 10/07/22 09:50 | 10/10/22 16:45 | 1 |
| Aroclor-1248 | 0.10 | U | 0.10 | 0.050 | ug/L | | 10/07/22 09:50 | 10/10/22 16:45 | 1 |
| Aroclor-1254 | 0.10 | U | 0.10 | 0.040 | ug/L | | 10/07/22 09:50 | 10/10/22 16:45 | 1 |
| Aroclor-1260 | 0.10 | U | 0.10 | 0.046 | ug/L | | 10/07/22 09:50 | 10/10/22 16:45 | 1 |
| Aroclor-1262 | 0.10 | U | 0.10 | 0.058 | ug/L | | 10/07/22 09:50 | 10/10/22 16:45 | 1 |
| Aroclor-1268 | 0.10 | U | 0.10 | 0.062 | ug/L | | 10/07/22 09:50 | 10/10/22 16:45 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *79* | | *10 - 149* | *10/07/22 09:50* | *10/10/22 16:45* | *1* |
| *DCB Decachlorobiphenyl* | *81* | | *10 - 174* | *10/07/22 09:50* | *10/10/22 16:45* | *1* |

**Lab Sample ID: LCS 240-546081/22-A**
**Matrix: Water**
**Analysis Batch: 546227**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 546081**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | | | 2.50 | 1.75 | | ug/L | | 70 | 28 - 140 | | |
| Aroclor-1260 | | | 2.50 | 2.12 | | ug/L | | 85 | 39 - 153 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Tetrachloro-m-xylene* | *77* | | *10 - 149* |
| *DCB Decachlorobiphenyl* | *102* | | *10 - 174* |

**Lab Sample ID: 240-173822-10 MS**
**Matrix: Water**
**Analysis Batch: 546227**

**Client Sample ID: MW-111WT_09272022 MS**
**Prep Type: Total/NA**
**Prep Batch: 546081**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.095 | U F2 | 2.38 | 1.99 | | ug/L | | 84 | 50 - 120 | | |
| Aroclor-1260 | 0.095 | U | 2.38 | 1.60 | | ug/L | | 67 | 39 - 135 | | |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *Tetrachloro-m-xylene* | *80* | | *10 - 149* |
| *DCB Decachlorobiphenyl* | *34* | | *10 - 174* |

**Lab Sample ID: 240-173822-10 MSD**
**Matrix: Water**
**Analysis Batch: 546227**

**Client Sample ID: MW-111WT_09272022 MSD**
**Prep Type: Total/NA**
**Prep Batch: 546081**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.095 | U F2 | 2.38 | 1.50 | F2 | ug/L | | 63 | 50 - 120 | 28 | 25 |
| Aroclor-1260 | 0.095 | U | 2.38 | 1.62 | | ug/L | | 68 | 39 - 135 | 1 | 26 |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

**Lab Sample ID: 240-173822-10 MSD**
**Matrix: Water**
**Analysis Batch: 546227**

**Client Sample ID: MW-111WT_09272022 MSD**
**Prep Type: Total/NA**
**Prep Batch: 546081**

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| Tetrachloro-m-xylene | 66 | | 10 - 149 |
| DCB Decachlorobiphenyl | 65 | | 10 - 174 |

**Lab Sample ID: MB 240-546521/21-A**
**Matrix: Water**
**Analysis Batch: 546806**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 546521**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.10 | U | 0.10 | 0.056 | ug/L | | 10/11/22 10:44 | 10/13/22 14:11 | 1 |
| Aroclor-1221 | 0.10 | U | 0.10 | 0.057 | ug/L | | 10/11/22 10:44 | 10/13/22 14:11 | 1 |
| Aroclor-1232 | 0.10 | U | 0.10 | 0.074 | ug/L | | 10/11/22 10:44 | 10/13/22 14:11 | 1 |
| Aroclor-1242 | 0.10 | U | 0.10 | 0.076 | ug/L | | 10/11/22 10:44 | 10/13/22 14:11 | 1 |
| Aroclor-1248 | 0.10 | U | 0.10 | 0.050 | ug/L | | 10/11/22 10:44 | 10/13/22 14:11 | 1 |
| Aroclor-1254 | 0.10 | U | 0.10 | 0.040 | ug/L | | 10/11/22 10:44 | 10/13/22 14:11 | 1 |
| Aroclor-1260 | 0.10 | U | 0.10 | 0.046 | ug/L | | 10/11/22 10:44 | 10/13/22 14:11 | 1 |
| Aroclor-1262 | 0.10 | U | 0.10 | 0.058 | ug/L | | 10/11/22 10:44 | 10/13/22 14:11 | 1 |
| Aroclor-1268 | 0.10 | U | 0.10 | 0.062 | ug/L | | 10/11/22 10:44 | 10/13/22 14:11 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 85 | | 10 - 149 | 10/11/22 10:44 | 10/13/22 14:11 | 1 |
| DCB Decachlorobiphenyl | 91 | | 10 - 174 | 10/11/22 10:44 | 10/13/22 14:11 | 1 |

**Lab Sample ID: LCS 240-546521/22-A**
**Matrix: Water**
**Analysis Batch: 546806**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 546521**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 2.50 | 1.92 | | ug/L | | 77 | 28 - 140 |
| Aroclor-1260 | 2.50 | 2.21 | | ug/L | | 89 | 39 - 153 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| Tetrachloro-m-xylene | 78 | | 10 - 149 |
| DCB Decachlorobiphenyl | 88 | | 10 - 174 |

**Lab Sample ID: 240-173822-10 MS**
**Matrix: Water**
**Analysis Batch: 546806**

**Client Sample ID: MW-111WT_09272022 MS**
**Prep Type: Dissolved**
**Prep Batch: 546521**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.095 | U | 2.38 | 1.38 | | ug/L | | 58 | 50 - 120 |
| Aroclor-1260 | 0.095 | U | 2.38 | 1.44 | | ug/L | | 60 | 39 - 135 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| Tetrachloro-m-xylene | 55 | | 10 - 149 |
| DCB Decachlorobiphenyl | 58 | | 10 - 174 |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

**Lab Sample ID: 240-173822-10 MSD**
**Matrix: Water**
**Analysis Batch: 546806**

**Client Sample ID: MW-111WT_09272022 MSD**
**Prep Type: Dissolved**
**Prep Batch: 546521**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 0.095 | U | 2.38 | 1.36 | | ug/L | | 57 | 50 - 120 | 1 | 25 |
| Aroclor-1260 | 0.095 | U | 2.38 | 1.46 | | ug/L | | 62 | 39 - 135 | 2 | 26 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *Tetrachloro-m-xylene* | *60* | | *10 - 149* |
| *DCB Decachlorobiphenyl* | *62* | | *10 - 174* |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 240-545292/1-A**
**Matrix: Water**
**Analysis Batch: 545531**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 545292**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 15 | U | 15 | 6.2 | ug/L | | 10/03/22 12:00 | 10/04/22 10:26 | 1 |
| Thallium | 20 | U | 20 | 2.7 | ug/L | | 10/03/22 12:00 | 10/04/22 10:26 | 1 |
| Arsenic | 15 | U | 15 | 4.1 | ug/L | | 10/03/22 12:00 | 10/04/22 10:26 | 1 |

**Lab Sample ID: LCS 240-545292/2-A**
**Matrix: Water**
**Analysis Batch: 545531**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 545292**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Manganese | 1000 | 912 | | ug/L | | 91 | 80 - 120 |
| Thallium | 2000 | 1880 | | ug/L | | 94 | 80 - 120 |
| Arsenic | 2000 | 1950 | | ug/L | | 97 | 80 - 120 |

**Lab Sample ID: 240-173822-14 MS**
**Matrix: Water**
**Analysis Batch: 545531**

**Client Sample ID: MW-107WT_09272022 MS**
**Prep Type: Total Recoverable**
**Prep Batch: 545292**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 480 | | 1000 | 1380 | | ug/L | | 90 | 75 - 125 |
| Arsenic | 8.0 | J | 2000 | 2020 | | ug/L | | 101 | 75 - 125 |

**Lab Sample ID: 240-173822-14 MSD**
**Matrix: Water**
**Analysis Batch: 545531**

**Client Sample ID: MW-107WT_09272022**
**Prep Type: Total Recoverable**
**Prep Batch: 545292**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 480 | | 1000 | 1360 | | ug/L | | 89 | 75 - 125 | 1 | 20 |
| Thallium | 20 | U | 2000 | 1860 | | ug/L | | 93 | 75 - 125 | 2 | 20 |
| Arsenic | 8.0 | J | 2000 | 1960 | | ug/L | | 98 | 75 - 125 | 3 | 20 |

## Method: 6010C - Metals (ICP) (Continued)

**Lab Sample ID: MB 240-545318/1-A**
**Matrix: Water**
**Analysis Batch: 545531**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 545318**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dissolved Arsenic | 4.1 | U | 4.1 | 4.1 | ug/L | | 10/03/22 12:00 | 10/04/22 17:51 | 1 |

**Lab Sample ID: LCS 240-545318/2-A**
**Matrix: Water**
**Analysis Batch: 545531**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 545318**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Dissolved Arsenic | 2000 | 1930 | | ug/L | | 96 | 80 - 120 |

**Lab Sample ID: 240-173822-14 MS**
**Matrix: Water**
**Analysis Batch: 545531**

**Client Sample ID: MW-107WT_09272022 MS**
**Prep Type: Dissolved**
**Prep Batch: 545318**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Dissolved Arsenic | 9.2 | | 2000 | 2000 | | ug/L | | 100 | 75 - 125 |

**Lab Sample ID: 240-173822-14 MSD**
**Matrix: Water**
**Analysis Batch: 545531**

**Client Sample ID: MW-107WT_09272022 MSD**
**Prep Type: Dissolved**
**Prep Batch: 545318**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dissolved Arsenic | 9.2 | | 2000 | 1970 | | ug/L | | 98 | 75 - 125 | 1 | 20 |

## Method: 4500 NH3 H - Ammonia

**Lab Sample ID: MB 240-545640/14**
**Matrix: Water**
**Analysis Batch: 545640**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.20 | U | 0.20 | 0.076 | mg/L | | | 10/04/22 12:31 | 1 |

**Lab Sample ID: MB 240-545640/44**
**Matrix: Water**
**Analysis Batch: 545640**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.20 | U | 0.20 | 0.076 | mg/L | | | 10/04/22 14:01 | 1 |

**Lab Sample ID: MB 240-545640/76**
**Matrix: Water**
**Analysis Batch: 545640**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.20 | U | 0.20 | 0.076 | mg/L | | | 10/04/22 15:37 | 1 |

## Method: 4500 NH3 H - Ammonia (Continued)

**Lab Sample ID: LCS 240-545640/15**
**Matrix: Water**
**Analysis Batch: 545640**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Ammonia | 6.37 | 5.99 | | mg/L | | 94 | 90 - 110 |

**Lab Sample ID: LCS 240-545640/45**
**Matrix: Water**
**Analysis Batch: 545640**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Ammonia | 6.37 | 6.00 | | mg/L | | 94 | 90 - 110 |

**Lab Sample ID: LCS 240-545640/77**
**Matrix: Water**
**Analysis Batch: 545640**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Ammonia | 6.37 | 5.78 | | mg/L | | 91 | 90 - 110 |

**Lab Sample ID: 240-173822-1 MS**
**Matrix: Water**
**Analysis Batch: 545640**

**Client Sample ID: MW-107S1_09262022**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 1.2 | | 2.50 | 3.49 | | mg/L | | 90 | 90 - 110 |

**Lab Sample ID: 240-173822-1 MSD**
**Matrix: Water**
**Analysis Batch: 545640**

**Client Sample ID: MW-107S1_09262022**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 1.2 | | 2.50 | 3.50 | | mg/L | | 90 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 240-173822-14 MS**
**Matrix: Water**
**Analysis Batch: 545640**

**Client Sample ID: MW-107WT_09272022 MS**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.62 | F1 | 2.50 | 4.97 | F1 | mg/L | | 174 | 90 - 110 |

**Lab Sample ID: 240-173822-14 MSD**
**Matrix: Water**
**Analysis Batch: 545640**

**Client Sample ID: MW-107WT_09272022 MSD**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 0.62 | F1 | 2.50 | 5.23 | F1 | mg/L | | 184 | 90 - 110 | 5 | 20 |

## Method: SM4500 P E-2011 - Phosphorus

**Lab Sample ID: MB 240-546660/3**
**Matrix: Water**
**Analysis Batch: 546660**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Phosphorus as P | 0.0335 | J | 0.10 | 0.017 | mg/L | | | 10/12/22 08:57 | 1 |

**Lab Sample ID: LCS 240-546660/4**
**Matrix: Water**
**Analysis Batch: 546660**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Phosphorus as P | | | 0.784 | 0.851 | | mg/L | | 108 | 77 - 120 | | |

**Lab Sample ID: 240-173822-14 MS**
**Matrix: Water**
**Analysis Batch: 546660**

**Client Sample ID: MW-107WT_09272022 MS**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Phosphorus as P | 0.12 | B | 0.500 | 0.661 | | mg/L | | 107 | 38 - 156 | | |

**Lab Sample ID: 240-173822-14 MSD**
**Matrix: Water**
**Analysis Batch: 546660**

**Client Sample ID: MW-107WT_09272022 MSD**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Phosphorus as P | 0.12 | B | 0.500 | 0.689 | | mg/L | | 113 | 38 - 156 | 4 | 29 |

## GC Semi VOA

### Prep Batch: 546081

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173822-5 | MW-110WTR_09272022 | Total/NA | Water | 3510C | |
| 240-173822-6 | MW-185WT_09272022 | Total/NA | Water | 3510C | |
| 240-173822-7 | MW-186WT_09282022 | Total/NA | Water | 3510C | |
| 240-173822-9 | MW-114WT_09282022 | Total/NA | Water | 3510C | |
| 240-173822-10 | MW-111WT_09272022 | Total/NA | Water | 3510C | |
| 240-173822-15 | DUP-08_09272022 | Total/NA | Water | 3510C | |
| MB 240-546081/21-A | Method Blank | Total/NA | Water | 3510C | |
| LCS 240-546081/22-A | Lab Control Sample | Total/NA | Water | 3510C | |
| 240-173822-10 MS | MW-111WT_09272022 MS | Total/NA | Water | 3510C | |
| 240-173822-10 MSD | MW-111WT_09272022 MSD | Total/NA | Water | 3510C | |

### Analysis Batch: 546227

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173822-5 | MW-110WTR_09272022 | Total/NA | Water | 8082A | 546081 |
| 240-173822-6 | MW-185WT_09272022 | Total/NA | Water | 8082A | 546081 |
| 240-173822-7 | MW-186WT_09282022 | Total/NA | Water | 8082A | 546081 |
| 240-173822-9 | MW-114WT_09282022 | Total/NA | Water | 8082A | 546081 |
| 240-173822-10 | MW-111WT_09272022 | Total/NA | Water | 8082A | 546081 |
| 240-173822-15 | DUP-08_09272022 | Total/NA | Water | 8082A | 546081 |
| MB 240-546081/21-A | Method Blank | Total/NA | Water | 8082A | 546081 |
| LCS 240-546081/22-A | Lab Control Sample | Total/NA | Water | 8082A | 546081 |
| 240-173822-10 MS | MW-111WT_09272022 MS | Total/NA | Water | 8082A | 546081 |
| 240-173822-10 MSD | MW-111WT_09272022 MSD | Total/NA | Water | 8082A | 546081 |

### Prep Batch: 546521

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173822-5 | MW-110WTR_09272022 | Dissolved | Water | 3510C | |
| 240-173822-6 | MW-185WT_09272022 | Dissolved | Water | 3510C | |
| 240-173822-7 | MW-186WT_09282022 | Dissolved | Water | 3510C | |
| 240-173822-9 | MW-114WT_09282022 | Dissolved | Water | 3510C | |
| 240-173822-10 | MW-111WT_09272022 | Dissolved | Water | 3510C | |
| 240-173822-15 | DUP-08_09272022 | Dissolved | Water | 3510C | |
| MB 240-546521/21-A | Method Blank | Total/NA | Water | 3510C | |
| LCS 240-546521/22-A | Lab Control Sample | Total/NA | Water | 3510C | |
| 240-173822-10 MS | MW-111WT_09272022 MS | Dissolved | Water | 3510C | |
| 240-173822-10 MSD | MW-111WT_09272022 MSD | Dissolved | Water | 3510C | |

### Analysis Batch: 546806

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173822-5 | MW-110WTR_09272022 | Dissolved | Water | 8082A | 546521 |
| 240-173822-6 | MW-185WT_09272022 | Dissolved | Water | 8082A | 546521 |
| 240-173822-7 | MW-186WT_09282022 | Dissolved | Water | 8082A | 546521 |
| 240-173822-9 | MW-114WT_09282022 | Dissolved | Water | 8082A | 546521 |
| 240-173822-10 | MW-111WT_09272022 | Dissolved | Water | 8082A | 546521 |
| 240-173822-15 | DUP-08_09272022 | Dissolved | Water | 8082A | 546521 |
| MB 240-546521/21-A | Method Blank | Total/NA | Water | 8082A | 546521 |
| LCS 240-546521/22-A | Lab Control Sample | Total/NA | Water | 8082A | 546521 |
| 240-173822-10 MS | MW-111WT_09272022 MS | Dissolved | Water | 8082A | 546521 |
| 240-173822-10 MSD | MW-111WT_09272022 MSD | Dissolved | Water | 8082A | 546521 |

## Metals

### Prep Batch: 545292

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173822-2 | MW-149WT_09262022 | Total Recoverable | Water | 3005A | |
| 240-173822-5 | MW-110WTR_09272022 | Total Recoverable | Water | 3005A | |
| 240-173822-6 | MW-185WT_09272022 | Total Recoverable | Water | 3005A | |
| 240-173822-7 | MW-186WT_09282022 | Total Recoverable | Water | 3005A | |
| 240-173822-8 | MW-114WT_09272022 | Total Recoverable | Water | 3005A | |
| 240-173822-10 | MW-111WT_09272022 | Total Recoverable | Water | 3005A | |
| 240-173822-11 | DUP-04_09272022 | Total Recoverable | Water | 3005A | |
| 240-173822-13 | DUP-07_09272022 | Total Recoverable | Water | 3005A | |
| 240-173822-14 | MW-107WT_09272022 | Total Recoverable | Water | 3005A | |
| MB 240-545292/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 240-545292/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 240-173822-14 MS | MW-107WT_09272022 MS | Total Recoverable | Water | 3005A | |
| 240-173822-14 MSD | MW-107WT_09272022 | Total Recoverable | Water | 3005A | |

### Filtration Batch: 545317

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173822-2 | MW-149WT_09262022 | Dissolved | Water | FILTRATION | |
| 240-173822-11 | DUP-04_09272022 | Dissolved | Water | FILTRATION | |
| 240-173822-14 | MW-107WT_09272022 | Dissolved | Water | FILTRATION | |
| 240-173822-14 MS | MW-107WT_09272022 MS | Dissolved | Water | FILTRATION | |
| 240-173822-14 MSD | MW-107WT_09272022 MSD | Dissolved | Water | FILTRATION | |

### Prep Batch: 545318

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173822-2 | MW-149WT_09262022 | Dissolved | Water | 3005A | 545317 |
| 240-173822-11 | DUP-04_09272022 | Dissolved | Water | 3005A | 545317 |
| 240-173822-14 | MW-107WT_09272022 | Dissolved | Water | 3005A | 545317 |
| MB 240-545318/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 240-545318/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 240-173822-14 MS | MW-107WT_09272022 MS | Dissolved | Water | 3005A | 545317 |
| 240-173822-14 MSD | MW-107WT_09272022 MSD | Dissolved | Water | 3005A | 545317 |

### Analysis Batch: 545531

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173822-2 | MW-149WT_09262022 | Dissolved | Water | 6010C | 545318 |
| 240-173822-2 | MW-149WT_09262022 | Total Recoverable | Water | 6010C | 545292 |
| 240-173822-5 | MW-110WTR_09272022 | Total Recoverable | Water | 6010C | 545292 |
| 240-173822-6 | MW-185WT_09272022 | Total Recoverable | Water | 6010C | 545292 |
| 240-173822-7 | MW-186WT_09282022 | Total Recoverable | Water | 6010C | 545292 |
| 240-173822-8 | MW-114WT_09272022 | Total Recoverable | Water | 6010C | 545292 |
| 240-173822-10 | MW-111WT_09272022 | Total Recoverable | Water | 6010C | 545292 |
| 240-173822-11 | DUP-04_09272022 | Dissolved | Water | 6010C | 545318 |
| 240-173822-11 | DUP-04_09272022 | Total Recoverable | Water | 6010C | 545292 |
| 240-173822-13 | DUP-07_09272022 | Total Recoverable | Water | 6010C | 545292 |
| 240-173822-14 | MW-107WT_09272022 | Dissolved | Water | 6010C | 545318 |
| 240-173822-14 | MW-107WT_09272022 | Total Recoverable | Water | 6010C | 545292 |
| MB 240-545292/1-A | Method Blank | Total Recoverable | Water | 6010C | 545292 |
| MB 240-545318/1-A | Method Blank | Total Recoverable | Water | 6010C | 545318 |
| LCS 240-545292/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 545292 |
| LCS 240-545318/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 545318 |
| 240-173822-14 MS | MW-107WT_09272022 MS | Dissolved | Water | 6010C | 545318 |

## Metals (Continued)

### Analysis Batch: 545531 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173822-14 MS | MW-107WT_09272022 MS | Total Recoverable | Water | 6010C | 545292 |
| 240-173822-14 MSD | MW-107WT_09272022 | Total Recoverable | Water | 6010C | 545292 |
| 240-173822-14 MSD | MW-107WT_09272022 MSD | Dissolved | Water | 6010C | 545318 |

## General Chemistry

### Analysis Batch: 545640

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173822-1 | MW-107S1_09262022 | Total/NA | Water | 4500 NH3 H | |
| 240-173822-2 | MW-149WT_09262022 | Total/NA | Water | 4500 NH3 H | |
| 240-173822-3 | MW-108S2_09272022 | Total/NA | Water | 4500 NH3 H | |
| 240-173822-4 | MW-114S2_09272022 | Total/NA | Water | 4500 NH3 H | |
| 240-173822-5 | MW-110WTR_09272022 | Total/NA | Water | 4500 NH3 H | |
| 240-173822-6 | MW-185WT_09272022 | Total/NA | Water | 4500 NH3 H | |
| 240-173822-7 | MW-186WT_09282022 | Total/NA | Water | 4500 NH3 H | |
| 240-173822-8 | MW-114WT_09272022 | Total/NA | Water | 4500 NH3 H | |
| 240-173822-10 | MW-111WT_09272022 | Total/NA | Water | 4500 NH3 H | |
| 240-173822-11 | DUP-04_09272022 | Total/NA | Water | 4500 NH3 H | |
| 240-173822-12 | DUP-06_09272022 | Total/NA | Water | 4500 NH3 H | |
| 240-173822-14 | MW-107WT_09272022 | Total/NA | Water | 4500 NH3 H | |
| MB 240-545640/14 | Method Blank | Total/NA | Water | 4500 NH3 H | |
| MB 240-545640/44 | Method Blank | Total/NA | Water | 4500 NH3 H | |
| MB 240-545640/76 | Method Blank | Total/NA | Water | 4500 NH3 H | |
| LCS 240-545640/15 | Lab Control Sample | Total/NA | Water | 4500 NH3 H | |
| LCS 240-545640/45 | Lab Control Sample | Total/NA | Water | 4500 NH3 H | |
| LCS 240-545640/77 | Lab Control Sample | Total/NA | Water | 4500 NH3 H | |
| 240-173822-1 MS | MW-107S1_09262022 | Total/NA | Water | 4500 NH3 H | |
| 240-173822-1 MSD | MW-107S1_09262022 | Total/NA | Water | 4500 NH3 H | |
| 240-173822-14 MS | MW-107WT_09272022 MS | Total/NA | Water | 4500 NH3 H | |
| 240-173822-14 MSD | MW-107WT_09272022 MSD | Total/NA | Water | 4500 NH3 H | |

### Analysis Batch: 546660

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173822-2 | MW-149WT_09262022 | Total/NA | Water | SM4500 P E-2011 | |
| 240-173822-5 | MW-110WTR_09272022 | Total/NA | Water | SM4500 P E-2011 | |
| 240-173822-6 | MW-185WT_09272022 | Total/NA | Water | SM4500 P E-2011 | |
| 240-173822-7 | MW-186WT_09282022 | Total/NA | Water | SM4500 P E-2011 | |
| 240-173822-8 | MW-114WT_09272022 | Total/NA | Water | SM4500 P E-2011 | |
| 240-173822-10 | MW-111WT_09272022 | Total/NA | Water | SM4500 P E-2011 | |
| 240-173822-11 | DUP-04_09272022 | Total/NA | Water | SM4500 P E-2011 | |
| 240-173822-14 | MW-107WT_09272022 | Total/NA | Water | SM4500 P E-2011 | |
| MB 240-546660/3 | Method Blank | Total/NA | Water | SM4500 P E-2011 | |
| LCS 240-546660/4 | Lab Control Sample | Total/NA | Water | SM4500 P E-2011 | |

## General Chemistry (Continued)

### Analysis Batch: 546660 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 240-173822-14 MS | MW-107WT_09272022 MS | Total/NA | Water | SM4500 P E-2011 | |
| 240-173822-14 MSD | MW-107WT_09272022 MSD | Total/NA | Water | SM4500 P E-2011 | |

# Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: MW-107S1_09262022

**Lab Sample ID: 240-173822-1**

**Date Collected: 09/26/22 14:26**

**Matrix: Water**

**Date Received: 09/29/22 09:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 4500 NH3 H | | 1 | 545640 | AJ | EET CAN | 10/04/22 14:07 |

## Client Sample ID: MW-149WT_09262022

**Lab Sample ID: 240-173822-2**

**Date Collected: 09/26/22 09:11**

**Matrix: Water**

**Date Received: 09/29/22 09:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Filtration | FILTRATION | | | 545317 | SHB | EET CAN | 10/03/22 11:00 |
| Dissolved | Prep | 3005A | | | 545318 | SHB | EET CAN | 10/03/22 12:00 |
| Dissolved | Analysis | 6010C | | 1 | 545531 | RKT | EET CAN | 10/04/22 18:32 |
| Total Recoverable | Prep | 3005A | | | 545292 | SHB | EET CAN | 10/03/22 12:00 |
| Total Recoverable | Analysis | 6010C | | 1 | 545531 | RKT | EET CAN | 10/04/22 11:38 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 545640 | AJ | EET CAN | 10/04/22 14:22 |
| Total/NA | Analysis | SM4500 P E-2011 | | 5 | 546660 | BLW | EET CAN | 10/12/22 08:57 |

## Client Sample ID: MW-108S2_09272022

**Lab Sample ID: 240-173822-3**

**Date Collected: 09/27/22 10:45**

**Matrix: Water**

**Date Received: 09/29/22 09:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 4500 NH3 H | | 1 | 545640 | AJ | EET CAN | 10/04/22 14:25 |

## Client Sample ID: MW-114S2_09272022

**Lab Sample ID: 240-173822-4**

**Date Collected: 09/27/22 12:05**

**Matrix: Water**

**Date Received: 09/29/22 09:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 4500 NH3 H | | 1 | 545640 | AJ | EET CAN | 10/04/22 14:28 |

## Client Sample ID: MW-110WTR_09272022

**Lab Sample ID: 240-173822-5**

**Date Collected: 09/27/22 14:26**

**Matrix: Water**

**Date Received: 09/29/22 09:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3510C | | | 546521 | BMB | EET CAN | 10/11/22 10:44 |
| Dissolved | Analysis | 8082A | | 1 | 546806 | RR | EET CAN | 10/13/22 16:58 |
| Total/NA | Prep | 3510C | | | 546081 | MDH | EET CAN | 10/07/22 09:50 |
| Total/NA | Analysis | 8082A | | 1 | 546227 | LSH | EET CAN | 10/10/22 16:12 |
| Total Recoverable | Prep | 3005A | | | 545292 | SHB | EET CAN | 10/03/22 12:00 |
| Total Recoverable | Analysis | 6010C | | 1 | 545531 | RKT | EET CAN | 10/04/22 11:50 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 545640 | AJ | EET CAN | 10/04/22 14:31 |
| Total/NA | Analysis | SM4500 P E-2011 | | 1 | 546660 | BLW | EET CAN | 10/12/22 08:57 |

# Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: MW-185WT_09272022

**Lab Sample ID: 240-173822-6**

**Date Collected: 09/27/22 13:50**

**Matrix: Water**

**Date Received: 09/29/22 09:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3510C | | | 546521 | BMB | EET CAN | 10/11/22 10:44 |
| Dissolved | Analysis | 8082A | | 1 | 546806 | RR | EET CAN | 10/13/22 17:14 |
| Total/NA | Prep | 3510C | | | 546081 | MDH | EET CAN | 10/07/22 09:50 |
| Total/NA | Analysis | 8082A | | 1 | 546227 | LSH | EET CAN | 10/10/22 16:29 |
| Total Recoverable | Prep | 3005A | | | 545292 | SHB | EET CAN | 10/03/22 12:00 |
| Total Recoverable | Analysis | 6010C | | 1 | 545531 | RKT | EET CAN | 10/04/22 12:25 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 545640 | AJ | EET CAN | 10/04/22 13:10 |
| Total/NA | Analysis | SM4500 P E-2011 | | 1 | 546660 | BLW | EET CAN | 10/12/22 08:57 |

## Client Sample ID: MW-186WT_09282022

**Lab Sample ID: 240-173822-7**

**Date Collected: 09/28/22 10:41**

**Matrix: Water**

**Date Received: 09/29/22 09:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3510C | | | 546521 | BMB | EET CAN | 10/11/22 10:44 |
| Dissolved | Analysis | 8082A | | 1 | 546806 | RR | EET CAN | 10/13/22 17:31 |
| Total/NA | Prep | 3510C | | | 546081 | MDH | EET CAN | 10/07/22 09:50 |
| Total/NA | Analysis | 8082A | | 1 | 546227 | LSH | EET CAN | 10/10/22 17:34 |
| Total Recoverable | Prep | 3005A | | | 545292 | SHB | EET CAN | 10/03/22 12:00 |
| Total Recoverable | Analysis | 6010C | | 1 | 545531 | RKT | EET CAN | 10/04/22 12:30 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 545640 | AJ | EET CAN | 10/04/22 14:37 |
| Total/NA | Analysis | SM4500 P E-2011 | | 1 | 546660 | BLW | EET CAN | 10/12/22 08:57 |

## Client Sample ID: MW-114WT_09272022

**Lab Sample ID: 240-173822-8**

**Date Collected: 09/27/22 16:10**

**Matrix: Water**

**Date Received: 09/29/22 09:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 545292 | SHB | EET CAN | 10/03/22 12:00 |
| Total Recoverable | Analysis | 6010C | | 1 | 545531 | RKT | EET CAN | 10/04/22 12:34 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 545640 | AJ | EET CAN | 10/04/22 14:40 |
| Total/NA | Analysis | SM4500 P E-2011 | | 1 | 546660 | BLW | EET CAN | 10/12/22 08:57 |

## Client Sample ID: MW-114WT_09282022

**Lab Sample ID: 240-173822-9**

**Date Collected: 09/28/22 07:30**

**Matrix: Water**

**Date Received: 09/29/22 09:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3510C | | | 546521 | BMB | EET CAN | 10/11/22 10:44 |
| Dissolved | Analysis | 8082A | | 1 | 546806 | RR | EET CAN | 10/13/22 17:47 |
| Total/NA | Prep | 3510C | | | 546081 | MDH | EET CAN | 10/07/22 09:50 |
| Total/NA | Analysis | 8082A | | 1 | 546227 | LSH | EET CAN | 10/10/22 17:51 |

# Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: MW-111WT_09272022
**Date Collected: 09/27/22 12:05**
**Date Received: 09/29/22 09:45**

## Lab Sample ID: 240-173822-10
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3510C | | | 546521 | BMB | EET CAN | 10/11/22 10:44 |
| Dissolved | Analysis | 8082A | | 1 | 546806 | RR | EET CAN | 10/13/22 16:08 |
| Total/NA | Prep | 3510C | | | 546081 | MDH | EET CAN | 10/07/22 09:50 |
| Total/NA | Analysis | 8082A | | 1 | 546227 | LSH | EET CAN | 10/10/22 13:26 |
| Total Recoverable | Prep | 3005A | | | 545292 | SHB | EET CAN | 10/03/22 12:00 |
| Total Recoverable | Analysis | 6010C | | 1 | 545531 | RKT | EET CAN | 10/04/22 12:38 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 545640 | AJ | EET CAN | 10/04/22 15:04 |
| Total/NA | Analysis | SM4500 P E-2011 | | 1 | 546660 | BLW | EET CAN | 10/12/22 08:57 |

## Client Sample ID: DUP-04_09272022
**Date Collected: 09/27/22 00:00**
**Date Received: 09/29/22 09:45**

## Lab Sample ID: 240-173822-11
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Filtration | FILTRATION | | | 545317 | SHB | EET CAN | 10/03/22 11:00 |
| Dissolved | Prep | 3005A | | | 545318 | SHB | EET CAN | 10/03/22 12:00 |
| Dissolved | Analysis | 6010C | | 1 | 545531 | RKT | EET CAN | 10/04/22 18:36 |
| Total Recoverable | Prep | 3005A | | | 545292 | SHB | EET CAN | 10/03/22 12:00 |
| Total Recoverable | Analysis | 6010C | | 1 | 545531 | RKT | EET CAN | 10/04/22 12:42 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 545640 | AJ | EET CAN | 10/04/22 16:49 |
| Total/NA | Analysis | SM4500 P E-2011 | | 5 | 546660 | BLW | EET CAN | 10/12/22 08:57 |

## Client Sample ID: DUP-06_09272022
**Date Collected: 09/27/22 00:00**
**Date Received: 09/29/22 09:45**

## Lab Sample ID: 240-173822-12
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 4500 NH3 H | | 1 | 545640 | AJ | EET CAN | 10/04/22 16:52 |

## Client Sample ID: DUP-07_09272022
**Date Collected: 09/27/22 00:00**
**Date Received: 09/29/22 09:45**

## Lab Sample ID: 240-173822-13
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 545292 | SHB | EET CAN | 10/03/22 12:00 |
| Total Recoverable | Analysis | 6010C | | 1 | 545531 | RKT | EET CAN | 10/04/22 12:46 |

## Client Sample ID: MW-107WT_09272022
**Date Collected: 09/27/22 11:00**
**Date Received: 09/29/22 09:45**

## Lab Sample ID: 240-173822-14
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Filtration | FILTRATION | | | 545317 | SHB | EET CAN | 10/03/22 11:00 |
| Dissolved | Prep | 3005A | | | 545318 | SHB | EET CAN | 10/03/22 12:00 |
| Dissolved | Analysis | 6010C | | 1 | 545531 | RKT | EET CAN | 10/04/22 18:12 |

# Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Client Sample ID: MW-107WT_09272022

**Lab Sample ID: 240-173822-14**

**Date Collected: 09/27/22 11:00**

**Matrix: Water**

**Date Received: 09/29/22 09:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 545292 | SHB | EET CAN | 10/03/22 12:00 |
| Total Recoverable | Analysis | 6010C | | 1 | 545531 | RKT | EET CAN | 10/04/22 10:39 |
| Total/NA | Analysis | 4500 NH3 H | | 1 | 545640 | AJ | EET CAN | 10/04/22 14:55 |
| Total/NA | Analysis | SM4500 P E-2011 | | 1 | 546660 | BLW | EET CAN | 10/12/22 08:57 |

## Client Sample ID: DUP-08_09272022

**Lab Sample ID: 240-173822-15**

**Date Collected: 09/27/22 00:00**

**Matrix: Water**

**Date Received: 09/29/22 09:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Dissolved | Prep | 3510C | | | 546521 | BMB | EET CAN | 10/11/22 10:44 |
| Dissolved | Analysis | 8082A | | 1 | 546806 | RR | EET CAN | 10/13/22 18:04 |
| Total/NA | Prep | 3510C | | | 546081 | MDH | EET CAN | 10/07/22 09:50 |
| Total/NA | Analysis | 8082A | | 1 | 546227 | LSH | EET CAN | 10/10/22 18:07 |

**Laboratory References:**

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

# Accreditation/Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: RACER SMI

Job ID: 240-173822-1

## Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| California | State | 2927 | 02-27-23 |
| Connecticut | State | PH-0590 | 12-31-23 |
| Florida | NELAP | E87225 | 06-30-23 |
| Georgia | State | 4062 | 02-27-23 |
| Illinois | NELAP | 200004 | 07-31-23 |
| Iowa | State | 421 | 06-01-23 |
| Kentucky (UST) | State | 112225 | 02-27-23 |
| Kentucky (WW) | State | KY98016 | 12-31-22 |
| Minnesota | NELAP | 039-999-348 | 12-31-22 |
| Minnesota (Petrofund) | State | 3506 | 08-01-23 |
| New Jersey | NELAP | OH001 | 06-30-23 |
| New York | NELAP | 10975 | 04-01-23 |
| Ohio | State | 8303 | 02-27-23 |
| Ohio VAP | State | CL0024 | 02-27-23 |
| Oregon | NELAP | 4062 | 02-27-23 |
| Pennsylvania | NELAP | 68-00340 | 08-31-23 |
| Texas | NELAP | T104704517-22-17 | 08-31-23 |
| Virginia | NELAP | 460175 | 09-14-23 |
| Washington | State | C971 | 01-12-23 |
| West Virginia DEP | State | 210 | 12-31-22 |

**Eurofins Canton**
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information | Sampler: | Lab PM: DelMonico, Michael | Carrier Tracking No(s): | COC No: 240-99448-36195.1 |
|---|---|---|---|---|
| Client Contact: Ms. Kristen Padron | Phone: | E-Mail: Michael.DelMonico@et.eurofinsus.com | State of Origin: | Page: Page ~~1 of 6~~ 1 of 2 |
| Company: ARCADIS U.S., Inc. | PWSID: | | | Job #: |
| Address: 28550 Cabot Drive Suite 500 | Due Date Requested: | | | |
| City: Novi | TAT Requested (days): | | | |
| State, Zip: MI, 48377 | Compliance Project: Δ Yes Δ No | | | |
| Phone: 810-225-1921(Tel) | PO #: B0064434.2017.0010 | | | |
| Email: kristen.padron@arcadis.com | WO #: | | | |
| Project Name: RACER SMI | Project #: 24006824 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8270C - OLM03.1/4.2 Semivolatile Analyte List | 8082A - Standard PCB List 9 Aroclors | 8082A - Standard PCB List 9 Aroclors - FF | 4500_P_E - Total Phosphorus as P | 6010C - Total Manganese | 6010C - Dissolved Arsenic | 6010C - Total Arsenic | SM4500_NH3_H - Ammonia | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | N | N | N | S | D | N | D | S | | |
| MW-107ST-09262022 | 9/26/22 | 1426 | G | Water | N | N | | | | | | | | 1 | 1 | |
| MW-149WT-09272022 | 9/27/22 | 911 | G | Water | N | N | | | | 1 | | 1 | 1 | 1 | 4 | |
| MW-108S2-09272022 | 9/27/22 | 1045 | G | Water | N | N | | | | | | | | 1 | 1 | |
| MW-114S2-09272022 | 9/27/22 | 1205 | G | Water | N | N | | | | | | | | 1 | 1 | |
| MW-110WTR-09272022 | 9/27/22 | 1426 | G | Water | Y | N | | 2 | 2 | 1 | 1 | | | 1 | 7 | |
| MW-185WT-09272022 | 9/27/22 | 1350 | G | Water | Y | N | | 2 | 2 | 1 | 1 | | | 1 | 7 | |
| MW-186WT-09282022 | 9/28/22 | 1041 | G | Water | Y | N | | 2 | 2 | 1 | 1 | | | 1 | 7 | |
| ~~MW-185WT~~ MW-114WT-09272022 | 9/27/22 | 1610 | G | Water | N | N | | | | 1 | 1 | | | 1 | 3 | |
| MW-114WT-09282022 | 9/28/22 | 730 | G | Water | Y | N | | 2 | 2 | | | | | | 4 | |
| ~~MW-108S2~~ | | ~~1045~~ 1035 | | Water | | | | | | | | | | 1 | | |
| MW-111WT-09272022 | 9/27/22 | 1205 | G | Water | Y | Y | | 6 | 6 | 1 | 1 | | | 1 | 15 | MS/MSD for PCBs |

240-173822 Chain of Custody

***Possible Hazard Identification***
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| John Sider | 9/28/22 1345 | | Mandalay Bl | 9-29-22 9:45 | EESPC |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks |
|---|---|---|

Ver: 06/08/2021

**Eurofins Canton**
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information | Sampler: | Lab PM: DelMonico, Michael | Carrier Tracking No(s): | COC No: 240-99448-36195.2 |
|---|---|---|---|---|
| Client Contact: Ms. Kristen Padron | Phone: | E-Mail: Michael.DelMonico@et.eurofinsus.com | State of Origin: | Page: Page ~~2 of 6~~ 2 of 2 |
| Company: ARCADIS U.S., Inc. | PWSID: | | | Job #: |
| Address: 28550 Cabot Drive Suite 500 | Due Date Requested: | | | |
| City: Novi | TAT Requested (days): | | | |
| State, Zip: MI, 48377 | Compliance Project: ∆ Yes ∆ No | | | |
| Phone: 810-225-1921(Tel) | PO #: B0064434.2017.0010 | | | |
| Email: kristen.padron@arcadis.com | WO #: | | | |
| Project Name: RACER SMI | Project #: 24006824 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8270C - OLM03.1/4.2 Semivolatile Analyte List | 8082A - Standard PCB List 9 Aroclors | 8082A - Standard PCB List 9 Aroclors - FF | 4500_P_E - Total Phosphorus as P | 6010C - Total Manganese | 6010C - Dissolved Arsenic | 6010C - Total Arsenic | SM4500_NH3_H - Ammonia | | | | | | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | N | N | N | S | D | N | D | S | | | | | | | |
| DUP-04_09272022 | 9/27/22 | | 6 | Water | Y | N | | | | 1 | | 1 | 1 | 1 | | | | | | 4 | |
| DUP-06_09272022 | 9/27/22 | | 6 | Water | N | N | | | | | | | | 1 | | | | | | 1 | |
| DUP-07_09272022 | 9/27/22 | | 6 | Water | N | N | | | | | 1 | | | | | | | | | 1 | |
| MW-107WT_09272022 | 9/27/22 | 1100 | 6 | Water | Y | N | | | | 1 | 1 | 1 | 1 | 1 | | | | | | 5 | |
| MW-107WT_09272022 | 9/27/22 | 1725 | 6 | Water | Y | Y | | | | 1 | 1 | 1 | 1 | 1 | | | | | | 5 | MS/MSD |
| MW-107WT-09282022 | 9/28/22 | 730 | 6 | Water | Y | Y | | | | 1 | 1 | 1 | 1 | 1 | | | | | | 5 | |
| DUP-08_09272022 | 9/27/22 | | 6 | Water | Y | N | | 2 | 2 | | | | | | | | | | | 4 | |
| | | | | Water | | | | | | | | | | | | | | | | | |
| | | | | Water | | | | | | | | | | | | | | | | | |
| | | | | Water | | | | | | | | | | | | | | | | | |
| | | | | Water | | | | | | | | | | | | | | | | | |

***Possible Hazard Identification***
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by | Date/Time | Company | Received by | Date/Time | Company |
|---|---|---|---|---|---|
| John Fidor | 9/28/22 1345 | | Mandaly Bla | 9-29-22 9:45 | eqm |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 06/08/2021

**Eurofins - Canton Sample Receipt Form/Narrative** **Login # :** _____
**Barberton Facility**

Client ARCADIS Site Name _____ Cooler unpacked by: M. A. A.

