

Transmitted via Electronic Mail

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Subject:

Semi-Annual Progress Report No. 3
Revitalizing Auto Communities Environmental Response (RACER) Trust
Buick City Site, Flint, Michigan

Reference:

30121887

Date:

April 15, 2022

Dear Mr. Bridgford:

On behalf of Revitalizing Auto Communities Environmental Response Trust (RACER), Arcadis of Michigan, LLC (Arcadis) is submitting this Semi-Annual Progress Report No.3 to the Michigan Department of Environment, Great Lakes, and Energy (EGLE) in accordance with Section 8.9.3 of the RACER Trust's Corrective Action Consent Order (Consent Order), MMD Order No. 111-02-2020 for the Buick City Site located in Flint, Michigan (the Site) (**Figure 1**), which was effective on August 5, 2020.

This Semi-Annual Progress Report No. 1 covers the period of October 1, 2021 through March 31, 2022 and briefly summarizes the work performed to date, data collected, problems encountered, project schedule, and estimated percent complete for a list of ongoing Site activities. Areas of the Site and specific Site features discussed herein are presented on **Figure 2** (Northend of the site), **Figure 3** (Southend of the Site), and **Figure 4** (Bldg 04 and Hamilton Avenue Areas).

1. Work Performed

The list below provides a summary of the work conducted from October 1, 2021 through March 31, 2022 at the Buick City Site. Site work include completing 73 soil borings and collecting approximately 215 soil samples and 147 groundwater samples.

- In October and November 2022, slug tests and low-flow pumping tests were conducted on monitoring wells at the site, including at the Leith Street Area, the Foam Generation Building, the Building 84 Area, the Building 04 Area, and the Lagoon Area. The collected data was analyzed to provide estimates of hydraulic conductivity at each location a test was conducted.
- In November 2021, geotechnical samples were collected from select borings near the wastewater lagoon and submitted for analysis of various geotechnical parameters.
- On November 19, 2021, a bentonite plug was placed in Seep No. 5 at the Southend of the Site to eliminate daylighting water.
- On November 22, 2021, the temporary plugs were removed from Outfall 011 and the sanitary sewer to prepare for installation of permanent plugs
- On December 6, 2021, permanent plugs were placed in Outfall 011 laterals at MH 11-6-A-2 (northwestern lateral) and MH 11-6-A-3.
- On December 9, 2021, water was pumped from MH 100-8 adjacent to the wastewater lagoon to lower the water level enough to conduct a video survey of the storm sewer line. Approximately 20 feet of the storm sewer line was accessible to the video camera, the rest of the sewer line was blocked by water and/or sediment.
- On December 9, 2021, a soil berm was placed at the Southend of the Site on Division Street to prevent Site runoff from flowing onto Hamilton Avenue.
- On December 10, 2021, a permanent plug was placed in the Hamilton Avenue sanitary sewer.
- In December 2021, nine soil borings were completed to further characterize Waste Management Units #2 and #4. Samples were submitted for analysis of select VOCs and SVOCs.
- In January 2022, twenty-five soils samples were collected from six borings in the area south of the lagoons to characterize the area for potential reuse as a Corrective Action Management Unit (CAMU). Samples were submitted for VOC, SVOC, metals, PCB and PFAS analysis, plus geotechnical analyses.
- On January 18, 2022, the bulkhead of the former Outfall 009 was completed at manhole MH 11-6.
- On January 28, 2022, a video survey was conducted in the storm sewer line from MH 2-16 to MH 2-18 to inspect the line for water leaks.
- In February 2022 six soil borings were completed to delineate trichloroethene (TCE) impacts in the southwestern parcel. Ten samples were submitted for laboratory analysis of VOCs.

- On March 29, 2022, an inspection of the Outfall 011 manholes in Hamilton Ave was completed to evaluate the integrity of bulkheads, plugs, and manhole structures.