Cooler Received on 9/29/22 Opened on 9/29/22

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

**Receipt After-hours**: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 1A Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice (Water) None

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form

IR GUN# IR-13 (CF +0.7 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

IR GUN #IR-15 (CF 0.0°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

| | | |
|---|---|---|
| 2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 | (Yes) | No |
| -Were the seals on the outside of the cooler(s) signed & dated? | (Yes) | No NA |
| -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? | Yes | (No) |
| -Were tamper/custody seals intact and uncompromised? | (Yes) | No NA |
| 3. Shippers' packing slip attached to the cooler(s)? | (Yes) | No |
| 4. Did custody papers accompany the sample(s)? | (Yes) | No |
| 5. Were the custody papers relinquished & signed in the appropriate place? | (Yes) | No |
| 6. Was/were the person(s) who collected the samples clearly identified on the COC? | Yes | (No) |
| 7. Did all bottles arrive in good condition (Unbroken)? | (Yes) | No |
| 8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? | (Yes) | No |
| 9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? | | |
| 10. Were correct bottle(s) used for the test(s) indicated? | (Yes) | No |
| 11. Sufficient quantity received to perform indicated analyses? | (Yes) | No |
| 12. Are these work share samples and all listed on the COC? | Yes | (No) |
| If yes, Questions 13-17 have been checked at the originating laboratory. | | |
| 13. Were all preserved sample(s) at the correct pH upon receipt? | (Yes) | No NA pH Strip Lot# **HC286797** |
| 14. Were VOAs on the COC? | Yes | (No) |
| 15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this. | Yes | No (NA) |
| 16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ | Yes | (No) |
| 17. Was a LL Hg or Me Hg trip blank present? _____ | Yes | (No) |

**Tests that are not checked for pH by Receiving:**

**VOAs**
**Oil and Grease**
**TOC**

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

**18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES** ☐ additional next page

Samples processed by:

**19. SAMPLE CONDITION**

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

**20. SAMPLE PRESERVATION**

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

# Login Container Summary Report



Temperature readings: _____

| Client Sample ID | Lab ID | Container Type | Container pH | Container Temp | Preservative Added (mls) | Lot # |
|---|---|---|---|---|---|---|
| MW-107ST_09262022 | 240-173822-A-1 | Plastic 250ml - with Sulfuric Acid | <2 | | | |
| MW-149WT_09262022 | 240-173822-A-2 | Plastic 250ml - with Sulfuric Acid | <2 | | | |
| MW-149WT_09262022 | 240-173822-C-2 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| MW-149WT_09262022 | 240-173822-D-2 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-108S2_09272022 | 240-173822-A-3 | Plastic 250ml - with Sulfuric Acid | <2 | | | |
| MW-114S2_09272022 | 240-173822-A-4 | Plastic 250ml - with Sulfuric Acid | <2 | | | |
| MW-110WT_09272022 | 240-173822-A-5 | Plastic 250ml - with Sulfuric Acid | <2 | | | |
| MW-110WT_09272022 | 240-173822-B-5 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| MW-110WT_09272022 | 240-173822-C-5 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-185WT_09272022 | 240-173822-A-6 | Plastic 250ml - with Sulfuric Acid | <2 | | | |
| MW-185WT_09272022 | 240-173822-B-6 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| MW-185WT_09272022 | 240-173822-C-6 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-186WT_09282022 | 240-173822-A-7 | Plastic 250ml - with Sulfuric Acid | <2 | | | |
| MW-186WT_09282022 | 240-173822-B-7 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| MW-186WT_09282022 | 240-173822-C-7 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-114WT_09272022 | 240-173822-A-8 | Plastic 250ml - with Sulfuric Acid | <2 | | | |
| MW-114WT_09272022 | 240-173822-B-8 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| MW-114WT_09272022 | 240-173822-C-8 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-111WT_09272022 | 240-173822-A-10 | Plastic 250ml - with Sulfuric Acid | <2 | | | |
| MW-111WT_09272022 | 240-173822-B-10 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| MW-111WT_09272022 | 240-173822-C-10 | Plastic 500ml - with Nitric Acid | <2 | | | |
| DUP-04_09272022 | 240-173822-A-11 | Plastic 250ml - with Sulfuric Acid | <2 | | | |
| DUP-04_09272022 | 240-173822-C-11 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| DUP-04_09272022 | 240-173822-D-11 | Plastic 500ml - with Nitric Acid | <2 | | | |
| DUP-06_09272022 | 240-173822-A-12 | Plastic 250ml - with Sulfuric Acid | <2 | | | |
| DUP-07_09272022 | 240-173822-A-13 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-107WT_09272022 | 240-173822-A-14 | Plastic 250ml - with Sulfuric Acid | <2 | | | |
| MW-107WT_09272022 | 240-173822-B-14 | Plastic 250ml - with Sulfuric Acid | <2 | | | |
| MW-107WT_09272022 | 240-173822-C-14 | Plastic 250ml - with Sulfuric Acid | <2 | | | |
| MW-107WT_09272022 | 240-173822-G-14 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| MW-107WT_09272022 | 240-173822-H-14 | Plastic 500ml - with Sulfuric Acid | <2 | | | |
| MW-107WT_09272022 | 240-173822-I-14 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-107WT_09272022 | 240-173822-J-14 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-107WT_09272022 | 240-173822-K-14 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-107WT_09272022 | 240-173822-L-14 | Plastic 500ml - with Nitric Acid | <2 | | | |

| Client Sample ID | Lab ID | Container Type | Container pH | Container Temp | Preservative Added (mls) | Lot # |
|---|---|---|---|---|---|---|
| MW-107WT_09272022 | 240-173822-M-14 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-107WT_09272022 | 240-173822-N-14 | Plastic 500ml - with Nitric Acid | <2 | | | |
| MW-107WT_09272022 | 240-173822-P-14 | Plastic 500ml - with Sulfuric Acid | <2 | | | |

Login # : _____

## Eurofins - Canton Sample Receipt Multiple Cooler Form

| Cooler Description (Circle) | IR Gun # (Circle) | Observed Temp °C | Corrected Temp °C | Coolant (Circle) |
|---|---|---|---|---|
| (TA) Client Box Other | IR-13 (IR-15) | 2.4 | 2.4 | (Wet Ice) Blue Ice Dry Ice Water None |
| (TA) Client Box Other | IR-13 (IR-15) | 4.6 | 4.6 | (Wet Ice) Blue Ice Dry Ice Water None |
| (TA) Client Box Other | IR-13 (IR-15) | 0.9 | 0.9 | (Wet Ice) Blue Ice Dry Ice Water None |
| (TA) Client Box Other | IR-13 (IR-15) | 3.3 | 3.3 | (Wet Ice) Blue Ice Dry Ice Water None |
| (TA) Client Box Other | IR-13 (IR-15) | 7.4 | 7.4 | (Wet Ice) Blue Ice Dry Ice Water None |
| (TA) Client Box Other | IR-13 (IR-15) | 3.1 | 3.1 | (Wet Ice) Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |
| TA Client Box Other | IR-13 IR-15 | | | Wet Ice Blue Ice Dry Ice Water None |

☐ See Temperature Excursion Form

*WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers*

# Attachment 3

**Field Sampling Logs**

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-117S1 | | | **Date** | 09/21/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 74.7 degrees F and Partly Cloudy. The wind is blowing S at 8.1 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 4.13 | **Total Depth (ft-bmp)** | 35.48 | **Water Column(ft)** | 31.35 | **Gallons in Well** | 5.09 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 35 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 14:25 | **Volumes Purged** | NA | **Sample ID** | MW-117S1_092122 | **Sampled by** | Daniel Parker |
| **Purge Start** | 12:27 | **Gallons Purged** | NA | **Replicate/ Code No.** | | | |
| **Purge End** | 15:45 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 12:35 | 0 | 0 | 50 | 4.13 | 0.00 | 7.09 | 0.92 | 11.2 | 1.53 | 20.9 | 86.6 | Clear | None |
| 12:45 | 10 | 10 | 50 | 4.13 | 0.00 | 6.61 | 1.53 | 14.8 | 2.61 | 22.3 | -29.5 | Clear | None |
| 12:50 | 5 | 15 | 50 | 4.13 | 0.00 | 6.75 | 162 | 0.02 | 1.8 | 23.2 | -85.9 | Clear | None |
| 12:55 | 5 | 20 | 50 | 4.13 | 0.00 | 7.06 | 1.2 | 15 | 1.27 | 23.5 | -112 | Clear | None |
| 13:00 | 5 | 25 | 50 | 4.13 | 0.00 | 6.99 | 1.22 | 8.94 | 1.89 | 23.5 | -116.9 | Clear | None |
| 13:05 | 5 | 30 | 50 | 4.13 | 0.00 | 6.82 | 1.42 | 0.02 | 1.69 | 23.3 | -116.4 | Clear | None |
| 13:10 | 5 | 35 | 50 | 4.13 | 0.00 | 6.76 | 1.62 | 3.64 | 1.53 | 23.3 | -114.4 | Clear | None |
| 13:15 | 5 | 40 | 50 | 4.13 | 0.00 | 6.76 | 1.66 | 0.02 | 1.42 | 23.3 | -117.3 | Clear | None |
| 13:20 | 5 | 45 | 50 | 4.13 | 0.00 | 6.77 | 1.66 | 0.02 | 1.41 | 23.2 | -119.4 | Clear | None |
| 13:25 | 5 | 50 | 50 | 4.13 | 0.00 | 6.74 | 1.66 | 10.9 | 2.73 | 23.2 | -119.8 | Clear | None |
| 13:30 | 5 | 55 | 50 | 4.13 | 0.00 | 6.8 | NA | 0.02 | 1.65 | 23.8 | -103.7 | Clear | None |
| 13:35 | 5 | 60 | 50 | 4.13 | 0.00 | 6.78 | 1.66 | 0.02 | 1.4 | 23.3 | -111.2 | Clear | None |
| 13:40 | 5 | 65 | 50 | 4.13 | 0.00 | 6.78 | 1.66 | 0.02 | 1.38 | 23.2 | -113.9 | Clear | None |
| 13:45 | 5 | 70 | 50 | 4.13 | 0.00 | 6.78 | 1.66 | 0.59 | 1.36 | 22.6 | -115.4 | Clear | None |
| 13:50 | 5 | 75 | 50 | 4.13 | 0.00 | 6.78 | 1.66 | 1.64 | 1.24 | 22.6 | -112 | Clear | None |
| 13:55 | 5 | 80 | 50 | 4.13 | 0.00 | 6.78 | 1.66 | 0.02 | 1.26 | 22.6 | -112.8 | Clear | None |
| 14:00 | 5 | 85 | 50 | 4.13 | 0.00 | 6.78 | 1.66 | 0.02 | 1.26 | 22.3 | -112.1 | Clear | None |
| 14:05 | 5 | 90 | 50 | 4.13 | 0.00 | 6.77 | 1.65 | 0.02 | 1.08 | 22.3 | -114.5 | Clear | None |
| 14:10 | 5 | 95 | 50 | 4.13 | 0.00 | 6.77 | 1.66 | 0.02 | 1.07 | 22.4 | -114.9 | Clear | None |
| 14:15 | 5 | 100 | 50 | 4.13 | 0.00 | 6.8 | 1.66 | 0.02 | 0.97 | 22.9 | -115.4 | Clear | None |
| 14:20 | 5 | 105 | 50 | 4.13 | 0.00 | 6.78 | 1.67 | 0.02 | 1.03 | 23.1 | -115.6 | Clear | None |
| 14:25 | 5 | 110 | 50 | 4.13 | 0.00 | 6.82 | 1.68 | 0.02 | 1.02 | 23.1 | -117.2 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 8 | NA |

**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: GPL in pond east of landfill

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: no

Well Locked at Departure: no

Key Number To Well: N/A

ft-bmp = feet below measuring point
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

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-117WT | | | **Date** | 09/22/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 52 °F, Sunny, NW winds at 14 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 3.29 | **Total Depth (ft-bmp)** | 18.47 | **Water Column(ft)** | 15.18 | **Gallons in Well** | 2.47 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 18 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 10:40 | **Volumes Purged** | NA | **Sample ID** | MW-117WT_092222 | **Sampled by** | Daniel Parker |
| **Purge Start** | 10:00 | **Gallons Purged** | NA | **Replicate/ Code No.** | | | |
| **Purge End** | 12:15 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 10:05 | 0 | 0 | 50 | 3.32 | 0.00 | 6.35 | 9.14 | 0.02 | 0.33 | 15.1 | -84.6 | Clear | None |
| 10:10 | 5 | 5 | 50 | 3.32 | 0.00 | 6.36 | 9.5 | 0.02 | 0.36 | 15 | -91.1 | Clear | None |
| 10:15 | 5 | 10 | 50 | 3.32 | 0.00 | 6.38 | 9.82 | 9.61 | 0.66 | 15.1 | -97.7 | Clear | None |
| 10:20 | 5 | 15 | 50 | 3.32 | 0.00 | 6.4 | 9.79 | 0.02 | 1.25 | 15.3 | -99.6 | Clear | None |
| 10:25 | 5 | 20 | 50 | 3.32 | 0.00 | 6.4 | 10.25 | 0.02 | 1.24 | 15.3 | -102.5 | Clear | None |
| 10:30 | 5 | 25 | 50 | 3.32 | 0.00 | 6.4 | 10.35 | 0.15 | 1.24 | 15.1 | -104.5 | Clear | None |
| 10:35 | 5 | 30 | 50 | 3.32 | 0.00 | 6.4 | 10.4 | 0.02 | 1.23 | 14.9 | -106 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 8 | NA |

**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: GPL in pond east of landfill

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: no

Well Locked at Departure: no

Key Number To Well: N/A

ft-bmp = feet below measuring point
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

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-118S1 | | | **Date** | 09/26/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 54.1 degrees F and Cloudy. The wind is blowing W/SW at 9.2 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 3.74 | **Total Depth (ft-bmp)** | 34.4 | **Water Column(ft)** | 30.66 | **Gallons in Well** | 4.98 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 34 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 12:30 | **Volumes Purged** | NA | **Sample ID** | MW-118S1_092622 | **Sampled by** | Daniel Parker |
| **Purge Start** | 11:00 | **Gallons Purged** | NA | **Replicate/ Code No.** | | | |
| **Purge End** | 14:10 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 11:10 | 0 | 0 | 50 | 3.74 | 0.00 | 7.1 | 0.3 | 0.02 | 0.54 | 13.8 | -36.7 | Yellow | None |
| 11:15 | 5 | 5 | 50 | 3.78 | 0.00 | 7.15 | 0.308 | 0.02 | 0.52 | 13.9 | -59.8 | Yellow | None |
| 11:20 | 5 | 10 | 50 | 3.78 | 0.00 | 7.15 | 0.327 | 0.02 | 0.35 | 14.1 | -82 | Yellow | None |
| 11:25 | 5 | 15 | 50 | 3.78 | 0.00 | 7.16 | 0.351 | 0.02 | 0.25 | 14.3 | -98 | Yellow | None |
| 11:30 | 5 | 20 | 50 | 3.78 | 0.00 | 7.18 | 0.368 | 0.02 | 0.27 | 14.3 | -112 | Yellow | None |
| 11:35 | 5 | 25 | 50 | 3.78 | 0.00 | 7.19 | 0.381 | 0.02 | 0.22 | 14.5 | -121.5 | Yellow | None |
| 11:40 | 5 | 30 | 50 | 3.78 | 0.00 | 7.19 | 0.413 | 0.02 | 0.15 | 14.7 | -124.9 | Yellow | None |
| 11:45 | 5 | 35 | 50 | 3.78 | 0.00 | 7.18 | 0.451 | 0.02 | 0.13 | 14.6 | -126 | Yellow | None |
| 11:50 | 5 | 40 | 50 | 3.78 | 0.00 | 7.15 | 0.494 | 0.02 | 0.16 | 14.7 | -131.4 | Yellow | None |
| 11:55 | 5 | 45 | 50 | 3.78 | 0.00 | 7.15 | 0.518 | 0.02 | 0.14 | 14.8 | -134 | Yellow | None |
| 12:00 | 5 | 50 | 50 | 3.78 | 0.00 | 7.14 | 0.548 | 0.02 | 0.15 | 14.6 | -134.8 | Yellow | None |
| 12:05 | 5 | 55 | 50 | 3.78 | 0.00 | 7.14 | 0.56 | 0.02 | 0.17 | 14.7 | -134.5 | Yellow | None |
| 12:10 | 5 | 60 | 50 | 3.78 | 0.00 | 7.13 | 0.588 | 0.02 | 0.17 | 15 | -135 | Yellow | None |
| 12:15 | 5 | 65 | 50 | 3.78 | 0.00 | 7.13 | 0.597 | 0.02 | 0.17 | 15.1 | -135.5 | Yellow | None |
| 12:20 | 5 | 70 | 50 | 3.78 | 0.00 | 7.13 | 0.63 | 0.02 | 0.16 | 15.9 | -136.7 | Yellow | None |
| 12:25 | 5 | 75 | 50 | 3.78 | 0.00 | 7.13 | 0.63 | 0.02 | 0.16 | 16 | -138.4 | Yellow | None |
| 12:30 | 5 | 80 | 50 | 3.78 | 0.00 | 7.13 | 0.63 | 0.02 | 0.16 | 16.1 | -138.8 | Yellow | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 6 | NA |

**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: GPL in pond east of landfill

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: no

Well Locked at Departure: no

Key Number To Well: N/A

ft-bmp = feet below measuring point
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

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-118WT | | | **Date** | 09/22/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 58 °F, Sunny, NW winds at 16 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 3.29 | **Total Depth (ft-bmp)** | 16.94 | **Water Column(ft)** | 13.65 | **Gallons in Well** | 2.22 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 16.5 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 13:20 | **Volumes Purged** | NA | **Sample ID** | MW-118WT_092222 | **Sampled by** | Daniel Parker |
| **Purge Start** | 13:00 | **Gallons Purged** | NA | **Replicate/ Code No.** | | | |
| **Purge End** | 15:20 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 13:05 | 0 | 0 | 50 | 3.34 | 0.00 | 6.66 | 2.27 | 5.79 | 0.56 | 16.2 | -79.2 | Clear | None |
| 13:10 | 5 | 5 | 50 | 3.34 | 0.00 | 6.69 | 2.21 | 1.33 | 0.64 | 16.2 | -91.2 | Clear | None |
| 13:15 | 5 | 10 | 50 | 3.34 | 0.00 | 6.7 | 2.19 | 1.74 | 0.66 | 16.1 | -97.5 | Clear | None |
| 13:20 | 5 | 15 | 50 | 3.34 | 0.00 | 6.7 | 2.19 | 0.87 | 0.67 | 16.1 | -99.8 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 8 | NA |

**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: GPL in pond east of landfill

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: no

Well Locked at Departure: no

Key Number To Well: N/A

ft-bmp = feet below measuring point
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

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-122WT | | | **Date** | 09/23/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | NA | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 3.39 | **Total Depth (ft-bmp)** | 14.95 | **Water Column(ft)** | 11.56 | **Gallons in Well** | 1.88 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 12.5 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 08:20 | **Volumes Purged** | 0.70 | **Sample ID** | MW-122WT_092322 | **Sampled by** | Billy Cobern |
| **Purge Start** | 07:30 | **Gallons Purged** | 1.32 | **Replicate/ Code No.** | | | |
| **Purge End** | 08:25 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 07:35 | 0 | 0 | 100 | 3.49 | 0.13 | 6.89 | 1.12 | 53.7 | 3.62 | 13.3 | -31.3 | Clear | None |
| 07:40 | 5 | 5 | 100 | 3.52 | 0.26 | 6.92 | 1.09 | 48.3 | 2.12 | 12.9 | -44.2 | Clear | None |
| 07:45 | 5 | 10 | 100 | 3.53 | 0.40 | 6.94 | 1.1 | 40.1 | 1.83 | 12.9 | -51.2 | Clear | None |
| 07:50 | 5 | 15 | 100 | 3.53 | 0.53 | 7 | 1.09 | 36.1 | 0.98 | 12.8 | -59.3 | Clear | None |
| 07:55 | 5 | 20 | 100 | 3.53 | 0.66 | 7.01 | 1.08 | 30.3 | 0.84 | 12.8 | -64.2 | Clear | None |
| 08:00 | 5 | 25 | 100 | 3.53 | 0.79 | 7.01 | 1.08 | 26.7 | 0.81 | 12.8 | -67.2 | Clear | None |
| 08:05 | 5 | 30 | 100 | 3.53 | 0.92 | 7.01 | 1.08 | 20.2 | 0.78 | 12.8 | -69.7 | Clear | None |
| 08:10 | 5 | 35 | 100 | 3.53 | 1.06 | 7.02 | 1.08 | 17.6 | 0.71 | 12.8 | -70.3 | Clear | None |
| 08:15 | 5 | 40 | 100 | 3.53 | 1.19 | 7.02 | 1.07 | 17.1 | 0.69 | 12.9 | -72.4 | Clear | None |
| 08:20 | 5 | 45 | 100 | 3.53 | 1.32 | 7.02 | 1.08 | 17.4 | 0.68 | 12.9 | -77.9 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 2 | NA |

**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: GPL

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-183WT | | | **Date** | 09/26/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 53.6 degrees F and Light Rain. The wind is blowing W at 8.1 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 8.14 | **Total Depth (ft-bmp)** | 18.45 | **Water Column(ft)** | 10.31 | **Gallons in Well** | 1.68 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 16 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 11:05 | **Volumes Purged** | 0.63 | **Sample ID** | MW-183WT_092622 | **Sampled by** | Billy Cobern |
| **Purge Start** | 09:45 | **Gallons Purged** | 1.06 | **Replicate/ Code No.** | MW-183WT_092622 | | |
| **Purge End** | 14:00 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 09:50 | 0 | 0 | 50 | 8.29 | 0.07 | 7.07 | 0.67 | 26 | 0.39 | 12.9 | -82.5 | Clear | None |
| 10:15 | 25 | 25 | 50 | 8.36 | 0.40 | 7.34 | 0.635 | 13.1 | 0.87 | 13.1 | -109.9 | Clear | None |
| 10:30 | 15 | 40 | 50 | 8.38 | 0.59 | 7.32 | 0.635 | 7.72 | 0.42 | 13.2 | -118.7 | Clear | None |
| 10:40 | 10 | 50 | 50 | 8.38 | 0.73 | 7.3 | 0.635 | 5.35 | 0.24 | 13.3 | -127 | Clear | None |
| 10:45 | 5 | 55 | 50 | 8.38 | 0.79 | 7.31 | 0.636 | 4.62 | 0.16 | 13.3 | -127.6 | Clear | None |
| 10:50 | 5 | 60 | 50 | 8.38 | 0.86 | 7.32 | 0.637 | 3.21 | 0.14 | 13.8 | -129.8 | Clear | None |
| 10:55 | 5 | 65 | 50 | 8.38 | 0.92 | 7.32 | 0.636 | 2.31 | 0.13 | 13.6 | -129.6 | Clear | None |
| 11:00 | 5 | 70 | 50 | 8.38 | 0.99 | 7.32 | 0.636 | 2.06 | 0.12 | 13.5 | -129.3 | Clear | None |
| 11:05 | 5 | 75 | 50 | 8.38 | 1.06 | 7.32 | 0.636 | 1.92 | 0.12 | 13.4 | -129.1 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 18 | NA |

**Comments:** MS/MSD Collected AR10242022

**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot

1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

**Well Information**

Well Location: GPL

Condition of Well: Needs repairs

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | TW-242 | | | **Date** | 09/23/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 49.1 degrees F and Clear. The wind is blowing N/NW at 4.7 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 9.51 | **Total Depth (ft-bmp)** | 10.2 | **Water Column(ft)** | 0.69 | **Gallons in Well** | 0.11 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 10 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 10:10 | **Volumes Purged** | 9.61 | **Sample ID** | TW-242_092322 | **Sampled by** | Billy Cobern |
| **Purge Start** | 09:30 | **Gallons Purged** | 1.06 | **Replicate/ Code No.** | TW-242_092322 | | |
| **Purge End** | 10:15 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 09:35 | 0 | 0 | 100 | 9.69 | 0.13 | 7.17 | 1.11 | 36.7 | 1.92 | 14.5 | -2.8 | Clear | None |
| 09:40 | 5 | 5 | 100 | 9.75 | 0.26 | 7.15 | 1.11 | 29.2 | 1.14 | 14.6 | -1.4 | Clear | None |
| 09:45 | 5 | 10 | 100 | 9.79 | 0.40 | 713 | 1.11 | 20.6 | 0.8 | 14.5 | -0.8 | Clear | None |
| 09:50 | 5 | 15 | 100 | 9.82 | 0.53 | 7.13 | 1.12 | 16.8 | 0.7 | 14.5 | -0.9 | Clear | None |
| 09:55 | 5 | 20 | 100 | 9.85 | 0.66 | 7.13 | 1.11 | 11.3 | 0.73 | 14.4 | -2.9 | Clear | None |
| 10:00 | 5 | 25 | 100 | 9.87 | 0.79 | 7.13 | 1.11 | 9.7 | 0.6 | 14.5 | -4.5 | Clear | None |
| 10:05 | 5 | 30 | 100 | 9.89 | 0.92 | 7.13 | 1.11 | 9.81 | 0.62 | 14.6 | -5.1 | Clear | None |
| 10:10 | 5 | 35 | 100 | 9.91 | 1.06 | 7.13 | 1.11 | 9.73 | 0.61 | 14.6 | -6.2 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 9 | NA |

**Comments:** Didn't meet drawdown requirements. MS/MSD Collected AR10242022.

**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot

1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

**Well Information**

Well Location: GPL

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: no

Well Locked at Departure: no

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | TWW-1 | | | **Date** | 09/23/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 54.1 degrees F and Clear. The wind is blowing N/NW at 4.7 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 5.95 | **Total Depth (ft-bmp)** | 10.55 | **Water Column(ft)** | 4.6 | **Gallons in Well** | 0.75 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 8.5 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 11:35 | **Volumes Purged** | 1.59 | **Sample ID** | TWW-1_092322 | **Sampled by** | Billy Cobern |
| **Purge Start** | 10:50 | **Gallons Purged** | 1.19 | **Replicate/ Code No.** | DUP-03_092322 | | |
| **Purge End** | 11:45 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 10:55 | 0 | 0 | 100 | 6.12 | 0.13 | 7.02 | 2.33 | 21.8 | 0.86 | 17.4 | -83.4 | Clear | None |
| 11:00 | 5 | 5 | 100 | 6.12 | 0.26 | 7.02 | 2.23 | 19.8 | 0.41 | 17.6 | -92.2 | Clear | None |
| 11:05 | 5 | 10 | 100 | 6.12 | 0.40 | 7.01 | 2.14 | 16.2 | 0.28 | 17.7 | -93.7 | Clear | None |
| 11:10 | 5 | 15 | 100 | 6.12 | 0.53 | 7 | 2.04 | 14.7 | 0.16 | 17.6 | -92.2 | Clear | None |
| 11:15 | 5 | 20 | 100 | 6.12 | 0.66 | 6.99 | 1.96 | 11.8 | 0.08 | 17.9 | -91.4 | Clear | None |
| 11:20 | 5 | 25 | 100 | 6.12 | 0.79 | 6.99 | 1.95 | 10.1 | 0.08 | 17.9 | -91.2 | Clear | None |
| 11:25 | 5 | 30 | 100 | 6.12 | 0.92 | 6.99 | 1.95 | 9.71 | 0.08 | 17.9 | -90.4 | Clear | None |
| 11:30 | 5 | 35 | 100 | 6.12 | 1.06 | 6.99 | 1.93 | 9.59 | 0.08 | 17.9 | -90.2 | Clear | None |
| 11:35 | 5 | 40 | 100 | 6.12 | 1.19 | 6.99 | 1.93 | 9.4 | 0.08 | 17.9 | -90.1 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 8 | NA |

**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: GPL

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: no

Well Locked at Departure: no

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | X-2A | | | **Date** | 09/21/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 79.7 degrees F and Clear. The wind is blowing W at 12.8 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 5.36 | **Total Depth (ft-bmp)** | 11.5 | **Water Column(ft)** | 6.14 | **Gallons in Well** | 1 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 9 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 17:55 | **Volumes Purged** | 1.45 | **Sample ID** | X-2A_092122 | **Sampled by** | Billy Cobern |
| **Purge Start** | 17:00 | **Gallons Purged** | 1.45 | **Replicate/ Code No.** | DUP-01_092122 | | |
| **Purge End** | 18:00 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 17:05 | 0 | 0 | 100 | 5.56 | 0.13 | 9.01 | 0.75 | 14.8 | 0.37 | 20.8 | -62.4 | Clear | None |
| 17:10 | 5 | 5 | 100 | 5.52 | 0.26 | 9.01 | 0.75 | 18.5 | 0.37 | 20.9 | -74 | Clear | None |
| 17:15 | 5 | 10 | 100 | 5.52 | 0.40 | 9.12 | 0.77 | 21.1 | 0.29 | 21 | -86.8 | Clear | None |
| 17:20 | 5 | 15 | 100 | 5.52 | 0.53 | 9.25 | 0.77 | 19.5 | 0.24 | 20.8 | -90.6 | Clear | None |
| 17:25 | 5 | 20 | 100 | 5.52 | 0.66 | 9.29 | 0.78 | 15.2 | 0.24 | 20.8 | -95.5 | Clear | None |
| 17:30 | 5 | 25 | 100 | 5.52 | 0.79 | 9.32 | 0.79 | 13.1 | 0.19 | 20.8 | -101.1 | Clear | None |
| 17:35 | 5 | 30 | 100 | 5.52 | 0.92 | 9.34 | 0.79 | 11.4 | 0.17 | 20.7 | -103.7 | Clear | None |
| 17:40 | 5 | 35 | 100 | 5.52 | 1.06 | 9.34 | 0.79 | 10.2 | 0.15 | 20.7 | -104.4 | Clear | None |
| 17:45 | 5 | 40 | 100 | 5.52 | 1.19 | 9.35 | 0.79 | 9.89 | 0.17 | 20.6 | -105 | Clear | None |
| 17:50 | 5 | 45 | 100 | 5.52 | 1.32 | 9.35 | 0.79 | 9.88 | 0.18 | 20.5 | -105.5 | Clear | None |
| 17:55 | 5 | 50 | 100 | 5.52 | 1.45 | 9.36 | 0.79 | 9.77 | 0.18 | 20.6 | -106.4 | 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: GPL
Condition of Well: Good condition
Well Completion: Stick-up
Well Locked at Arrival: yes
Well Locked at Departure: yes
Key Number To Well: NA

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

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | X-4AR | | | **Date** | 09/21/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 75.0 degrees F and Mostly Cloudy. The wind is blowing S/SW at 8.1 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 4.69 | **Total Depth (ft-bmp)** | 7.75 | **Water Column(ft)** | 3.06 | **Gallons in Well** | 0.5 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 7.75 | **Purge Method** | No-Purge | **Sample Method** | Low-Flow |
| **Sample Time** | 12:30 | **Volumes Purged** | 1.00 | **Sample ID** | X-4AR_092122 | **Sampled by** | Billy Cobern |
| **Purge Start** | 12:30 | **Gallons Purged** | 0.50 | **Replicate/ Code No.** | | | |

**Purge End**

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 12:30 | 0 | 0 | 100 | 4.69 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 4 | NA |

**Comments:** No purge grab 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: | GPL | Well Locked at Arrival: | yes |
| Condition of Well: | Needs repairs | 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

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | X-4CAUGR | | | **Date** | 09/21/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 79.7 degrees F and Mostly Cloudy. The wind is blowing W/SW at 9.2 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 5.58 | **Total Depth (ft-bmp)** | 16.8 | **Water Column(ft)** | 11.22 | **Gallons in Well** | 1.82 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 14.5 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 15:00 | **Volumes Purged** | 0.18 | **Sample ID** | D-4CAUGR | **Sampled by** | Billy Cobern |
| **Purge Start** | 14:35 | **Gallons Purged** | 0.33 | **Replicate/ Code No.** | | | |
| **Purge End** | 15:50 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 14:40 | 0 | 0 | 50 | 5.72 | 0.07 | 7.32 | 0.65 | 1.76 | 0.26 | 22.2 | -139.2 | Clear | None |
| 14:45 | 5 | 5 | 50 | 5.72 | 0.13 | 7.31 | 0.62 | 1.23 | 0.23 | 22.3 | -135.6 | Clear | None |
| 14:50 | 5 | 10 | 50 | 5.72 | 0.20 | 7.31 | 0.61 | 1.16 | 0.21 | 22.4 | -132.4 | Clear | None |
| 14:55 | 5 | 15 | 50 | 5.72 | 0.26 | 7.31 | 0.61 | 0.02 | 0.2 | 22.5 | -128.7 | Clear | None |
| 15:00 | 5 | 20 | 50 | 5.72 | 0.33 | 7.31 | 0.61 | 0.02 | 0.21 | 22.6 | -124.6 | Clear | None |

| **Constituent Sampled** | **Container** | **Number** | **Preservative** |
|---|---|---|---|
| See COC | NA | 6 | NA |

**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: GPL

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | X-4D | | | **Date** | 09/21/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 76.8 degrees F and Mostly Cloudy. The wind is blowing W/SW at 9.2 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 2.48 | **Total Depth (ft-bmp)** | 47.45 | **Water Column(ft)** | 44.97 | **Gallons in Well** | 7.31 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 45 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 13:35 | **Volumes Purged** | 0.08 | **Sample ID** | X-4D_092122 | **Sampled by** | Billy Cobern |
| **Purge Start** | 12:50 | **Gallons Purged** | 0.59 | **Replicate/ Code No.** | | | |
| **Purge End** | 14:30 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 12:55 | 0 | 0 | 50 | 2.53 | 0.07 | 7.34 | 4.71 | 6.82 | 0.83 | 21.7 | -22.8 | Clear | None |
| 13:00 | 5 | 5 | 50 | 2.53 | 0.13 | 7.37 | 4.79 | 3.33 | 1.43 | 21.9 | -68.4 | Clear | None |
| 13:05 | 5 | 10 | 50 | 2.53 | 0.20 | 7.39 | 4.82 | 3.05 | 1.21 | 22 | -82.1 | Clear | None |
| 13:10 | 5 | 15 | 50 | 2.53 | 0.26 | 7.41 | 4.84 | 3.51 | 0.98 | 22.1 | -99.7 | Clear | None |
| 13:15 | 5 | 20 | 50 | 2.53 | 0.33 | 7.42 | 4.85 | 3.03 | 0.88 | 22.1 | -106.8 | Clear | None |
| 13:20 | 5 | 25 | 50 | 2.53 | 0.40 | 7.43 | 4.85 | 2.78 | 0.85 | 22.3 | -112 | Clear | None |
| 13:25 | 5 | 30 | 50 | 2.53 | 0.46 | 7.43 | 4.84 | 2.21 | 0.93 | 22.4 | -117.4 | Clear | None |
| 13:30 | 5 | 35 | 50 | 2.53 | 0.00 | 7.43 | 4.84 | 2.04 | 0.96 | 22.5 | -121.3 | Clear | None |
| 13:35 | 5 | 40 | 50 | 2.53 | 0.59 | 7.43 | 4.85 | 1.91 | 0.91 | 22.5 | -125.8 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 6 | NA |

**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: GPL

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | X-9AR | | | **Date** | 09/22/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | NA | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 7.15 | **Total Depth (ft-bmp)** | 16.1 | **Water Column(ft)** | 8.95 | **Gallons in Well** | 1.45 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 14 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 08:00 | **Volumes Purged** | 0.32 | **Sample ID** | X-9AR_092222 | **Sampled by** | Billy Cobern |
| **Purge Start** | 07:25 | **Gallons Purged** | 0.46 | **Replicate/ Code No.** | DUP-02_092222 | | |
| **Purge End** | 09:50 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 07:30 | 0 | 0 | 50 | 7.23 | 0.07 | 7.3 | 0.78 | 6.38 | 2.47 | 10.3 | -128.8 | Clear | None |
| 07:35 | 5 | 5 | 50 | 7.21 | 0.13 | 7.3 | 0.78 | 5.58 | 1.11 | 10.5 | -124 | Clear | None |
| 07:40 | 5 | 10 | 50 | 7.21 | 0.20 | 7.29 | 0.77 | 2.84 | 0.88 | 10.5 | -123.1 | Clear | None |
| 07:45 | 5 | 15 | 50 | 7.21 | 0.26 | 7.28 | 0.77 | 2.52 | 0.87 | 10.5 | -123 | Clear | None |
| 07:50 | 5 | 20 | 50 | 7.21 | 0.33 | 7.28 | 0.77 | 2.32 | 0.94 | 10.5 | -122.9 | Clear | None |
| 07:55 | 5 | 25 | 50 | 7.21 | 0.40 | 7.28 | 0.77 | 2.12 | 0.95 | 10.5 | -122.2 | Clear | None |
| 08:00 | 5 | 30 | 50 | 7.21 | 0.46 | 7.28 | 0.77 | 1.98 | 0.96 | 10.6 | -122.8 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 14 | NA |

**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: GPL

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | X-9BR | | | **Date** | 09/22/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | NA | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 6.89 | **Total Depth (ft-bmp)** | 34.15 | **Water Column(ft)** | 27.26 | **Gallons in Well** | 4.43 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 31.5 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 10:35 | **Volumes Purged** | 0.10 | **Sample ID** | X-9BR_092222 | **Sampled by** | Billy Cobern |
| **Purge Start** | 10:00 | **Gallons Purged** | 0.46 | **Replicate/ Code No.** | | | |
| **Purge End** | 11:25 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 10:05 | 0 | 0 | 50 | 6.91 | 0.07 | 7.43 | 1.11 | 8.46 | 4.03 | 12.4 | -93.7 | Clear | None |
| 10:10 | 5 | 5 | 50 | 6.91 | 0.13 | 7.42 | 1.14 | 2.77 | 0.99 | 12.6 | -133.4 | Clear | None |
| 10:15 | 5 | 10 | 50 | 6.91 | 0.20 | 7.4 | 1.14 | 1.87 | 0.32 | 12.8 | -145.6 | Clear | None |
| 10:20 | 5 | 15 | 50 | 6.91 | 0.26 | 7.39 | 1.15 | 0.02 | 0.32 | 12.9 | -149 | Clear | None |
| 10:25 | 5 | 20 | 50 | 6.91 | 0.33 | 7.38 | 1.14 | 0.02 | 0.27 | 12.9 | -149.9 | Clear | None |
| 10:30 | 5 | 25 | 50 | 6.91 | 0.40 | 7.38 | 1.14 | 0.02 | 0.26 | 12.8 | -152.1 | Clear | None |
| 10:35 | 5 | 30 | 50 | 6.91 | 0.46 | 7.38 | 1.14 | 0.02 | 0.26 | 12.8 | -153.6 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 6 | NA |

**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: GPL

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | X-9CAUGR | | | **Date** | 09/22/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | NA | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 6.5 | **Total Depth (ft-bmp)** | 28.35 | **Water Column(ft)** | 21.85 | **Gallons in Well** | 3.55 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 26 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 12:25 | **Volumes Purged** | 0.17 | **Sample ID** | X-9CAUGR_092222 | **Sampled by** | Billy Cobern |
| **Purge Start** | 11:40 | **Gallons Purged** | 0.59 | **Replicate/ Code No.** | | | |
| **Purge End** | 13:15 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 11:45 | 0 | 0 | 50 | 6.51 | 0.07 | 7.16 | 1.17 | 13.5 | 2.91 | 14.7 | -71.7 | Clear | None |
| 11:50 | 5 | 5 | 50 | 6.51 | 0.13 | 7.11 | 1.28 | 10.4 | 0.66 | 14.2 | -81.6 | Clear | None |
| 11:55 | 5 | 10 | 50 | 6.51 | 0.20 | 7.12 | 1.23 | 7.05 | 0.52 | 14.3 | -89.5 | Clear | None |
| 12:00 | 5 | 15 | 50 | 6.51 | 0.26 | 7.12 | 1.2 | 5.24 | 0.34 | 14.4 | -93 | Clear | None |
| 12:05 | 5 | 20 | 50 | 6.51 | 0.33 | 7.12 | 1.14 | 3.72 | 0.32 | 14 | -96.3 | Clear | None |
| 12:10 | 5 | 25 | 50 | 6.51 | 0.40 | 7.12 | 1.11 | 2.81 | 0.24 | 14.2 | -100 | Clear | None |
| 12:15 | 5 | 30 | 50 | 6.51 | 0.46 | 7.12 | 1.1 | 2.14 | 0.23 | 14.3 | -100.9 | Clear | None |
| 12:20 | 5 | 35 | 50 | 6.51 | 0.53 | 7.12 | 1.1 | 1.91 | 0.22 | 14.2 | -99.8 | Clear | None |
| 12:25 | 5 | 40 | 50 | 6.51 | 0.59 | 7.12 | 1.1 | 1.89 | 0.23 | 14.2 | -99.8 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 6 | NA |

**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: GPL

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | X-9D | | | **Date** | 09/22/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 60.8 degrees F and Partly Cloudy. The wind is blowing N/NW at 18.3 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 3.25 | **Total Depth (ft-bmp)** | 50.2 | **Water Column(ft)** | 46.95 | **Gallons in Well** | 7.63 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 48 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 14:05 | **Volumes Purged** | 0.07 | **Sample ID** | D-9D_092222 | **Sampled by** | Billy Cobern |
| **Purge Start** | 13:25 | **Gallons Purged** | 0.53 | **Replicate/ Code No.** | | | |
| **Purge End** | 14:55 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 13:30 | 0 | 0 | 50 | 3.27 | 0.07 | 7.78 | 0.582 | 4.67 | 4.5 | 16.3 | 63.7 | Clear | None |
| 13:35 | 5 | 5 | 50 | 3.27 | 0.13 | 7.47 | 1.19 | 1.76 | 1.22 | 17.2 | 35.3 | Clear | None |
| 13:40 | 5 | 10 | 50 | 3.27 | 0.20 | 7.46 | 1.21 | 0.02 | 0.26 | 17.8 | 26.6 | Clear | None |
| 13:45 | 5 | 15 | 50 | 3.27 | 0.26 | 7.46 | 1.21 | 0.02 | 0.31 | 18 | 24.2 | Clear | None |
| 13:50 | 5 | 20 | 50 | 3.27 | 0.33 | 7.46 | 1.22 | 0.02 | 0.21 | 18.4 | 22.9 | Clear | None |
| 13:55 | 5 | 25 | 50 | 3.27 | 0.40 | 7.44 | 1.23 | 0.02 | 0.17 | 18.1 | 21.8 | Clear | None |
| 14:00 | 5 | 30 | 50 | 3.27 | 0.46 | 7.44 | 1.23 | 0.02 | 0.17 | 18 | 21.6 | Clear | None |
| 14:05 | 5 | 35 | 50 | 3.27 | 0.53 | 7.44 | 1.24 | 0.02 | 0.16 | 17.9 | 21.6 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 6 | NA |

**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: GPL

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | X-10AR2 | | | **Date** | 09/22/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 60.3 degrees F and Partly Cloudy. The wind is blowing NW at 16.1 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 9.09 | **Total Depth (ft-bmp)** | 18.6 | **Water Column(ft)** | 9.51 | **Gallons in Well** | 1.55 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 16 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 18:00 | **Volumes Purged** | 0.68 | **Sample ID** | X-10AR2_092222 | **Sampled by** | Billy Cobern |
| **Purge Start** | 17:20 | **Gallons Purged** | 1.06 | **Replicate/ Code No.** | X-10AR2_092222 | | |
| **Purge End** | 18:10 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 17:25 | 0 | 0 | 100 | 9.28 | 0.13 | 7.13 | 0.96 | 19.8 | 0.85 | 15.6 | -36.4 | Clear | None |
| 17:30 | 5 | 5 | 100 | 9.32 | 0.26 | 7.13 | 0.95 | 15.3 | 0.48 | 15.3 | -55.6 | Clear | None |
| 17:35 | 5 | 10 | 100 | 9.34 | 0.40 | 7.13 | 0.95 | 11.3 | 0.31 | 15 | -65.2 | Clear | None |
| 17:40 | 5 | 15 | 100 | 9.34 | 0.53 | 7.13 | 0.95 | 9.89 | 0.24 | 15.1 | -73.2 | Clear | None |
| 17:45 | 5 | 20 | 100 | 9.34 | 0.66 | 7.12 | 0.95 | 8.9 | 0.19 | 15.1 | -75.3 | Clear | None |
| 17:50 | 5 | 25 | 100 | 9.34 | 0.79 | 7.12 | 0.95 | 8.64 | 0.16 | 15.1 | -76.8 | Clear | None |
| 17:55 | 5 | 30 | 100 | 9.34 | 0.92 | 7.11 | 0.95 | 8.24 | 0.16 | 15.1 | -77.5 | Clear | None |
| 18:00 | 5 | 35 | 100 | 9.34 | 1.06 | 7.11 | 0.95 | 8.19 | 0.15 | 15 | -77.9 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 6 | NA |

**Comments:** MS/MSD Collected AR10242022

**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot

1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

**Well Information**

Well Location: GPL

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | B-3R | | | **Date** | 09/26/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | NA | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 9.15 | **Total Depth (ft-bmp)** | 18.6 | **Water Column(ft)** | 9.45 | **Gallons in Well** | 1.54 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 16 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 17:10 | **Volumes Purged** | 0.69 | **Sample ID** | B-3R_092622 | **Sampled by** | Billy Cobern |
| **Purge Start** | 16:30 | **Gallons Purged** | 1.06 | **Replicate/ Code No.** | | | |
| **Purge End** | 17:15 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 16:35 | 0 | 0 | 100 | 9.19 | 0.13 | 8.06 | 0.99 | 31.1 | 2.34 | 13.1 | -127.3 | Clear | None |
| 16:40 | 5 | 5 | 100 | 9.19 | 0.26 | 8.09 | 0.98 | 19.9 | 0.14 | 13.2 | -187.7 | Clear | None |
| 16:45 | 5 | 10 | 100 | 9.19 | 0.40 | 8.09 | 0.98 | 18.3 | 0.06 | 13.2 | -200.1 | Clear | None |
| 16:50 | 5 | 15 | 100 | 9.19 | 0.53 | 8.09 | 0.98 | 14.2 | 0.12 | 13.2 | -201.2 | Clear | None |
| 16:55 | 5 | 20 | 100 | 9.19 | 0.66 | 8.09 | 0.98 | 10.7 | 0.14 | 13.1 | -204.8 | Clear | None |
| 17:00 | 5 | 25 | 100 | 9.19 | 0.79 | 8.09 | 0.98 | 9.1 | 0.15 | 13.1 | -205.3 | Clear | None |
| 17:05 | 5 | 30 | 100 | 9.19 | 0.92 | 8.1 | 0.98 | 9.65 | 0.14 | 13.2 | -207.2 | Clear | None |
| 17:10 | 5 | 35 | 100 | 9.19 | 1.06 | 8.1 | 0.98 | 9.34 | 0.14 | 13.2 | -209.8 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 2 | NA |

**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: SMI

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-107S1 | | | **Date** | 09/26/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 59 °F, Light Rain, E winds at 14 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 8.05 | **Total Depth (ft-bmp)** | 17.25 | **Water Column(ft)** | 9.2 | **Gallons in Well** | 1.49 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 16.25 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 16:26 | **Volumes Purged** | NA | **Sample ID** | MW-107S1_09262022 | **Sampled by** | John Sidor |
| **Purge Start** | 15:55 | **Gallons Purged** | NA | **Replicate/ Code No.** | | | |
| **Purge End** | NA | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 15:55 | 0 | 0 | 100 | 8.1 | 0.00 | 7.29 | 1.38 | 34.6 | 5.35 | 13.2 | -73.7 | Clear | None |
| 16:00 | 5 | 5 | 100 | 8.1 | 0.13 | 7.29 | 1.38 | 4.56 | 3.2 | 13.1 | -84.2 | Clear | None |
| 16:05 | 5 | 10 | 100 | 8.1 | 0.26 | 7.28 | 1.37 | 1.5 | 3.06 | 13 | -91.5 | Clear | None |
| 16:10 | 5 | 15 | 100 | 8.1 | 0.40 | 7.29 | 1.37 | 1.24 | 2.65 | 13 | -96.4 | Clear | None |
| 16:15 | 5 | 20 | 100 | 8.1 | 0.53 | 7.3 | 1.37 | 1.46 | 2.43 | 12.9 | -100.7 | Clear | None |
| 16:20 | 5 | 25 | 100 | 8.1 | 0.66 | 7.31 | 1.37 | 0.07 | 2.28 | 12.8 | -102.9 | Clear | None |
| 16:25 | 5 | 30 | 100 | 8.1 | 0.79 | 7.31 | 1.36 | 0.04 | 2.3 | 12.8 | -104.9 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| Ammonia | 250 mL Plastic | 1 | H2SO4 |

**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: SMI

Condition of Well: NA

Well Completion: NA

Well Locked at Arrival: NA

Well Locked at Departure: NA

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-107WT | | | **Date** | 09/26/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 58 °F, Light Rain, E winds at 13 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 7.52 | **Total Depth (ft-bmp)** | 8.75 | **Water Column(ft)** | 1.23 | **Gallons in Well** | 0.2 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 8 | **Purge Method** | Low-Flow | **Sample Method** | NA |
| **Sample Time** | NA | **Volumes Purged** | NA | **Sample ID** | NA | **Sampled by** | John Sidor |
| **Purge Start** | 15:10 | **Gallons Purged** | NA | **Replicate/ Code No.** | | | |
| **Purge End** | 15:33 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 15:10 | 0 | 0 | 100 | 7.87 | 0.00 | 7.19 | 1.13 | 7.81 | 0.25 | 14.7 | -90.9 | NA | NA |
| 15:15 | 5 | 5 | 100 | 7.98 | 0.13 | 7.14 | 1.06 | 4.18 | 0.34 | 14.7 | -97.1 | NA | NA |
| 15:20 | 5 | 10 | 100 | 8.16 | 0.26 | 7.2 | 1.05 | 1.72 | 0.26 | 14.6 | -120.6 | NA | NA |
| 15:25 | 5 | 15 | 100 | 8.43 | 0.40 | 7.21 | 1.05 | 0.83 | 0.35 | 14.7 | -128.4 | NA | NA |
| 15:30 | 5 | 20 | 100 | 8.55 | 0.53 | 7.22 | 1.06 | 0.49 | 0.33 | 14.4 | -127.9 | NA | NA |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|

**Comments:** Sample not collected AR103122.

**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot

1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

**Well Information**

Well Location: SMI

Condition of Well: NA

Well Completion: NA

Well Locked at Arrival: NA

Well Locked at Departure: NA

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-107WT | | | **Date** | 09/27/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 52 °F, Overcast, W winds at 13 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | | **Well Casing Material** | NA |
| **Static Water Level (ft-bmp)** | 7.55 | **Total Depth (ft-bmp)** | 8.75 | **Water Column(ft)** | 1.2 | **Gallons in Well** | NA |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | NA | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 11:00 | **Volumes Purged** | NA | **Sample ID** | MW-107WT_09272022 | **Sampled by** | John Sidor |
| **Purge Start** | NA | **Gallons Purged** | NA | **Replicate/ Code No.** | | | |
| **Purge End** | NA | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 10:46 | 0 | 0 | 100 | 7.55 | 0.00 | NA | NA | NA | NA | NA | NA | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| Ammonia | 250 mL Plastic | 1 | H2SO4 |
| total phosphorus | 500 mL Plastic | 1 | H2SO4 |
| total arsenic | 500 mL Plastic | 1 | HNO3 |
| dissolved arsenic | 500 mL Plastic | 1 | None |
| total manganese | 500 mL Plastic | 1 | HNO3 |

**Comments:** Sample collected on 9/27/22 @ 1100, 9/27/22 @ 1725, and 9/28/22 @ 730. MS/MSD collected AR10242022

**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot

1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

**Well Information**

Well Location: SMI

Condition of Well: NA

Well Completion: NA

Well Locked at Arrival: NA

Well Locked at Departure: NA

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-108S2 | | | **Date** | 09/27/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 50.0 degrees F and Light Rain. The wind is blowing W at 11.4 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 10.57 | **Total Depth (ft-bmp)** | 30.6 | **Water Column(ft)** | 20.03 | **Gallons in Well** | 3.25 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 28 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 10:45 | **Volumes Purged** | 0.24 | **Sample ID** | MW-108S2_09272022 | **Sampled by** | Billy Cobern |
| **Purge Start** | 10:15 | **Gallons Purged** | 0.79 | **Replicate/ Code No.** | DUP-06_09272022 | | |
| **Purge End** | 10:50 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 10:20 | 0 | 0 | 100 | 10.61 | 0.13 | 7.83 | 0.84 | 17.3 | 0.96 | 11.7 | -89.3 | Clear | None |
| 10:25 | 5 | 5 | 100 | 10.61 | 0.26 | 7.83 | 0.83 | 15 | 0.33 | 11.8 | -121.1 | Clear | None |
| 10:30 | 5 | 10 | 100 | 10.61 | 0.40 | 7.82 | 0.82 | 9.99 | 0.3 | 11.8 | -132.1 | Clear | None |
| 10:35 | 5 | 15 | 100 | 10.61 | 0.53 | 7.82 | 0.82 | 9.42 | 0.31 | 11.9 | -139.2 | Clear | None |
| 10:40 | 5 | 20 | 100 | 10.61 | 0.66 | 7.82 | 0.82 | 8.98 | 0.31 | 11.9 | -139.5 | Clear | None |
| 10:45 | 5 | 25 | 100 | 10.61 | 0.79 | 7.82 | 0.81 | 8.58 | 0.32 | 11.9 | -140.4 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 2 | NA |

**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: SMI

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-108WT | | | **Date** | 09/27/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 49.5 degrees F and Light Drizzle. The wind is blowing W at 11.4 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 10.02 | **Total Depth (ft-bmp)** | 10.4 | **Water Column(ft)** | 0.38 | **Gallons in Well** | 0.06 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 10.4 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | NA | **Volumes Purged** | 0.99 | **Sample ID** | NA | **Sampled by** | Billy Cobern |
| **Purge Start** | 09:30 | **Gallons Purged** | 0.06 | **Replicate/ Code No.** | | | |
| **Purge End** | 09:33 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 09:30 | 0 | 0 | 100 | 10.02 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | Brown | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|

**Comments:** Well went dry before the flow cell was full. No readings, 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: SMI

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-110WTR | | | **Date** | 09/27/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 52 °F, Light Rain, W winds at 12 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 11.9 | **Total Depth (ft-bmp)** | 14.03 | **Water Column(ft)** | 2.13 | **Gallons in Well** | 0.35 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 13.5 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 14:26 | **Volumes Purged** | NA | **Sample ID** | MW-110WTR_09272022 | **Sampled by** | John Sidor |
| **Purge Start** | 12:20 | **Gallons Purged** | NA | **Replicate/ Code No.** | DUP-07_09272022 | | |
| **Purge End** | 16:52 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 12:20 | 0 | 0 | 50 | 12.11 | 0.00 | 6.84 | 1.06 | 10.1 | 1.63 | 13.1 | -77.3 | Clear | None |
| 12:25 | 5 | 5 | 50 | 12.28 | 0.07 | 6.79 | 1.06 | 3.58 | 0.19 | 13.1 | -93.6 | Clear | None |
| 12:30 | 5 | 10 | 50 | 12.36 | 0.13 | 6.8 | 1.06 | 5.44 | 0.17 | 12.9 | -99.4 | Clear | None |
| 12:35 | 5 | 15 | 50 | 12.41 | 0.20 | 9.81 | 1.07 | 4.33 | 0.17 | 13 | -105.3 | Clear | None |
| 12:40 | 5 | 20 | 50 | 12.47 | 0.26 | 6.82 | 1.07 | 4.14 | 0.16 | 13 | -109.1 | Clear | None |
| 12:45 | 5 | 25 | 50 | 12.53 | 0.33 | 6.83 | 1.07 | 4.99 | 0.18 | 12.9 | -112.3 | Clear | None |
| 12:50 | 5 | 30 | 50 | 12.55 | 0.40 | 6.83 | 1.07 | 5.62 | 0.22 | 12.8 | -113.5 | Clear | None |
| 12:55 | 5 | 35 | 50 | 12.61 | 0.46 | 6.83 | 1.08 | 5.69 | 0.23 | 12.8 | -115.9 | Clear | None |
| 13:00 | 5 | 40 | 50 | 12.66 | 0.53 | 6.83 | 1.09 | 5.97 | 0.25 | 12.6 | -117.3 | Clear | None |
| 13:05 | 5 | 45 | 50 | 12.69 | 0.59 | 6.82 | 1.09 | 5.49 | 0.27 | 12.4 | -118.1 | Clear | None |
| 13:10 | 5 | 50 | 50 | 12.73 | 0.66 | 6.82 | 1.09 | 5.9 | 0.3 | 12.3 | -118.7 | Clear | None |
| 13:15 | 5 | 55 | 50 | 12.77 | 0.73 | 6.82 | 1.09 | 6.18 | 0.35 | 12.2 | -118.2 | Clear | None |
| 13:20 | 5 | 60 | 50 | 12.81 | 0.79 | 6.82 | 1.09 | 6.49 | 0.31 | 12.3 | -116.7 | Clear | None |
| 13:25 | 5 | 65 | 50 | 12.84 | 0.86 | 6.83 | 1.09 | 6.88 | 0.41 | 12.3 | -117.5 | Clear | None |
| 13:30 | 5 | 70 | 50 | 12.88 | 0.92 | 6.83 | 1.09 | 7.45 | 0.42 | 12.3 | -117.5 | Clear | None |
| 13:35 | 5 | 75 | 50 | 12.9 | 0.99 | 6.83 | 1.09 | 6.5 | 0.4 | 12.3 | -117.3 | Clear | None |
| 13:40 | 5 | 80 | 50 | 12.93 | 1.06 | 6.83 | 1.1 | 3.12 | 0.39 | 12.3 | -118.2 | Clear | None |
| 13:45 | 5 | 85 | 50 | 12.95 | 1.12 | 6.83 | 1.1 | 2.19 | 0.39 | 12.3 | -118.6 | Clear | None |
| 13:50 | 5 | 90 | 50 | 12.95 | 1.19 | 6.82 | 1.1 | 2.55 | 0.39 | 12.3 | -104.4 | Clear | None |
| 13:55 | 5 | 95 | 50 | 12.95 | 1.25 | 6.82 | 1.1 | 3.6 | 0.4 | 12.4 | -98.6 | Clear | None |
| 14:00 | 5 | 100 | 50 | 12.95 | 1.32 | 6.84 | 1.09 | 4.75 | 0.2 | 12.4 | -107.9 | Clear | None |
| 14:05 | 5 | 105 | 50 | 12.95 | 1.39 | 6.83 | 1.09 | 3.55 | 0.23 | 12.4 | -113.7 | Clear | None |
| 14:10 | 5 | 110 | 50 | 12.97 | 1.45 | 6.83 | 1.09 | 3.99 | 0.25 | 12.4 | -116.8 | Clear | None |
| 14:15 | 5 | 115 | 50 | 12.98 | 1.52 | 6.83 | 1.1 | 3.96 | 0.27 | 12.6 | -119.3 | Clear | None |
| 14:20 | 5 | 120 | 50 | 13 | 1.59 | 6.84 | 1.1 | 3.64 | 0.28 | 12.7 | -121.6 | Clear | None |
| 14:25 | 5 | 125 | 50 | 13.01 | 1.65 | 6.84 | 1.1 | 1.85 | 0.29 | 12.8 | -123.2 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| Ammonia | 250 mL Plastic | 1 | H2SO4 |
| total phosphorus | 500 mL Plastic | 1 | H2SO4 |
| total manganese | 500 mL Plastic | 1 | HNO3 |
| PCBs | 1L Glass | 2 | None |
| dissolved PCBs | 1L Glass | 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: SMI

Condition of Well: NA

Well Completion: NA

Well Locked at Arrival: NA

Well Locked at Departure: NA

Key Number To Well: NA

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

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-111WT | | | **Date** | 09/27/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 52.0 degrees F and Light Rain. The wind is blowing W/NW at 12.8 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 9.18 | **Total Depth (ft-bmp)** | 12.85 | **Water Column(ft)** | 3.67 | **Gallons in Well** | 0.6 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 12.5 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 12:05 | **Volumes Purged** | 0.66 | **Sample ID** | MW-111WT_09272022 | **Sampled by** | Billy Cobern |
| **Purge Start** | 11:35 | **Gallons Purged** | 0.40 | **Replicate/ Code No.** | DUP-08_09272022 | | |
| **Purge End** | 15:30 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 11:40 | 0 | 0 | 50 | 9.3 | 0.07 | 7.3 | 0.82 | 4.63 | 0.32 | 13.3 | -126.1 | Clear | None |
| 11:45 | 5 | 5 | 50 | 9.37 | 0.13 | 7.31 | 0.82 | 3.51 | 0.22 | 13.5 | -141.2 | Clear | None |
| 11:50 | 5 | 10 | 50 | 9.44 | 0.20 | 7.31 | 0.82 | 3.13 | 0.19 | 13.6 | -159.1 | Clear | None |
| 11:55 | 5 | 15 | 50 | 9.51 | 0.26 | 7.32 | 0.82 | 2.53 | 0.15 | 13.7 | -160.6 | Clear | None |
| 12:00 | 5 | 20 | 50 | 9.56 | 0.33 | 7.32 | 0.82 | 1.93 | 0.15 | 13.7 | -165.1 | Clear | None |
| 12:05 | 5 | 25 | 50 | 9.59 | 0.40 | 7.32 | 0.82 | 1.73 | 0.15 | 13.7 | -169.3 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 12 | NA |

**Comments:** Didn't meet drawdown requirements. Duplicate for total and dissolved PCBs.MS/MSD collected AR10242022.

**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot

1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

**Well Information**

Well Location: SMI

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-114S2 | | | **Date** | 09/27/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 51.1 degrees F and Light Drizzle. The wind is blowing W at 12.8 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 10.57 | **Total Depth (ft-bmp)** | 30.9 | **Water Column(ft)** | 20.33 | **Gallons in Well** | 3.3 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 30.5 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 12:05 | **Volumes Purged** | NA | **Sample ID** | MW-114S2_09272022 | **Sampled by** | Daniel Parker |
| **Purge Start** | 10:50 | **Gallons Purged** | NA | **Replicate/ Code No.** | | | |
| **Purge End** | 12:10 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 11:00 | 0 | 0 | 100 | 10.59 | 0.00 | 7.35 | 0.401 | 0.02 | 0.36 | 14.7 | -36.7 | Clear | None |
| 11:05 | 5 | 5 | 100 | 10.59 | 0.00 | 7.28 | 0.417 | 0.02 | 0.18 | 14.5 | -65.4 | Clear | None |
| 11:10 | 5 | 10 | 100 | 10.61 | 0.00 | 7.2 | 0.476 | 1.61 | 0.14 | 14.3 | -88.9 | Clear | None |
| 11:15 | 5 | 15 | 100 | 10.61 | 0.00 | 7.19 | 0.491 | 0.78 | 0.12 | 14.4 | -97.6 | Clear | None |
| 11:20 | 5 | 20 | 100 | 10.61 | 0.00 | 7.18 | 0.502 | 3.24 | 0.11 | 14.3 | -100.3 | Clear | None |
| 11:25 | 5 | 25 | 100 | 10.61 | 0.00 | 7.18 | -101.8 | 0.1 | 0.12 | 14.3 | -102 | Clear | None |
| 11:30 | 5 | 30 | 100 | 10.61 | 0.00 | 7.18 | 0.526 | 0.1 | 0.07 | 14.3 | -103.2 | Clear | None |
| 11:35 | 5 | 35 | 100 | 10.61 | 0.00 | 7.18 | 0.53 | 2.65 | 0.09 | 14.3 | -106.1 | Clear | None |
| 11:40 | 5 | 40 | 100 | 10.61 | 0.00 | 7.15 | 0.531 | 0.95 | 0.34 | 14.3 | -105.6 | Clear | None |
| 11:45 | 5 | 45 | 100 | 10.61 | 0.00 | 7.17 | 0.532 | 0.02 | 0.15 | 14.3 | -107.1 | Clear | None |
| 11:50 | 5 | 50 | 100 | 10.63 | 0.00 | 7.16 | 0.538 | 1.19 | 0.11 | 14.3 | -108.9 | Clear | None |
| 11:55 | 5 | 55 | 100 | 10.64 | 0.00 | 7.17 | 0.538 | 0.02 | 0.1 | 14.3 | -110.1 | Clear | None |
| 12:00 | 5 | 60 | 100 | 10.64 | 0.00 | 7.16 | 0.551 | 0.02 | 0.1 | 14.3 | -110 | Clear | None |
| 12:05 | 5 | 65 | 100 | 10.64 | 0.00 | 7.17 | 0.546 | 0.02 | 0.1 | 14.3 | -111.4 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 1 | NA |

**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: SMI

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-114WT | | | **Date** | 09/27/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 49.1 degrees F and Light Rain. The wind is blowing W at 10.3 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 8.05 | **Total Depth (ft-bmp)** | 11 | **Water Column(ft)** | 2.95 | **Gallons in Well** | 0.48 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 10.5 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 16:10 | **Volumes Purged** | NA | **Sample ID** | MW-114WT_09272022 | **Sampled by** | Daniel Parker |
| **Purge Start** | 08:35 | **Gallons Purged** | NA | **Replicate/ Code No.** | MW-114WT_09282022 | | |
| **Purge End** | 09:55 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 08:50 | 0 | 0 | 50 | 8.26 | 0.00 | 7.09 | 0.396 | 3.58 | 0.55 | 14.7 | -86.8 | Clear | None |
| 08:55 | 5 | 5 | 50 | 8.42 | 0.00 | 7.12 | 0.394 | 0.02 | 0.31 | 15 | -122.3 | Clear | None |
| 09:00 | 5 | 10 | 50 | 8.51 | 0.00 | 7.12 | 0.394 | 0.02 | 0.24 | 14.6 | -129.7 | Clear | None |
| 09:05 | 5 | 15 | 50 | 8.56 | 0.00 | 7.14 | 0.393 | 0.02 | 0.2 | 14.6 | -138.4 | Clear | None |
| 09:10 | 5 | 20 | 50 | 8.61 | 0.00 | 7.03 | 0.389 | 0.02 | 1.92 | 14 | -81 | Clear | None |
| 09:20 | 10 | 30 | 50 | 8.7 | 0.00 | 7.05 | 0.389 | 0.02 | 0.87 | 14.4 | -109.4 | Clear | None |
| 09:25 | 5 | 35 | 50 | 8.76 | 0.00 | 7.08 | 0.39 | 0.02 | 0.22 | 14.6 | -123.5 | Clear | None |
| 09:30 | 5 | 40 | 50 | 8.82 | 0.00 | 7.14 | 0.393 | 0.02 | 0.18 | 14.8 | -140 | Clear | None |
| 09:35 | 5 | 45 | 50 | 8.86 | 0.00 | 7.15 | 0.392 | 0.02 | 0.13 | 15 | -143.3 | Clear | None |
| 09:40 | 5 | 50 | 50 | 8.9 | 0.00 | 7.13 | 0.393 | 0.02 | 0.36 | 14.8 | -146.2 | Clear | None |
| 09:45 | 5 | 55 | 50 | 8.95 | 0.00 | 7.15 | 0.393 | 0.02 | 0.18 | 14.8 | -149.6 | Clear | None |
| 09:50 | 5 | 60 | 50 | 9 | 0.00 | 7.15 | 0.393 | 0.02 | 0.17 | 14.8 | -149.8 | Clear | None |
| 09:55 | 5 | 65 | 50 | 9.05 | 0.00 | 7.14 | 0.393 | 0.02 | 0.17 | 14.7 | -148.8 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 3 | NA |

**Comments:** Purged dry, recovered enough water to fill Ammonia Nitrogen 250ml, Phosphorus 500ml, and Total Manganese 500 ml 9.27.2022 @ 1610.

**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot

1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

**Well Information**

Well Location: SMI

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-131WT | | | **Date** | 09/26/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | NA | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 5.72 | **Total Depth (ft-bmp)** | 14.5 | **Water Column(ft)** | 8.78 | **Gallons in Well** | 1.43 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 12 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 18:15 | **Volumes Purged** | 0.55 | **Sample ID** | MW-131WT_092622 | **Sampled by** | Billy Cobern |
| **Purge Start** | 17:45 | **Gallons Purged** | 0.79 | **Replicate/ Code No.** | | | |
| **Purge End** | 18:20 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 17:50 | 0 | 0 | 100 | 5.74 | 0.13 | 7.54 | 0.67 | 11.3 | 0.51 | 14.9 | -97.4 | Clear | None |
| 17:55 | 5 | 5 | 100 | 5.74 | 0.26 | 7.56 | 0.66 | 7.24 | 0.32 | 14.7 | -103.4 | Clear | None |
| 18:00 | 5 | 10 | 100 | 5.74 | 0.40 | 7.6 | 0.66 | 5.94 | 0.29 | 14.8 | -106 | Clear | None |
| 18:05 | 5 | 15 | 100 | 5.74 | 0.53 | 7.6 | 0.66 | 4.93 | 0.28 | 14.8 | -106.2 | Clear | None |
| 18:10 | 5 | 20 | 100 | 5.74 | 0.66 | 7.6 | 0.66 | 4.92 | 0.28 | 14.8 | -106.2 | Clear | None |
| 18:15 | 5 | 25 | 100 | 5.74 | 0.79 | 7.6 | 0.66 | 4.71 | 0.28 | 14.9 | -106.3 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 2 | NA |

**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: SMI

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-134WT | | | **Date** | 09/27/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 49.1 degrees F and Drizzle. The wind is blowing W at 9.2 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 4.44 | **Total Depth (ft-bmp)** | 12.55 | **Water Column(ft)** | 8.11 | **Gallons in Well** | 1.32 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 10 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 08:45 | **Volumes Purged** | 0.80 | **Sample ID** | MW-134WT_092722 | **Sampled by** | Billy Cobern |
| **Purge Start** | 08:05 | **Gallons Purged** | 1.06 | **Replicate/ Code No.** | | | |
| **Purge End** | 08:50 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 08:10 | 0 | 0 | 100 | 4.46 | 0.13 | 7.01 | 1.18 | 10.1 | 0.45 | 12.6 | -61.8 | Clear | None |
| 08:15 | 5 | 5 | 100 | 4.46 | 0.26 | 7.06 | 1.06 | 9.82 | 0.25 | 12.7 | -109.1 | Clear | None |
| 08:20 | 5 | 10 | 100 | 4.46 | 0.40 | 7.08 | 1.04 | 9.14 | 0.31 | 12.8 | -119.3 | Clear | None |
| 08:25 | 5 | 15 | 100 | 4.46 | 0.53 | 7.09 | 1.02 | 8.56 | 0.26 | 12.8 | -124.1 | Clear | None |
| 08:30 | 5 | 20 | 100 | 4.46 | 0.66 | 7.1 | 1.01 | 8.05 | 0.22 | 12.8 | -129.8 | Clear | None |
| 08:35 | 5 | 25 | 100 | 4.46 | 0.79 | 7.11 | 0.99 | 7.89 | 0.23 | 12.8 | -131 | Clear | None |
| 08:40 | 5 | 30 | 100 | 4.46 | 0.92 | 7.11 | 0.97 | 7.67 | 0.24 | 12.8 | -130.6 | Clear | None |
| 08:45 | 5 | 35 | 100 | 4.46 | 1.06 | 7.11 | 0.97 | 7.42 | 0.24 | 12.8 | -131.9 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 2 | NA |

**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: SMI

Condition of Well: Good condition

Well Completion: Flush mount

Well Locked at Arrival: no

Well Locked at Departure: no

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-149WT | | | **Date** | 09/27/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 50 °F, Overcast, W winds at 9 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 12.14 | **Total Depth (ft-bmp)** | 20.05 | **Water Column(ft)** | 7.91 | **Gallons in Well** | 1.29 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 19 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 09:11 | **Volumes Purged** | 1.02 | **Sample ID** | MW-149WT_09272022 | **Sampled by** | John Sidor |
| **Purge Start** | 08:20 | **Gallons Purged** | 1.32 | **Replicate/ Code No.** | DUP-04_09272022 | | |
| **Purge End** | 10:04 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 08:20 | 0 | 0 | 100 | 12.14 | 0.00 | 6.67 | 1.16 | 33.2 | 0.76 | 11.6 | -59.2 | Clear | None |
| 08:25 | 5 | 5 | 100 | 12.52 | 0.13 | 6.71 | 1.1 | 10.2 | 0.12 | 11.8 | -78.9 | Clear | None |
| 08:30 | 5 | 10 | 100 | 12.7 | 0.26 | 6.74 | 1.06 | 8.61 | 0.08 | 11.8 | -92.1 | Clear | None |
| 08:35 | 5 | 15 | 100 | 12.98 | 0.40 | 6.76 | 1.02 | 8.32 | 0.18 | 11.9 | -91.1 | Clear | None |
| 08:40 | 5 | 20 | 100 | 13.08 | 0.53 | 6.76 | 1.01 | 7.92 | 0.06 | 12 | -102.4 | Clear | None |
| 08:45 | 5 | 25 | 100 | 13.23 | 0.66 | 6.77 | 1.02 | 8.89 | 0.06 | 12 | -111.1 | Clear | None |
| 08:50 | 5 | 30 | 100 | 13.35 | 0.79 | 6.77 | 1.02 | 8.72 | 0.04 | 12.1 | -115.3 | Clear | None |
| 08:55 | 5 | 35 | 100 | 13.47 | 0.92 | 6.77 | 1.02 | 8.99 | 0.03 | 12.1 | -118.6 | Clear | None |
| 09:00 | 5 | 40 | 100 | 13.58 | 1.06 | 6.78 | 1.02 | 9.12 | 0.03 | 12.1 | -121.6 | Clear | None |
| 09:05 | 5 | 45 | 100 | 13.66 | 1.19 | 6.79 | 1.02 | 9.08 | 0.03 | 12.1 | -125 | Clear | None |
| 09:10 | 5 | 50 | 100 | 13.72 | 1.32 | 6.79 | 1.02 | 9.01 | 0.03 | 12 | -127 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| Ammonia | 250 mL Plastic | 1 | H2SO4 |
| Total Phosphorus | 500 mL Plastic | 1 | H2SO4 |
| Total Arsenic | 500 mL Plastic | 1 | HNO3 |
| Dissolved Arsenic | 500 mL Plastic | 1 | 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: SMI

Condition of Well: NA

Well Completion: NA

Well Locked at Arrival: NA

Well Locked at Departure: NA

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-185WT | | | **Date** | 09/27/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 54 °F, Overcast, NW winds at 13 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 6.81 | **Total Depth (ft-bmp)** | 10.45 | **Water Column(ft)** | 3.64 | **Gallons in Well** | 0.59 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 10 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 13:50 | **Volumes Purged** | NA | **Sample ID** | MW-185WT_09272022 | **Sampled by** | Daniel Parker |
| **Purge Start** | 13:00 | **Gallons Purged** | NA | **Replicate/ Code No.** | | | |
| **Purge End** | 16:00 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 13:20 | 0 | 0 | 100 | 6.84 | 0.00 | 7.56 | 0.377 | 0.47 | 0.39 | 11.3 | 28.3 | Clear | None |
| 13:25 | 5 | 5 | 100 | 6.84 | 0.00 | 7.57 | 0.376 | 0.02 | 0.33 | 11.7 | 19.7 | Clear | None |
| 13:30 | 5 | 10 | 100 | 6.84 | 0.00 | 7.57 | 0.377 | 0.02 | 0.36 | 11.7 | 12.5 | Clear | None |
| 13:35 | 5 | 15 | 100 | 6.84 | 0.00 | 7.55 | 0.378 | 0.02 | 0.39 | 11.7 | 6.8 | Clear | None |
| 13:40 | 5 | 20 | 100 | 6.84 | 0.00 | 7.54 | 0.379 | 0.02 | 0.42 | 11.7 | 5.2 | Clear | None |
| 13:45 | 5 | 25 | 100 | 6.84 | 0.00 | 7.53 | 0.379 | 0.02 | 0.46 | 11.8 | 3.4 | Clear | None |
| 13:50 | 5 | 30 | 100 | 6.84 | 0.00 | 7.52 | 0.381 | 0.02 | 0.46 | 11.9 | 0.6 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 7 | NA |

**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: SMI

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | MW-186WT | | | **Date** | 09/28/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 46.6 degrees F and Cloudy. The wind is blowing N/NW at 9.2 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 8.5 | **Total Depth (ft-bmp)** | 21.22 | **Water Column(ft)** | 12.72 | **Gallons in Well** | 2.07 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 20 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 10:41 | **Volumes Purged** | NA | **Sample ID** | MW-186WT_09282022 | **Sampled by** | John Sidor |
| **Purge Start** | 08:15 | **Gallons Purged** | NA | **Replicate/ Code No.** | | | |
| **Purge End** | 12:31 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 08:15 | 0 | 0 | 50 | 9.08 | 0.00 | 7.05 | 0.575 | 46 | 1.76 | 11.6 | -74.9 | Clear | None |
| 08:20 | 5 | 5 | 50 | 9.22 | 0.07 | 7.36 | 0.543 | 17.2 | 1.21 | 11.4 | -138.8 | Clear | None |
| 08:25 | 5 | 10 | 50 | 9.28 | 0.13 | 7.4 | 0.532 | 13.5 | 0.58 | 11.2 | -157.9 | Clear | None |
| 08:30 | 5 | 15 | 50 | 9.3 | 0.20 | 7.41 | 0.527 | 10.9 | 0.39 | 11.3 | -165 | Clear | None |
| 08:35 | 5 | 20 | 50 | 9.31 | 0.26 | 7.45 | 0.527 | 10.5 | 0.31 | 11.3 | -172.3 | Clear | None |
| 08:40 | 5 | 25 | 50 | 9.32 | 0.33 | 7.47 | 0.526 | 9.13 | 0.28 | 11.3 | -177 | Clear | None |
| 08:45 | 5 | 30 | 50 | 9.32 | 0.40 | 7.47 | 0.524 | 7.82 | 0.28 | 11.3 | -178.3 | Clear | None |
| 08:50 | 5 | 35 | 50 | 9.32 | 0.46 | 7.47 | 0.524 | 7.24 | 0.26 | 11.2 | -178.9 | Clear | None |
| 08:55 | 5 | 40 | 50 | 9.32 | 0.53 | 7.47 | 0.526 | 6.02 | 0.27 | 11.2 | -179.9 | Clear | None |
| 09:00 | 5 | 45 | 50 | 9.32 | 0.59 | 7.47 | 0.524 | 4.21 | 0.25 | 11.4 | -180.7 | Clear | None |
| 09:05 | 5 | 50 | 50 | 9.32 | 0.66 | 7.48 | 0.525 | 4.54 | 0.24 | 11.1 | -181.1 | Clear | None |
| 09:10 | 5 | 55 | 50 | 9.32 | 0.73 | 7.47 | 0.525 | 2.37 | 0.24 | 11.2 | -181.1 | Clear | None |
| 09:15 | 5 | 60 | 50 | 9.32 | 0.79 | 7.45 | 0.523 | 4.79 | 0.25 | 11.2 | -180.5 | Clear | None |
| 09:20 | 5 | 65 | 50 | 9.32 | 0.86 | 7.46 | 0.524 | 4.21 | 0.25 | 11 | -181.1 | Clear | None |
| 09:25 | 5 | 70 | 50 | 9.32 | 0.92 | 7.47 | 0.523 | 5.07 | 0.25 | 11.4 | -181.8 | Clear | None |
| 09:30 | 5 | 75 | 50 | 9.32 | 0.99 | 7.47 | 0.524 | 5.15 | 0.25 | 11.3 | -183.2 | Clear | None |
| 09:35 | 5 | 80 | 50 | 9.32 | 1.06 | 7.48 | 0.523 | 4.97 | 0.24 | 11.4 | -184.1 | Clear | None |
| 09:40 | 5 | 85 | 50 | 9.32 | 1.12 | 7.49 | 0.522 | 4.51 | 0.24 | 11.3 | -184.3 | Clear | None |
| 09:45 | 5 | 90 | 50 | 9.32 | 1.19 | 7.49 | 0.521 | 5.15 | 0.24 | 11.4 | -184.7 | Clear | None |
| 09:50 | 5 | 95 | 50 | 9.32 | 1.25 | 7.49 | 0.523 | 5.09 | 0.25 | 11.4 | -185.4 | Clear | None |
| 09:55 | 5 | 100 | 50 | 9.32 | 1.32 | 7.49 | 0.524 | 4.78 | 0.24 | 11.4 | -186.3 | Clear | None |
| 10:00 | 5 | 105 | 50 | 9.32 | 1.39 | 7.49 | 0.521 | 4.77 | 0.24 | 11.5 | -186.6 | Clear | None |
| 10:05 | 5 | 110 | 50 | 9.32 | 1.45 | 7.49 | 0.521 | 5.37 | 0.25 | 11.4 | -186.8 | Clear | None |
| 10:10 | 5 | 115 | 50 | 9.32 | 1.52 | 7.5 | 0.52 | 5.26 | 0.24 | 11.2 | -186.5 | Clear | None |
| 10:15 | 5 | 120 | 50 | 9.32 | 1.59 | 7.48 | 0.518 | 5.94 | 0.24 | 11.4 | -186.4 | Clear | None |
| 10:20 | 5 | 125 | 50 | 9.32 | 1.65 | 7.49 | 0.519 | 6.03 | 0.25 | 11.5 | -187.7 | Clear | None |
| 10:25 | 5 | 130 | 50 | 9.32 | 1.72 | 7.51 | 0.517 | 2.52 | 0.25 | 11.5 | -188.9 | Clear | None |
| 10:30 | 5 | 135 | 50 | 9.32 | 1.78 | 7.53 | 0.517 | 2.28 | 0.24 | 11.5 | -189.2 | Clear | None |
| 10:35 | 5 | 140 | 50 | 9.32 | 1.85 | 7.52 | 0.518 | 2.11 | 0.24 | 11.5 | -189.5 | Clear | None |
| 10:40 | 5 | 145 | 50 | 9.32 | 1.92 | 7.52 | 0.519 | 1.97 | 0.25 | 11.5 | -189.4 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| Ammonia | 250 mL Plastic | 1 | H2SO4 |
| Total manganese | 500 mL Plastic | 1 | HNO3 |
| Total phosphorus | 500 mL Plastic | 1 | H2SO4 |
| PCBs | 1L Amber | 2 | None |
| Dissolved PCBs | 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: SMI

Condition of Well: NA

Well Completion: NA

Well Locked at Arrival: NA

Well Locked at Departure: NA

Key Number To Well: NA

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

# Groundwater Sampling Form

ARCADIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30121470 | **Well ID** | QPTW-13R | | | **Date** | 09/26/2022 |
| **Project Name/Location** | RACER Saginaw 2022 | | **Weather(°F)** | 57.9 degrees F and Partly Cloudy. The wind is blowing W/NW at 12.8 mph. | | | |
| **Measuring Pt. Description** | Top of Inner Casing | **Screen Setting (ft-bmp)** | -- | **Casing Diameter (in)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 5.32 | **Total Depth (ft-bmp)** | 14.25 | **Water Column(ft)** | 8.93 | **Gallons in Well** | 1.45 |
| **MP Elevation** | | **Pump Intake (ft-bmp)** | 12 | **Purge Method** | Low-Flow | **Sample Method** | Low-Flow |
| **Sample Time** | 15:45 | **Volumes Purged** | 0.82 | **Sample ID** | QPTW-13R_092622 | **Sampled by** | Billy Cobern |
| **Purge Start** | 15:00 | **Gallons Purged** | 1.19 | **Replicate/ Code No.** | DUP-05_092622 | | |
| **Purge End** | 15:55 | | | | | | |

| Time | Minutes Elapsed | Total Elapsed Minutes | Rate mL/min | Depth to Water (ft) | Gallons Purged | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature °C | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Color | Odor |
| 15:05 | 0 | 0 | 100 | 5.36 | 0.13 | 6.96 | 1.06 | 4.11 | 0.41 | 16.2 | -52.9 | Clear | None |
| 15:10 | 5 | 5 | 100 | 5.36 | 0.26 | 6.96 | 1.06 | 4.61 | 0.28 | 16.3 | -68 | Clear | None |
| 15:15 | 5 | 10 | 100 | 5.36 | 0.40 | 6.96 | 1.06 | 3.04 | 0.25 | 16.2 | -70.9 | Clear | None |
| 15:20 | 5 | 15 | 100 | 5.36 | 0.53 | 6.96 | 1.06 | 3.04 | 0.22 | 16.1 | -74.8 | Clear | None |
| 15:25 | 5 | 20 | 100 | 5.36 | 0.66 | 6.96 | 1.06 | 2.92 | 0.18 | 16.2 | -76.6 | Clear | None |
| 15:30 | 5 | 25 | 100 | 5.36 | 0.79 | 6.96 | 1.06 | 2.05 | 0.15 | 16.2 | -78.6 | Clear | None |
| 15:35 | 5 | 30 | 100 | 5.36 | 0.92 | 6.96 | 1.06 | 0.02 | 0.13 | 16.2 | -80.6 | Clear | None |
| 15:40 | 5 | 35 | 100 | 5.36 | 1.06 | 6.96 | 1.06 | 0.02 | 0.13 | 16.2 | -80.9 | Clear | None |
| 15:45 | 5 | 40 | 100 | 5.36 | 1.19 | 6.96 | 1.06 | 0.02 | 0.13 | 16.3 | -81.2 | Clear | None |

| Constituent Sampled | Container | Number | Preservative |
|---|---|---|---|
| See COC | NA | 4 | NA |

**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: SMI

Condition of Well: Good condition

Well Completion: Flush mount

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

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

mV = milliv

# Attachment 4

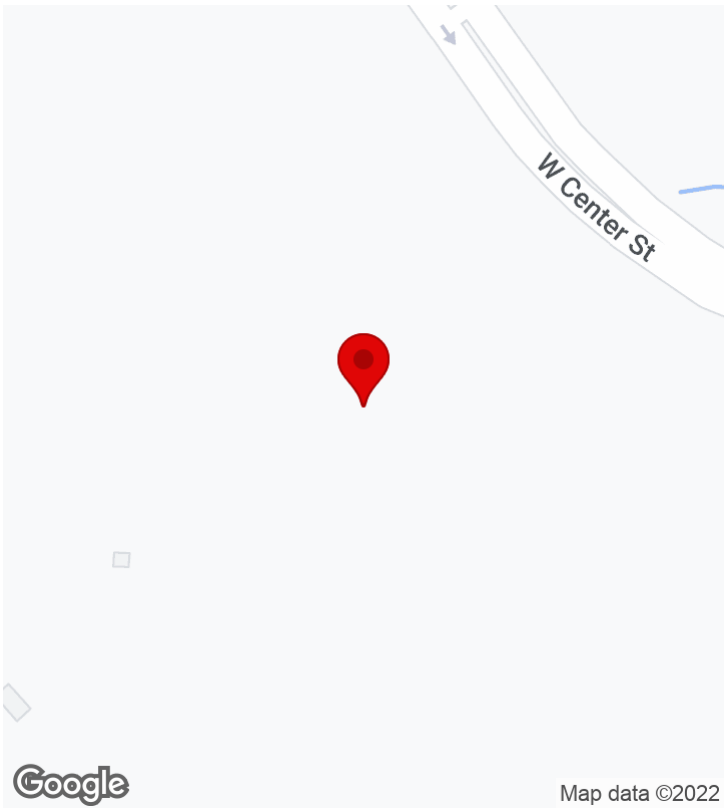
**SMI and Green Point Landfill Site Inspection Forms**

# RACER Trust IC/EC Inspection v2

A site inspection app made for Institutional Control (IC) and Engineering Control (EC) conformance across RACER Trust sites.