In addition to the specific Site activities noted above, various Site investigation activities were completed as listed below:

- PFAS soil and groundwater delineation investigation continued at the Former Aeration Lagoons in the Northend of the Site and Building 04 and Factory 84 Areas in the Southend of the Site.
- Preparations for a tracer study at the Building 04 Area were completed.
- Soil samples were collected from the Building 04 Area to delineate benzo(a)pyrene impacts.
- Groundwater elevations have been collected in monitoring wells near Hamilton Avenue every two to three weeks to monitor changes in groundwater levels as interim measures are installed.
- Samples were collected from select manholes along storm sewer Outfall 002, 003, 100 (adjacent to the lagoon), 005, 010 and 011 for PFAS analysis to evaluate current conditions. In addition, the Outfall 100 samples were submitted for chlorine/fluoride analysis.
- Wet weather samples were collected from the Outfall 003 and 011 per the NPDES permit.
- Additional PFAS investigation samples were collected from the sanitary sewer in Hamilton Avenue.
- NPDES required weekly PCB sampling was completed in the Outfall 003 storm sewer.

2. Data Collected

The samples collected as part of Site investigation or monitoring activities since October 1st are discussed below.

2.1 Storm Sewer Water Samples

2.1.1 NPDES Sampling

As required per Part 1, Section A 2 in the current National Pollution Discharge Elimination System (NPDES) Permit No. MI0001597, weekly composite samples were collected from Monitoring Point 003A. This data will be included in the 2021 and 2022 Yearly Pollutant Minimization Plan (PMP) for PCBs reports, which will be submitted to EGLE as required in the NPDES permit.

2.1.2 PFAS Sampling

In addition to the NPDES samples, storm sewer samples were collected from multiple storm sewers from October through March and analyzed for PFAS, as part of various investigation and/or monitoring activities at the Site, as follows:

In October, the following storm sewer samples were collected:

- Two samples were collected from Outfall 005 and select manholes along the storm sewer at the Northend of the Site.
- Three samples were collected from select manholes and laterals along the Outfall 011 storm sewer at the Southend of the Site.

In November, the following storm sewer samples were collected:

- Two samples were collected from select manholes along Outfall 100 at the Northend of the Site.
- Two samples were collected from Outfall 010 and select manholes along the storm sewer at the Southend of the Site.

In December, the following storm sewer samples were collected:

- Two samples were collected from select manholes along Outfall 100 at the Northend of the Site.
- Three samples were collected from Outfall 002 and select manholes along the storm sewer at the Northend of the Site.

In January 2022, the following storm sewer samples were collected:

- Five samples were collected from select manholes along Outfall 002 at the Northend of the Site.

In February 2022, the following storm sewer samples were collected:

- Two samples were collected from the P-traps associated with Outfall 005 at the Northend of the Site.
- One sample was collected from a select manhole along Outfall 011 at the Southend of the Site.

In March, the following storm sewer samples were collected:

- Three samples were collected from select manholes and laterals along Outfall 011 at the Southend of the Site.

2.1.3 *Various Constituent Sampling*

In addition to the NPDES samples, storm sewer samples were collected from multiple storm sewers from October through March and analyzed for various parameters, as part of various investigation and/or monitoring activities at the Site, as follows:

In October, the following storm sewer samples were collected:

- One wet weather sample was collected from the Outfall 003 monitoring point (MH 3-3) and submitted for PCB analysis as required by the NPDES permit.
- One wet weather sample was collected from the Outfall 011 monitoring point (MH 11-6) and submitted for laboratory analysis of copper pursuant to the NPDES permit.

In November, the following storm sewer samples were collected:

- One sample was collected from the Outfall 100 manhole MH100-8 upgradient of the bulkhead and analyzed for chlorine and fluoride to attempt to determine whether water in this area was from a broken water line.

In December, the following storm sewer samples were collected:

- Two samples were collected from the Outfall 100 manholes MH100-8 and MH 100-10 and analyzed for chlorine to attempt to determine whether water in this area was from a broken water line.

2.2 Sanitary Sewer Water Samples

The following samples were collected and submitted for PFAS analysis:

- In October, two samples were collected from select sanitary sewer manholes along Hamilton Ave.
- In January, two samples were collected from select sanitary sewer manholes along Hamilton Ave.

2.3 Groundwater Samples

In October, the following samples were collected and submitted for laboratory analysis of PFAS except as noted below:

- One sample was collected from a well downgradient of the former Building 40 Tunnel and analyzed for PCBs.
- Ten samples were collected from monitoring wells installed in Hamilton Avenue.
- Sixteen groundwater grab samples were collected from borings in the Eastern Lagoon area.

In November, the following samples were collected and submitted for laboratory analysis of PFAS:

- Twenty-six samples were collected from monitoring wells near the Eastern Lagoon.

In December, the following samples were collected and submitted for laboratory analysis of PFAS except as noted below:

- Three samples were collected from wells in the Western Lagoon area.