## IC/EC Inspection Report for Saginaw Malleable Site at Saginaw Malleable Industrial Land (10030) on September 19, 2022






**INSPECTION DATE**

9/19/2022, 8:43:24 PM UTC
by Dan Parker

**UPDATED**

12/2/2022, 7:49:49 PM UTC
by RACER User

**LOCATION**

43.401594, -83.969821

**SITE NAME**

Saginaw Malleable Site

**ZONE NAME**

Saginaw Malleable Industrial Land (10030)

## Site Description

| | |
|---|---|
| **Site Name** | Saginaw Malleable Site |
| **Site Zone** | Saginaw Malleable Industrial Land (10030) |
| **Site Address** | 77 West Center Street |
| **Site City** | Saginaw |
| **Site State** | MI |

## General Site Conditions

| | |
|---|---|
| **Describe on-site land use** | Recreational |
| **Describe off-site surrounding land use** | Residential, Recreational, Commercial, Open Space |
| **Describe any on-site ownership or tenancy changes.** | None |
| **Describe any needed on-site repairs** | Woody brush needs to be cut on the southerly type 3 landfill near B-3R |
| **Describe any on-site improvements** | In 2022 Saginaw County Parks installed a parking lot, placed gravel for trails, installed benches and began preparations for repaving the front entrance. |
| **Weather Conditions at time of inspection** | Cloudy, windy, 40's-50's |

**Photos of current conditions/uses**



## Inspect Institutional Controls and Engineering Controls

## Institutional Controls (IC) (11 Items)

### Institutional Controls (IC) - 1. Property-Wide

| | |
|---|---|
| **Name of the IC** | Property-Wide |
| **Characterize restricted activities and uses** | Commercial Use Restriction, Drinking Water Well or GW Use Restriction, Excavation Restriction, Obligation to Maintain Vegetation, Obligation to Maintain Wells and Markers, Obligation to Manage Contaminated Soils |
| **Is commerical use occurring?** | No |
| **Have drinking water wells been drilled, constructed, or used on the property for unauthorized purposes?** | No |
| **Has excavation occurred?** | No |
| **Is vegetation present and kept in acceptable condition?** | Yes |
| **Are all permanent survey markers, benchmarks, and monitoring stations in place as designed?** | Yes |
| **Other comments or notes about the IC?** | |

**Institutional Control photos**







## Institutional Controls (IC) - 2. Southwest Plant LNAPL Area (Residual LNAPL Area 1) Lead Impacted Soil Area

| | |
|---|---|
| **Name of the IC** | Southwest Plant LNAPL Area (Residual LNAPL Area 1) Lead Impacted Soil Area |
| **Characterize restricted activities and uses** | Excavation Restriction |
| **Has excavation occurred?** | No |
| **Other comments or notes about the IC?** | |

**Institutional Control photos**



## Institutional Controls (IC) - 3. Quench Pit LNAPL Area (Residual LNAPL Area 2)

| | |
|---|---|
| **Name of the IC** | Quench Pit LNAPL Area (Residual LNAPL Area 2) |
| **Characterize restricted activities and uses** | Excavation Restriction, Obligation to Maintain Wells and Markers |
| **Has excavation occurred?** | No |
| **Are all permanent survey markers, benchmarks, and monitoring stations in place as designed?** | Yes |
| **Other comments or notes about the IC?** | |

**Institutional Control photos**



## Institutional Controls (IC) - 4. Former SMI Plant Slab

| | |
|---|---|
| **Name of the IC** | Former SMI Plant Slab |
| **Characterize restricted activities and uses** | Excavation Restriction, New Building or Structure Restriction, Other Restrictions |
| **Has excavation occurred?** | No |
| **Is new building or structure present?** | No |
| **Characterize other restriction(s)** | Limit worker duration in area to 335 hours or less per calendar year |
| **Do site use and activities comply with other restrictions** | Yes |
| **Other comments or notes about the IC?** | |

**Institutional Control photos**



## Institutional Controls (IC) - 5. I27.7 Manhole Area

| | |
|---|---|
| **Name of the IC** | I27.7 Manhole Area |
| **Characterize restricted activities and uses** | Excavation Restriction, Other Restrictions |
| **Has excavation occurred?** | No |
| **Characterize other restriction(s)** | Limit worker duration in area to 335 hours or less per calendar year |
| **Do site use and activities comply with other restrictions** | Yes |
| **Other comments or notes about the IC?** | |

**Institutional Control photos**



## Institutional Controls (IC) - 6. Melting Department Area

| | |
|---|---|
| **Name of the IC** | Melting Department Area |
| **Characterize restricted activities and uses** | Excavation Restriction, Other Restrictions |
| **Has excavation occurred?** | No |
| **Characterize other restriction(s)** | Limit worker duration in area to 335 hours or less per calendar year |
| **Do site use and activities comply with other restrictions** | Yes |
| **Other comments or notes about the IC?** | |

**Institutional Control photos**



## Institutional Controls (IC) - 7. Former Railyard Area

| | |
|---|---|
| **Name of the IC** | Former Railyard Area |
| **Characterize restricted activities and uses** | Excavation Restriction |
| **Has excavation occurred?** | No |
| **Other comments or notes about the IC?** | |

**Institutional Control photos**



## Institutional Controls (IC) - 8. Type III Landfills

| | |
|---|---|
| **Name of the IC** | Type III Landfills |
| **Characterize restricted activities and uses** | Excavation Restriction |
| **Has excavation occurred?** | No |
| **Other comments or notes about the IC?** | |

**Institutional Control photos**


Southerly type 3 landfill


Northerly type 3 landfill

## Institutional Controls (IC) - 9. Stormwater Pond

| | |
|---|---|
| **Name of the IC** | Stormwater Pond |
| **Characterize restricted activities and uses** | Excavation Restriction |
| **Has excavation occurred?** | No |

| | |
|---|---|
| **Other comments or notes about the IC?** | No NAPL or sheen present. |

**Institutional Control photos**



## Institutional Controls (IC) - 10. Storm Sewers

| | |
|---|---|
| **Name of the IC** | Storm Sewers |
| **Characterize restricted activities and uses** | Underground Utility Construction or Repair Restriction |
| **Is new underground utility or repair observed?** | No |
| **Other comments or notes about the IC?** | Possible sheen present in two of the manholes. |

**Institutional Control photos**


Manhole X5.9


Manhole FV3.0

## Institutional Controls (IC) - 11. On-Site Surface Water Bodies

| | |
|---|---|
| **Name of the IC** | On-Site Surface Water Bodies |
| **Characterize restricted activities and uses** | Water Recreation Restrictions, Fishing Restrictions |
| **Are water-based recreation restrictions met?** | Yes |
| **Are fishing restrictions met?** | Yes |
| **Other comments or notes about the IC?** | |

**Institutional Control photos**



Former secondary settling pond



Former intake channel

# Engineering Controls (EC) (7 Items)

## Engineering Controls (EC) - 1. Southwest Plant LNAPL Area (Residual LNAPL Area 1) Lead Impacted Soil Area

| | |
|---|---|
| **What is the Name of the EC?** | Southwest Plant LNAPL Area (Residual LNAPL Area 1) Lead Impacted Soil Area |
| **Describe the EC** | Vegetated Cover |

| | |
|---|---|
| **Is the general condition of the EC acceptable?** | Yes |
| **Elevation has remained consistent without settlement?** | Yes |
| **Has the engineering control not been disturbed and has been adequately repaired/restored?** | Yes |
| **The vegetation is an area void of vegetation?** | No |
| **Other comments or notes about the EC?** | |

**Engineering Control Photos**



## Engineering Controls (EC) - 2. Quench Pit LNAPL Area (Residual LNAPL Area 1) Lead Impacted Soil Area

| | |
|---|---|
| **What is the Name of the EC?** | Quench Pit LNAPL Area (Residual LNAPL Area 1) Lead Impacted Soil Area |
| **Describe the EC** | Vegetated Cover |
| **Is the general condition of the EC acceptable?** | Yes |
| **Elevation has remained consistent without settlement?** | Yes |
| **Has the engineering control not been disturbed and has been adequately repaired/restored?** | Yes |
| **The vegetation is an area void of vegetation?** | No |
| **Other comments or notes about the EC?** | |

**Engineering Control Photos**



## Institutional Controls (IC) - 4. Former SMI Plant Slab

| | |
|---|---|
| **Name of the IC** | Former SMI Plant Slab |
| **Characterize restricted activities and uses** | Excavation Restriction, New Building or Structure Restriction, Other Restrictions |
| **Has excavation occurred?** | No |
| **Is new building or structure present?** | No |
| **Characterize other restriction(s)** | Limit worker duration in area to 335 hours or less per calendar year |
| **Do site use and activities comply with other restrictions** | Yes |
| **Other comments or notes about the IC?** | |

**Institutional Control photos**



## Institutional Controls (IC) - 5. I27.7 Manhole Area

| | |
|---|---|
| **Name of the IC** | I 27.7 Manhole Area |
| **Characterize restricted activities and uses** | Excavation Restriction, Other Restrictions |
| **Has excavation occurred?** | No |
| **Characterize other restriction(s)** | Limit worker duration in area to 335 hours or less per calendar year |
| **Do site use and activities comply with other restrictions** | Yes |
| **Other comments or notes about the IC?** | |

**Institutional Control photos**



## Institutional Controls (IC) - 6. Melting Department Area

| | |
|---|---|
| **Name of the IC** | Melting Department Area |
| **Characterize restricted activities and uses** | Excavation Restriction, Other Restrictions |
| **Has excavation occurred?** | No |
| **Characterize other restriction(s)** | Limit worker duration in area to 335 hours or less per calendar year |
| **Do site use and activities comply with other restrictions** | Yes |
| **Other comments or notes about the IC?** | |

**Institutional Control photos**



## Engineering Controls (EC) - 6. Former Railyard Area

| | |
|---|---|
| **What is the Name of the EC?** | Former Railyard Area |
| **Describe the EC** | Vegetated Cover |
| **Is the general condition of the EC acceptable?** | Yes |
| **Elevation has remained consistent without settlement?** | Yes |
| **Has the engineering control not been disturbed and has been adequately repaired/restored?** | Yes |
| **The vegetation is an area void of vegetation?** | No |
| **Other comments or notes about the EC?** | |

**Engineering Control Photos**



## Engineering Controls (EC) - 7. Type III Landfills

| | |
|---|---|
| **What is the Name of the EC?** | Type III Landfills |
| **Describe the EC** | Vegetated Cover |
| **Is the general condition of the EC acceptable?** | Yes |
| **Elevation has remained consistent without settlement?** | Yes |
| **Has the engineering control not been disturbed and has been adequately repaired/restored?** | Yes |
| **The vegetation is an area void of vegetation?** | No |
| **Other comments or notes about the EC?** | Woody brush in area of B-3R needs to be cut. |

**Engineering Control Photos**



Southerly type 3 landfill



Northerly type 3 landfill

## Inspector Information

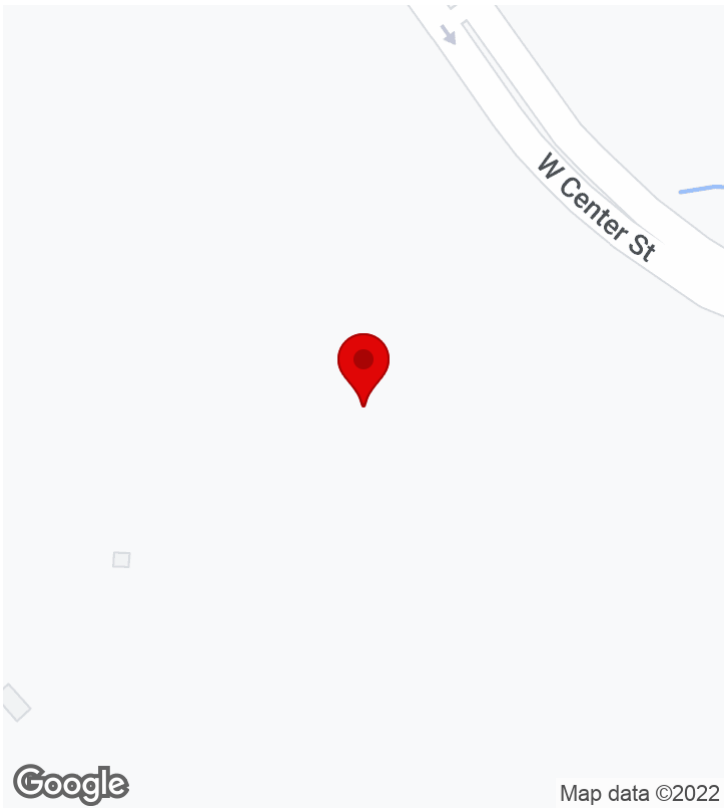
| | |
|---|---|
| **Inspector Name** | Dan Parker |
| **Inspector Company** | Arcadis |
| **Inspector Email** | Daniel.Parker@arcadis.com |
| **Inspection Date** | September 19, 2022 |
| **Inspector Signature** |  Signed 9/28/2022, 7:41:36 PM UTC |

# RACER Trust IC/EC Inspection v2

A site inspection app made for Institutional Control (IC) and Engineering Control (EC) conformance across RACER Trust sites.

## IC/EC Inspection Report for Saginaw Malleable Site at Saginaw Malleable Peninsula (13280) on September 19, 2022






**INSPECTION DATE**

9/19/2022, 8:45:00 PM UTC
by Dan Parker

**UPDATED**

10/26/2022, 12:30:01 AM UTC
by RACER User

**LOCATION**

43.401594, -83.969821

**SITE NAME**

Saginaw Malleable Site

**ZONE NAME**

Saginaw Malleable Peninsula (13280)

## Site Description

| | |
|---|---|
| **Site Name** | Saginaw Malleable Site |
| **Site Zone** | Saginaw Malleable Peninsula (13280) |
| **Site Address** | 77 West Center Street |
| **Site City** | Saginaw |
| **Site State** | MI |

## General Site Conditions

| | |
|---|---|
| **Describe on-site land use** | Residential |
| **Describe off-site surrounding land use** | Recreational, Commercial, Open Space, Vacant |
| **Describe any on-site ownership or tenancy changes.** | None |
| **Describe any needed on-site repairs** | None |
| **Describe any on-site improvements** | None |
| **Weather Conditions at time of inspection** | Cloudy, windy, 40's-50's |

**Photos of current conditions/uses**







## Inspect Institutional Controls and Engineering Controls

## Institutional Controls (IC) (1 Item)

### Institutional Controls (IC) - 1. Property-Wide

| | |
|---|---|
| **Name of the IC** | Property-Wide |
| **Characterize restricted activities and uses** | Commercial Use Restriction, Drinking Water Well or GW Use Restriction, Excavation Restriction, Obligation to Maintain Vegetation, New Building or Structure Restriction, Underground Utility Construction or Repair Restriction, Obligation to Maintain Wells and Markers, Obligation to Manage Contaminated Soils |
| **Is commerical use occurring?** | No |
| **Have drinking water wells been drilled, constructed, or used on the property for unauthorized purposes?** | No |
| **Has excavation occurred?** | No |

| | |
|---|---|
| **Is vegetation present and kept in acceptable condition?** | Yes |
| **Is new building or structure present?** | No |
| **Is new underground utility or repair observed?** | No |
| **Are all permanent survey markers, benchmarks, and monitoring stations in place as designed?** | Yes |
| **Other comments or notes about the IC?** | |

**Institutional Control photos**



## Engineering Controls (EC) (1 Item)

### Engineering Controls (EC) - 1. Lead-Impacted Soil Area

| | |
|---|---|
| **What is the Name of the EC?** | Lead-Impacted Soil Area |
| **Describe the EC** | Vegetated Cover |
| **Is the general condition of the EC acceptable?** | Yes |
| **Elevation has remained consistent without settlement?** | Yes |
| **Has the engineering control not been disturbed and has been adequately repaired/restored?** | Yes |
| **The vegetation is an area void of vegetation?** | No |
| **Other comments or notes about the EC?** | |

**Engineering Control Photos**



## Inspector Information

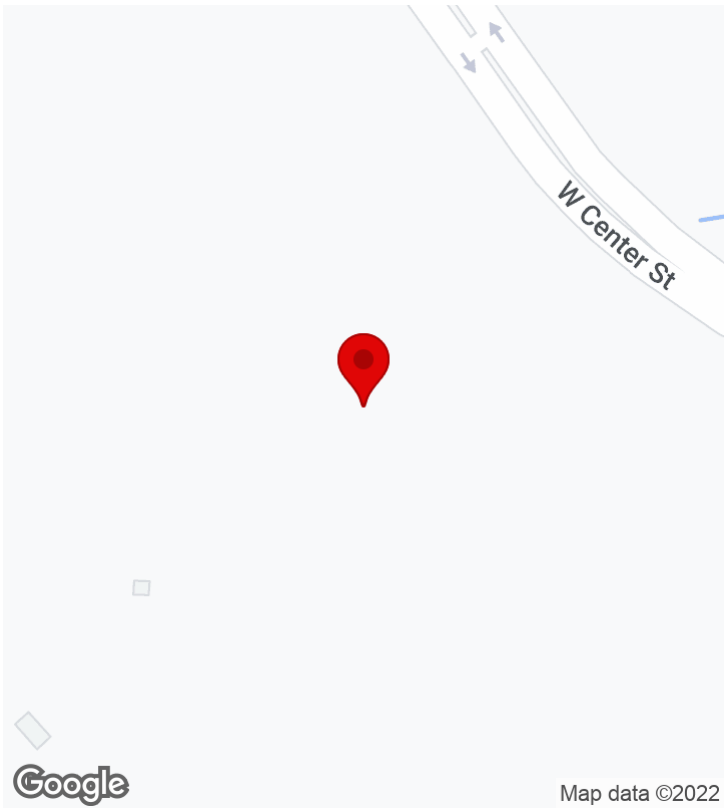
| | |
|---|---|
| **Inspector Name** | Dan Parker |
| **Inspector Company** | Arcadis |
| **Inspector Email** | Daniel.Parker@arcadis.com |
| **Inspection Date** | September 19, 2022 |
| **Inspector Signature** |  Signed 9/28/2022, 8:49:21 PM UTC |

# RACER Trust IC/EC Inspection v2

A site inspection app made for Institutional Control (IC) and Engineering Control (EC) conformance across RACER Trust sites.

## IC/EC Inspection Report for Saginaw Malleable Site at Green Point Landfill (11060) on September 19, 2022






**INSPECTION DATE**

9/19/2022, 6:52:07 PM UTC
by Dan Parker

**UPDATED**

10/26/2022, 12:32:08 AM UTC
by RACER User

**LOCATION**

43.401699, -83.969932

**SITE NAME**

Saginaw Malleable Site

**ZONE NAME**

Green Point Landfill (11060)

## Site Description

| | |
|---|---|
| **Site Name** | Saginaw Malleable Site |
| **Site Zone** | Green Point Landfill (11060) |
| **Site Address** | 77 West Center Street |
| **Site City** | Saginaw |
| **Site State** | MI |

## General Site Conditions

| | |
|---|---|
| **Describe on-site land use** | Recreational |
| **Describe off-site surrounding land use** | Recreational, Open Space, Vacant |
| **Describe any on-site ownership or tenancy changes.** | None |
| **Describe any needed on-site repairs** | None |
| **Describe any on-site improvements** | None |
| **Weather Conditions at time of inspection** | Cloudy, windy, 40's-50's |

**Photos of current conditions/uses**





# Inspect Institutional Controls and Engineering Controls

## Institutional Controls (IC) (5 Items)

### Institutional Controls (IC) - 1. Property-wide

| | |
|---|---|
| **Name of the IC** | Property-wide |
| **Characterize restricted activities and uses** | Commercial Use Restriction, Drinking Water Well or GW Use Restriction, Excavation Restriction, Obligation to Maintain Vegetation, Underground Utility Construction or Repair Restriction, Obligation to Maintain Wells and Markers, Obligation to Manage Contaminated Soils |
| **Is commerical use occurring?** | No |
| **Have drinking water wells been drilled, constructed, or used on the property for unauthorized purposes?** | No |
| **Has excavation occurred?** | No |
| **Is vegetation present and kept in acceptable condition?** | Yes |
| **Is new underground utility or repair observed?** | No |
| **Are all permanent survey markers, benchmarks, and monitoring stations in place as designed?** | Yes |
| **Other comments or notes about the IC?** | |

**Institutional Control photos**







## Institutional Controls (IC) - 2. Landfill Cap

| | |
|---|---|
| **Name of the IC** | Landfill Cap |
| **Characterize restricted activities and uses** | Excavation Restriction, New Building or Structure Restriction |
| **Has excavation occurred?** | No |
| **Is new building or structure present?** | No |

| | |
|---|---|
| **Other comments or notes about the IC?** | |

**Institutional Control photos**



## Institutional Controls (IC) - 3. Hillock Area

| | |
|---|---|
| **Name of the IC** | Hillock Area |
| **Characterize restricted activities and uses** | Excavation Restriction |
| **Has excavation occurred?** | No |
| **Other comments or notes about the IC?** | |

**Institutional Control photos**



Hillock area looking north



Hillock Area facing south

## Institutional Controls (IC) - 4. On-Site Surface Water Bodies

| | |
|---|---|
| **Name of the IC** | On-Site Surface Water Bodies |
| **Characterize restricted activities and uses** | Water Recreation Restrictions, Fishing Restrictions |
| **Are water-based recreation restrictions met?** | Yes |
| **Are fishing restrictions met?** | Yes |
| **Other comments or notes about the IC?** | |

**Institutional Control photos**


South surface water body


South surface water body


South East surface water body


East surface water body

## Institutional Controls (IC) - 5. Mitigation Wetlands

| | |
|---|---|
| **Name of the IC** | Mitigation Wetlands |
| **Characterize restricted activities and uses** | Dredging of Stream or Waterway Restriction, Wetland Alteration/Development Restriction |
| **Has dredging of stream or waterway occurred?** | No |
| **Has the wetland been altered or developed?** | No |
| **Other comments or notes about the IC?** | Southwest mitigation wetlands |

**Institutional Control photos**





South east mitigation wetland

## Engineering Controls (EC) (1 Item)

### Engineering Controls (EC) - 1. Landfill Cap

| | |
|---|---|
| **What is the Name of the EC?** | Landfill Cap |
| **Describe the EC** | Multi-layer cap and infiltration barrier |
| **Is the general condition of the EC acceptable?** | Yes |
| **Elevation has remained consistent without settlement?** | Yes |
| **Has the engineering control not been disturbed and has been adequately repaired/restored?** | Yes |
| **Other comments or notes about the EC?** | |

**Engineering Control Photos**



## Inspector Information

| | |
|---|---|
| **Inspector Name** | Dan Parker |
| **Inspector Company** | Arcadis |
| **Inspector Email** | daniel.parker@arcadis.com |
| **Inspection Date** | September 19, 2022 |
| **Inspector Signature** | Signed 9/19/2022, 11:11:50 PM UTC |

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
Site Address: 77 West Center Street
Saginaw, MI 48605

# Site Inspection Form

28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240

| | |
|---|---|
| Inspector Name: | Billy Cobern |
| Inspector Date and Time: | 9/28/2022 12:00:00 AM / 07:00 |
| Weather Conditions: | |
| Inspector Signature: | |

## Green Point Landfill

| Location | No Issue | Potential Issue Description, if identified[1] Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
|---|---|---|---|
| Site Access Road | | | |
| Erosion/Washout/Settlement | x | No erosion, washout, settlement observed | |
| Sufficient Gravel | x | Gravel areas have sufficient gravel | |

Photo with description



South side road

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
Site Address: 77 West Center Street
Saginaw, MI 48605

# Site Inspection Form

28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240



East side road



North road and gate

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
Site Address: 77 West Center Street
Saginaw, MI 48605

# Site Inspection Form

28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240



Road to top



North road

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
Site Address: 77 West Center Street
Saginaw, MI 48605

# Site Inspection Form

28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240



West road

| Location | No Issue | Potential Issue Description, if identified[1]<br>Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
|---|---|---|---|
| Landfill Cover | | | |
| Bare spots | x | No bare spots observed | |
| Stressed Vegetation | x | No signs of stressed vegetation | |
| Cracks or intrusions | x | No cracks or intrusions observed | |
| Burrowing Animals | x | No animal burrows observed | |
| Erosion | x | No erosion observed | |
| Washout | x | No wash out areas observed | |
| Settlement | x | No signs of settlement observed | |
| Water Ponding | x | No ponding water observed | |
| Protruding Objects | x | No protruding objects observed | |
| Undesirable (woody) Growth | x | No woody growth observed | |
| Slope Movement | x | No slope movement observed | |

Photo with description

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
Site Address: 77 West Center Street
Saginaw, MI 48605

# Site Inspection Form

28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240



Cap top looking west



Cap top looking east

| Location | No Issue | Potential Issue Description, if identified[1]<br>Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
|---|---|---|---|
| Leachate Breakouts | | | |
| Area Locations | x | No leachate breakouts observed | |
| Seepage or groundwater discharge | x | No seepage or groundwater discharge observed | |
| Location | No Issue | Potential Issue Description, if identified[1]<br>Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
| Surface Water Drainage System | | | |
| Drainage Swales | x | Drainage swales good | |
| Culverts | x | Culverts good | |
| Downchutes | x | Downchutes good | |

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
Site Address: 77 West Center Street
Saginaw, MI 48605

# Site Inspection Form

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Novi, MI 48377
(248) 994-2240

| | | | |
|---|---|---|---|
| Primary Sedimentation Basin | x | | |
| Bank Erosion | x | No bank erosion observed | |
| Silt Levels | x | | |

Photo with description



Drainage downchute



Culverts

| Location | No Issue | Potential Issue Description, if identified[1]<br>Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
|---|---|---|---|
| Gas Management System | | | |
| Vent Riser Condition | x | Vents good | |
| Vent Screen Condition | x | | |
| Detectable Odor | x | No odor detected | |

# Site Inspection Form

ARCADIS
28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240

| | | | |
|---|---|---|---|
| Surface Seal | x | Surface seals good | |

Photo with description



Typical vent

| Location | No Issue | Potential Issue Description, if identified[1]<br>Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
|---|---|---|---|
| Overall Site Appearance | x | | 09/28/2022 |

Photo with description



Landfill south side

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
Site Address: 77 West Center Street
Saginaw, MI 48605

# Site Inspection Form

28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240



Landfill east side



North side Landfill

| Location | No Issue | Potential Issue Description, if identified[1]<br>Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
|---|---|---|---|
| Mitigation Wetlands | x | Wetland area lower than last year | |

Photo with description

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
Site Address: 77 West Center Street
Saginaw, MI 48605

# Site Inspection Form

28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240



Southwest Mitigation Wetland




null

## SMI terminated Type III Landfills

| Location | No Issue | Potential Issue Description, if identified[1]<br>Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
|---|---|---|---|
| Soil Cover | | | |
| Bare spots | x | No bare spots observed | |
| Stressed Vegetation | x | No stressed vegetation observed | |
| Cracks or intrusions | x | No cracks or intrusions observed | |
| Burrowing Animals | x | No animal burrows observed | |
| Erosion | x | No erosion observed | |
| Washout | x | No washout observed | |

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
Site Address: 77 West Center Street
Saginaw, MI 48605

# Site Inspection Form

28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240

| | | | |
|---|---|---|---|
| Settlement | x | No settlement observed | |
| Water Ponding | x | No ponding water observed | |
| Protruding Objects | x | No protruding objects observed | |
| Undesirable (woody) Growth | | Woody growth observed on the southerly most landfill near B-3R | 9/29/2022 |
| Slope Movement | x | No slope movement observed | |

Photo with description



Southerly landfill top looking east to west



Southerly landfill east side

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
Site Address: 77 West Center Street
Saginaw, MI 48605

# Site Inspection Form

28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240



Southerly landfill south side



Woody growth near B-3R

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
Site Address: 77 West Center Street
Saginaw, MI 48605

# Site Inspection Form

28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240



Southerly landfill north side



Northerly landfill south side

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
Site Address: 77 West Center Street
Saginaw, MI 48605

# Site Inspection Form

28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240



Northerly landfill west side



Northerly landfill west side

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
Site Address: 77 West Center Street
Saginaw, MI 48605

# Site Inspection Form

28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240



Northerly landfill north side



Northerly landfill east side

Client Name: RACER Trust
Client Contact: Dave Favero
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Site Address: 77 West Center Street
Saginaw, MI 48605

# Site Inspection Form

28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240



Northerly landfill southeast corner



Northerly landfill southeasterly corner

| Location | No Issue | Potential Issue Description, if identified[1]<br>Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
|---|---|---|---|
| Leachate Breakouts | | | |
| Area Locations | x | No leachate observed | |
| Seepage or groundwater discharge | x | No seepage or groundwater discharge observed | |

## SMI Former Plant Slab Soil Cover Area

Includes the following subareas - I27.7 manhole area, former Melting Department Area, former Quench Pit Area

| Location | No Issue | Potential Issue Description, if identified[1]<br>Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
|---|---|---|---|
| Soil Cover | | | |
| Bare spots | x | No bare spots observed | |

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| | | | |
|---|---|---|---|
| Stressed Vegetation | x | No stressed vegetation observed | |
| Cracks or intrusions | x | No cracks or intrusions observed | |
| Burrowing Animals | x | No animal burrows observed | |
| Erosion | x | No erosion observed | |
| Washout | x | No washout observed | |
| Settlement | x | No settlement observed | |
| Water Ponding | x | No ponding water observed | |
| Protruding Objects | x | No protruding objects observed | |
| Undesirable (woody) Growth | x | No woody growth observed | |
| Slope Movement | x | No slope movement observed | |

Photo with description



Former plant slab cover area looking west

## SMI Former Southwest LNAPL Area

| Location | No Issue | Potential Issue Description, if identified[1]<br>Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
|---|---|---|---|
| Area Access Road | | | |
| Erosion/Washout/Settlement | x | No erosion observed | |
| Sufficient Gravel | x | Access road is mostly concrete/asphalt | |

Photo with description

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
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Saginaw, MI 48605

# Site Inspection Form

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Access road to the east



Access road to the north

Client Name: RACER Trust
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Saginaw, MI 48605

# Site Inspection Form

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Access road to the south

| Location | No Issue | Potential Issue Description, if identified[1]<br>Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
|---|---|---|---|
| Soil Cover | | | |
| Bare spots | x | No bare spots | |
| Stressed Vegetation | x | No stressed vegetation | |
| Cracks or intrusions | x | No cracks or intrusions | |
| Burrowing Animals | x | No animal burrows observed | |
| Erosion | x | No erosion observed | |
| Washout | x | No washout observed | |
| Settlement | x | No settlement observed | |
| Water Ponding | | ponded water observed (see photo) | |
| Protruding Objects | x | No protruding objects observed | |
| Undesirable (woody) Growth | x | No woody growth observed | |
| Slope Movement | x | No slope movement observed | |

Photo with description

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
Site Address: 77 West Center Street
Saginaw, MI 48605

# Site Inspection Form

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Area of ponded water



Former LNAPL area

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
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Saginaw, MI 48605

# Site Inspection Form

28550 Cabot Dr Suite 500
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Area of ponded water on the west side

## Former Railyard Area

| Location | No Issue | Potential Issue Description, if identified[1]<br>Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
|---|---|---|---|
| Soil Cover | | | |
| Bare spots | x | No bare spots observed | |
| Stressed Vegetation | x | No stressed vegetation observed | |
| Cracks or intrusions | x | No cracks or intrusions observed | |
| Burrowing Animals | x | No animal burrows observed | |
| Erosion | x | No erosion observed | |
| Washout | x | No washout observed | |
| Settlement | x | No settlement observed | |
| Water Ponding | x | No ponding water observed | |
| Protruding Objects | x | No protruding objects observed | |
| Undesirable (woody) Growth | x | No woody growth observed | |
| Slope Movement | x | No slope movement observed | |

Photo with description

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
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# Site Inspection Form

28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240



Former railyard area looking north



Former railyard area looking northeast

## Peninsula Property

| Location | No Issue | Potential Issue Description, if identified[1]<br>Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
|---|---|---|---|
| Soil Cover | | | |
| Bare spots | x | No bare spots observed | |
| Stressed Vegetation | x | No stressed vegetation observed | |
| Cracks or intrusions | x | No cracks or intrusions observed | |
| Burrowing Animals | x | No animal burrows observed | |
| Erosion | x | No erosion observed | |
| Washout | x | No washout observed | |

Client Name: RACER Trust
Client Contact: Dave Favero
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Saginaw, MI 48605

# Site Inspection Form

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| | | | |
|---|---|---|---|
| Settlement | x | No settlement observed | |
| Water Ponding | x | No ponding water observed | |
| Protruding Objects | x | No protruding objects observed | |
| Undesirable (woody) Growth | x | No woody growth observed in the cover areas. | |
| Slope Movement | x | No slope movement observed | |

Photo with description



Exposure barrier area

**SMI Stormwater Pond**

| Location | No Issue | Potential Issue Description, if identified[1]<br>Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
|---|---|---|---|
| Intrusive Restriction | | | |
| Disturbance to pond lining | x | Lining looks good | |
| Erosion | x | No erosion observed | |
| Evidence of Sheen | x | No sheen observed | |
| Signs of intrusive activity | x | No signs of intrusive activity. | |

Photo with description

Client Name: RACER Trust
Client Contact: Dave Favero
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Saginaw, MI 48605

# Site Inspection Form

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View from the west



Concrete structure

## Overall Site Condition

| Location | No Issue | Potential Issue Description, if identified[1] Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
|---|---|---|---|
| **Monitoring Wells / LNAPL Systems:** | | | |
| Have any monitoring wells or LNAPL systems been damaged or destroyed? | x | All wells intact | |
| Well Cap Integrity | x | | |
| Well lock integrity | x | | |
| **Water Wells:** | | | |
| Location | No Issue | Potential Issue Description, if identified[1] Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |

Client Name: RACER Trust
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# Site Inspection Form

ARCADIS
28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240

| | | | |
|---|---|---|---|
| Have any water wells been installed at the Property? | x | No known water wells on site | |
| **Building Construction/Additions:** | | | |
| Have any new buildings been constructed, added onto or any other redevelopment occurred at the Site? | x | No buildings on site | |
| **Permanent Markers:** | | | |
| Location | No Issue | Potential Issue Description, if identified[1] Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
| Are the markers visible and is the map and wording in legible condition with no vegetation blocking it? | x | | |
| Evidence of Disturbance | x | | |
| **Land Use - Non-Residential/Passive Recreational:** | | | |
| Location | No Issue | Potential Issue Description, if identified[1] Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
| In accordance with the RC the land use needs to remain non-residential/passive recreational, is the property still non-residential/passive recreational use? | x | | |
| **Other items, if any:** | | | |
| Location | No Issue | Potential Issue Description, if identified[1] Note if issue is from property use or naturally occurring | Date Record of Maintenance Was Completed |
| Please describe any other notable items identified during Inspection. | | The south fence has several trees on it and several openings. | |

Notes:

1. If issue is identified, a Record of Maintenance Form must be completed

'- Use related refers to any wear or development that occurs as part of the daily use of the Property. An example would be trail use, etc.

'- Naturally occurring refers to any wear or damage caused by natural phenomenon. Examples include flooding, rain, spontaneous tree growth, etc.

'- Inspections to be completed annually

Submit completed form to EGLE Saginaw Bay District Office RRD, 401 Ketchum Street, Suite B, Bay City, MI 48708 attention Amanda Armbruster annually by December 20.

Client Name: RACER Trust
Client Contact: Dave Favero
Site Name: RACER Saginaw
Site Address: 77 West Center Street
Saginaw, MI 48605

# Record of Maintenance Form

28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240

| | |
|---|---|
| **Work Loction On-Site:** | SMI Terminated Type III Landfills |
| **Description of Work:** | Trim wooden bushes, needs to be performed yearly unless we can have a contractor permanently treat/remove them. |
| **Photo Log:** | |

| **Before Maintanence Photos:** | | | |
|---|---|---|---|
| |  | | |
| |  | | |

Client Name: RACER Trust
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# Record of Maintenance Form

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**After Maintanence Photos:**





Client Name: RACER Trust
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# Record of Maintenance Form

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| | | | |
|---|---|---|---|
| |  | | |
| |  | | |

| | |
|---|---|
| **Materials Used:** | |
| **Personal Protective Equipment Used (if applicable):** | Class D, leather gloves |
| **Work Performed By (Contractor Name):** | Daniel Parker |
| **Address of Contractor:** | Midland MI 48640 US |
| **Telephone of Contractor:** | (989)245-9225 |
| **Start Date:** | 09/29/2022 |
| **Completion Date:** | 09/29/2022 |
| **Desginated Inspector:** | Daniel Parker |
| **Inspector Signature and Date:** | 9/29/2022 12:00:00 AM |
| **Comments:** | |

Client Name: RACER Trust
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# Record of Maintenance Form

ARCADIS
28550 Cabot Dr Suite 500
Novi, MI 48377
(248) 994-2240

Note - Submit completed form, if response actions are required, to EGLE annually according to the Postclosure Agreement and per Part 20114d(4)(a)-(c).

# Attachment 5

## GPL Well Construction Logs, Sampling Parameters and Field Parameters

**Attachment 5**
**Monitoring Well Sampling Plan and Construction Summary**
**2022 Annual Report**
**RACER Trust**
**Green Point Landfill**
**Saginaw, Michigan**

| Well ID | Screen Interval (ft bgs)[1] | Screened Unit/Zone | Well Construction | Date Installed | TIC[2] Elevation (ft AMSL)[3] |
|---|---|---|---|---|---|
| MW-117WT | 3-13 | Water Table | 2" PVC | 5/3/1995 | 582.37 |
| MW-117S1 | 24.2-29.2 | Lower Sand | 2" PVC | 5/3/1995 | 583.70 |
| MW-118WT | 1.6-11.6 | Water Table | 2" PVC | 5/2/1995 | 582.98 |
| MW-118S1 | 23.5-28.5 | Lower Sand | 2" PVC | 5/2/1995 | 583.28 |
| MW-122 WT | 2-12 | Water Table | 2” PVC | 1/11/1995 | 584.97 |
| MW-183WT | 6-16 | Water Table | 2" PVC | 7/24/2000 | 588.77 |
| X-2A | 8.6-11.6 | Water Table | 2” PVC | 6/2/1980 | 593.12 |
| X-4AR | 3.3-8.3 | Water Table | 2" PVC | NA | 586.82 |
| X-4CAUGR | 14-19 | Upper Sand | 2" PVC | 7/24/2007 | 586.36 |
| X-4D | 40-45 | Lower Sand | 2" PVC | 7/23/2007 | 586.32 |
| X-9AR | 3-13 | Water Table | 2" PVC | 5/26/1995 | 586.95 |
| X-9BR | 26-31 | Upper Sand | 2" PVC | 5/17/1995 | 586.85 |
| X-9CAUG | 20-25 | Upper Sand | 2" PVC | 5/5/1995 | 586.62 |
| X-9D | 42.5-47.5 | Lower Sand | 2" PVC | 7/23/2007 | 587.47 |
| X-10AR2 | 6-16 | Water Table | 2” PVC | 11/6/2001 | 594.67 |
| TWW-1 | 1.5-6.5 | Water Table | 2” PVC | 1/22/1997 | 587.31 |
| TW-242 | 2-7 | Water Table | 2” PVC | 7/16/1998 | 589.58 |

**Notes:**

[1] Depths are in feet below ground surface (ft bgs)

[2] TIC = top of inner casing

[3] Elevations are in feet above mean sea level (ft AMSL)

“ PVC = inch polyvinyl chloride

NA = not available

**Attachment 5**
**Groundwater Sampling Analytical Parameters**
**RACER Green Point Landfill**
**Saginaw, Michigan**

| | | Constituent & Preservative - Container Description | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Well ID** | **Proposed Monitoring Plan (2020)** | **Total TAL Metals [1] (ULF Only [2]) $HNO_3$ - 500mL Poly** | **TAL Dissolved Metals [1] $HNO_3$ - 500mL Poly** | **Total Cyanide NaOH - 250mL Poly** | **Dissolved Cyanide NaOH - 250mL Poly** | **TDS, Sulfate, Chloride, Nitrite, Nitrate [3] unpreserved - 500mL Poly** | **Ammonia nitrogen $H_2SO_4$ - 500 mL Poly** | **VOCs HCl - 3x40mL VOA** | **PFAS unpreserved - 2x250mL HDPE** | **Screen interval** | **QA/QC/Comments** |
| **MW-117S1** | TAL metals (total and dissolved), cyanide (total and dissolved), TDS, chloride, sulfate, nitrite, nitrate, ammonia nitrogen, and PFAS | X | X | X | X | X | X | | X | 24.2-29.2 | |
| **MW-117WT** | TAL metals (total and dissolved), cyanide (total and dissolved), TDS, chloride, sulfate, nitrite, nitrate, ammonia nitrogen, and PFAS | X | X | X | X | X | X | | X | 3-13 | |
| **MW-118S1** | TAL metals (total and dissolved), cyanide (total and dissolved), TDS, chloride, sulfate, nitrite, nitrate, and ammonia nitrogen | X | X | X | X | X | X | | | 23.5-28.5 | |
| **MW-118WT** | TAL metals (total and dissolved), cyanide (total and dissolved), TDS, chloride, sulfate, nitrite, nitrate, ammonia nitrogen, and PFAS | X | X | X | X | X | X | | X | 1.6-11.6 | |
| **MW-183WT** | TAL metals (total and dissolved), cyanide (total and dissolved), TDS, chloride, sulfate, nitrite, nitrate, ammonia nitrogen, and PFAS | X | X | X | X | X | X | | X | 6-16 | MS/MSD for TAL metals (total and dissolved), cyanide (total and dissolved), TDS, chloride, sulfate, nitrite, and nitrate |
| **X-4AR[4]** | TAL metals (total and dissolved), cyanide (total and dissolved), TDS, chloride, sulfate, nitrite, nitrate, and ammonia nitrogen | X | | X | | X | X | | | NA-8.3 | |
| **X-4CAUGR** | TAL metals (total and dissolved), cyanide (total and dissolved), TDS, chloride, sulfate, nitrite, nitrate, and ammonia nitrogen | X | X | X | X | X | X | | | 14-19 | |
| **X-4D** | TAL metals (total and dissolved), cyanide (total and dissolved), TDS, chloride, sulfate, nitrite, nitrate, and ammonia nitrogen | X | X | X | X | X | X | | | 40-45 | |
| **X-9AR** | TAL metals (total and dissolved), cyanide (total and dissolved), TDS, chloride, sulfate, nitrite, nitrate, ammonia nitrogen, and PFAS | X | X | X | X | X | X | | X | 3-13 | Duplicate for TAL metals (total and dissolved), cyanide (total and dissolved), TDS, chloride, sulfate, nitrite, nitrate, and ammonia nitrogen |
| **X-9BR** | TAL metals (total and dissolved), cyanide (total and dissolved), TDS, chloride, sulfate, nitrite, nitrate, and ammonia nitrogen | X | X | X | X | X | X | | | 26-31 | |
| **X-9CAUG** | TAL metals (total and dissolved), cyanide (total and dissolved), TDS, chloride, sulfate, nitrite, nitrate, and ammonia nitrogen | X | X | X | X | X | X | | | 20-25 | |
| **X-9D** | TAL metals (total and dissolved), cyanide (total and dissolved), TDS, chloride, sulfate, nitrite, nitrate, and ammonia nitrogen | X | X | X | X | X | X | | | 42.5-47.5 | |
| **TWW-1** | VOC and PFAS | | | | | | | X | X | 1.5-6.5 | Duplicate for VOCs |
| **TW-242** | VOC | | | | | | | X | | 2-7 | MS/MSD for VOCs |
| **MW-122WT** | PFAS | | | | | | | | X | 2-12 | |
| **X-10AR2** | PFAS | | | | | | | | X | 6-16 | MS/MSD for PFAS |
| **X-2A** | PFAS | | | | | | | | X | 8.6-11.6 | Duplicate for PFAS<br>Equipment Blank for PFAS |

**Notes:**

[1]TAL dissolved metals plus cyanide, and indicator parameters (sulfate, chloride, total dissolved solids, nitrate, nitrite, and ammonia nitrogen).

[2]Ultra Low Flow (ULF) sampling refers to the use of a purge and sampling rate of approximately 1 liter per hour, implemented to minimize sample turbidity.

[3]TDS, sulfate, chloride, nitrite, and nitrate will all be included in one unpreserved 500 mL poly bottle and will be reported seperately using method 300.

[4]No-purge sample collected.

HDPE = high-density ploye thylene

$HNO_3$ = nitric acid

$H_2SO_4$ = sulfuric acid

mL = milliliter

MS/MSD = matrix spike/matrix spike duplicate

NA = not available

NaOH = sodium hydroxide

PFAS = per- and ploy fluoroalkyl substances

VOC = volatile organic compound

**Attachment 5**
**Field Parameters, 2022 Annual Report**
**RACER Trust**
**Green Point Landfill**
**Saginaw, Michigan**

| Well ID | Date Sampled | Conductivity (mS/cm) | Dissolved Oxygen (mg/L) | Oxidation Reduction Potential (mV) | pH (SU) | Temperature (°C) | Turbidity (NTUs) |
|---|---|---|---|---|---|---|---|
| **MW-117S1** | **10/01/10** | 1.243 | 0.21 | -82.5 | 8.14 | 13.15 | 1.3 |
| **MW-117S1** | **09/27/11** | 1.7 | 1.26 | -82.3 | 6.89 | 15.7 | 0.8 |
| **MW-117S1** | **09/13/12** | 1.310 | -[2] | -90.3 | 6.77 | 15.61 | 0.42 |
| **MW-117S1** | **09/24/13** | 4.123 | 0.75 | -126.0 | 6.87 | 11.23 | 0.4 |
| **MW-117S1** | **09/22/14** | 1.307 | 0.58 | -50.4 | 6.45 | 12.14 | 4.5 |
| **MW-117S1** | **10/01/15** | 1.681 | 0.17 | 127.91 | 6.69 | 13.28 | 8.03 |
| **MW-117S1** | **09/27/16** | 0.643 | 0.89 | -34.7 | 6.56 | 15.64 | 7.99 |
| **MW-117S1** | **11/13/17** | 1.043 | 0.20 | 161.4 | 5.88 | 10.34 | 3.58 |
| **MW-117S1** | **08/21/19** | 0.464 | 7.87 | -44.6 | 6.88 | 18.6 | 1.49 |
| **MW-117S1** | **08/13/20** | 1.52 | 0.20 | -90.6 | 6.91 | 27 | 8.98 |
| **MW-117S1** | **08/17/21** | 1.53 | 0.10 | -104.2 | 6.94 | 21.4 | 1.82 |
| **MW-117S1** | **09/21/22** | 1.680 | 1.02 | -117.2 | 6.82 | 23.1 | 0.02 |
| **MW-117WT** | **10/01/10** | 8.45 | 0.11 | -90 | 8.45 | 16.51 | 0.9 |
| **MW-117WT** | **09/27/11** | 9.535 | 0.68 | -103 | 6.60 | 13.39 | 1.1 |
| **MW-117WT** | **09/13/12** | 10.33 | -[2] | -77.2 | 6.23 | 16.32 | 0.68 |
| **MW-117WT** | **09/24/13** | 29.95 | 0.41 | -109.8 | 6.37 | 12.72 | 0.80 |
| **MW-117WT** | **09/23/14** | 8.05 | 0.70 | -57.8 | 6.25 | 12.05 | 8.60 |
| **MW-117WT** | **10/01/15** | 9.684 | 0.43 | -97.38 | 6.55 | 12.74 | 5.96 |
| **MW-117WT** | **09/27/16** | 9.531 | 0.30 | -157.64 | 6.71 | 15.85 | 2.72 |
| **MW-117WT** | **08/13/20** | 9.25 | 0.13 | -95.7 | 6.41 | 25.1 | 12.2 |
| **MW-117WT** | **08/17/21** | 12.3 | 0.11 | -95.5 | 6.45 | 21.2 | 1.79 |
| **MW-117WT** | **09/22/22** | 10.40 | 1.23 | -106.0 | 6.40 | 14.9 | 0.02 |
| **MW-118S1**[1] | **09/27/11** | 1.81 | 1.19 | -91.9 | 7.02 | 17.6 | 0.3 |
| **MW-118S1** | **09/13/12** | 1.803 | 3.82 | -230.3 | 6.83 | 15.83 | 1.03 |
| **MW-118S1** | **09/24/13** | 4.289 | 0.72 | -95.8 | 6.36 | 13.17 | 0.9 |
| **MW-118S1** | **09/22/14** | 1.38 | 0.30 | -56 | 6.35 | 12.49 | 9.7 |
| **MW-118S1** | **10/01/15** | 1.753 | 0.20 | 116.27 | 6.77 | 12.78 | 1.4 |
| **MW-118S1** | **09/27/16** | 0.662 | 0.94 | 13.84 | 6.71 | 14.3 | 7.91 |
| **MW-118S1** | **11/13/17** | 1.303 | 0.2 | 4.2 | 5.94 | 10.19 | 7.41 |
| **MW-118S1** | **08/14/20** | 0.37 | 0.1 | -101.7 | 7.03 | 24.2 | 8.87 |
| **MW-118S1** | **08/17/21** | 1.358 | 0.14 | -110.9 | 7.01 | 20.4 | 1.51 |
| **MW-118S1** | **09/26/22** | 0.630 | 0.16 | -138.8 | 7.13 | 16.1 | 0.02 |
| **MW-118WT** | **09/30/10** | 3.435 | 0.22 | -104.2 | 7.27 | 14.89 | 1.8 |
| **MW-118WT** | **09/27/11** | 3.261 | 0.71 | -92.8 | 6.43 | 17.13 | 0.3 |
| **MW-118WT** | **09/13/12** | 2.451 | 1.37 | -201.4 | 6.74 | 16.99 | 0.66 |
| **MW-118WT** | **09/24/13** | 5.017 | 0.95 | -115.3 | 6.38 | 15.17 | 0.4 |
| **MW-118WT** | **09/22/14** | 1.521 | 0.20 | -60.4 | 6.72 | 12.88 | 8.2 |
| **MW-118WT** | **10/01/15** | 1.939 | 0.36 | -126.86 | 6.99 | 17.02 | 1.4 |
| **MW-118WT** | **09/27/16** | 2.072 | 0.79 | -161.44 | 6.99 | 15.74 | 0.79 |
| **MW-118WT** | **11/13/17** | 1.654 | 0.26 | -27.8 | 6.05 | 11.51 | 0.87 |
| **MW-118WT** | **08/14/20** | 1.58 | 0.15 | -114.6 | 6.79 | 22.2 | 5.45 |
| **MW-118WT** | **08/17/21** | 2.045 | 0.13 | -109.4 | 6.92 | 22.9 | 1.31 |
| **MW-118WT** | **09/22/22** | 2.19 | 0.67 | -99.8 | 6.70 | 16.1 | 0.87 |
| **MW-122WT** | **08/18/21** | 0.809 | 0.12 | -107.1 | 6.9 | 18.8 | 8.79 |
| **MW-122WT** | **09/23/22** | 1.080 | 0.68 | -77.9 | 7.02 | 12.9 | 17.40 |
| **MW-125WT** | **09/08/20** | 1.21 | 0.21 | -47.1 | 6.8 | 16.9 | 8.85 |
| **MW-183WT** | **09/28/10** | 0.633 | 0.33 | -119.6 | 7.45 | 13.01 | 3.5 |
| **MW-183WT** | **09/28/11** | 0.814 | 0.26 | -128.1 | 7.73 | 13.82 | 1.2 |
| **MW-183WT** | **09/14/12** | 0.962 | 0.25 | -207.6 | 7.11 | 15.30 | 0.43 |
| **MW-183WT** | **09/24/13** | 2.390 | 0.51 | -105.2 | 6.56 | 17.12 | 1.8 |
| **MW-183WT** | **09/22/14** | Missing field notes | | | | | |
| **MW-183WT** | **10/01/15** | 0.750 | 0.37 | -139.06 | 7.28 | 13.45 | 0.9 |
| **MW-183WT** | **09/28/16** | 1.299 | 0.20 | -125.02 | 7.23 | 16.52 | 0.20 |
| **MW-183WT** | **08/29/17** | 0.665 | 1.09 | -91.4 | 6.94 | 20.50 | 1.74 |
| **MW-183WT** | **09/26/18** | 0.55 | 0.60 | -83.7 | 6.65 | 16.0 | 0.96 |
| **MW-183WT** | **08/21/19** | 0.70 | 0.27 | -67.5 | 7.11 | 15.2 | 1.96 |

| Well ID | Date Sampled | Conductivity (mS/cm) | Dissolved Oxygen (mg/L) | Oxidation Reduction Potential (mV) | pH (SU) | Temperature (°C) | Turbidity (NTUs) |
|---|---|---|---|---|---|---|---|
| **MW-183WT** | **08/18/20** | 0.67 | 0.50 | -69.8 | 6.86 | 17.6 | 0.02 |
| **MW-183WT** | **08/19/21** | 0.64 | 0.33 | -84.8 | 7.04 | 19.7 | 0.02 |
| **MW-183WT** | **08/24/21** | 0.66 | 0.37 | -77.9 | 7.09 | 19.5 | 0.41 |
| **MW-183WT** | **09/26/22** | 0.636 | 0.12 | -129.1 | 7.32 | 13.4 | 1.92 |
| **TW-242** | **08/30/17** | 1.019 | 0.45 | -96.1 | 7.01 | 17.1 | 9.02 |
| **TW-242** | **09/25/18** | 0.780 | 1.29 | 81.71 | 7.11 | 19.03 | 20.16 |
| **TW-242** | **08/22/19** | 1.11 | 0.37 | -1.5 | 7.03 | 17.7 | 49.4 |
| **TW-242** | **08/12/20** | 1.13 | 0.31 | 21.1 | 7.04 | 21.4 | 2.42 |
| **TW-242** | **08/18/21** | 0.86 | 0.26 | -31.1 | 7.07 | 18.7 | 2.81 |
| **TW-242** | **09/23/22** | 1.110 | 0.61 | -6.20 | 7.13 | 14.60 | 9.73 |
| **TWW-1** | **09/29/10** | 3.924 | 1.15 | -54.7 | 6.99 | 15.08 | 9.1 |
| **TWW-1** | **09/21/11** | 2.89 | 3.11 | -7.1 | 6.87 | 18.42 | 1.2 |
| **TWW-1** | **09/14/12** | 2.289 | -[2] | 19.0 | 6.87 | 19.30 | 0.59 |
| **TWW-1** | **09/24/13** | 3.004 | 0.64 | -139.6 | 6.84 | 17.47 | 2.27 |
| **TWW-1** | **09/23/14** | 2.342 | 0.23 | -89.9 | 6.91 | 17.35 | 1.01 |
| **TWW-1** | **10/01/15** | 2.534 | 0.49 | 84.32 | 6.79 | 17.82 | 6.09 |
| **TWW-1** | **09/28/16** | 2.531 | 0.34 | -156.95 | 7.06 | 18.04 | 1.56 |
| **TWW-1** | **08/30/17** | 1.712 | 7.70 | -52.6 | 7.22 | 19.10 | 8.43 |
| **TWW-1** | **09/25/18** | 1.48[3] | 0.54 | -89.8 | 6.75 | 21.30 | 0.58 |
| **TWW-1** | **08/22/19** | 1.59 | 0.21 | -10.1 | 6.91 | 20.80 | 0.02 |
| **TWW-1** | **08/12/20** | 1.92 | 0.22 | -90.2 | 6.88 | 22.8 | 0.65 |
| **TWW-1** | **09/08/20** | 1.71 | 1.69 | -51.3 | 6.94 | 17.6 | 11.20 |
| **TWW-1** | **08/18/21** | 1.622 | 0.11 | -74.1 | 6.89 | 20.8 | 1.32 |
| **TWW-1** | **09/23/22** | 1.930 | 0.08 | -90.10 | 6.99 | 17.9 | 9.40 |
| **X-2A** | **08/11/20** | 0.72 | 0.62 | 61.8 | 8.88 | 20.4 | 6.68 |
| **X-2A** | **09/08/20** | 0.71 | 0.08 | -124.6 | 8.83 | 15.3 | 9.73 |
| **X-2A** | **08/18/21** | 0.652 | 0.06 | -143.5 | 9.29 | 17.6 | 4.11 |
| **X-2A** | **09/21/22** | 0.790 | 0.18 | -106.4 | 9.36 | 20.60 | 9.77 |
| **X-4AR** | **DRY 2010, 2011, 2012, 2013** | NA | NA | NA | NA | NA | NA |
| **X-4AR** | **10/01/15** | 1.008 | 8.26 | 45.81 | 8 | 22.09 | 142.9 |
| **X-4AR**[4] | **09/28/16** | 0.360 | 2.07 | 9.63 | 7.23 | 17.08 | 20.11 |
| **X-4AR**[4] | **08/29/17** | Well was pumped dry and sampled upon recharge | | | | | |
| **X-4AR**[5] | **09/26/18** | 0.71 | 0.53 | 3.1 | 7.37 | 17.1 | 8.14 |
| **X-4AR** | **08/18/20** | 0.51 | 3.82 | 118.9 | 8.27 | 26.2 | 0.02 |
| **X-4AR** | **08/17/21** | Well was pumped dry, unable to sample | | | | | |
| **X-4AR** | **09/21/22** | Well has previously pumped dry, sample collected after no-purge | | | | | |
| **X-4CAUGR** | **09/28/10** | 1.03 | 0.34 | -79.8 | 7.11 | 12.29 | 1.1 |
| **X-4CAUGR** | **09/26/11** | 0.971 | 1.17 | -97.1 | 6.96 | 17.25 | 1.2 |
| **X-4CAUGR** | **09/14/12** | 1.050 | 0.19 | -293.7 | 6.93 | 11.83 | 0.48 |
| **X-4CAUGR** | **09/24/13** | 0.783 | 0.19 | -64.1 | 6.22 | 13.21 | 1.49 |
| **X-4CAUGR** | **09/22/14** | Missing field notes | | | | | |
| **X-4CAUGR** | **10/01/15** | 1.225 | 0.25 | -116.75 | 7.10 | 13.43 | 2.29 |
| **X-4CAUGR** | **09/28/16** | 0.396 | 0.85 | -14.23 | 6.78 | 14.88 | 0.68 |
| **X-4CAUGR** | **08/29/17** | 0.910 | 0.16 | -45.2 | 7.26 | 25.8 | 1.89 |
| **X-4CAUGR** | **09/26/18** | 0.500 | 0.40 | -23.1 | 6.72 | 16.1 | 4.69 |
| **X-4CAUGR** | **08/22/19** | 0.568 | 0.23 | -62.8 | 7.02 | 17.8 | 1.83 |
| **X-4CAUGR** | **08/17/20** | 0.528 | 0.25 | -72.9 | 6.85 | 19.6 | 0.02 |
| **X-4CAUGR** | **08/17/21** | 0.540 | 0.25 | -86.5 | 7.05 | 22.9 | 1.98 |
| **X-4CAUGR** | **09/21/22** | 0.610 | 0.21 | -124.6 | 7.31 | 22.60 | 0.02 |
| **X-4D** | **09/28/10** | 4.58 | 0.53 | -146.7 | 7.41 | 13.45 | 1.3 |
| **X-4D** | **09/26/11** | 4.897 | 1.67 | -105.7 | 7.62 | 15.94 | 0.0 |
| **X-4D** | **09/14/12** | 4.884 | 0.50 | -208.1 | 7.20 | 11.92 | 0.4 |
| **X-4D** | **09/24/13** | 3.937 | 0.23 | -36.8 | 6.40 | 13.30 | 1.45 |
| **X-4D** | **09/22/14** | Missing field notes | | | | | |
| **X-4D** | **10/01/15** | 4.561 | 0.18 | 110.66 | 7.19 | 12.91 | 4.08 |
| **X-4D** | **09/28/16** | 4.908 | 0.22 | -151.91 | 7.35 | 15.05 | 0.10 |

| Well ID | Date Sampled | Conductivity (mS/cm) | Dissolved Oxygen (mg/L) | Oxidation Reduction Potential (mV) | pH (SU) | Temperature (°C) | Turbidity (NTUs) |
|---|---|---|---|---|---|---|---|
| **X-4D** | **08/29/17** | 4.451 | 0.94 | 117.2 | 7.18 | 24.2 | 0.38 |
| **X-4D** | **09/26/18** | 2.89 | 0.39 | 2.4 | 6.82 | 16.2 | 3.87 |
| **X-4D** | **08/22/19** | 0.71 | 0.37 | 18.7 | 7.11 | 17.9 | 1.93 |
| **X-4D** | **08/17/20** | 4.47 | 0.30 | -97.7 | 7.33 | 23.5 | 0.02 |
| **X-4D** | **08/17/21** | 0.73 | 1.92 | 109.4 | 6.96 | 22 | 1.96 |
| **X-4D** | **09/21/22** | 4.850 | 0.91 | -125.8 | 7.43 | 22.50 | 1.91 |
| **X-9AR** | **09/29/10** | 0.815 | 0.24 | -81.5 | 7.45 | 11.44 | 0.9 |
| **X-9AR** | **09/23/11** | 1.142 | 0.38 | -114.8 | 7.09 | 11.63 | 0.0 |
| **X-9AR** | **09/12/12** | 1.056 | 8.20 | -92.7 | 6.88 | 14.03 | 0.45 |
| **X-9AR** | **09/25/13** | 5.685 | 0.26 | -122.6 | 6.95 | 10.54 | 1.90 |
| **X-9AR** | **09/22/14** | Missing field notes | | | | | |
| **X-9AR** | **10/01/15** | 1.224 | 0.71 | -126.9 | 6.90 | 12.1 | 1.34 |
| **X-9AR** | **09/28/16** | 0.417 | 0.66 | -56.94 | 6.63 | 15.03 | 1.95 |
| **X-9AR** | **08/29/17** | 0.816 | 0.28 | -55.5 | 7.33 | 19.7 | 1.09 |
| **X-9AR** | **09/26/18** | 0.79 | 0.27 | -70.4 | 6.30 | 17.6 | 2.54 |
| **X-9AR** | **08/21/19** | 0.73 | 0.28 | -61.2 | 7.06 | 20.1 | 0.02 |
| **X-9AR** | **08/17/20** | 0.556 | 0.34 | -94.7 | 7.09 | 19.3 | 0.02 |
| **X-9AR** | **08/18/21** | 0.72 | 0.27 | -100.2 | 7.06 | 15.8 | 0.93 |
| **X-9AR** | **09/22/22** | 0.770 | 0.96 | -122.8 | 7.28 | 10.60 | 1.98 |
| **X-9BR** | **09/28/10** | 1.215 | 0.10 | -93.4 | 7.09 | 14.53 | 0.8 |
| **X-9BR** | **09/23/11** | 1.41 | 0.20 | -113.8 | 7.13 | 11.29 | 0.0 |
| **X-9BR** | **09/12/12** | 1.358 | 0.21 | -217.9 | 6.69 | 14.02 | 0.97 |
| **X-9BR** | **09/25/13** | 6.571 | 0.24 | -146.0 | 6.98 | 11.31 | 1.76 |
| **X-9BR** | **09/22/14** | Missing field notes | | | | | |
| **X-9BR** | **10/01/15** | 1.859 | 0.36 | 129.69 | 6.92 | 11.49 | 7.27 |
| **X-9BR** | **09/28/16** | 2.020 | 0.08 | -168.87 | 7.19 | 15.33 | 2.36 |
| **X-9BR** | **08/29/17** | 1.595 | 1.42 | -168.3 | 7.06 | 17.3 | 1.64 |
| **X-9BR** | **09/26/18** | 0.428 | 0.30 | -23.6 | 6.64 | 16.1 | 3.06 |
| **X-9BR** | **08/21/19** | 1.29 | 2.47 | -145.5 | 7.04 | 20.9 | 1.95 |
| **X-9BR** | **08/18/20** | 0.72 | 0.46 | -91.4 | 7.08 | 21.2 | 0.02 |
| **X-9BR** | **08/18/21** | 0.60 | 0.06 | -105.3 | 6.97 | 15.7 | 0.02 |
| **X-9BR** | **09/22/22** | 1.140 | 0.26 | -153.6 | 7.38 | 12.80 | 0.02 |
| **X-9CAUG** | **09/28/10** | 0.995 | 0.29 | -72.3 | 6.97 | 12.45 | 0.1 |
| **X-9CAUG** | **09/23/11** | 1.07 | 0.45 | -116.9 | 7.03 | 12.79 | 0.0 |
| **X-9CAUG** | **09/12/12** | 1.132 | 1.98 | -137.1 | 6.65 | 21.04 | 0.76 |
| **X-9CAUG** | **09/25/13** | 5.046 | 0.27 | -69.0 | 6.54 | 15.64 | 1.29 |
| **X-9CAUG** | **09/22/14** | Missing field notes | | | | | |
| **X-9CAUG** | **10/01/15** | 1.469 | 0.27 | -156.66 | 7.12 | 12.32 | 4.73 |
| **X-9CAUG** | **09/28/16** | 0.634 | 0.60 | 0.50 | 6.74 | 12.24 | 3.95 |
| **X-9CAUG** | **08/29/17** | 0.956 | 0.34 | -99.40 | 7.33 | 17 | 1.71 |
| **X-9CAUG** | **09/25/18** | 0.80[3] | 0.43 | -98.2 | 7.11 | 19.82 | 516.53[6] |
| **X-9CAUG** | **08/21/19** | 0.93 | 0.35 | -109.5 | 6.92 | 18.8 | 1.97 |
| **X-9CAUG** | **08/18/20** | 0.87 | 0.91 | -88.0 | 6.92 | 17.4 | 1.82 |
| **X-9CAUGR** | **08/18/21** | 0.91 | 0.19 | -97.3 | 6.97 | 19.4 | 1.92 |
| **X-9CAUGR** | **09/22/22** | 1.100 | 0.23 | -99.80 | 7.12 | 14.20 | 1.89 |
| **X-9D** | **09/28/10** | 3.257 | 0.41 | -93.2 | 7.31 | 12.54 | 0.1 |
| **X-9D** | **09/23/11** | 4.27 | 0.56 | -113.8 | 7.44 | 11.73 | 0.0 |
| **X-9D** | **09/12/12** | 3.510 | -[2] | -83.1 | 7.13 | 14.20 | 0.10 |
| **X-9D** | **09/25/13** | 19.53 | 0.17 | -113.1 | 7.08 | 13.03 | 1.71 |
| **X-9D** | **09/22/14** | Missing field notes | | | | | |
| **X-9D** | **10/01/15** | 4.496 | 0.16 | 89.53 | 7.24 | 12.68 | 6.59 |
| **X-9D** | **09/28/16** | 4.567 | 0.12 | 166.31 | 7.23 | 11.2 | 1.24 |
| **X-9D** | **08/29/17** | 2.140 | 0.82 | 133.4 | 7.00 | 17 | 1.07 |
| **X-9D** | **09/25/18** | 3.44[3] | 0.15 | -138.8 | 7.11 | 18.64 | 14.86[6] |
| **X-9D** | **08/20/19** | 4.52 | 0.30 | -101.9 | 7.21 | 22.2 | 7.82 |
| **X-9D** | **08/17/20** | 1.05 | 0.33 | -167.8 | 7.43 | 23.8 | 1.89 |

| Well ID | Date Sampled | Conductivity (mS/cm) | Dissolved Oxygen (mg/L) | Oxidation Reduction Potential (mV) | pH (SU) | Temperature (°C) | Turbidity (NTUs) |
|---|---|---|---|---|---|---|---|
| **X-9D** | **08/18/21** | 1.14 | 0.42 | -129.7 | 7.32 | 21.2 | 1.98 |
| **X-9D** | **09/22/22** | 1.240 | 0.16 | 21.60 | 7.44 | 17.90 | 0.02 |
| **X-10AR2** | **08/12/20** | 0.87 | 0.17 | -62.4 | 6.89 | 17.1 | 0.02 |
| **X-10AR2** | **09/08/20** | 0.88 | 0.31 | -63.3 | 7.01 | 15.5 | 9.45 |
| **X-10AR2** | **08/18/21** | 0.83 | 0.11 | -70.4 | 6.99 | 19.1 | 1.90 |
| **X-10AR2** | **09/22/22** | 0.95 | 0.15 | -77.9 | 7.11 | 15 | 8.19 |
| **X-10BR** | **09/29/10** | 2.446 | 0.20 | -101.2 | 6.69 | 14.17 | 1.4 |
| **X-10BR** | **09/22/11** | 1.692 | 0.79 | -88.1 | 6.87 | 13.25 | 4.8 |
| **X-10BR** | **09/14/12** | 1.953 | -[2] | -91.6 | 6.59 | 14.58 | 0.42 |
| **X-10BR** | **09/24/13** | 21.55 | 0.28 | -104.5 | 6.40 | 14.21 | 4.89 |
| **X-10BR** | **Well Abandoned** | | | | | | |

**Notes:**

°C = Celsius.
mg/L = milligrams per liter.
mV = millivolts.
NTUs = Nephelometric Turbidity Units.
SU = Standard Units.
mS/cm = milliSiemens per centimeter.
NA = not applicable/not available.

1. Monitoring well MW-188S1 was sampled on October 10, 2010 but the sampling log was not found.
2. No reading due to faulty dissolved oxygen sensor.
3. Conductivity not recorded. Specific conductance reported instead.
4. Monitoring well purged dry upon sampling. Well was allowed to recharge and then a sample was collected.
5. Monitoring well purged dry. Well did not sufficiently recharge during sampling event; therefore, no sample was collected.
6. Turbidimeter malfunctioned during sampling. Turbidity result is not accurate.

# Attachment 6

**2022 PCB Cover Inspections and LNAPL Gauging/ Inspection**

# Technical Memorandum

**November 30, 2022**

| | | | |
|---|---|---|---|
| **To** | Dave Favero (RACER) | **Tel** | 519-340-4316 |
| **Copy to** | Jessica Gallaway | **Email** | John-eric.pardys@ghd.com |
| **From** | John-Eric Pardys | **Ref. No.** | 11208013-MEM-3 |
| **Subject** | 2022 Annual Inspections and Gauging<br>RACER Trust Saginaw Malleable Industrial Land, Saginaw Michigan | | |

## 1. Introduction

This memorandum presents a summary of the inspection conducted on the cover placed over the former building slab, including the I27.7 Manhole Area, and annual gauging/inspection of the LNAPL areas in accordance with RACER Trust's Operation, Maintenance, and Monitoring Plan (ARCADIS, 2020) completed on September 20, 2022 at RACER Trust's Saginaw Malleable Industrial Land (Site) in Saginaw, Michigan (Figure 1). The purpose of the inspections are to confirm the cover is being maintained in accordance with 40 CFR 761.61 (a)(8) and to identify any changes in LNAPL conditions that would necessitate further evaluation.

## 2. Visual Cover Observations

GHD staff completed a visual assessment on May 16, 2022 of the cover placed over the former building slab, including the I27.7 Manhole Area, to document its condition and to recommend any maintenance that may be required. The week prior to the inspection, the Saginaw area received approximately 0.17-inches of rain (https://w2.weather.gov/climate/index.php?wfo=dtx). See Attachment 1 for a photographic log documenting the cover observations.

The following observations were made during the inspection:

– Very minor erosion along the edges of the cover was identified. No maintenance needed.
– There were no signs of any major depressions on the cover.
– Vegetation is primarily composed of grasses, clovers, wildflowers, thistles, and other small plants. The vegetation is 4-5 inches tall and there does not appear to be much (if any) woody vegetation. No mowing needed at this time.
– The cover was not mowed this year. Mowing will be scheduled for late spring/early summer 2023.

Based on the results of the May 2022 inspection, no maintenance of the cover was required.

## 3. Annual LNAPL Gauging / Inspection

The annual gauging event was conducted by Arcadis on September 20, 2022. The groundwater gaging log is provided in Attachment 2.

**Quench Pit Area**

Figure 2 presents the Quench Pit Area monitoring well locations. A summary of the annual gauging information is provided in Table 1, along with historical gauging information for reference. All water levels/LNAPL thicknesses were below the top of screen during the September 2022 gauging event. The LNAPL thickness in the wells is consistent with historical readings and changes in LNAPL thickness in wells exhibit the expected correlation with fluctuations in hydraulic conditions (i.e., water table elevation). Please note that QPTW-03R2 water depth and LNAPL depth measurements appear reversed in the gaging log, this has been corrected in Table 1.

**Southwest Plant LNAPL Area**

Arcadis also inspected manholes in the Southwest Plant LNAPL area, the storm water pond and the secondary pond for the presence of LNAPL. Figure 3 presents the location of the inspection points. A possible sheen was identified in two of the manholes, however, no evidence of LNAPL was identified in the Stormwater Pond or the Secondary Pond. A summary of the manhole inspections is provided in Table 2.

**Transmissivity Testing**

Table 3 summarizes the LNAPL Transmissivity that has been completed to date. No transmissivity testing was completed in 2022 as conditions were similar to when the previous tests were completed. A memorandum was submitted to EGLE on January 28, 2019 summarizing transmissivity testing that has been completed. The memorandum concluded that the remaining concern with LNAPL appears to be limited to the potential for residual LNAPL sheen to enter active sewers that discharge to the on-Site stormwater pond. However, it is noted that no sheen has been observed in the on-Site stormwater pond since before the Plant was closed in 2007. Further, transmissivity testing since 2016 has demonstrated LNAPL is not readily or practically recoverable.

# 4. Conclusions/Recommendations

With respect to the cover, in order to keep phragmite growth and woody growth under control, GHD recommends evaluating the need for a mowing event at a minimum annually. LNAPL conditions continue to remain stable and, therefore, no further evaluation is necessary beyond continued monitoring. Consistent with the January 28, 2019 memorandum, GHD recommends that no additional transmissivity testing be performed, and that observations/inspections of the cap continue on an annual basis.

**List of Enclosures:**
Figure 1 Site Plan
Figure 2 Quench Pit Area – LNAPL Monitoring Program
Figure 3 Southwest Plan LNAPL Area – LNAPL Monitoring Program

Table 1 Summary of Groundwater Gauging Data – Quench Pit Area
Table 2 Summary of Manhole Inspections – Southwest LNAPL Area
Table 3 Summary of Transmissivity Testing – Quench Pit Area

Attachment 1 Photographic Log – Cover Inspection
Attachment 2 Gauging Form

Regards

**John-Eric Pardys**
Engineer

SALT STREET

CENTER STREET

MELTING DEPARTMENT AREA

I27.7 AREA

CONCRETE PAD
(FORMER SAGINAW
MALLEABLE IRON PLANT)

SEE FIGURE 2

QUENCH PIT AREA

SEE FIGURE 3

SOUTHWEST LNAPL AREA

TERMINATED
TYPE III LANDFILL

SAGINAW RIVER

SAGINAW RIVER BERM AREA

STORWATER
POND

POND
OBSERVATION
LOCATION

SECONDARY
POND

TERMINATED TYPE III LANDFILL

## LEGEND

RACER MALLEABLE IRON INDUSTRIAL LAND PROPERTY LINE (APPROX.)

UNPAVED ROAD

620 GROUND SURFACE ELEVATION CONTOUR (10 FT INTERVAL)

FENCE LINE

NOTE:
THIS DRAWING HAS BEEN PREPARED
UTILIZING THE BEST AVAILABLE INFORMATION.