- Fourteen samples were collected from monitoring wells near the Eastern Lagoon.
- Seven samples were collected from monitoring wells at former Waste Management Units (WMU) #2 and #4 and were submitted for analysis of select VOCs and SVOCs.
- Six samples were collected from temporary wells in the Building 04 Area near Hamilton Avenue.

In January, the following samples were collected and submitted for laboratory analysis of PFAS:

- Three samples were collected from monitoring wells near the Eastern Lagoon.
- Twenty-three samples were collected from monitoring wells in the former Building 84 Area at the Southend of the Site near James P Cole Blvd.
- Two groundwater grab samples were collected from borings in the field south of the former lagoons, north of Leith Street.

In February, the following samples were collected and submitted for laboratory analysis of PFAS:

- Fifteen samples were collected from monitoring wells near the Leith Street underpass.
- Three samples were collected from monitoring wells near the Eastern Lagoon.

In March, the following samples were collected and submitted for laboratory analysis of PFAS:

- Four samples were collected from monitoring wells near the Eastern Lagoon.
- Ten samples were collected from monitoring wells in the former Building 84 Area at the Southend of the Site near James P Cole Blvd.
- Two groundwater grab samples were collected from borings in the former employee parking lot north of Hamilton Avenue, and West of North Avenue.

2.4 Soil Samples

In October, the following soil samples were collected and submitted for PFAS analysis.:

- Fourteen soil samples were collected from seven borings in the Eastern Lagoon Area and submitted for analysis.

In November, the following soil samples were collected and submitted for PFAS analysis.:

- Eight soil samples were collected from four borings in the Eastern Lagoon Area and submitted for analysis.

In December, the following soil samples were collected and submitted for PFAS analysis, except as noted below:

- Eighteen soil samples were collected from nine locations at the former Waste Management Units (WMU) #2 and #4 and were submitted for analysis of select VOCs and SVOCs.
- Eight soil samples were collected from three borings in the Building 04 Area and submitted for PFAS analysis.
- Seventeen soil samples were collected from six borings north of the Building 04 Area and submitted for analysis of benzo(a)pyrene.
- Thirteen soil samples were collected from five borings in the Eastern Lagoon Area and submitted for analysis.
- Two soil samples were collected from one boring in the Building 84 Area and submitted for analysis of trichloroethene.
- Twelve soil samples were collected from three borings in the former Factory 84 Area north of Hamilton Avenue, and East of James P Cole Blvd.

In January, the following samples were collected for PFAS analysis, except as noted below:

- Twenty-five soil samples were collected from six borings in the field south of the former lagoons, north of Leith Street. The samples were submitted for laboratory analysis of VOCs, SVOCs, metals, PCBs, and PFAS.
- Six soil samples were collected from two borings in the Building 04 Area and submitted for analysis of benzo(a)pyrene.
- Two soil samples were collected from one boring in the Building 84 Area and submitted for analysis of benzo(a)pyrene.
- Thirty-five soil samples were collected from ten borings in the former Factory 84 Area north of Hamilton Avenue, and East of James P Cole Blvd.

In February, the following samples were collected for PFAS analysis, except as noted below:

- Ten soil samples were collected from six borings in the former employee parking lot north of Hamilton Avenue, and West of North Avenue. The samples were submitted for laboratory analysis of VOCs.
- Six soil samples were collected from two borings in the Building 04 Area and submitted for analysis of benzo(a)pyrene.
- Three soil samples were collected from one boring in the Building 86 Area and submitted for analysis.

- Nineteen soil samples were collected from four borings in the Eastern Lagoon Area and submitted for analysis.

In March, the following samples were collected:

- Seventeen soil samples were collected from five borings in the former Factory 84 Area north of Hamilton Avenue, and East of James P Cole Blvd.

2.5 Sediment Samples

In December, one sediment sample was collected from the Outfall 100 manhole MH 100-8 near the Western Lagoon at the former aeration pond at the Site. The sample was submitted for laboratory analysis of PFAS.

3. Problems Encountered

3.1 Daylighting Groundwater near Hamilton Avenue

Daylighting groundwater was identified at the Site near Hamilton Avenue (Building 04 Area) at one location on four occasions from September 25, 2021, through April 4, 2022. Daylighting was identified at Seep #5 from September 25 - 30, 2021 following a 3.53-inch rain event; from October 7 – 14, 2021 following a 1.13-inch rain event; from October 25 – November 5, 2021, following an initial two-day 1.62-inch rain event and two additional rain events (0.32 and 0.44 inch) during the seeping period. Bentonite and concrete were used to plug the seep on November 19, 2021; however, Seep #5 reappeared from March 29 through April 4, 2022, after the snow melt, indicating additional work will be required to address this seep.