0 150 300 ft

1" = 300 ft

N

GHD

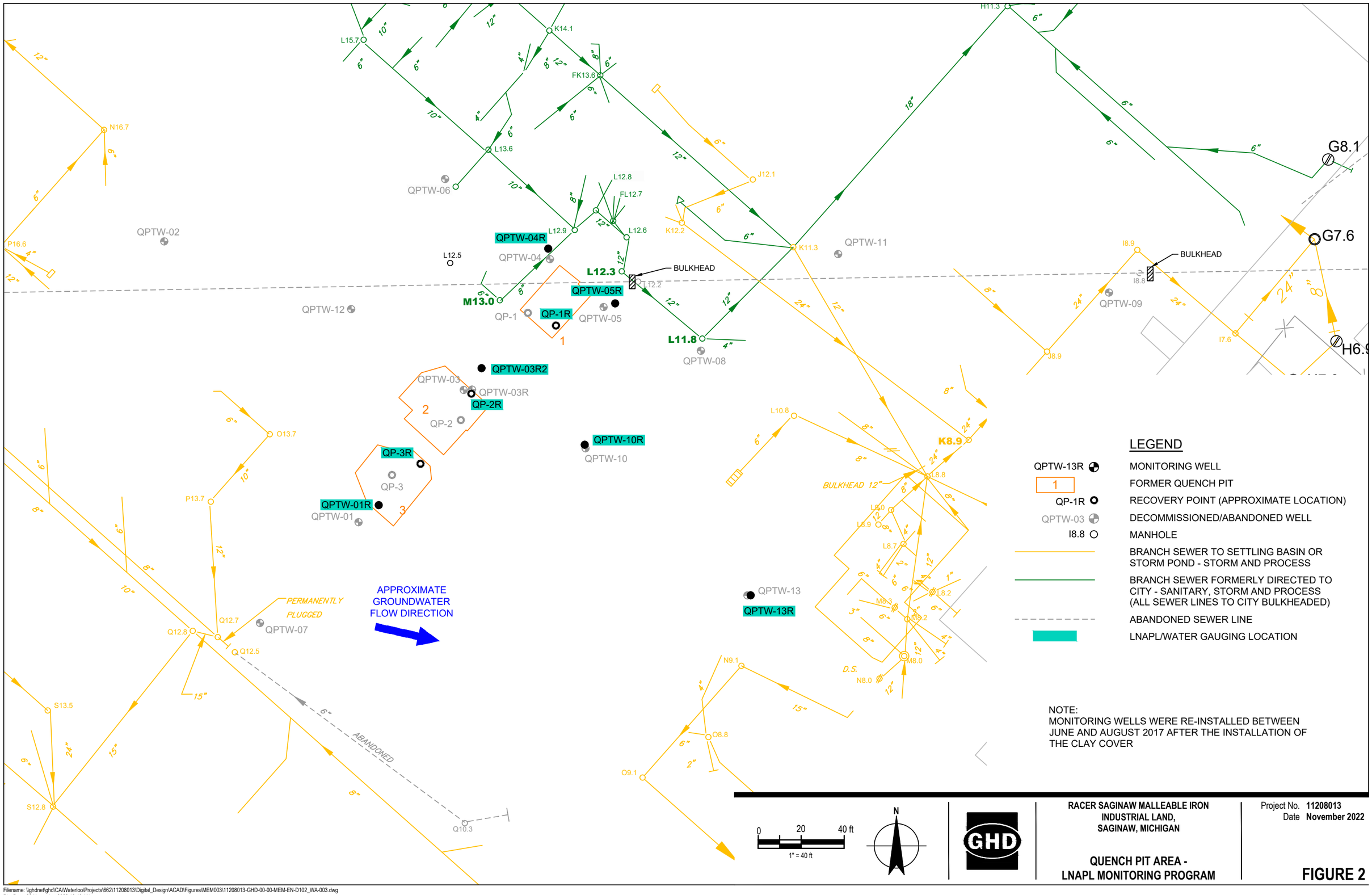
**RACER SAGINAW MALLEABLE IRON INDUSTRIAL LAND, SAGINAW, MICHIGAN**

**SITE PLAN**

Project No. **11208013**
Date **November 2022**

**FIGURE 1**

Filename: \\ghdnet\ghd\CA\Waterloo\Projects\662\11208013\Digital_Design\ACAD\Figures\MEM003\11208013-GHD-00-00-MEM-EN-D101_WA-003.dwg
Plot Date: 28 November 2022 1:08 PM




## LEGEND

- QPTW-13R — MONITORING WELL
- 1 — FORMER QUENCH PIT
- QP-1R — RECOVERY POINT (APPROXIMATE LOCATION)
- QPTW-03 — DECOMMISSIONED/ABANDONED WELL
- I8.8 — MANHOLE
- BRANCH SEWER TO SETTLING BASIN OR STORM POND - STORM AND PROCESS
- BRANCH SEWER FORMERLY DIRECTED TO CITY - SANITARY, STORM AND PROCESS (ALL SEWER LINES TO CITY BULKHEADED)
- ABANDONED SEWER LINE
- LNAPL/WATER GAUGING LOCATION

NOTE:
MONITORING WELLS WERE RE-INSTALLED BETWEEN JUNE AND AUGUST 2017 AFTER THE INSTALLATION OF THE CLAY COVER

0 20 40 ft
1" = 40 ft

N

GHD

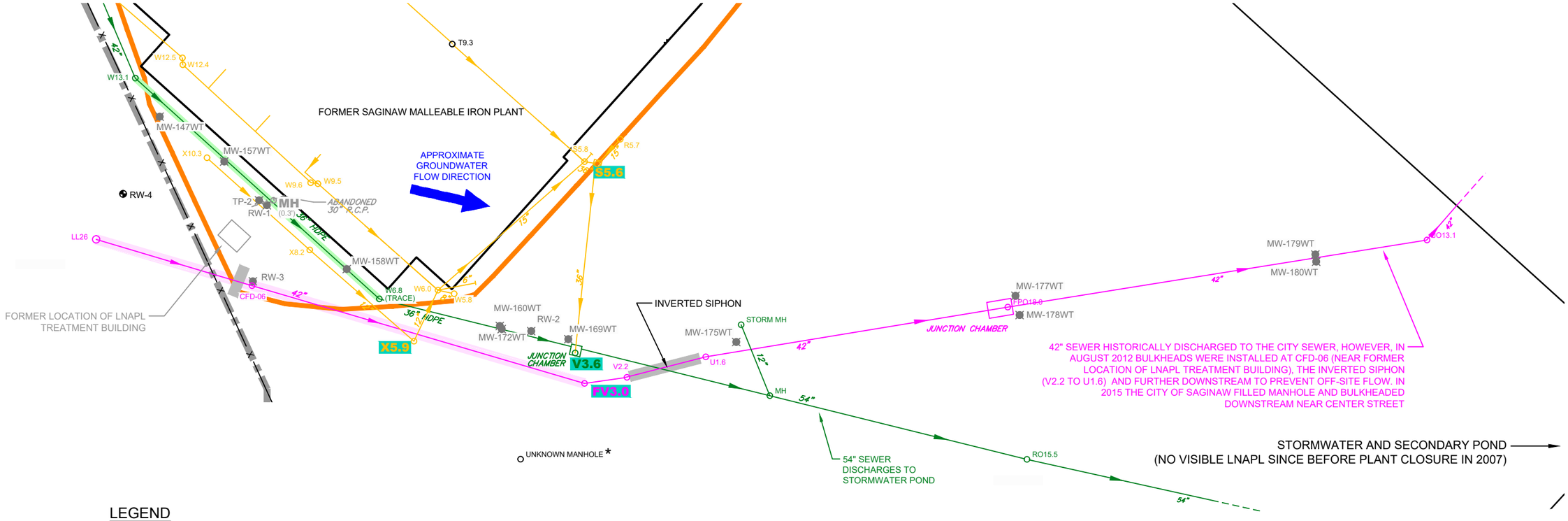
**RACER SAGINAW MALLEABLE IRON INDUSTRIAL LAND, SAGINAW, MICHIGAN**

**QUENCH PIT AREA - LNAPL MONITORING PROGRAM**

Project No. **11208013**
Date **November 2022**

# FIGURE 2

Filename: \\ghdnet\ghd\CA\Waterloo\Projects\662\11208013\Digital_Design\ACAD\Figures\MEM003\11208013-GHD-00-00-MEM-EN-D102_WA-003.dwg
Plot Date: 28 November 2022 10:43 AM




## LEGEND

- RW-1 — RECOVERY WELL (LNAPL) LOCATION
- MW147 — DECOMMISSIONED WELL LOCATION
- CURE-IN-PLACE LINING
- SEWER SLEVE
- RACER PROPERTY BOUNDARY
- BULKHEAD
- LNAPL/WATER GAUGING LOCATION
- EXTENT OF 1-FT COVER AREA

NOTE:

* LOCATION OF MANHOLE IS APPROXIMATED BASED ON ARCADIS FIELD COORDINATES.

0 50 100 ft

1" = 100 ft

N

GHD

**RACER SAGINAW MALLEABLE IRON INDUSTRIAL LAND, SAGINAW, MICHIGAN**

**SOUTHWEST PLANT NAPL AREA - LNAPL MONITORING PROGRAM**

Project No. **11208013**
Date **November 2022**

**FIGURE 3**

Filename: \\ghdnet\ghd\CA\Waterloo\Projects\662\11208013\Digital_Design\ACAD\Figures\MEM003\11208013-GHD-00-00-MEM-EN-D103_WA-003.dwg
Plot Date: 28 November 2022 1:14 PM

**Table 1**

**Summary of Groundwater Gauging Data - Quench Pit Area**
**RACER Trust - Saginaw Malleable Iron Industrial Land**
**Saginaw, Michigan**

| Well ID | Date | Ground Surface Elevation (ft amsl) | Top of Casing Elevation (ft amsl) | Top of Screen (ft btoc) | Total Depth (ft btoc) | Depth to Water (ft btoc) | Depth to Product (ft btoc) | LNAPL Thickness (ft) | Corrected Groundwater Elevation [1] (ft amsl) | Corrected Water Table Depth [1] (ft btoc) |
|---|---|---|---|---|---|---|---|---|---|---|
| QPTW-01 | 03/17/05 | 592.3 | 591.95 | 2.85 | 12.85 | 10.48 | 7.28 | 3.20 | 584.29 | 7.66 |
| | 04/12/05 | 592.3 | 591.95 | 2.85 | 12.85 | 10.63 | 7.30 | 3.33 | 584.25 | 7.70 |
| | 05/31/05 | 592.3 | 591.95 | 2.85 | 12.85 | 10.69 | 7.36 | 3.33 | 584.19 | 7.76 |
| | 06/24/05 | 592.3 | 591.95 | 2.85 | 12.85 | 10.45 | 7.04 | 3.41 | 584.50 | 7.45 |
| | 08/12/05 | 592.3 | 591.95 | 2.85 | 12.85 | 10.20 | 6.95 | 3.25 | 584.61 | 7.34 |
| | 10/14/05 | 592.3 | 591.95 | 2.85 | 12.85 | 10.58 | 7.29 | 3.29 | 584.27 | 7.68 |
| | 11/08/05 | 592.3 | 591.95 | 2.85 | 12.85 | 10.82 | 7.44 | 3.38 | 584.10 | 7.85 |
| | 12/19/05 | 592.3 | 591.95 | 2.85 | 12.85 | 10.91 | 7.52 | 3.39 | 584.02 | 7.93 |
| | 01/31/06 | 592.3 | 591.95 | 2.85 | 12.85 | 10.53 | 7.29 | 3.24 | 584.27 | 7.68 |
| | 02/15/06 | 592.3 | 591.95 | 2.85 | 12.85 | 10.46 | 7.21 | 3.25 | 584.35 | 7.60 |
| | 03/13/06 | 592.3 | 591.95 | 2.85 | 12.85 | 9.71 | 6.93 | 2.78 | 584.69 | 7.26 |
| | 04/10/06 | 592.3 | 591.95 | 2.85 | 12.85 | 10.02 | 7.04 | 2.98 | 584.55 | 7.40 |
| | 05/22/06 | 592.3 | 591.95 | 2.85 | 12.85 | 10.23 | 7.11 | 3.12 | 584.47 | 7.48 |
| | 06/21/06 | 592.3 | 591.95 | 2.85 | 12.85 | 10.22 | 7.05 | 3.17 | 584.52 | 7.43 |
| | 07/11/06 | 592.3 | 591.95 | 2.85 | 12.85 | 9.67 | 6.82 | 2.85 | 584.79 | 7.16 |
| | 08/23/06 | 592.3 | 591.95 | 2.85 | 12.85 | 9.99 | 6.78 | 3.21 | 584.78 | 7.17 |
| | 09/26/06 | 592.3 | 591.95 | 2.85 | 12.85 | 9.90 | 6.82 | 3.08 | 584.76 | 7.19 |
| | 10/30/06 | 592.3 | 591.95 | 2.85 | 12.85 | 9.62 | 6.83 | 2.79 | 584.79 | 7.16 |
| | 11/27/06 | 592.3 | 591.95 | 2.85 | 12.85 | 9.79 | 6.91 | 2.88 | 584.69 | 7.26 |
| | 12/27/06 | 592.3 | 591.95 | 2.85 | 12.85 | 9.97 | 6.96 | 3.01 | 584.63 | 7.32 |
| | 01/15/07 | 592.3 | 591.95 | 2.85 | 12.85 | 9.79 | 6.94 | 2.85 | 584.67 | 7.28 |
| | 02/21/07 | 592.3 | 591.95 | 2.85 | 12.85 | 10.35 | 7.29 | 3.06 | 584.29 | 7.66 |
| | 03/23/07 | 592.3 | 591.95 | 2.85 | 12.85 | 10.18 | 7.27 | 2.91 | 584.33 | 7.62 |
| | 04/09/07 | 592.3 | 591.95 | 2.85 | 12.85 | 10.39 | 7.25 | 3.14 | 584.32 | 7.63 |
| | 05/15/07 | 592.3 | 591.95 | 2.85 | 12.85 | 10.09 | 7.32 | 2.77 | 584.30 | 7.65 |
| | 06/11/07 | 592.3 | 591.95 | 2.85 | 12.85 | 10.36 | 7.47 | 2.89 | 584.13 | 7.82 |
| | 07/11/07 | 592.3 | 591.95 | 2.85 | 12.85 | 10.36 | 7.43 | 2.93 | 584.17 | 7.78 |
| | 08/16/07 | 592.3 | 591.95 | 2.85 | 12.85 | 10.41 | 7.48 | 2.93 | 584.12 | 7.83 |
| | 09/17/07 | 592.3 | 591.95 | 2.85 | 12.85 | 10.11 | 7.38 | 2.73 | 584.24 | 7.71 |
| | 11/26/07 | 592.3 | 591.95 | 2.85 | 12.85 | 10.62 | 7.64 | 2.98 | 583.95 | 8.00 |
| | 12/12/07 | 592.3 | 591.95 | 2.85 | 12.85 | 10.79 | 7.77 | 3.02 | 583.82 | 8.13 |
| | 01/11/08 | 592.3 | 591.95 | 2.85 | 12.85 | 10.32 | 7.56 | 2.76 | 584.06 | 7.89 |
| | 02/05/08 | 592.3 | 591.95 | 2.85 | 12.85 | 9.91 | 7.42 | 2.49 | 584.23 | 7.72 |
| | 04/11/08 | 592.3 | 591.95 | 2.85 | 12.85 | 8.41 | 6.60 | 1.81 | 585.13 | 6.82 |
| | 05/16/08 | 592.3 | 591.95 | 2.85 | 12.85 | 8.65 | 6.56 | 2.09 | 585.14 | 6.81 |
| | 10/29/08 | 592.3 | 591.95 | 2.85 | 12.85 | 8.71 | 6.39 | 2.32 | 585.28 | 6.67 |
| | 01/21/09 | 592.3 | 591.95 | 2.85 | 12.85 | 8.22 | 6.26 | 1.96 | 585.45 | 6.50 |
| | 03/18/09 | 592.3 | 591.95 | 2.85 | 12.85 | ***8.07*** | ***6.16*** | 1.91 | 585.56 | 6.39 |
| | 10/17/09 | 592.3 | 591.95 | 2.85 | 12.85 | 8.46 | 6.39 | 2.07 | 585.31 | 6.64 |
| | 10/23/09 | 592.3 | 591.95 | 2.85 | 12.85 | 8.07 | 6.34 | 1.73 | 585.40 | 6.55 |
| | 06/24/10 | 592.3 | 591.95 | 2.85 | 12.85 | 8.31 | 5.06 | 3.25 | 586.50 | 5.45 |
| | 07/08/10 | 592.3 | 591.95 | 2.85 | 12.85 | 8.88 | 4.62 | 4.26 | 586.82 | 5.13 |
| | 07/22/10 | 592.3 | 591.95 | 2.85 | 12.85 | 9.86 | 4.81 | 5.05 | 586.53 | 5.42 |
| | 07/29/10 | 592.3 | 591.95 | 2.85 | 12.85 | 8.27 | 5.11 | 3.16 | 586.46 | 5.49 |
| | 08/06/10 | 592.3 | 591.95 | 2.85 | 12.85 | 8.13 | 5.41 | 2.72 | 586.21 | 5.74 |
| | 08/13/10 | 592.3 | 591.95 | 2.85 | 12.85 | 6.83 | 4.04 | 2.79 | 587.58 | 4.37 |
| | 08/27/10 | 592.3 | 591.95 | 2.85 | 12.85 | 7.40 | 4.42 | 2.98 | 587.17 | 4.78 |
| | 09/23/10 | 592.3 | 591.95 | 2.85 | 12.85 | 5.54 | 3.05 | 2.49 | 588.60 | 3.35 |
| | 10/15/10 | 592.3 | 591.95 | 2.85 | 12.85 | 7.14 | 4.01 | 3.13 | 587.56 | 4.39 |
| | 10/29/10 | 592.3 | 591.95 | 2.85 | 12.85 | 6.90 | 3.99 | 2.91 | 587.61 | 4.34 |
| | 12/07/10 | 592.3 | 591.95 | 2.85 | 12.85 | 7.61 | 3.87 | 3.74 | 587.63 | 4.32 |
| | 03/18/11 | 592.3 | 591.95 | 2.85 | 12.85 | 6.57 | 3.54 | 3.03 | 588.05 | 3.90 |
| | 04/08/11 | 592.3 | 591.95 | 2.85 | 12.85 | 6.15 | 2.77 | 3.38 | 588.77 | 3.18 |
| | 05/09/11 | 592.3 | 591.95 | 2.85 | 12.85 | 5.98 | 3.11 | 2.87 | 588.50 | 3.45 |
| | 06/09/11 | 592.3 | 591.95 | 2.85 | 12.85 | 6.31 | 3.16 | 3.15 | 588.41 | 3.54 |
| | 07/05/11 | 592.3 | 591.95 | 2.85 | 12.85 | 5.62 | 3.31 | 2.31 | 588.36 | 3.59 |
| | 08/23/11 | 592.3 | 591.95 | 2.85 | 12.85 | 4.21 | 2.88 | 1.33 | 588.91 | 3.04 |
| | 10/14/11 | 592.3 | 591.95 | 2.85 | 12.85 | 5.72 | 3.81 | 1.91 | 587.91 | 4.04 |
| | 01/24/12 | 592.3 | 591.95 | 2.85 | 12.85 | 6.28 | 1.66 | 4.62 | 589.74 | 2.21 |
| | 03/20/12 | 592.3 | 591.95 | 2.85 | 12.85 | 5.41 | 2.67 | 2.74 | 588.95 | 3.00 |

**Table 1**

**Summary of Groundwater Gauging Data - Quench Pit Area**
**RACER Trust - Saginaw Malleable Iron Industrial Land**
**Saginaw, Michigan**

| Well ID | Date | Ground Surface Elevation (ft amsl) | Top of Casing Elevation (ft amsl) | Top of Screen (ft btoc) | Total Depth (ft btoc) | Depth to Water (ft btoc) | Depth to Product (ft btoc) | LNAPL Thickness (ft) | Corrected Groundwater Elevation [1] (ft amsl) | Corrected Water Table Depth [1] (ft btoc) |
|---|---|---|---|---|---|---|---|---|---|---|
| QPTW-01 (cont'd) | 04/23/12 | 592.3 | 591.95 | 2.85 | 12.85 | 5.53 | 2.16 | 3.37 | 589.39 | 2.56 |
| | 06/11/12 | 592.3 | 591.95 | 2.85 | 12.85 | 6.72 | 2.87 | 3.85 | 588.62 | 3.33 |
| | 07/10/12 | 592.3 | 591.95 | 2.85 | 12.85 | 5.41 | 3.69 | 1.72 | 588.05 | 3.90 |
| | 08/29/12 | 592.3 | 591.95 | 2.85 | 12.85 | 5.75 | 3.04 | 2.71 | 588.58 | 3.37 |
| | 09/12/12 | 592.3 | 591.95 | 2.85 | 12.85 | 4.25 | 2.90 | 1.35 | 588.89 | 3.06 |
| | 11/06/12 | 592.3 | 591.95 | 2.85 | 12.85 | 4.06 | 3.04 | 1.02 | 588.79 | 3.16 |
| | 12/05/12 | 592.3 | 591.95 | 2.85 | 12.85 | 4.41 | 3.26 | 1.15 | 588.55 | 3.40 |
| | 04/03/13 | 592.3 | 591.95 | 2.85 | 12.85 | 4.91 | 3.37 | 1.54 | 588.40 | 3.55 |
| | 07/18/13 | 592.3 | 591.95 | 2.85 | 12.85 | 3.48 | 2.80 | 0.68 | 589.07 | 2.88 |
| | 09/23/13 | 592.3 | 591.95 | 2.85 | 12.85 | 4.34 | 3.74 | 0.60 | 588.14 | 3.81 |
| | 06/02/14 | 592.3 | 591.95 | 2.85 | 12.85 | 3.06 | 2.36 | 0.70 | 589.51 | 2.44 |
| | 07/09/14 | 592.3 | 591.95 | 2.85 | 12.85 | 2.92 | 1.07 | 1.85 | 590.66 | 1.29 |
| | 07/31/14 | 592.3 | 591.95 | 2.85 | 12.85 | 3.17 | 1.99 | 1.18 | 589.82 | 2.13 |
| | 09/16/14 | 592.3 | 591.95 | 2.85 | 12.85 | 3.31 | 2.27 | 1.04 | 589.56 | 2.39 |
| | 03/24/15 | 592.3 | 591.95 | 2.85 | 12.85 | 4.51 | 3.14 | 1.37 | 588.65 | 3.30 |
| | 06/17/15 | 592.3 | 591.95 | 2.85 | 12.85 | 3.31 | 1.25 | 2.06 | 590.45 | 1.50 |
| | 09/09/15 | 592.3 | 591.95 | 2.85 | 12.85 | 3.81 | 1.11 | 2.70 | 590.52 | 1.43 |
| | 12/04/15 | 592.3 | 591.95 | 2.85 | 12.85 | 4.70 | 3.48 | 1.22 | 588.32 | 3.63 |
| | 03/15/16 | 592.3 | 591.95 | 2.85 | 12.85 | 5.13 | 1.94 | 3.19 | 589.63 | 2.32 |
| | 06/17/16 | 592.3 | 591.95 | 2.85 | 12.85 | 2.23 | 1.17 | 1.06 | 590.65 | 1.30 |
| | 09/22/16 | 592.3 | 591.95 | 2.85 | 12.85 | 3.82 | 2.86 | 0.96 | 588.97 | 2.98 |
| | 09/27/16 | ABANDONED | | | | | | | | |
| QPTW-01R | 09/06/17 | 594.69 | 594.49 | 2.00 | 12.00 | 4.14 | --- | --- | 590.35 | 4.14 |
| | 11/27/17 | 594.69 | 594.49 | 2.00 | 12.00 | 4.17 | --- | --- | 590.32 | 4.17 |
| | 02/27/18 | 594.69 | 594.49 | 2.00 | 12.00 | 3.66 | --- | --- | 590.83 | 3.66 |
| | 06/04/18 | 594.69 | 594.49 | 2.00 | 12.00 | 3.81 | --- | --- | 590.68 | 3.81 |
| | 10/05/18 | 594.69 | 594.49 | 2.00 | 12.00 | 4.13 | --- | --- | 590.36 | 4.13 |
| | 12/11/18 | 594.69 | 594.49 | 2.00 | 12.00 | frozen | --- | --- | --- | --- |
| | 03/12/19 | 594.69 | 594.49 | 2.00 | 12.00 | 3.94 | --- | --- | 590.55 | 3.94 |
| | 06/18/19 | 594.69 | 594.49 | 2.00 | 12.00 | 2.53 | 2.51 | 0.02 | 591.98 | 2.51 |
| | 09/16/19 | 594.69 | 594.49 | 2.00 | 12.00 | 4.34 | --- | --- | 590.15 | 4.34 |
| | 12/03/19 | 594.69 | 594.49 | 2.00 | 12.00 | 2.22 | 2.19 | 0.03 | 592.30 | 2.19 |
| | 03/12/20 | 594.69 | 594.49 | 2.00 | 12.00 | 2.87 | --- | --- | 591.62 | 2.87 |
| | 06/03/20 | 594.69 | 594.49 | 2.00 | 12.00 | 2.54 | --- | --- | 591.95 | 2.54 |
| | 09/09/20 | 594.69 | 594.49 | 2.00 | 12.00 | 4.62 | 4.60 | 0.02 | 589.89 | 4.60 |
| | 12/03/20 | 594.69 | 594.49 | 2.00 | 12.00 | 4.86 | --- | --- | 589.63 | 4.86 |
| | 08/16/21 | 594.69 | 594.49 | 2.00 | 12.00 | 4.65 | 4.63 | 0.02 | 589.86 | 4.63 |
| | 09/20/22 | 594.69 | 594.49 | 2.00 | 12.00 | 4.55 | 4.51 | 0.04 | 589.98 | 4.51 |
| QPTW-02 | 03/17/05 | 592.6 | 592.35 | 2.80 | 12.80 | 7.54 | 7.51 | 0.03 | 584.84 | 7.51 |
| | 04/12/05 | 592.6 | 592.35 | 2.80 | 12.80 | 7.64 | 7.58 | 0.06 | 584.76 | 7.59 |
| | 05/31/05 | 592.6 | 592.35 | 2.80 | 12.80 | 7.54 | 7.50 | 0.04 | 584.85 | 7.50 |
| | 06/24/05 | 592.6 | 592.35 | 2.80 | 12.80 | 7.41 | 7.38 | 0.03 | 584.97 | 7.38 |
| | 08/12/05 | 592.6 | 592.35 | 2.80 | 12.80 | 7.30 | 7.26 | 0.04 | 585.09 | 7.26 |
| | 10/14/05 | 592.6 | 592.35 | 2.80 | 12.80 | 7.50 | 7.44 | 0.06 | 584.90 | 7.45 |
| | 11/08/05 | 592.6 | 592.35 | 2.80 | 12.80 | 7.52 | 7.49 | 0.03 | 584.86 | 7.49 |
| | 12/19/05 | 592.6 | 592.35 | 2.80 | 12.80 | 7.67 | 7.63 | 0.04 | 584.72 | 7.63 |
| | 01/31/06 | 592.6 | 592.35 | 2.80 | 12.80 | 7.53 | 7.48 | 0.05 | 584.86 | 7.49 |
| | 02/15/06 | 592.6 | 592.35 | 2.80 | 12.80 | 7.50 | 7.47 | 0.03 | 584.88 | 7.47 |
| | 03/13/06 | 592.6 | 592.35 | 2.80 | 12.80 | 7.30 | 7.26 | 0.04 | 585.09 | 7.26 |
| | 04/10/06 | 592.6 | 592.35 | 2.80 | 12.80 | 7.39 | 7.36 | 0.03 | 584.99 | 7.36 |
| | 05/22/06 | 592.6 | 592.35 | 2.80 | 12.80 | 7.38 | 7.35 | 0.03 | 585.00 | 7.35 |
| | 06/21/06 | 592.6 | 592.35 | 2.80 | 12.80 | 7.33 | 7.29 | 0.04 | 585.06 | 7.29 |
| | 07/11/06 | 592.6 | 592.35 | 2.80 | 12.80 | 7.29 | 7.26 | 0.03 | 585.09 | 7.26 |
| | 08/23/06 | 592.6 | 592.35 | 2.80 | 12.80 | 7.28 | 7.26 | 0.02 | 585.09 | 7.26 |
| | 09/26/06 | 592.6 | 592.35 | 2.80 | 12.80 | 7.39 | 7.37 | 0.02 | 584.98 | 7.37 |
| | 10/30/06 | 592.6 | 592.35 | 2.80 | 12.80 | 7.38 | 7.35 | 0.03 | 585.00 | 7.35 |
| | 11/27/06 | 592.6 | 592.35 | 2.80 | 12.80 | 7.41 | 7.38 | 0.03 | 584.97 | 7.38 |
| | 12/27/06 | 592.6 | 592.35 | 2.80 | 12.80 | 7.44 | 7.42 | 0.02 | 584.93 | 7.42 |
| | 01/15/07 | 592.6 | 592.35 | 2.80 | 12.80 | 7.46 | 7.42 | 0.04 | 584.93 | 7.42 |
| | 02/21/07 | 592.6 | 592.35 | 2.80 | 12.80 | 7.47 | 7.46 | 0.01 | 584.89 | 7.46 |
| | 03/23/07 | 592.6 | 592.35 | 2.80 | 12.80 | 7.42 | 7.40 | 0.02 | 584.95 | 7.40 |
| | 04/09/07 | 592.6 | 592.35 | 2.80 | 12.80 | 7.45 | 7.43 | 0.02 | 584.92 | 7.43 |
| | 05/15/07 | 592.6 | 592.35 | 2.80 | 12.80 | 7.50 | 7.48 | 0.02 | 584.87 | 7.48 |
| | 08/16/07 | 592.6 | 592.35 | 2.80 | 12.80 | 7.65 | 7.62 | 0.03 | 584.73 | 7.62 |
| | 09/17/07 | 592.6 | 592.35 | 2.80 | 12.80 | 7.51 | 7.48 | 0.03 | 584.87 | 7.48 |

**Table 1**

**Summary of Groundwater Gauging Data - Quench Pit Area**
**RACER Trust - Saginaw Malleable Iron Industrial Land**
**Saginaw, Michigan**

| Well ID | Date | Ground Surface Elevation (ft amsl) | Top of Casing Elevation (ft amsl) | Top of Screen (ft btoc) | Total Depth (ft btoc) | Depth to Water (ft btoc) | Depth to Product (ft btoc) | LNAPL Thickness (ft) | Corrected Groundwater Elevation [1] (ft amsl) | Corrected Water Table Depth [1] (ft btoc) |
|---|---|---|---|---|---|---|---|---|---|---|
| QPTW-02 | 11/26/07 | 592.6 | 592.35 | 2.80 | 12.80 | 7.73 | 7.71 | 0.02 | 584.64 | 7.71 |
| (cont'd) | 12/12/07 | 592.6 | 592.35 | 2.80 | 12.80 | 7.76 | 7.74 | 0.02 | 584.61 | 7.74 |
| | 01/11/08 | 592.6 | 592.35 | 2.80 | 12.80 | 7.15 | 7.14 | 0.01 | 585.21 | 7.14 |
| | 02/05/08 | 592.6 | 592.35 | 2.80 | 12.80 | 7.27 | 7.26 | 0.01 | 585.09 | 7.26 |
| | 04/11/08 | 592.6 | 592.35 | 2.80 | 12.80 | 6.79 | --- | --- | 585.56 | 6.79 |
| | 05/16/08 | 592.6 | 592.35 | 2.80 | 12.80 | 7.30 | --- | --- | 585.05 | 7.30 |
| | 10/29/08 | 592.6 | 592.35 | 2.80 | 12.80 | 6.99 | --- | --- | 585.36 | 6.99 |
| | 01/21/09 | 592.6 | 592.35 | 2.80 | 12.80 | 6.53 | --- | --- | 585.82 | 6.53 |
| | 03/18/09 | 592.6 | 592.35 | 2.80 | 12.80 | 6.28 | --- | --- | 586.07 | 6.28 |
| | 10/17/09 | 592.6 | 592.35 | 2.80 | 12.80 | 6.93 | --- | --- | 585.42 | 6.93 |
| | 10/23/09 | 592.6 | 592.35 | 2.80 | 12.80 | 7.08 | --- | --- | 585.27 | 7.08 |
| | 10/15/10 | 592.6 | 592.35 | 2.80 | 12.80 | 5.23 | --- | --- | 587.12 | 5.23 |
| | 10/29/10 | 592.6 | 592.35 | 2.80 | 12.80 | 5.30 | --- | --- | 587.05 | 5.30 |
| | 03/18/11 | 592.6 | 592.35 | 2.80 | 12.80 | 3.96 | --- | --- | 588.39 | 3.96 |
| | 04/08/11 | 592.6 | 592.35 | 2.80 | 12.80 | 3.19 | --- | --- | 589.16 | 3.19 |
| | 05/09/11 | 592.6 | 592.35 | 2.80 | 12.80 | 3.47 | --- | --- | 588.88 | 3.47 |
| | 06/09/11 | 592.6 | 592.35 | 2.80 | 12.80 | 3.58 | --- | --- | 588.77 | 3.58 |
| | 07/05/11 | 592.6 | 592.35 | 2.80 | 12.80 | 3.79 | --- | --- | 588.56 | 3.79 |
| | 08/23/11 | 592.6 | 592.35 | 2.80 | 12.80 | 3.11 | --- | --- | 589.24 | 3.11 |
| | 10/14/11 | 592.6 | 592.35 | 2.80 | 12.80 | 4.04 | --- | --- | 588.31 | 4.04 |
| | 11/23/11 | 592.6 | 592.35 | 2.80 | 12.80 | 3.81 | --- | --- | 588.54 | 3.81 |
| | 03/20/12 | 592.6 | 592.35 | 2.80 | 12.80 | 2.77 | --- | --- | 589.58 | 2.77 |
| | 04/23/12 | 592.6 | 592.35 | 2.80 | 12.80 | 3.02 | --- | --- | 589.33 | 3.02 |
| | 06/11/12 | 592.6 | 592.35 | 2.80 | 12.80 | 3.22 | --- | --- | 589.13 | 3.22 |
| | 07/10/12 | 592.6 | 592.35 | 2.80 | 12.80 | 3.88 | --- | --- | 588.47 | 3.88 |
| | 08/29/12 | 592.6 | 592.35 | 2.80 | 12.80 | 3.22 | --- | --- | 589.13 | 3.22 |
| | 09/12/12 | 592.6 | 592.35 | 2.80 | 12.80 | 3.01 | --- | --- | 589.34 | 3.01 |
| | 10/01/12 | 592.6 | 592.35 | 2.80 | 12.80 | 3.79 | --- | --- | 588.56 | 3.79 |
| | 11/06/12 | 592.6 | 592.35 | 2.80 | 12.80 | 2.98 | --- | --- | 589.37 | 2.98 |
| | 12/05/12 | 592.6 | 592.35 | 2.80 | 12.80 | 3.61 | --- | --- | 588.74 | 3.61 |
| | 04/03/13 | 592.6 | 592.35 | 2.80 | 12.80 | 3.25 | --- | --- | 589.10 | 3.25 |
| | 07/18/13 | 592.6 | 592.35 | 2.80 | 12.80 | 2.59 | --- | --- | 589.76 | 2.59 |
| | 09/23/13 | 592.6 | 592.35 | 2.80 | 12.80 | 3.94 | --- | --- | 588.41 | 3.94 |
| | 04/25/14 | 592.6 | 592.35 | 2.80 | 12.80 | 1.81 | --- | --- | 590.54 | 1.81 |
| | 06/02/14 | 592.6 | 592.35 | 2.80 | 12.80 | 2.62 | --- | --- | 589.73 | 2.62 |
| | 07/31/14 | 592.6 | 592.35 | 2.80 | 12.80 | 2.31 | --- | --- | 590.04 | 2.31 |
| | 09/16/14 | 592.6 | 592.35 | 2.80 | 12.80 | 2.36 | --- | --- | 589.99 | 2.36 |
| | 03/24/15 | 592.6 | 592.35 | 2.80 | 12.80 | 3.20 | --- | --- | 589.15 | 3.20 |
| | 06/17/15 | 592.6 | 592.35 | 2.80 | 12.80 | under water | --- | --- | --- | under water |
| | 09/09/15 | 592.6 | 592.35 | 2.80 | 12.80 | 1.84 | --- | --- | 590.51 | 1.84 |
| | 12/04/15 | 592.6 | 592.35 | 2.80 | 12.80 | 3.85 | --- | --- | 588.50 | 3.85 |
| | 03/15/16 | 592.6 | 592.35 | 2.80 | 12.80 | 1.98 | --- | --- | 590.37 | 1.98 |
| | 06/17/16 | 592.6 | 592.35 | 2.80 | 12.80 | 1.66 | --- | --- | 590.69 | 1.66 |
| | 09/22/16 | 592.6 | 592.35 | 2.80 | 12.80 | 2.98 | --- | --- | 589.37 | 2.98 |
| | 09/27/16 | ABANDONED | | | | | | | | |
| QPTW-03R | 04/25/14 | 592.5 | 592.13 | 2.75 | 12.75 | 2.19 | 1.82 | 0.37 | 590.27 | 1.86 |
| | 06/02/14 | 592.5 | 592.13 | 2.75 | 12.75 | 3.13 | 2.86 | 0.27 | 589.24 | 2.89 |
| | 07/09/14 | 592.5 | 592.13 | 2.75 | 12.75 | 2.10 | 1.98 | 0.12 | 590.14 | 1.99 |
| | 07/31/14 | 592.5 | 592.13 | 2.75 | 12.75 | 2.74 | 2.66 | 0.08 | 589.46 | 2.67 |
| | 09/16/14 | 592.5 | 592.13 | 2.75 | 12.75 | 3.27 | --- | --- | 588.86 | 3.27 |
| | 03/24/15 | 592.5 | 592.13 | 2.75 | 12.75 | 3.56 | 3.55 | 0.01 | 588.58 | 3.55 |
| | 06/17/15 | 592.5 | 592.13 | 2.75 | 12.75 | 3.36 | 2.72 | 0.64 | 589.33 | 2.80 |
| | 09/09/15 | 592.5 | 592.13 | 2.75 | 12.75 | 2.74 | 2.46 | 0.28 | 589.64 | 2.49 |
| | 12/04/15 | 592.5 | 592.13 | 2.75 | 12.75 | 4.14 | --- | --- | 587.99 | 4.14 |
| | 03/15/16 | 592.5 | 592.13 | 2.75 | 12.75 | 2.46 | 2.39 | 0.07 | 589.73 | 2.40 |
| | 06/17/16 | 592.5 | 592.13 | 2.75 | 12.75 | 2.30 | 1.77 | 0.53 | 590.30 | 1.83 |
| | 09/22/16 | 592.5 | 592.13 | 2.75 | 12.75 | 3.78 | 3.05 | 0.73 | 588.99 | 3.14 |
| | 09/27/16 | ABANDONED | | | | | | | | |
| QPTW-03R2 | 09/06/17 | 594.91 | 594.61 | 2.00 | 12.00 | 5.24 | --- | --- | 589.37 | 5.24 |
| | 11/27/17 | 594.91 | 594.61 | 2.00 | 12.00 | 5.07 | 4.85 | 0.22 | 589.73 | 4.88 |
| | 02/27/18 | 594.91 | 594.61 | 2.00 | 12.00 | 4.31 | 3.92 | 0.39 | 590.64 | 3.97 |
| | 06/04/18 | 594.91 | 594.61 | 2.00 | 12.00 | 4.83 | 4.65 | 0.18 | 589.94 | 4.67 |
| | 10/05/18 | 594.91 | 594.61 | 2.00 | 12.00 | 5.75 | 5.21 | 0.54 | 589.34 | 5.27 |
| | 12/11/18 | 594.91 | 594.61 | 2.00 | 12.00 | 5.13 | 4.52 | 0.61 | 590.02 | 4.59 |
| | 03/12/19 | 594.91 | 594.61 | 2.00 | 12.00 | 5.14 | 4.17 | 0.97 | 590.32 | 4.29 |
| | 06/18/19 | 594.91 | 594.61 | 2.00 | 12.00 | 3.26 | 3.03 | 0.23 | 591.55 | 3.06 |

**Table 1**

**Summary of Groundwater Gauging Data - Quench Pit Area**
**RACER Trust - Saginaw Malleable Iron Industrial Land**
**Saginaw, Michigan**

| Well ID | Date | Ground Surface Elevation (ft amsl) | Top of Casing Elevation (ft amsl) | Top of Screen (ft btoc) | Total Depth (ft btoc) | Depth to Water (ft btoc) | Depth to Product (ft btoc) | LNAPL Thickness (ft) | Corrected Groundwater Elevation [1] (ft amsl) | Corrected Water Table Depth [1] (ft btoc) |
|---|---|---|---|---|---|---|---|---|---|---|
| QPTW-03R2 | 09/16/19 | 594.91 | 594.61 | 2.00 | 12.00 | 5.92 | 5.38 | 0.54 | 589.17 | 5.44 |
| (cont'd) | 12/03/19 | 594.91 | 594.61 | 2.00 | 12.00 | 2.35 | --- | --- | 592.26 | 2.35 |
| | 03/12/20 | 594.91 | 594.61 | 2.00 | 12.00 | 3.71 | --- | --- | 590.90 | 3.71 |
| | 06/03/20 | 594.91 | 594.61 | 2.00 | 12.00 | 3.49 | --- | --- | 591.12 | 3.49 |
| | 09/09/20 | 594.91 | 594.61 | 2.00 | 12.00 | 5.78 | 5.59 | 0.19 | 589.00 | 5.61 |
| | 12/03/20 | 594.91 | 594.61 | 2.00 | 12.00 | 6.16 | 5.86 | 0.30 | 588.71 | 5.90 |
| | 08/16/21 | 594.91 | 594.61 | 2.00 | 12.00 | 6.06 | 5.78 | 0.28 | 588.80 | 5.81 |
| (2) | 09/20/22 | 594.91 | 594.61 | 2.00 | 12.00 | 6.04 | 5.77 | 0.27 | 588.81 | 5.80 |
| QPTW-04 | 03/17/05 | 592.3 | 591.73 | 2.50 | 12.50 | 8.54 | 7.51 | 1.03 | 584.10 | 7.63 |
| | 04/12/05 | 592.3 | 591.73 | 2.50 | 12.50 | 8.53 | 7.54 | 0.99 | 584.07 | 7.66 |
| | 05/31/05 | 592.3 | 591.73 | 2.50 | 12.50 | 8.58 | 7.50 | 1.08 | 584.10 | 7.63 |
| | 06/24/05 | 592.3 | 591.73 | 2.50 | 12.50 | 8.34 | 7.29 | 1.05 | 584.31 | 7.42 |
| | 08/12/05 | 592.3 | 591.73 | 2.50 | 12.50 | 8.28 | 7.26 | 1.02 | 584.35 | 7.38 |
| | 10/14/05 | 592.3 | 591.73 | 2.50 | 12.50 | 8.61 | 7.68 | 0.93 | 583.94 | 7.79 |
| | 11/08/05 | 592.3 | 591.73 | 2.50 | 12.50 | 8.70 | 7.72 | 0.98 | 583.89 | 7.84 |
| | 12/19/05 | 592.3 | 591.73 | 2.50 | 12.50 | 8.87 | 7.83 | 1.04 | 583.78 | 7.95 |
| | 01/31/06 | 592.3 | 591.73 | 2.50 | 12.50 | 8.58 | 7.46 | 1.12 | 584.14 | 7.59 |
| | 02/15/06 | 592.3 | 591.73 | 2.50 | 12.50 | 8.45 | 7.33 | 1.12 | 584.27 | 7.46 |
| | 03/13/06 | 592.3 | 591.73 | 2.50 | 12.50 | 8.14 | 7.16 | 0.98 | 584.45 | 7.28 |
| | 04/10/06 | 592.3 | 591.73 | 2.50 | 12.50 | 8.29 | 7.32 | 0.97 | 584.29 | 7.44 |
| | 05/22/06 | 592.3 | 591.73 | 2.50 | 12.50 | 8.41 | 7.39 | 1.02 | 584.22 | 7.51 |
| | 06/21/06 | 592.3 | 591.73 | 2.50 | 12.50 | 8.34 | 7.41 | 0.93 | 584.21 | 7.52 |
| | 07/11/06 | 592.3 | 591.73 | 2.50 | 12.50 | 8.16 | 7.12 | 1.04 | 584.49 | 7.24 |
| | 08/23/06 | 592.3 | 591.73 | 2.50 | 12.50 | 8.39 | 7.10 | 1.29 | 584.48 | 7.25 |
| | 09/26/06 | 592.3 | 591.73 | 2.50 | 12.50 | 8.09 | 7.11 | 0.98 | 584.50 | 7.23 |
| | 10/30/06 | 592.3 | 591.73 | 2.50 | 12.50 | 8.05 | 7.08 | 0.97 | 584.53 | 7.20 |
| | 11/27/06 | 592.3 | 591.73 | 2.50 | 12.50 | 8.08 | 7.19 | 0.89 | 584.43 | 7.30 |
| | 12/27/06 | 592.3 | 591.73 | 2.50 | 12.50 | 8.58 | 7.48 | 1.10 | 584.12 | 7.61 |
| | 01/15/07 | 592.3 | 591.73 | 2.50 | 12.50 | 8.07 | 7.29 | 0.78 | 584.35 | 7.38 |
| | 02/21/07 | 592.3 | 591.73 | 2.50 | 12.50 | 8.45 | 7.57 | 0.88 | 584.05 | 7.68 |
| | 03/23/07 | 592.3 | 591.73 | 2.50 | 12.50 | 8.32 | 7.56 | 0.76 | 584.08 | 7.65 |
| | 04/09/07 | 592.3 | 591.73 | 2.50 | 12.50 | 8.47 | 7.52 | 0.95 | 584.10 | 7.63 |
| | 05/15/07 | 592.3 | 591.73 | 2.50 | 12.50 | 8.42 | 7.51 | 0.91 | 584.11 | 7.62 |
| | 06/11/07 | 592.3 | 591.73 | 2.50 | 12.50 | 8.61 | 7.64 | 0.97 | 583.97 | 7.76 |
| | 07/11/07 | 592.3 | 591.73 | 2.50 | 12.50 | 8.67 | 7.61 | 1.06 | 583.99 | 7.74 |
| | 08/16/07 | 592.3 | 591.73 | 2.50 | 12.50 | 8.80 | 7.69 | 1.11 | 583.91 | 7.82 |
| | 09/17/07 | 592.3 | 591.73 | 2.50 | 12.50 | 8.62 | 7.54 | 1.08 | 584.06 | 7.67 |
| | 11/26/07 | 592.3 | 591.73 | 2.50 | 12.50 | 9.05 | 7.99 | 1.06 | 583.61 | 8.12 |
| | 12/12/07 | 592.3 | 591.73 | 2.50 | 12.50 | 9.15 | 8.09 | 1.06 | 583.51 | 8.22 |
| | 01/11/08 | 592.3 | 591.73 | 2.50 | 12.50 | 8.81 | 7.82 | 0.99 | 583.79 | 7.94 |
| | 02/05/08 | 592.3 | 591.73 | 2.50 | 12.50 | 8.69 | 7.64 | 1.05 | 583.96 | 7.77 |
| | 04/11/08 | 592.3 | 591.73 | 2.50 | 12.50 | 7.75 | 6.68 | 1.07 | 584.92 | 6.81 |
| | 05/16/08 | 592.3 | 591.73 | 2.50 | 12.50 | 7.82 | 6.81 | 1.01 | 584.80 | 6.93 |
| | 10/29/08 | 592.3 | 591.73 | 2.50 | 12.50 | 7.70 | 6.69 | 1.01 | 584.92 | 6.81 |
| | 01/21/09 | 592.3 | 591.73 | 2.50 | 12.50 | 7.35 | 6.61 | 0.74 | 585.03 | 6.70 |
| | 03/18/09 | 592.3 | 591.73 | 2.50 | 12.50 | 6.86 | 6.12 | 0.74 | 585.52 | 6.21 |
| | 10/17/09 | 592.3 | 591.73 | 2.50 | 12.50 | 7.76 | 6.85 | 0.91 | 584.77 | 6.96 |
| | 10/23/09 | 592.3 | 591.73 | 2.50 | 12.50 | 7.76 | 6.83 | 0.93 | 584.79 | 6.94 |
| | 06/09/10 | 592.3 | 591.73 | 2.50 | 12.50 | 6.23 | 5.65 | 0.58 | 586.01 | 5.72 |
| | 08/27/10 | 592.3 | 591.73 | 2.50 | 12.50 | 7.06 | 6.17 | 0.89 | 585.45 | 6.28 |
| | 09/17/10 | 592.3 | 591.73 | 2.50 | 12.50 | 5.61 | 5.02 | 0.59 | 586.64 | 5.09 |
| | 09/23/10 | 592.3 | 591.73 | 2.50 | 12.50 | 5.47 | 4.87 | 0.60 | 586.79 | 4.94 |
| | 10/15/10 | 592.3 | 591.73 | 2.50 | 12.50 | 6.03 | 5.20 | 0.83 | 586.43 | 5.30 |
| | 10/29/10 | 592.3 | 591.73 | 2.50 | 12.50 | 6.39 | 5.86 | 0.53 | 585.81 | 5.92 |
| | 03/18/11 | 592.3 | 591.73 | 2.50 | 12.50 | 5.16 | 4.20 | 0.96 | 587.41 | 4.32 |
| | 04/08/11 | 592.3 | 591.73 | 2.50 | 12.50 | 4.27 | 3.54 | 0.73 | 588.10 | 3.63 |
| | 05/09/11 | 592.3 | 591.73 | 2.50 | 12.50 | 4.60 | 3.64 | 0.96 | 587.97 | 3.76 |
| | 06/09/11 | 592.3 | 591.73 | 2.50 | 12.50 | 4.35 | 3.63 | 0.72 | 588.01 | 3.72 |
| | 07/05/11 | 592.3 | 591.73 | 2.50 | 12.50 | 4.84 | 3.87 | 0.97 | 587.74 | 3.99 |
| | 08/23/11 | 592.3 | 591.73 | 2.50 | 12.50 | 4.16 | 3.34 | 0.82 | 588.29 | 3.44 |
| | 03/20/12 | 592.3 | 591.73 | 2.50 | 12.50 | 5.21 | 2.78 | 2.43 | 588.66 | 3.07 |
| | 04/23/12 | 592.3 | 591.73 | 2.50 | 12.50 | 5.59 | 3.06 | 2.53 | 588.37 | 3.36 |
| | 06/11/12 | 592.3 | 591.73 | 2.50 | 12.50 | 5.85 | 3.16 | 2.69 | 588.25 | 3.48 |
| | 07/10/12 | 592.3 | 591.73 | 2.50 | 12.50 | 5.97 | 3.40 | 2.57 | 588.02 | 3.71 |
| | 08/29/12 | 592.3 | 591.73 | 2.50 | 12.50 | 5.32 | 2.99 | 2.33 | 588.46 | 3.27 |

**Table 1**

**Summary of Groundwater Gauging Data - Quench Pit Area**
**RACER Trust - Saginaw Malleable Iron Industrial Land**
**Saginaw, Michigan**

| Well ID | Date | Ground Surface Elevation (ft amsl) | Top of Casing Elevation (ft amsl) | Top of Screen (ft btoc) | Total Depth (ft btoc) | Depth to Water (ft btoc) | Depth to Product (ft btoc) | LNAPL Thickness (ft) | Corrected Groundwater Elevation [1] (ft amsl) | Corrected Water Table Depth [1] (ft btoc) |
|---|---|---|---|---|---|---|---|---|---|---|
| QPTW-04 | 09/12/12 | 592.3 | 591.73 | 2.50 | 12.50 | 5.03 | 2.68 | 2.35 | 588.77 | 2.96 |
| (cont'd) | 10/01/12 | 592.3 | 591.73 | 2.50 | 12.50 | 5.80 | 3.31 | 2.49 | 588.12 | 3.61 |
| | 11/06/12 | 592.3 | 591.73 | 2.50 | 12.50 | 4.85 | 2.88 | 1.97 | 588.61 | 3.12 |
| | 12/05/12 | 592.3 | 591.73 | 2.50 | 12.50 | 5.49 | 3.50 | 1.99 | 587.99 | 3.74 |
| | 04/03/13 | 592.3 | 591.73 | 2.50 | 12.50 | 5.36 | 3.16 | 2.20 | 588.31 | 3.42 |
| | 07/18/13 | 592.3 | 591.73 | 2.50 | 12.50 | 4.74 | 2.48 | 2.26 | 588.98 | 2.75 |
| | 09/23/13 | 592.3 | 591.73 | 2.50 | 12.50 | 4.73 | 3.61 | 1.12 | 587.99 | 3.74 |
| | 04/25/14 | 592.3 | 591.73 | 2.50 | 12.50 | 3.16 | 1.73 | 1.43 | 589.83 | 1.90 |
| | 06/02/14 | 592.3 | 591.73 | 2.50 | 12.50 | 3.98 | 2.39 | 1.59 | 589.15 | 2.58 |
| | 07/09/14 | 593.3 | 592.73 | 2.50 | 12.50 | 2.74 | 1.61 | 1.13 | 590.98 | 1.75 |
| | 07/31/14 | 592.3 | 591.73 | 2.50 | 12.50 | 3.53 | 2.33 | 1.20 | 589.26 | 2.47 |
| | 09/16/14 | 591.3 | 590.73 | 2.50 | 12.50 | 4.00 | 2.10 | 1.90 | 588.40 | 2.33 |
| | 03/24/15 | 590.3 | 589.73 | 2.50 | 12.50 | 4.66 | 3.02 | 1.64 | 586.51 | 3.22 |
| | 06/17/15 | 589.3 | 588.73 | 2.50 | 12.50 | 3.51 | 2.05 | 1.46 | 586.50 | 2.23 |
| | 09/09/15 | 588.3 | 587.73 | 2.50 | 12.50 | 4.09 | 2.64 | 1.45 | 584.92 | 2.81 |
| | 12/04/15 | 587.3 | 586.73 | 2.50 | 12.50 | 5.56 | 3.51 | 2.05 | 582.97 | 3.76 |
| | 03/15/16 | 586.3 | 585.73 | 2.50 | 12.50 | 3.68 | 1.76 | 1.92 | 583.74 | 1.99 |
| | 06/17/16 | 585.3 | 584.73 | 2.50 | 12.50 | 2.27 | 2.16 | 0.11 | 582.56 | 2.17 |
| | 09/22/16 | 584.3 | 583.73 | 2.50 | 12.50 | 4.61 | 2.80 | 1.81 | 580.71 | 3.02 |
| | 09/27/16 | ABANDONED | | | | | | | | |
| QPTW-04R | 09/06/17 | 594.96 | 594.46 | 2.00 | 12.00 | 5.61 | 4.75 | 0.86 | 589.61 | 4.85 |
| | 11/27/17 | 594.96 | 594.46 | 2.00 | 12.00 | 5.10 | 4.51 | 0.59 | 589.88 | 4.58 |
| | 02/27/18 | 594.96 | 594.46 | 2.00 | 12.00 | 3.62 | 3.58 | 0.04 | 590.88 | 3.58 |
| | 06/04/18 | 594.96 | 594.46 | 2.00 | 12.00 | 4.51 | 4.32 | 0.19 | 590.12 | 4.34 |
| | 10/05/18 | 594.96 | 594.46 | 2.00 | 12.00 | 5.01 | 4.85 | 0.16 | 589.59 | 4.87 |
| | 12/11/18 | 594.96 | 594.46 | 2.00 | 12.00 | 4.58 | 4.27 | 0.31 | 590.15 | 4.31 |
| | 03/12/19 | 594.96 | 594.46 | 2.00 | 12.00 | 4.20 | 3.86 | 0.34 | 590.56 | 3.90 |
| | 06/18/19 | 594.96 | 594.46 | 2.00 | 12.00 | 2.86 | 2.68 | 0.18 | 591.76 | 2.70 |
| | 09/16/19 | 594.96 | 594.46 | 2.00 | 12.00 | 6.40 | 5.00 | 1.40 | 589.29 | 5.17 |
| | 12/03/19 | 594.96 | 594.46 | 2.00 | 12.00 | 2.03 | 1.35 | 0.68 | 593.03 | 1.43 |
| | 03/12/20 | 594.96 | 594.46 | 2.00 | 12.00 | 3.37 | 3.30 | 0.07 | 591.15 | 3.31 |
| | 06/03/20 | 594.96 | 594.46 | 2.00 | 12.00 | 3.24 | 3.18 | 0.06 | 591.27 | 3.19 |
| | 09/09/20 | 594.96 | 594.46 | 2.00 | 12.00 | 6.31 | 5.16 | 1.15 | 589.16 | 5.30 |
| | 12/03/20 | 594.96 | 594.46 | 2.00 | 12.00 | 6.15 | 5.28 | 0.87 | 589.08 | 5.38 |
| | 08/16/21 | 594.96 | 594.46 | 2.00 | 12.00 | 5.56 | 5.51 | 0.05 | 588.94 | 5.52 |
| | 09/20/22 | 594.96 | 594.46 | 2.00 | 12.00 | 5.51 | 5.48 | 0.03 | 588.98 | 5.48 |
| QPTW-05 | 03/17/05 | 592.4 | 592.13 | 2.70 | 12.70 | 8.94 | 7.67 | 1.27 | 584.31 | 7.82 |
| | 04/12/05 | 592.4 | 592.13 | 2.70 | 12.70 | 8.98 | 7.69 | 1.29 | 584.29 | 7.84 |
| | 05/31/05 | 592.4 | 592.13 | 2.70 | 12.70 | 9.10 | 7.73 | 1.37 | 584.24 | 7.89 |
| | 06/24/05 | 592.4 | 592.13 | 2.70 | 12.70 | 8.65 | 7.50 | 1.15 | 584.49 | 7.64 |
| | 08/12/05 | 592.4 | 592.13 | 2.70 | 12.70 | 8.76 | 7.68 | 1.08 | 584.32 | 7.81 |
| | 10/14/05 | 592.4 | 592.13 | 2.70 | 12.70 | 9.38 | 7.91 | 1.47 | 584.04 | 8.09 |
| | 11/08/05 | 592.4 | 592.13 | 2.70 | 12.70 | 9.55 | 7.99 | 1.56 | 583.95 | 8.18 |
| | 12/19/05 | 592.4 | 592.13 | 2.70 | 12.70 | 9.74 | 8.05 | 1.69 | 583.88 | 8.25 |
| | 01/31/06 | 592.4 | 592.13 | 2.70 | 12.70 | 8.84 | 7.68 | 1.16 | 584.31 | 7.82 |
| | 02/15/06 | 592.4 | 592.13 | 2.70 | 12.70 | 8.63 | 7.54 | 1.09 | 584.46 | 7.67 |
| | 03/13/06 | 592.4 | 592.13 | 2.70 | 12.70 | 8.20 | 7.33 | 0.87 | 584.70 | 7.43 |
| | 04/10/06 | 592.4 | 592.13 | 2.70 | 12.70 | 8.44 | 7.47 | 0.97 | 584.54 | 7.59 |
| | 05/22/06 | 592.4 | 592.13 | 2.70 | 12.70 | 8.65 | 7.58 | 1.07 | 584.42 | 7.71 |
| | 06/21/06 | 592.4 | 592.13 | 2.70 | 12.70 | 8.70 | 6.71 | 1.99 | 585.18 | 6.95 |
| | 07/11/06 | 592.4 | 592.13 | 2.70 | 12.70 | 8.35 | 7.38 | 0.97 | 584.63 | 7.50 |
| | 08/23/06 | 592.4 | 592.13 | 2.70 | 12.70 | 8.52 | 7.46 | 1.06 | 584.54 | 7.59 |
| | 09/26/06 | 592.4 | 592.13 | 2.70 | 12.70 | 8.46 | 7.45 | 1.01 | 584.56 | 7.57 |
| | 10/30/06 | 592.4 | 592.13 | 2.70 | 12.70 | 8.32 | 7.33 | 0.99 | 584.68 | 7.45 |
| | 11/27/06 | 592.4 | 592.13 | 2.70 | 12.70 | 8.50 | 7.44 | 1.06 | 584.56 | 7.57 |
| | 12/27/06 | 592.4 | 592.13 | 2.70 | 12.70 | 8.18 | 7.23 | 0.95 | 584.79 | 7.34 |
| | 01/15/07 | 592.4 | 592.13 | 2.70 | 12.70 | 8.55 | 7.49 | 1.06 | 584.51 | 7.62 |
| | 02/21/07 | 592.4 | 592.13 | 2.70 | 12.70 | 9.27 | 7.84 | 1.43 | 584.12 | 8.01 |
| | 03/23/07 | 592.4 | 592.13 | 2.70 | 12.70 | 9.19 | 7.81 | 1.38 | 584.15 | 7.98 |
| | 04/09/07 | 592.4 | 592.13 | 2.70 | 12.70 | 9.27 | 7.77 | 1.50 | 584.18 | 7.95 |
| | 05/15/07 | 592.4 | 592.13 | 2.70 | 12.70 | 9.11 | 7.74 | 1.37 | 584.23 | 7.90 |
| | 06/11/07 | 592.4 | 592.13 | 2.70 | 12.70 | 9.41 | 7.92 | 1.49 | 584.03 | 8.10 |
| | 07/11/07 | 592.4 | 592.13 | 2.70 | 12.70 | 9.52 | 7.96 | 1.56 | 583.98 | 8.15 |
| | 08/16/07 | 592.4 | 592.13 | 2.70 | 12.70 | 9.71 | 8.04 | 1.67 | 583.89 | 8.24 |
| | 09/17/07 | 592.4 | 592.13 | 2.70 | 12.70 | 9.25 | 7.82 | 1.43 | 584.14 | 7.99 |

**Table 1**

**Summary of Groundwater Gauging Data - Quench Pit Area**
**RACER Trust - Saginaw Malleable Iron Industrial Land**
**Saginaw, Michigan**

| Well ID | Date | Ground Surface Elevation (ft amsl) | Top of Casing Elevation (ft amsl) | Top of Screen (ft btoc) | Total Depth (ft btoc) | Depth to Water (ft btoc) | Depth to Product (ft btoc) | LNAPL Thickness (ft) | Corrected Groundwater Elevation [1] (ft amsl) | Corrected Water Table Depth [1] (ft btoc) |
|---|---|---|---|---|---|---|---|---|---|---|
| QPTW-05 | 11/26/07 | 592.4 | 592.13 | 2.70 | 12.70 | 10.10 | 8.21 | 1.89 | 583.69 | 8.44 |
| (cont'd) | 12/12/07 | 592.4 | 592.13 | 2.70 | 12.70 | 10.31 | 8.30 | 2.01 | 583.59 | 8.54 |
| | 01/11/08 | 592.4 | 592.13 | 2.70 | 12.70 | 9.62 | 8.07 | 1.55 | 583.87 | 8.26 |
| | 02/05/08 | 592.4 | 592.13 | 2.70 | 12.70 | 9.05 | 7.90 | 1.15 | 584.09 | 8.04 |
| | 04/11/08 | 592.4 | 592.13 | 2.70 | 12.70 | 7.50 | 7.00 | 0.50 | 585.07 | 7.06 |
| | 05/16/08 | 592.4 | 592.13 | 2.70 | 12.70 | 7.67 | 7.12 | 0.55 | 584.94 | 7.19 |
| | 10/29/08 | 592.4 | 592.13 | 2.70 | 12.70 | 7.71 | 7.23 | 0.48 | 584.84 | 7.29 |
| | 01/21/09 | 592.4 | 592.13 | 2.70 | 12.70 | 7.43 | 6.87 | 0.56 | 585.19 | 6.94 |
| | 03/18/09 | 592.4 | 592.13 | 2.70 | 12.70 | 7.11 | 6.57 | 0.54 | 585.50 | 6.63 |
| | 10/17/09 | 592.4 | 592.13 | 2.70 | 12.70 | 7.98 | 7.18 | 0.80 | 584.85 | 7.28 |
| | 10/23/09 | 592.4 | 592.13 | 2.70 | 12.70 | 7.68 | 7.09 | 0.59 | 584.97 | 7.16 |
| | 06/09/10 | 592.4 | 592.13 | 2.70 | 12.70 | 7.07 | 6.23 | 0.84 | 585.80 | 6.33 |
| | 06/24/10 | 592.4 | 592.13 | 2.70 | 12.70 | 7.40 | 6.59 | 0.81 | 585.44 | 6.69 |
| | 07/29/10 | 592.4 | 592.13 | 2.70 | 12.70 | 7.34 | 6.14 | 1.20 | 585.85 | 6.28 |
| | 08/06/10 | 592.4 | 592.13 | 2.70 | 12.70 | 7.31 | 6.28 | 1.03 | 585.73 | 6.40 |
| | 08/13/10 | 592.4 | 592.13 | 2.70 | 12.70 | 6.08 | 5.57 | 0.51 | 586.50 | 5.63 |
| | 08/27/10 | 592.4 | 592.13 | 2.70 | 12.70 | 6.51 | 5.70 | 0.81 | 586.33 | 5.80 |
| | 09/17/10 | 592.4 | 592.13 | 2.70 | 12.70 | 6.36 | 5.83 | 0.53 | 586.24 | 5.89 |
| | 09/23/10 | 592.4 | 592.13 | 2.70 | 12.70 | 6.12 | 5.59 | 0.53 | 586.48 | 5.65 |
| | 10/15/10 | 592.4 | 592.13 | 2.70 | 12.70 | 6.31 | 6.01 | 0.30 | 586.08 | 6.05 |
| | 10/29/10 | 592.4 | 592.13 | 2.70 | 12.70 | 5.48 | 5.14 | 0.34 | 586.95 | 5.18 |
| | 12/07/10 | 592.4 | 592.13 | 2.70 | 12.70 | 6.46 | 5.72 | 0.74 | 586.32 | 5.81 |
| | 01/03/11 | 592.4 | 592.13 | 2.70 | 12.70 | 5.99 | 5.71 | 0.28 | 586.39 | 5.74 |
| | 03/18/11 | 592.4 | 592.13 | 2.70 | 12.70 | 5.43 | 5.11 | 0.32 | 586.98 | 5.15 |
| | 04/08/11 | 592.4 | 592.13 | 2.70 | 12.70 | 4.63 | 4.32 | 0.31 | 587.77 | 4.36 |
| | 05/09/11 | 592.4 | 592.13 | 2.70 | 12.70 | 4.55 | 4.31 | 0.24 | 587.79 | 4.34 |
| | 06/09/11 | 592.4 | 592.13 | 2.70 | 12.70 | 4.83 | 4.56 | 0.27 | 587.54 | 4.59 |
| | 07/05/11 | 592.4 | 592.13 | 2.70 | 12.70 | 5.11 | 4.64 | 0.47 | 587.43 | 4.70 |
| | 08/23/11 | 592.4 | 592.13 | 2.70 | 12.70 | 4.26 | 4.03 | 0.23 | 588.07 | 4.06 |
| | 10/14/11 | 592.4 | 592.13 | 2.70 | 12.70 | 5.28 | 4.94 | 0.34 | 587.15 | 4.98 |
| | 11/23/11 | 592.4 | 592.13 | 2.70 | 12.70 | 4.75 | 4.42 | 0.33 | 587.67 | 4.46 |
| | 01/24/12 | 592.4 | 592.13 | 2.70 | 12.70 | 3.73 | 3.58 | 0.15 | 588.53 | 3.60 |
| | 03/20/12 | 592.4 | 592.13 | 2.70 | 12.70 | 4.05 | 3.72 | 0.33 | 588.37 | 3.76 |
| | 04/23/12 | 592.4 | 592.13 | 2.70 | 12.70 | 4.10 | 3.74 | 0.36 | 588.35 | 3.78 |
| | 06/11/12 | 592.4 | 592.13 | 2.70 | 12.70 | 4.44 | 4.00 | 0.44 | 588.08 | 4.05 |
| | 07/10/12 | 592.4 | 592.13 | 2.70 | 12.70 | 5.17 | 4.52 | 0.65 | 587.53 | 4.60 |
| | 08/29/12 | 592.4 | 592.13 | 2.70 | 12.70 | 4.44 | 3.80 | 0.64 | 588.25 | 3.88 |
| | 09/12/12 | 592.4 | 592.13 | 2.70 | 12.70 | 4.39 | 3.63 | 0.76 | 588.41 | 3.72 |
| | 11/06/12 | 592.4 | 592.13 | 2.70 | 12.70 | 4.49 | 3.69 | 0.80 | 588.34 | 3.79 |
| | 12/05/12 | 592.4 | 592.13 | 2.70 | 12.70 | 5.28 | 4.31 | 0.97 | 587.70 | 4.43 |
| | 04/03/13 | 592.4 | 592.13 | 2.70 | 12.70 | 5.07 | 4.01 | 1.06 | 587.99 | 4.14 |
| | 07/18/13 | 592.4 | 592.13 | 2.70 | 12.70 | 4.80 | 3.10 | 1.70 | 588.83 | 3.30 |
| | 09/23/13 | 592.4 | 592.13 | 2.70 | 12.70 | 6.20 | 4.26 | 1.94 | 587.64 | 4.49 |
| | 04/25/14 | 592.4 | 592.13 | 2.70 | 12.70 | 4.87 | 2.36 | 2.51 | 589.47 | 2.66 |
| | 06/02/14 | 592.4 | 592.13 | 2.70 | 12.70 | 4.45 | 3.16 | 1.29 | 588.82 | 3.31 |
| | 07/09/14 | 592.4 | 592.13 | 2.70 | 12.70 | 3.66 | 2.19 | 1.47 | 589.76 | 2.37 |
| | 07/31/14 | 592.4 | 592.13 | 2.70 | 12.70 | 4.25 | 2.93 | 1.32 | 589.04 | 3.09 |
| | 09/16/14 | 592.4 | 592.13 | 2.70 | 12.70 | 4.77 | 2.99 | 1.78 | 588.93 | 3.20 |
| | 03/24/15 | 592.4 | 592.13 | 2.70 | 12.70 | 5.11 | 3.70 | 1.41 | 588.26 | 3.87 |
| | 06/17/15 | 592.4 | 592.13 | 2.70 | 12.70 | 4.77 | 2.59 | 2.18 | 589.28 | 2.85 |
| | 09/09/15 | 592.4 | 592.13 | 2.70 | 12.70 | 5.30 | 2.49 | 2.81 | 589.30 | 2.83 |
| | 12/04/15 | 592.4 | 592.13 | 2.70 | 12.70 | 6.38 | 4.10 | 2.28 | 587.76 | 4.37 |
| | 03/15/16 | 592.4 | 592.13 | 2.70 | 12.70 | 4.86 | 2.49 | 2.37 | 589.36 | 2.77 |
| | 06/17/16 | 592.4 | 592.13 | 2.70 | 12.70 | 4.14 | 1.99 | 2.15 | 589.88 | 2.25 |
| | 09/22/16 | 592.4 | 592.13 | 2.70 | 12.70 | 5.67 | 3.15 | 2.52 | 588.68 | 3.45 |
| | 09/27/16 | ABANDONED | | | | | | | | |
| QPTW-05R | 09/06/17 | 595 | 594.28 | 2.00 | 12.00 | 5.64 | 4.98 | 0.66 | 589.22 | 5.06 |
| | 11/27/17 | 595 | 594.28 | 2.00 | 12.00 | 5.41 | 4.75 | 0.66 | 589.45 | 4.83 |
| | 02/27/18 | 595 | 594.28 | 2.00 | 12.00 | 4.21 | 4.07 | 0.14 | 590.19 | 4.09 |
| | 06/04/18 | 595 | 594.28 | 2.00 | 12.00 | 5.36 | 4.52 | 0.84 | 589.66 | 4.62 |
| | 10/05/18 | 595 | 594.28 | 2.00 | 12.00 | 5.38 | 5.05 | 0.33 | 589.19 | 5.09 |
| | 12/11/18 | 595 | 594.28 | 2.00 | 12.00 | 4.97 | 4.66 | 0.31 | 589.58 | 4.70 |
| | 03/12/19 | 595 | 594.28 | 2.00 | 12.00 | 4.67 | 4.08 | 0.59 | 590.13 | 4.15 |
| | 06/18/19 | 595 | 594.28 | 2.00 | 12.00 | 3.90 | 2.97 | 0.93 | 591.20 | 3.08 |
| | 09/16/19 | 595 | 594.28 | 2.00 | 12.00 | 5.58 | 5.12 | 0.46 | 589.10 | 5.18 |
| | 12/03/19 | 595 | 594.28 | 2.00 | 12.00 | 4.35 | 2.73 | 1.62 | 591.36 | 2.92 |

**Table 1**

**Summary of Groundwater Gauging Data - Quench Pit Area**
**RACER Trust - Saginaw Malleable Iron Industrial Land**
**Saginaw, Michigan**

| Well ID | Date | Ground Surface Elevation (ft amsl) | Top of Casing Elevation (ft amsl) | Top of Screen (ft btoc) | Total Depth (ft btoc) | Depth to Water (ft btoc) | Depth to Product (ft btoc) | LNAPL Thickness (ft) | Corrected Groundwater Elevation [1] (ft amsl) | Corrected Water Table Depth [1] (ft btoc) |
|---|---|---|---|---|---|---|---|---|---|---|
| QPTW-05R (cont'd) | 03/12/20 | 595 | 594.28 | 2.00 | 12.00 | 5.28 | 3.57 | 1.71 | 590.50 | 3.78 |
| | 06/03/20 | 595 | 594.28 | 2.00 | 12.00 | 4.47 | 3.38 | 1.09 | 590.77 | 3.51 |
| | 09/09/20 | 595 | 594.28 | 2.00 | 12.00 | 6.91 | 5.25 | 1.66 | 588.83 | 5.45 |
| | 12/03/20 | 595 | 594.28 | 2.00 | 12.00 | 5.84 | 5.32 | 0.52 | 588.90 | 5.38 |
| | 08/16/21 | 595 | 594.28 | 2.00 | 12.00 | 6.29 | 5.43 | 0.86 | 588.75 | 5.53 |
| | 09/20/22 | 595 | 594.28 | 2.00 | 12.00 | 6.50 | 5.30 | 1.20 | 588.84 | 5.44 |
| QPTW-10 | 03/17/05 | 592.4 | 592.15 | 2.60 | 12.60 | 9.83 | 7.58 | 2.25 | 584.30 | 7.85 |
| | 04/12/05 | 592.4 | 592.15 | 2.60 | 12.60 | 9.96 | 7.63 | 2.33 | 584.24 | 7.91 |
| | 05/31/05 | 592.4 | 592.15 | 2.60 | 12.60 | 10.29 | 7.83 | 2.46 | 584.02 | 8.13 |
| | 06/24/05 | 592.4 | 592.15 | 2.60 | 12.60 | 9.72 | 7.43 | 2.29 | 584.45 | 7.70 |
| | 08/12/05 | 592.4 | 592.15 | 2.60 | 12.60 | 9.79 | 7.58 | 2.21 | 584.30 | 7.85 |
| | 10/14/05 | 592.4 | 592.15 | 2.60 | 12.60 | 10.56 | 7.80 | 2.76 | 584.02 | 8.13 |
| | 11/08/05 | 592.4 | 592.15 | 2.60 | 12.60 | 10.82 | 7.88 | 2.94 | 583.92 | 8.23 |
| | 12/19/05 | 592.4 | 592.15 | 2.60 | 12.60 | 11.01 | 7.95 | 3.06 | 583.83 | 8.32 |
| | 01/31/06 | 592.4 | 592.15 | 2.60 | 12.60 | 9.79 | 7.54 | 2.25 | 584.34 | 7.81 |
| | 02/15/06 | 592.4 | 592.15 | 2.60 | 12.60 | 9.73 | 7.44 | 2.29 | 584.44 | 7.71 |
| | 03/13/06 | 592.4 | 592.15 | 2.60 | 12.60 | 9.22 | 7.23 | 1.99 | 584.68 | 7.47 |
| | 04/10/06 | 592.4 | 592.15 | 2.60 | 12.60 | 9.59 | 7.34 | 2.25 | 584.54 | 7.61 |
| | 05/22/06 | 592.4 | 592.15 | 2.60 | 12.60 | 9.95 | 7.43 | 2.52 | 584.42 | 7.73 |
| | 06/21/06 | 592.4 | 592.15 | 2.60 | 12.60 | 10.00 | 7.49 | 2.51 | 584.36 | 7.79 |
| | 07/11/06 | 592.4 | 592.15 | 2.60 | 12.60 | 9.69 | 7.30 | 2.39 | 584.56 | 7.59 |
| | 08/23/06 | 592.4 | 592.15 | 2.60 | 12.60 | 9.58 | 7.30 | 2.28 | 584.58 | 7.57 |
| | 09/26/06 | 592.4 | 592.15 | 2.60 | 12.60 | 9.85 | 7.33 | 2.52 | 584.52 | 7.63 |
| | 10/30/06 | 592.4 | 592.15 | 2.60 | 12.60 | 9.68 | 7.19 | 2.49 | 584.66 | 7.49 |
| | 11/27/06 | 592.4 | 592.15 | 2.60 | 12.60 | 9.91 | 7.33 | 2.58 | 584.51 | 7.64 |
| | 12/27/06 | 592.4 | 592.15 | 2.60 | 12.60 | 9.99 | 7.34 | 2.65 | 584.49 | 7.66 |
| | 01/15/07 | 592.4 | 592.15 | 2.60 | 12.60 | 9.90 | 7.37 | 2.53 | 584.48 | 7.67 |
| | 02/21/07 | 592.4 | 592.15 | 2.60 | 12.60 | 10.81 | 7.78 | 3.03 | 584.01 | 8.14 |
| | 03/23/07 | 592.4 | 592.15 | 2.60 | 12.60 | 10.71 | 7.72 | 2.99 | 584.07 | 8.08 |
| | 04/09/07 | 592.4 | 592.15 | 2.60 | 12.60 | 10.63 | 7.64 | 2.99 | 584.15 | 8.00 |
| | 05/15/07 | 592.4 | 592.15 | 2.60 | 12.60 | 10.38 | 7.46 | 2.92 | 584.34 | 7.81 |
| | 06/11/07 | 592.4 | 592.15 | 2.60 | 12.60 | 10.81 | 7.81 | 3.00 | 583.98 | 8.17 |
| | 07/11/07 | 592.4 | 592.15 | 2.60 | 12.60 | 11.05 | 7.86 | 3.19 | 583.91 | 8.24 |
| | 08/16/07 | 592.4 | 592.15 | 2.60 | 12.60 | 11.27 | 7.95 | 3.32 | 583.80 | 8.35 |
| | 09/17/07 | 592.4 | 592.15 | 2.60 | 12.60 | 10.54 | 7.73 | 2.81 | 584.08 | 8.07 |
| | 11/26/07 | 592.4 | 592.15 | 2.60 | 12.60 | 11.57 | 8.11 | 3.46 | 583.62 | 8.53 |
| | 12/12/07 | 592.4 | 592.15 | 2.60 | 12.60 | 11.80 | 8.18 | 3.62 | 583.54 | 8.61 |
| | 01/11/08 | 592.4 | 592.15 | 2.60 | 12.60 | 10.96 | 7.95 | 3.01 | 583.84 | 8.31 |
| | 02/05/08 | 592.4 | 592.15 | 2.60 | 12.60 | 10.21 | 7.78 | 2.43 | 584.08 | 8.07 |
| | 04/11/08 | 592.4 | 592.15 | 2.60 | 12.60 | 8.71 | 6.83 | 1.88 | 585.09 | 7.06 |
| | 05/16/08 | 592.4 | 592.15 | 2.60 | 12.60 | 8.91 | 6.95 | 1.96 | 584.96 | 7.19 |
| | 10/29/08 | 592.4 | 592.15 | 2.60 | 12.60 | 9.12 | 6.94 | 2.18 | 584.95 | 7.20 |
| | 01/21/09 | 592.4 | 592.15 | 2.60 | 12.60 | 7.96 | 6.68 | 1.28 | 585.32 | 6.83 |
| | 03/18/09 | 592.4 | 592.15 | 2.60 | 12.60 | 8.69 | 6.36 | 2.33 | 585.51 | 6.64 |
| | 10/17/09 | 592.4 | 592.15 | 2.60 | 12.60 | 9.10 | 7.04 | 2.06 | 584.86 | 7.29 |
| | 10/23/09 | 592.4 | 592.15 | 2.60 | 12.60 | 8.67 | 6.97 | 1.70 | 584.98 | 7.17 |
| | 06/09/10 | 592.4 | 592.15 | 2.60 | 12.60 | 8.42 | 6.23 | 2.19 | 585.66 | 6.49 |
| | 06/24/10 | 592.4 | 592.15 | 2.60 | 12.60 | 8.91 | 6.48 | 2.43 | 585.38 | 6.77 |
| | 07/29/10 | 592.4 | 592.15 | 2.60 | 12.60 | 9.37 | 6.51 | 2.86 | 585.30 | 6.85 |
| | 08/06/10 | 592.4 | 592.15 | 2.60 | 12.60 | 9.22 | 6.71 | 2.51 | 585.14 | 7.01 |
| | 08/13/10 | 592.4 | 592.15 | 2.60 | 12.60 | 8.06 | 5.73 | 2.33 | 586.14 | 6.01 |
| | 08/27/10 | 592.4 | 592.15 | 2.60 | 12.60 | 8.83 | 6.03 | 2.80 | 585.78 | 6.37 |
| | 09/17/10 | 592.4 | 592.15 | 2.60 | 12.60 | 8.68 | 5.72 | 2.96 | 586.07 | 6.08 |
| | 09/23/10 | 592.4 | 592.15 | 2.60 | 12.60 | 8.54 | 5.64 | 2.90 | 586.16 | 5.99 |
| | 10/15/10 | 592.4 | 592.15 | 2.60 | 12.60 | 8.92 | 5.82 | 3.10 | 585.96 | 6.19 |
| | 10/29/10 | 592.4 | 592.15 | 2.60 | 12.60 | 8.87 | 5.68 | 3.19 | 586.09 | 6.06 |
| | 03/18/11 | 592.4 | 592.15 | 2.60 | 12.60 | 8.03 | 4.92 | 3.11 | 586.86 | 5.29 |
| | 04/08/11 | 592.4 | 592.15 | 2.60 | 12.60 | 7.75 | 4.06 | 3.69 | 587.65 | 4.50 |
| | 05/09/11 | 592.4 | 592.15 | 2.60 | 12.60 | 8.24 | 3.95 | 4.29 | 587.69 | 4.46 |
| | 06/09/11 | 592.4 | 592.15 | 2.60 | 12.60 | 8.28 | 4.24 | 4.04 | 587.43 | 4.72 |
| | 07/05/11 | 592.4 | 592.15 | 2.60 | 12.60 | 8.75 | 4.38 | 4.37 | 587.25 | 4.90 |
| | 08/23/11 | 592.4 | 592.15 | 2.60 | 12.60 | 8.50 | 3.67 | 4.83 | 587.90 | 4.25 |
| | 10/14/11 | 592.4 | 592.15 | 2.60 | 12.60 | 8.64 | 4.58 | 4.06 | 587.08 | 5.07 |
| | 11/23/11 | 592.4 | 592.15 | 2.60 | 12.60 | 8.38 | 3.98 | 4.40 | 587.64 | 4.51 |
| | 04/23/12 | 592.4 | 592.15 | 2.60 | 12.60 | 4.13 | 3.78 | 0.35 | 588.33 | 3.82 |