Please note that no daylighting has been identified at previously identified Seeps 1 through 4, since the preparation of the previous semi-annual report.

3.2 Hamilton Avenue Groundwater Impacts

Recent groundwater levels and PFAS analytical data have indicated an increase in groundwater levels and PFAS concentrations in Hamilton Avenue and downgradient of the Site on the Lear (former RACER) property. In addition, samples collected from select Outfall 011 storm sewer manholes show an increase in PFAS concentrations. Additional investigations and inspections are currently being completed to identify the cause of the concentration increases.

4. Project Schedule – Near-Term Milestone Activities Anticipated During the Next Semi-Annual Period

Site work for the second and third quarters of 2022 includes the following ongoing Site Activities:

- Continue OMM inspections of 003/004 Stormwater Treatment and Diversion System until

the system is decommissioned.

- Continue to perform inspections and maintenance (as necessary) of Outfalls 002, 003, 004, and 005. Dispose of waste as necessary.
- Continue to perform inspections of Oil Interceptor #2 until it is decommissioned.
- Continue Outfall 003A weekly sample collection for PCBs, pending the consent order from EGLE.
- Continue quarterly P-trap inspections associated with the French drain flowing into the Outfall 005 storm sewer per the PCB Pollutant Minimization Plan under the NPDES permit.
- Continue semi-annual SWPPP inspections.

In addition, the following activities are planned to be continued/completed in second and third quarters.

- Decommissioning 003/004 Stormwater Treatment and Diversion System
- Cleaning/decommissioning of Oil Interceptor #2
- Complete semi-annual SWPPP Report for the NPDES permit
- Completion of the Annual Wet Weather Sampling Report and PMP Annual Report.
- Continue delineation of Site PFAS impacts
- Complete Feasibility Study and Interim Measures Workplans for Building 04 Area, Former GM Foam Generation Building, Aeration Lagoon Area, and Outfall 005 storm sewer, pending approval of the CAF.
- Continue addressing PFAS impact at Outfalls and sanitary sewer

5. Estimated Percent Complete

This section presents a percentage complete for action items outlines in the CACO:

- Reconcile List of AOlS, AOCs, TSCA areas, etc. (Due Nov 3, 2020) – 100%
- Meeting with EGLE to discuss CA objectives, expectations, etc. (Due August 20, 2020) -100%
- Establish public repository (Due September 4, 2020) – 100%
- Public Involvement/Communications Plan (Due September 4, 2020) – 100%

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- Corrective Action Framework (Due Nov 3, 2020) – 100%
- List of electronic files submitted to EGLE (Due February 1, 2021) – 100% (Note that EGLE did not request that the actual electronic files could be submitted in batches following the February 1 submittal. That process is ongoing.)
- Semi-annual progress reports – ongoing
- Need to identify investigation, further corrective action or EGLE approved institutional control for WMU 2, WMU 3, WMU 4, WMU 5, WMU 7 and WMU 10 – 15%
- CMS workplan (Due 90 days after approval of CAF) – 0%
- CMS field work (to start within 30 days of CAF WP approval) – 0%
- CMS Report (Due 60 days after completion of CMS activities) – 0%
- CM Implementation Plan (Due within 90 days of EGLE approval of the CMS) – 0%
- CA440 Remedy Decision (Due 10/15/22) – 0%
- C550RC Remedy Constructed (Due 12/31/24) – 0%
- CA800YE Ready for Reuse (6/1/24) – 0%
- CA 900Cr Performance Standards Attained (Due 9/30/26) – 0%
- CA750 – Re-Evaluated for PFAS – 0%

If you have any questions, please contact me.

Sincerely,

Arcadis of Michigan, LLC



Christopher S. Peters, PG
Program Manager

Copies:

Grant Trigger, RACER Trust (via email)
Dave Favero, RACER Trust (via email)

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Flint Public Library

Attachments:

- Figure 1 – RACER Buick City Site Map
- Figure 2 – Northend Work Locations
- Figure 3 – Southend Work Locations
- Figure 4 – Hamilton Avenue Work Locations