**Table 1**

**Summary of Groundwater Gauging Data - Quench Pit Area**
**RACER Trust - Saginaw Malleable Iron Industrial Land**
**Saginaw, Michigan**

| Well ID | Date | Ground Surface Elevation (ft amsl) | Top of Casing Elevation (ft amsl) | Top of Screen (ft btoc) | Total Depth (ft btoc) | Depth to Water (ft btoc) | Depth to Product (ft btoc) | LNAPL Thickness (ft) | Corrected Groundwater Elevation [1] (ft amsl) | Corrected Water Table Depth [1] (ft btoc) |
|---|---|---|---|---|---|---|---|---|---|---|
| QPTW-10 | 07/10/12 | 592.4 | 592.15 | 2.60 | 12.60 | 5.65 | 4.51 | 1.14 | 587.50 | 4.65 |
| (cont'd) | 11/12/14 | 592.4 | 592.15 | 2.60 | 12.60 | 4.83 | 3.91 | 0.92 | 588.13 | 4.02 |
| | 09/09/15 | 592.4 | 592.15 | 2.60 | 12.60 | 2.99 | 2.85 | 0.14 | 589.28 | 2.87 |
| | 03/15/16 | 592.4 | 592.15 | 2.60 | 12.60 | 3.37 | 2.77 | 0.60 | 589.31 | 2.84 |
| | 06/17/16 | 592.4 | 592.15 | 2.60 | 12.60 | 2.84 | 2.41 | 0.43 | 589.69 | 2.46 |
| | 09/22/16 | 592.4 | 592.15 | 2.60 | 12.60 | 5.60 | 3.27 | 2.33 | 588.60 | 3.55 |
| | 09/27/16 | ABANDONED | | | | | | | | |
| QPTW-10R | 09/06/17 | 594.82 | 594.20 | 2.00 | 12.00 | 4.99 | --- | --- | 589.21 | 4.99 |
| | 11/27/17 | 594.82 | 594.20 | 2.00 | 12.00 | 4.77 | --- | --- | 589.43 | 4.77 |
| | 02/27/18 | 594.82 | 594.20 | 2.00 | 12.00 | 4.00 | --- | --- | 590.20 | 4.00 |
| | 06/04/18 | 594.82 | 594.20 | 2.00 | 12.00 | 4.56 | --- | --- | 589.64 | 4.56 |
| | 10/05/18 | 594.82 | 594.20 | 2.00 | 12.00 | 5.05 | --- | --- | 589.15 | 5.05 |
| | 12/11/18 | 594.82 | 594.20 | 2.00 | 12.00 | 4.61 | --- | --- | 589.59 | 4.61 |
| | 03/12/19 | 594.82 | 594.20 | 2.00 | 12.00 | 4.14 | --- | --- | 590.06 | 4.14 |
| | 06/18/19 | 594.82 | 594.20 | 2.00 | 12.00 | 3.05 | --- | --- | 591.15 | 3.05 |
| | 09/16/19 | 594.82 | 594.20 | 2.00 | 12.00 | 5.14 | --- | --- | 589.06 | 5.14 |
| | 12/03/19 | 594.82 | 594.20 | 2.00 | 12.00 | 2.66 | --- | --- | 591.54 | 2.66 |
| | 03/12/20 | 594.82 | 594.20 | 2.00 | 12.00 | 3.62 | --- | --- | 590.58 | 3.62 |
| | 06/03/20 | 594.82 | 594.20 | 2.00 | 12.00 | 3.45 | --- | --- | 590.75 | 3.45 |
| | 09/09/20 | 594.82 | 594.20 | 2.00 | 12.00 | 5.29 | --- | --- | 588.91 | 5.29 |
| | 12/03/20 | 594.82 | 594.20 | 2.00 | 12.00 | 5.35 | --- | --- | 588.85 | 5.35 |
| | 08/16/21 | 594.82 | 594.20 | 2.00 | 12.00 | 5.49 | --- | --- | 588.71 | 5.49 |
| | 09/20/22 | 594.82 | 594.20 | 2.00 | 12.00 | 5.42 | --- | --- | 588.78 | 5.42 |
| QPTW-13 | 10/15/10 | 592.7 | 592.36 | 2.76 | 12.76 | 7.17 | 6.65 | 0.52 | 585.65 | 6.71 |
| | 10/29/10 | 592.7 | 592.36 | 2.76 | 12.76 | 6.77 | 6.49 | 0.28 | 585.84 | 6.52 |
| | 03/18/11 | 592.7 | 592.36 | 2.76 | 12.76 | 4.56 | 4.47 | 0.09 | 587.88 | 4.48 |
| | 05/09/11 | 592.7 | 592.36 | 2.76 | 12.76 | 4.59 | 4.56 | 0.03 | 587.80 | 4.56 |
| | 06/09/11 | 592.7 | 592.36 | 2.76 | 12.76 | 4.88 | 4.85 | 0.03 | 587.51 | 4.85 |
| | 07/05/11 | 592.7 | 592.36 | 2.76 | 12.76 | 5.08 | 5.02 | 0.06 | 587.33 | 5.03 |
| | 08/23/11 | 592.7 | 592.36 | 2.76 | 12.76 | 4.43 | 4.38 | 0.05 | 587.97 | 4.39 |
| | 10/14/11 | 592.7 | 592.36 | 2.76 | 12.76 | 5.12 | 5.03 | 0.09 | 587.32 | 5.04 |
| | 03/20/12 | 592.7 | 592.36 | 2.76 | 12.76 | 4.12 | --- | --- | 588.24 | 4.12 |
| | 04/23/12 | 592.7 | 592.36 | 2.76 | 12.76 | 4.16 | 4.15 | 0.01 | 588.21 | 4.15 |
| | 06/11/12 | 592.7 | 592.36 | 2.76 | 12.76 | 4.38 | --- | --- | 587.98 | 4.38 |
| | 07/10/12 | 592.7 | 592.36 | 2.76 | 12.76 | 5.06 | 4.84 | 0.22 | 587.49 | 4.87 |
| | 08/29/12 | 592.7 | 592.36 | 2.76 | 12.76 | 4.30 | 4.24 | 0.06 | 588.11 | 4.25 |
| | 09/12/12 | 592.7 | 592.36 | 2.76 | 12.76 | 4.13 | 4.09 | 0.04 | 588.27 | 4.09 |
| | 04/15/13 | 592.7 | 592.36 | 2.76 | 12.76 | 2.85 | --- | --- | 589.51 | 2.85 |
| | 07/18/13 | 592.7 | 592.36 | 2.76 | 12.76 | 3.54 | --- | --- | 588.82 | 3.54 |
| | 09/23/13 | 592.7 | 592.36 | 2.76 | 12.76 | 4.74 | 4.71 | 0.03 | 587.65 | 4.71 |
| | 04/25/14 | 592.7 | 592.36 | 2.76 | 12.76 | 2.98 | --- | --- | 589.38 | 2.98 |
| | 06/02/14 | 592.7 | 592.36 | 2.76 | 12.76 | 3.65 | --- | --- | 588.71 | 3.65 |
| | 07/09/14 | 592.7 | 592.36 | 2.76 | 12.76 | 2.73 | --- | --- | 589.63 | 2.73 |
| | 07/31/14 | 592.7 | 592.36 | 2.76 | 12.76 | 3.41 | --- | --- | 588.95 | 3.41 |
| | 09/16/14 | 592.7 | 592.36 | 2.76 | 12.76 | 3.48 | --- | --- | 588.88 | 3.48 |
| | 03/24/15 | 592.7 | 592.36 | 2.76 | 12.76 | 4.12 | --- | --- | 588.24 | 4.12 |
| | 06/17/15 | 592.7 | 592.36 | 2.76 | 12.76 | 3.17 | --- | --- | 589.19 | 3.17 |
| | 09/09/15 | 592.7 | 592.36 | 2.76 | 12.76 | 3.17 | --- | --- | 589.19 | 3.17 |
| | 03/15/16 | 592.7 | 592.36 | 2.76 | 12.76 | 3.11 | --- | --- | 589.25 | 3.11 |
| | 06/17/16 | 592.7 | 592.36 | 2.76 | 12.76 | 2.53 | --- | --- | 589.83 | 2.53 |
| | 09/22/16 | 592.7 | 592.36 | 2.76 | 12.76 | 3.72 | --- | --- | 588.64 | 3.72 |
| | 09/27/16 | ABANDONED | | | | | | | | |
| QPTW-13R | 09/06/17 | 594.8 | 594.04 | 4 | 14 | 4.83 | --- | --- | 589.21 | 4.83 |
| | 11/27/17 | 594.8 | 594.04 | 4 | 14 | 4.61 | --- | --- | 589.43 | 4.61 |
| | 02/27/18 | 594.8 | 594.04 | 4 | 14 | 3.93 | --- | --- | 590.11 | 3.93 |
| | 06/04/18 | 594.8 | 594.04 | 4 | 14 | 4.40 | --- | --- | 589.64 | 4.40 |
| | 10/05/18 | 594.8 | 594.04 | 4 | 14 | 4.88 | --- | --- | 589.16 | 4.88 |
| | 12/11/18 | 594.8 | 594.04 | 4 | 14 | 4.54 | --- | --- | 589.50 | 4.54 |
| | 03/12/19 | 594.8 | 594.04 | 4 | 14 | 4.02 | --- | --- | 590.02 | 4.02 |
| | 06/18/19 | 594.8 | 594.04 | 4 | 14 | 3.00 | --- | --- | 591.04 | 3.00 |
| | 09/16/19 | 594.8 | 594.04 | 4 | 14 | 4.98 | --- | --- | 589.06 | 4.98 |
| | 12/03/19 | 594.8 | 594.04 | 4 | 14 | 1.68 | --- | --- | 592.36 | 1.68 |
| | 03/12/20 | 594.8 | 594.04 | 4 | 14 | 3.47 | --- | --- | 590.57 | 3.47 |
| | 06/03/20 | 594.8 | 594.04 | 4 | 14 | 3.36 | --- | --- | 590.68 | 3.36 |
| | 09/09/20 | 594.8 | 594.04 | 4 | 14 | 3.11 | --- | --- | 590.93 | 3.11 |
| | 12/03/20 | 594.8 | 594.04 | 4 | 14 | 5.20 | --- | --- | 588.84 | 5.20 |
| | 08/16/21 | 594.8 | 594.04 | 4 | 14 | 5.32 | --- | --- | 588.72 | 5.32 |
| | 09/20/22 | 594.8 | 594.04 | 4 | 14 | 5.26 | --- | --- | 588.78 | 5.26 |

**Table 1**

**Summary of Groundwater Gauging Data - Quench Pit Area**
**RACER Trust - Saginaw Malleable Iron Industrial Land**
**Saginaw, Michigan**

| Well ID | Date | Ground Surface Elevation (ft amsl) | Top of Casing Elevation (ft amsl) | Top of Screen (ft btoc) | Total Depth (ft btoc) | Depth to Water (ft btoc) | Depth to Product (ft btoc) | LNAPL Thickness (ft) | Corrected Groundwater Elevation [1] (ft amsl) | Corrected Water Table Depth [1] (ft btoc) |
|---|---|---|---|---|---|---|---|---|---|---|
| QP-1 | 06/24/10 | --- | --- | 5 | 15 | 9.65 | 9.51 | 0.14 | --- | 9.53 |
| | 07/22/10 | --- | --- | 5 | 15 | 12.22 | 12.14 | 0.08 | --- | 12.15 |
| | 08/06/10 | --- | --- | 5 | 15 | 4.40 | 4.21 | 0.19 | --- | 4.23 |
| | 08/13/10 | --- | --- | 5 | 15 | 1.63 | 1.56 | 0.07 | --- | 1.57 |
| | 08/27/10 | --- | --- | 5 | 15 | 9.79 | --- | --- | --- | 9.79 |
| | 09/17/10 | --- | --- | 5 | 15 | 8.64 | --- | --- | --- | 8.64 |
| | 09/23/10 | --- | --- | 5 | 15 | 8.45 | --- | --- | --- | 8.45 |
| | 10/15/10 | --- | --- | 5 | 15 | 8.91 | --- | --- | --- | 8.91 |
| | 10/29/10 | --- | --- | 5 | 15 | 8.85 | --- | --- | --- | 8.85 |
| | 12/07/10 | --- | --- | 5 | 15 | 9.22 | --- | --- | --- | 9.22 |
| | 01/03/11 | --- | --- | 5 | 15 | 8.73 | --- | --- | --- | 8.73 |
| | 03/18/11 | --- | --- | 5 | 15 | 8.83 | --- | --- | --- | 8.83 |
| | 04/08/11 | --- | --- | 5 | 15 | 8.26 | --- | --- | --- | 8.26 |
| | 05/09/11 | --- | --- | 5 | 15 | 8.19 | --- | --- | --- | 8.19 |
| | 06/09/11 | --- | --- | 5 | 15 | 7.72 | --- | --- | --- | 7.72 |
| | 07/05/11 | --- | --- | 5 | 15 | 8.54 | --- | --- | --- | 8.54 |
| | 08/23/11 | --- | --- | 5 | 15 | 7.47 | --- | --- | --- | 7.47 |
| | 10/14/11 | --- | --- | 5 | 15 | 8.82 | --- | --- | --- | 8.82 |
| | 11/23/11 | --- | --- | 5 | 15 | 8.21 | --- | --- | --- | 8.21 |
| | 01/24/12 | --- | --- | 5 | 15 | 6.58 | --- | --- | --- | 6.58 |
| | 03/20/12 | --- | --- | 5 | 15 | 7.63 | --- | --- | --- | 7.63 |
| | 04/23/12 | --- | --- | 5 | 15 | 7.15 | --- | --- | --- | 7.15 |
| | 06/11/12 | --- | --- | 5 | 15 | 7.91 | --- | --- | --- | 7.91 |
| | 07/10/12 | --- | --- | 5 | 15 | 8.54 | --- | --- | --- | 8.54 |
| | 08/29/12 | --- | --- | 5 | 15 | 7.91 | --- | --- | --- | 7.91 |
| | 09/12/12 | --- | --- | 5 | 15 | 7.66 | --- | --- | --- | 7.66 |
| | 10/01/12 | --- | --- | 5 | 15 | 8.47 | --- | --- | --- | 8.47 |
| | 11/06/12 | --- | --- | 5 | 15 | 7.66 | --- | --- | --- | 7.66 |
| | 12/05/12 | --- | --- | 5 | 15 | 7.68 | --- | --- | --- | 7.68 |
| | 04/03/13 | --- | --- | 5 | 15 | 7.93 | --- | --- | --- | 7.93 |
| | 07/18/13 | --- | --- | 5 | 15 | 7.37 | --- | --- | --- | 7.37 |
| | 09/23/13 | --- | --- | 5 | 15 | 8.55 | --- | --- | --- | 8.55 |
| | 04/25/14 | --- | --- | 5 | 15 | 6.49 | --- | --- | --- | 6.49 |
| | 06/02/14 | --- | --- | 5 | 15 | 7.17 | --- | --- | --- | 7.17 |
| | 07/09/14 | --- | --- | 5 | 15 | 6.16 | --- | --- | --- | 6.16 |
| | 07/31/14 | --- | --- | 5 | 15 | 6.48 | --- | --- | --- | 6.48 |
| | 09/16/14 | --- | --- | 5 | 15 | 6.94 | --- | --- | --- | 6.94 |
| | 03/24/15 | --- | --- | 5 | 15 | 7.55 | --- | --- | --- | 7.55 |
| | 06/17/15 | --- | --- | 5 | 15 | 6.51 | --- | --- | --- | 6.51 |
| | 09/09/15 | --- | --- | 5 | 15 | 6.12 | --- | --- | --- | 6.12 |
| | 12/04/15 | --- | --- | 5 | 15 | 8.25 | --- | --- | --- | 8.25 |
| | 03/15/16 | --- | --- | 5 | 15 | 6.88 | --- | --- | --- | 6.88 |
| | 06/17/16 | --- | --- | 5 | 15 | 6.12 | --- | --- | --- | 6.12 |
| | 09/22/16 | --- | --- | 5 | 15 | 7.45 | --- | --- | --- | 7.45 |
| | 09/27/16 | ABANDONED | | | | | | | | |
| QP-1R | 09/06/17 | 594.87 | 594.59 | 1.5 | 12 | 5.20 | --- | --- | 589.39 | 5.20 |
| | 11/27/17 | 594.87 | 594.59 | 1.5 | 12 | 5.11 | --- | --- | 589.48 | 5.11 |
| | 02/27/18 | 594.87 | 594.59 | 1.5 | 12 | 4.65 | --- | --- | 589.94 | 4.65 |
| | 06/04/18 | 594.87 | 594.59 | 1.5 | 12 | 4.68 | --- | --- | 589.91 | 4.68 |
| | 10/05/18 | 594.87 | 594.59 | 1.5 | 12 | 5.29 | --- | --- | 589.30 | 5.29 |
| | 12/11/18 | 594.87 | 594.59 | 1.5 | 12 | 4.63 | --- | --- | 589.96 | 4.63 |
| | 03/12/19 | 594.87 | 594.59 | 1.5 | 12 | 4.57 | --- | --- | 590.02 | 4.57 |
| | 06/18/19 | 594.87 | 594.59 | 1.5 | 12 | 2.96 | --- | --- | 591.63 | 2.96 |
| | 09/16/19 | 594.87 | 594.59 | 1.5 | 12 | 5.19 | --- | --- | 589.40 | 5.19 |
| | 12/03/19 | 594.87 | 594.59 | 1.5 | 12 | 2.61 | --- | --- | 591.98 | 2.61 |
| | 03/12/20 | 594.87 | 594.59 | 1.5 | 12 | 3.66 | --- | --- | 590.93 | 3.66 |
| | 06/03/20 | 594.87 | 594.59 | 1.5 | 12 | 3.48 | --- | --- | 591.11 | 3.48 |
| | 09/09/20 | 594.87 | 594.59 | 1.5 | 12 | 5.39 | --- | --- | 589.20 | 5.39 |
| | 12/03/20 | 594.87 | 594.59 | 1.5 | 12 | 5.64 | --- | --- | 588.95 | 5.64 |
| | 08/16/21 | 594.87 | 594.59 | 1.5 | 12 | 5.61 | --- | --- | 588.98 | 5.61 |
| | 09/20/22 | 594.87 | 594.59 | 1.5 | 12 | 5.47 | --- | --- | 589.12 | 5.47 |
| QP-2 | 06/24/10 | --- | --- | 5 | 15 | 10.27 | 10.25 | 0.02 | --- | 10.25 |
| | 06/28/10 | --- | --- | 5 | 15 | 9.49 | 9.45 | 0.04 | --- | 9.45 |
| | 07/08/10 | --- | --- | 5 | 15 | 8.57 | 8.48 | 0.09 | --- | 8.49 |
| | 07/22/10 | --- | --- | 5 | 15 | 8.31 | 8.22 | 0.09 | --- | 8.23 |
| | 07/29/10 | --- | --- | 5 | 15 | 8.55 | 8.46 | 0.09 | --- | 8.47 |
| | 08/06/10 | --- | --- | 5 | 15 | 8.88 | 8.74 | 0.14 | --- | 8.76 |
| | 08/13/10 | --- | --- | 5 | 15 | 6.70 | 6.61 | 0.09 | --- | 6.62 |

**Table 1**

**Summary of Groundwater Gauging Data - Quench Pit Area**
**RACER Trust - Saginaw Malleable Iron Industrial Land**
**Saginaw, Michigan**

| Well ID | Date | Ground Surface Elevation (ft amsl) | Top of Casing Elevation (ft amsl) | Top of Screen (ft btoc) | Total Depth (ft btoc) | Depth to Water (ft btoc) | Depth to Product (ft btoc) | LNAPL Thickness (ft) | Corrected Groundwater Elevation [1] (ft amsl) | Corrected Water Table Depth [1] (ft btoc) |
|---|---|---|---|---|---|---|---|---|---|---|
| QP-2 | 08/27/10 | --- | --- | 5 | 15 | 7.76 | 7.66 | 0.10 | --- | 7.67 |
| (cont'd) | 09/17/10 | --- | --- | 5 | 15 | 7.44 | 7.28 | 0.16 | --- | 7.30 |
| | 09/23/10 | --- | --- | 5 | 15 | 7.14 | 6.98 | 0.16 | --- | 7.00 |
| | 10/15/10 | --- | --- | 5 | 15 | 7.96 | 7.73 | 0.23 | --- | 7.76 |
| | 10/29/10 | --- | --- | 5 | 15 | 7.74 | 7.48 | 0.26 | --- | 7.51 |
| | 12/07/10 | --- | --- | 5 | 15 | 7.71 | 7.40 | 0.31 | --- | 7.44 |
| | 01/03/11 | --- | --- | 5 | 15 | 7.62 | 7.31 | 0.31 | --- | 7.35 |
| | 03/18/11 | --- | --- | 5 | 15 | 7.51 | 7.25 | 0.26 | --- | 7.28 |
| | 04/08/11 | --- | --- | 5 | 15 | 7.03 | 6.73 | 0.30 | --- | 6.77 |
| | 05/09/11 | --- | --- | 5 | 15 | 6.97 | 6.61 | 0.36 | --- | 6.65 |
| | 06/09/11 | --- | --- | 5 | 15 | 7.36 | 6.93 | 0.43 | --- | 6.98 |
| | 07/05/11 | --- | --- | 5 | 15 | 7.45 | 6.92 | 0.53 | --- | 6.98 |
| | 08/23/11 | --- | --- | 5 | 15 | 7.13 | 6.42 | 0.71 | --- | 6.51 |
| | 10/14/11 | --- | --- | 5 | 15 | 8.31 | 7.34 | 0.97 | --- | 7.46 |
| | 11/23/11 | --- | --- | 5 | 15 | 7.99 | 7.07 | 0.92 | --- | 7.18 |
| | 01/24/12 | --- | --- | 5 | 15 | 6.79 | 5.81 | 0.98 | --- | 5.93 |
| | 03/20/12 | --- | --- | 5 | 15 | 7.25 | 6.29 | 0.96 | --- | 6.41 |
| | 04/23/12 | --- | --- | 5 | 15 | 7.21 | 6.18 | 1.03 | --- | 6.30 |
| | 06/11/12 | --- | --- | 5 | 15 | 7.20 | 6.48 | 0.72 | --- | 6.57 |
| | 07/10/12 | --- | --- | 5 | 15 | 8.43 | 7.04 | 1.39 | --- | 7.21 |
| | 08/29/12 | --- | --- | 5 | 15 | 8.00 | 6.44 | 1.56 | --- | 6.63 |
| | 09/12/12 | --- | --- | 5 | 15 | 7.75 | 6.17 | 1.58 | --- | 6.36 |
| | 10/01/12 | --- | --- | 5 | 15 | 8.66 | 6.81 | 1.85 | --- | 7.03 |
| | 11/06/12 | --- | --- | 5 | 15 | 7.02 | 6.29 | 0.73 | --- | 6.38 |
| | 12/05/12 | --- | --- | 5 | 15 | 7.59 | 6.86 | 0.73 | --- | 6.95 |
| | 04/03/13 | --- | --- | 5 | 15 | 7.12 | 6.40 | 0.72 | --- | 6.49 |
| | 07/18/13 | --- | --- | 5 | 15 | 6.91 | 5.86 | 1.05 | --- | 5.99 |
| | 09/23/13 | --- | --- | 5 | 15 | 7.73 | 6.95 | 0.78 | --- | 7.04 |
| | 04/25/14 | --- | --- | 5 | 15 | 5.86 | 5.40 | 0.46 | --- | 5.46 |
| | 06/02/14 | --- | --- | 5 | 15 | 6.24 | 5.74 | 0.50 | --- | 5.80 |
| | 07/09/14 | --- | --- | 5 | 15 | 5.86 | 5.29 | 0.57 | --- | 5.36 |
| | 07/31/14 | --- | --- | 5 | 15 | 6.16 | 5.55 | 0.61 | --- | 5.62 |
| | 09/16/14 | --- | --- | 5 | 15 | 5.93 | 5.76 | 0.17 | --- | 5.78 |
| | 03/24/15 | --- | --- | 5 | 15 | 6.51 | 6.30 | 0.21 | --- | 6.33 |
| | 06/17/15 | --- | --- | 5 | 15 | 5.79 | 5.53 | 0.26 | --- | 5.56 |
| | 09/09/15 | --- | --- | 5 | 15 | 5.71 | 5.36 | 0.35 | --- | 5.40 |
| | 12/04/15 | --- | --- | 5 | 15 | 7.35 | 6.88 | 0.47 | --- | 6.94 |
| | 03/15/16 | --- | --- | 5 | 15 | 5.77 | 5.51 | 0.26 | --- | 5.54 |
| | 06/17/16 | --- | --- | 5 | 15 | 5.53 | 5.22 | 0.31 | --- | 5.26 |
| | 09/22/16 | --- | --- | 5 | 15 | 6.38 | 5.99 | 0.39 | --- | 6.04 |
| | 09/27/16 | ABANDONED | | | | | | | | |
| QP-2R | 09/06/17 | 594.81 | 594.22 | 2 | 12 | 4.29 | 4.27 | 0.02 | 589.95 | 4.27 |
| | 11/27/17 | 594.81 | 594.22 | 2 | 12 | 4.36 | 4.35 | 0.01 | 589.87 | 4.35 |
| | 02/27/18 | 594.81 | 594.22 | 2 | 12 | 3.80 | 3.79 | 0.01 | 590.43 | 3.79 |
| | 06/04/18 | 594.81 | 594.22 | 2 | 12 | 3.86 | 3.85 | 0.01 | 590.37 | 3.85 |
| | 10/05/18 | 594.81 | 594.22 | 2 | 12 | 4.33 | --- | --- | 589.89 | 4.33 |
| | 12/11/18 | 594.81 | 594.22 | 2 | 12 | 3.69 | --- | --- | 590.53 | 3.69 |
| | 03/12/19 | 594.81 | 594.22 | 2 | 12 | 3.87 | 3.83 | 0.04 | 590.39 | 3.83 |
| | 06/18/19 | 594.81 | 594.22 | 2 | 12 | 2.54 | 2.47 | 0.07 | 591.74 | 2.48 |
| | 09/16/19 | 594.81 | 594.22 | 2 | 12 | 4.42 | --- | --- | 589.80 | 4.42 |
| | 12/03/19 | 594.81 | 594.22 | 2 | 12 | 2.06 | --- | --- | 592.16 | 2.06 |
| | 03/12/20 | 594.81 | 594.22 | 2 | 12 | 2.92 | --- | --- | 591.30 | 2.92 |
| | 06/03/20 | 594.81 | 594.22 | 2 | 12 | 2.56 | --- | --- | 591.66 | 2.56 |
| | 09/09/20 | 594.81 | 594.22 | 2 | 12 | 4.67 | --- | --- | 589.55 | 4.67 |
| | 12/03/20 | 594.81 | 594.22 | 2 | 12 | 4.92 | --- | --- | 589.30 | 4.92 |
| | 08/16/21 | 594.81 | 594.22 | 2 | 12 | 4.86 | 4.84 | 0.02 | 589.38 | 4.84 |
| | 09/20/22 | 594.81 | 594.22 | 2 | 12 | 4.75 | --- | --- | 589.47 | 4.75 |
| QP-3 | 06/24/10 | --- | --- | 5 | 15 | 17.53 | 16.80 | 0.73 | --- | 16.89 |
| | 06/28/10 | --- | --- | 5 | 15 | 12.56 | 12.53 | 0.03 | --- | 12.53 |
| | 07/08/10 | --- | --- | 5 | 15 | 12.37 | 12.32 | 0.05 | --- | 12.33 |
| | 07/29/10 | --- | --- | 5 | 15 | 12.47 | 12.35 | 0.12 | --- | 12.36 |
| | 08/06/10 | --- | --- | 5 | 15 | 12.89 | 12.81 | 0.08 | --- | 12.82 |
| | 08/13/10 | --- | --- | 5 | 15 | 11.69 | 11.62 | 0.07 | --- | 11.63 |
| | 08/27/10 | --- | --- | 5 | 15 | 11.78 | 11.71 | 0.07 | --- | 11.72 |
| | 09/17/10 | --- | --- | 5 | 15 | 11.78 | 11.69 | 0.09 | --- | 11.70 |
| | 09/23/10 | --- | --- | 5 | 15 | 11.55 | 11.41 | 0.14 | --- | 11.43 |
| | 10/15/10 | --- | --- | 5 | 15 | 8.19 | 8.03 | 0.16 | --- | 8.05 |
| | 10/29/10 | --- | --- | 5 | 15 | 8.27 | 8.09 | 0.18 | --- | 8.11 |

**Table 1**

**Summary of Groundwater Gauging Data - Quench Pit Area**
**RACER Trust - Saginaw Malleable Iron Industrial Land**
**Saginaw, Michigan**

| Well ID | Date | Ground Surface Elevation (ft amsl) | Top of Casing Elevation (ft amsl) | Top of Screen (ft btoc) | Total Depth (ft btoc) | Depth to Water (ft btoc) | Depth to Product (ft btoc) | LNAPL Thickness (ft) | Corrected Groundwater Elevation [1] (ft amsl) | Corrected Water Table Depth [1] (ft btoc) |
|---|---|---|---|---|---|---|---|---|---|---|
| QP-3 | 12/07/10 | --- | --- | 5 | 15 | 7.92 | 7.82 | 0.10 | --- | 7.83 |
| (cont'd) | 01/03/11 | --- | --- | 5 | 15 | 7.70 | 7.57 | 0.13 | --- | 7.59 |
| | 03/18/11 | --- | --- | 5 | 15 | 7.69 | 7.59 | 0.10 | --- | 7.60 |
| | 04/08/11 | --- | --- | 5 | 15 | 6.78 | 6.72 | 0.06 | --- | 6.73 |
| | 05/09/11 | --- | --- | 5 | 15 | 7.08 | 7.02 | 0.06 | --- | 7.03 |
| | 06/09/11 | --- | --- | 5 | 15 | 7.33 | 7.25 | 0.08 | --- | 7.26 |
| | 07/05/11 | --- | --- | 5 | 15 | 7.26 | 7.18 | 0.08 | --- | 7.19 |
| | 08/23/11 | --- | --- | 5 | 15 | 6.41 | 6.37 | 0.04 | --- | 6.37 |
| | 10/14/11 | --- | --- | 5 | 15 | 7.44 | 7.35 | 0.09 | --- | 7.36 |
| | 11/23/11 | --- | --- | 5 | 15 | 7.06 | 7.00 | 0.06 | --- | 7.01 |
| | 01/24/12 | --- | --- | 5 | 15 | 5.63 | 5.60 | 0.03 | --- | 5.60 |
| | 03/20/12 | --- | --- | 5 | 15 | 6.25 | 6.22 | 0.03 | --- | 6.22 |
| | 04/23/12 | --- | --- | 5 | 15 | 6.02 | 6.00 | 0.02 | --- | 6.00 |
| | 06/11/12 | --- | --- | 5 | 15 | 6.55 | 6.51 | 0.04 | --- | 6.51 |
| | 07/10/12 | --- | --- | 5 | 15 | 7.21 | 7.11 | 0.10 | --- | 7.12 |
| | 08/29/12 | --- | --- | 5 | 15 | 6.58 | 6.49 | 0.09 | --- | 6.50 |
| | 09/12/12 | --- | --- | 5 | 15 | 6.16 | 6.10 | 0.06 | --- | 6.11 |
| | 10/01/12 | --- | --- | 5 | 15 | 7.11 | 7.01 | 0.10 | --- | 7.02 |
| | 11/06/12 | --- | --- | 5 | 15 | 7.07 | 7.01 | 0.06 | --- | 7.02 |
| | 12/05/12 | --- | --- | 5 | 15 | 6.58 | 6.55 | 0.03 | --- | 6.55 |
| | 04/03/13 | --- | --- | 5 | 15 | 6.57 | 6.54 | 0.03 | --- | 6.54 |
| | 07/18/13 | --- | --- | 5 | 15 | 5.98 | 5.92 | 0.06 | --- | 5.93 |
| | 09/23/13 | --- | --- | 5 | 15 | 7.01 | 6.91 | 0.10 | --- | 6.92 |
| | 04/25/14 | --- | --- | 5 | 15 | 5.41 | 5.39 | 0.02 | --- | 5.39 |
| | 06/02/14 | --- | --- | 5 | 15 | 5.74 | 5.71 | 0.03 | --- | 5.71 |
| | 07/09/14 | --- | --- | 5 | 15 | 5.17 | 5.13 | 0.04 | --- | 5.13 |
| | 07/31/14 | --- | --- | 5 | 15 | 5.25 | 5.24 | 0.01 | --- | 5.24 |
| | 09/16/14 | --- | --- | 5 | 15 | 5.47 | 5.41 | 0.06 | --- | 5.42 |
| | 03/24/15 | --- | --- | 5 | 15 | 6.36 | 6.34 | 0.02 | --- | 6.34 |
| | 06/17/15 | --- | --- | 5 | 15 | 5.20 | 5.18 | 0.02 | --- | 5.18 |
| | 09/09/15 | --- | --- | 5 | 15 | 5.12 | 5.09 | 0.03 | --- | 5.09 |
| | 12/04/15 | --- | --- | 5 | 15 | 6.40 | 6.39 | 0.01 | --- | 6.39 |
| | 03/15/16 | --- | --- | 5 | 15 | 5.40 | 5.39 | 0.01 | --- | 5.39 |
| | 06/17/16 | --- | --- | 5 | 15 | 5.13 | 5.11 | 0.02 | --- | 5.11 |
| | 09/22/16 | --- | --- | 5 | 15 | 5.72 | 5.68 | 0.04 | --- | 5.68 |
| | 09/27/16 | ABANDONED | | | | | | | | |
| QP-3R | 09/06/17 | 594.8 | 594.41 | 2 | 12 | 4.17 | 4.08 | 0.09 | 590.32 | 4.09 |
| | 11/27/17 | 594.8 | 594.41 | 2 | 12 | 4.15 | 4.04 | 0.11 | 590.36 | 4.05 |
| | 02/27/18 | 594.8 | 594.41 | 2 | 12 | 3.79 | 3.71 | 0.08 | 590.69 | 3.72 |
| | 06/04/18 | 594.8 | 594.41 | 2 | 12 | 3.87 | 3.76 | 0.11 | 590.64 | 3.77 |
| | 10/05/18 | 594.8 | 594.41 | 2 | 12 | 4.24 | 4.08 | 0.16 | 590.31 | 4.10 |
| | 12/11/18 | 594.8 | 594.41 | 2 | 12 | 3.71 | 3.59 | 0.12 | 590.81 | 3.60 |
| | 03/12/19 | 594.8 | 594.41 | 2 | 12 | 4.02 | 3.88 | 0.14 | 590.51 | 3.90 |
| | 06/18/19 | 594.8 | 594.41 | 2 | 12 | 2.62 | 2.39 | 0.23 | 591.99 | 2.42 |
| | 09/16/19 | 594.8 | 594.41 | 2 | 12 | 4.40 | 4.26 | 0.14 | 590.13 | 4.28 |
| | 12/03/19 | 594.8 | 594.41 | 2 | 12 | 2.57 | 2.26 | 0.31 | 592.11 | 2.30 |
| | 03/12/20 | 594.8 | 594.41 | 2 | 12 | 2.90 | 2.85 | 0.05 | 591.55 | 2.86 |
| | 06/03/20 | 594.8 | 594.41 | 2 | 12 | 2.65 | 2.52 | 0.13 | 591.87 | 2.54 |
| | 09/09/20 | 594.8 | 594.41 | 2 | 12 | 4.56 | 4.46 | 0.10 | 589.94 | 4.47 |
| | 12/03/20 | 594.8 | 594.41 | 2 | 12 | 4.91 | 4.81 | 0.10 | 589.59 | 4.82 |
| | 08/16/21 | 594.8 | 594.41 | 2 | 12 | 4.73 | 4.61 | 0.12 | 589.79 | 4.62 |
| | 09/20/22 | 594.8 | 594.41 | 2 | 12 | 4.67 | 4.54 | 0.13 | 589.85 | 4.56 |

Notes

| | |
|---|---|
| LNAPL | Light Non-Aqueous Phase Liquid |
| ft | Feet |
| ft amsl | Feet Above Mean Sea Level |
| ft btoc | Feet Below Top of Casing |
| --- | No LNAPL measured |
| (1) | A specific gravity of 0.88 (quench/hydraulic oil) was used to calculate corrected groundwater levels |
| (2) | Values for water and LNAPL depth appeared reversed on data collection log, it has been corrected on this table. |

**Table 2**

**Summary of Manhole Inspections - Southwest LNAPL Area**
**RACER Trust - Saginaw Malleable Iron Industrial Land**
**Saginaw, Michigan**

| Manhole Inspection Location | Inspection Date [(1)] | Depth to Water (ft btor) | Depth to Product (ft btor) | LNAPL Thickness (ft) | Observations |
|---|---|---|---|---|---|
| V3.6 | 03/24/15 | 4.99 | --- | | none |
| | 06/17/15 | 4.69 | --- | | slight sheen |
| | 09/09/15 | 5.13 | --- | | none |
| | 12/04/15 | 5.34 | --- | | slight sheen |
| | 03/15/16 | 4.27 | --- | | very slight sheen |
| | 06/17/16 | 3.77 | --- | | slight sheen |
| | 09/22/16 | 4.56 | --- | | none |
| | 02/27/18 | 4.07 | --- | | slight sheen/scum |
| | 06/04/18 | 4.19 | --- | | very little debris |
| | 07/26/18 | 5.03 | --- | | very minor amount of sheen |
| | 12/11/18 | 4.79 | --- | | slight sheen |
| | 03/12/19 | 4.05 | --- | | very slight sheen |
| | 06/18/19 | 2.93 | --- | | very slight sheen |
| | 09/16/19 | 4.71 | --- | | none |
| | 12/03/19 | 3.04 | --- | | none |
| | 03/12/20 | 3.09 | --- | | little scum |
| | 06/03/20 | 3.14 | --- | | none |
| | 09/09/20 | 4.84 | --- | | none |
| | 12/03/20 | 5.14 | --- | | none |
| | 08/16/21 | 5.43 | --- | | none |
| | 09/20/22 | 5.20 | --- | | none |
| X5.9 | 03/24/15 | 4.47 | --- | | none |
| | 06/17/15 | 4.19 | --- | | none |
| | 09/09/15 | 4.62 | --- | | none |
| | 12/04/15 | 4.88 | --- | | very slight sheen |
| | 03/15/16 | 3.73 | --- | | none |
| | 06/17/16 | 3.24 | --- | | none |
| | 09/22/16 | 4.08 | --- | | none |
| | 02/27/18 | N/a | --- | | none |
| | 06/04/18 | N/a | --- | | none |
| | 07/26/18 | 4.52 | --- | | none |
| | 12/11/18 | 4.32 | --- | | none |
| | 03/12/19 | N/a | --- | | covered in ice |
| | 06/18/19 | N/a | --- | | flooded-water on concrete |
| | 09/16/19 | 4.22 | --- | | a little scum |
| | 12/03/19 | N/a | --- | | flooded-water on concrete |
| | 03/12/20 | 2.61 | --- | | little scum |
| | 06/03/20 | 2.65 | --- | | none |
| | 09/09/20 | N/a | --- | | underwater |
| | 12/03/20 | 4.51 | --- | | little scum, little water |
| | 08/16/21 | 4.73 | --- | | none |
| | 09/20/22 | 4.65 | --- | | possible sheen |
| S5.6 | 03/24/15 | 4.63 | --- | | none |
| | 06/17/15 | N/a | --- | | none |
| | 09/09/15 | 6.30 | --- | | none |
| | 12/04/15 | 6.57 | --- | | none |
| | 03/15/16 | 5.44 | --- | | none |
| | 06/17/16 | 4.92 | --- | | none |
| | 09/22/16 | 5.78 | --- | | none |
| | 02/27/18 | 5.27 | --- | | none |
| | 06/04/18 | 5.36 | --- | | none |
| | 07/26/18 | 6.22 | --- | | none |

**Table 2**

**Summary of Manhole Inspections - Southwest LNAPL Area**
**RACER Trust - Saginaw Malleable Iron Industrial Land**
**Saginaw, Michigan**

| Manhole Inspection Location | Inspection Date [(1)] | Depth to Water (ft btor) | Depth to Product (ft btor) | LNAPL Thickness (ft) | Observations |
|---|---|---|---|---|---|
| S5.6 | 12/11/18 | 5.99 | --- | | none |
| (cont'd) | 03/12/19 | 5.19 | --- | | ice |
| | 06/18/19 | 4.11 | --- | | none |
| | 09/16/19 | 5.91 | --- | | none |
| | 12/03/19 | 4.21 | --- | | none |
| | 03/12/20 | 4.31 | --- | | none |
| | 06/03/20 | 4.35 | --- | | none |
| | 09/09/20 | 6.05 | --- | | none |
| | 12/03/20 | 6.32 | --- | | none |
| | 08/16/21 | 6.62 | --- | | none |
| | 09/20/22 | 5.19 | --- | | none |
| FV3.0 | 03/24/15 | 4.09 | --- | | none |
| | 06/17/15 | 3.15 | --- | | slight sheen and a little scum |
| | 09/09/15 | 3.55 | --- | | floating scum (less than 1/16 ") |
| | 12/04/15 | 4.49 | --- | | oily scum - boom installed |
| | 03/15/16 | 2.89 | --- | | boom installed - very little scum |
| | 06/17/16 | 2.66 | --- | | very little scum - leave boom in |
| | 09/22/16 | 3.58 | --- | | a little scum; boom in |
| | 02/27/18 | 2.83 | --- | | very sllight sheen |
| | 06/04/18 | 3.36 | --- | | very little debris |
| | 07/26/18 | 4.14 | --- | | a little oily scum |
| | 12/11/18 | 3.70 | --- | | slight sheen |
| | 03/12/19 | 3.55 | --- | | little sheen |
| | 06/18/19 | 1.91 | --- | | little sheen |
| | 09/16/19 | 4.01 | --- | | slight scum |
| | 12/03/19 | 1.95 | --- | | none |
| | 03/12/20 | 2.37 | --- | | slight sheen |
| | 06/03/20 | 2.31 | --- | | very slight sheen |
| | 09/09/20 | 3.89 | --- | | slight sheen, trace scum |
| | 12/03/20 | 4.09 | --- | | very slight sheen |
| | 08/16/21 | 4.25 | --- | | sheen |
| | 09/20/22 | 4.30 | --- | | possible sheen |

Notes

(1) Inspections did not occur between September 22, 2019 and February 27, 2018 as a result of work being conducted on the concrete floor slab of the former plant including the removal PCB impacted flooring and installation of cover over the entire floor slab.

| | |
|---|---|
| LNAPL | Light Non-Aqueous Phase Liquid |
| ft | Feet |
| ft btor | Feet Below Top of Reference |
| --- | No LNAPL measured |

**Table 3**

**Summary of Transmissivity Testing - Quench Pit Area**
**RACER Trust - Saginaw Malleable Iron Industrial Land**
**Saginaw, Michigan**

| Quench Pit Well Location | Date of Last Transmissivity Test | LNAPL Transmissivity - $T_n$ ($ft^3$/day) | LNAPL Thickness at Time of Transmissivity Testing (ft) | Range of LNAPL Thickness Since Well Re-Installation (ft) |
|---|---|---|---|---|
| QPTW-01R* | | | | 0.02 - 0.03 |
| QPTW-01 | 5/10/2016 | 0.05 | 1.3 | |
| QPTW-03R2* | 4/27/2018 | 0.30 | 0.54 | 0.18 - 0.97 |
| QPTW-03R | 4/28/2016 | 0.11 | 1.3 | |
| QPTW-04R* | 9/9/2017 | 0.21 | 0.82 | 0.04 - 1.40 |
| QPTW-04 | 5/10/2016 | 0.08 | 0.97 | |
| QPTW-05R* | 9/9/2017 | de minimis | 0.6 | 0.14 - 1.71 |
| QPTW-05 | 4/29/2016 | 0.31 | 2.18 | |
| QPTW-05 | 10/30/2014 | 0.31 | 1.7 | |
| QPTW-10R* | | | | No Measurable Product |
| QPTW-10 | 4/28/2016 | 0.00 | 0.23 | |
| QPTW-10 | 9/30/2015 | 1.17 | 0.58 | |
| QPTW-10 | 10/30/2014 | 1.58 | 2.56 | |

Notes

* Monitoring well re-installed between June and August 2017

# Attachment 1

## Photographic Log

# Site Photographs



***Photo 1 2022-05-16***



***Photo 2 2022-05-16***



***Photo 3 2022-05-16***

# Attachment 2

## Gauging Form

ARCADIS

# Groundwater Gauging Log



| | |
|---|---|
| **Client:** | RACER Trust |
| **Project Name/Location:** | RACER Saginaw 2022 |
| **Date(s):** | 9/20/2022 |
| **Sampler(s):** | Billy Cobern<br>Cooper Osgood<br>Daniel Parker |
| **Equipment:** | water probe |

| Well | Date | Time | Depth to Water (ft) | Well Depth (ft) | Depth to LNAPL (ft) | PID (ppmv) | Remarks |
|---|---|---|---|---|---|---|---|
| QPTW-13R | 9/20/2022 | 15:16:00 | 5.26 | -- | -- | -- | SMI-Quench pit area- Arcadis lock- Flushmount |
| QPTW-10R | 9/20/2022 | 15:20:00 | 5.42 | 11.81 | -- | -- | Locked-SIM-FlushMount-Quench pit area |
| QP-1R | 9/20/2022 | 15:29:00 | 5.47 | 11.45 | -- | -- | SMI- Quench Pit Area-Flushmount- Locked |
| QPTW-05R | 9/20/2022 | 15:35:00 | 6.5 | -- | 5.3 | -- | SMI-Quench Pit- LNAPL |
| QPTW-04R | 9/20/2022 | 15:40:00 | 5.51 | -- | 5.48 | -- | SMI-Quench Pit- LNAPL |
| QPTW-03R2 | 9/20/2022 | 15:46:00 | 5.77 | -- | 6.04 | -- | SMI-Quench Pit-LNAPL |
| QP-2R | 9/20/2022 | 15:50:00 | 4.75 | 11.29 | -- | -- | SMI-Quench Pit |
| QP-3R | 9/20/2022 | 15:54:00 | 4.67 | -- | 4.54 | -- | SMI-Quench Pit-LNAPL |
| QPTW-01R | 9/20/2022 | 15:56:00 | 4.55 | -- | 4.51 | -- | SMI- Quench Pit- LNAPL |
| V-3.6 | 9/22/2022 | 16:05:00 | 5.2 | 10.2 | -- | -- | No pipes visible. No sheen observed. (692201.25N, 13227953.01E) |
| X-5.9 | 9/20/2022 | 17:37:00 | 4.65 | 4.75 | -- | -- | 12” concrete north and 12” concrete west. Possible sheen (692202.28N, 13227800.44E) |
| Unknown Manhole | 9/20/2022 | 17:51:00 | 4.75 | 4.77 | -- | -- | 12” concrete north, 12” concrete East, 8” HDPE East, (692098.54N, 13227902.81E) |
| FV-3.0 | 9/20/2022 | 18:01:00 | 4.3 | 9.8 | -- | -- | No pipes visible. Possible sheen present. (692179.11N, 13227957.61E) |
| S-5.6 | 9/20/2022 | 18:09:00 | 5.19 | 5.7 | -- | -- | No pipes visible. No sheen evident. (692342.44N, 13228089.83E) |