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GHD Reference No: 11208041

April 14, 2023

Mr. Michael Beedle
U.S. Environmental Protection Agency, Region 5
Remediation Branch
Land, Chemicals, and Redevelopment Division
77 West Jackson Blvd., LR 16J
Chicago, Illinois
U.S.A. 60604

Transmitted via email

Semi-Annual Progress Report (October 1, 2022 to March 31, 2023)
Performance Based Administrative Order on Consent
RCRA Corrective Action
Saginaw Nodular Iron, 2100 Veterans Memorial Parkway, Saginaw, MI
U.S. EPA ID No. MID 041 793 340

Dear Mr. Beedle

In accordance with the Performance-Based Administrative Order on Consent (Docket No. RCRA-05-2011-0023) between the U.S. Environmental Protection Agency Region 5 (U.S. EPA) and Revitalizing Auto Communities Environmental Response Trust (RACER), please find the attached semi-annual progress report for the period October 1, 2022 to March 31, 2023. Please note that on June 27, 2018, U.S. EPA approved the reduction in frequency of progress reporting from quarterly to semi-annually.

Please contact me if you would like to discuss this matter further.

Regards

A handwritten signature in blue ink that reads "J. Pardys".

John-Eric Pardys, P.Eng.
Engineer

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JEP/kf/4

Encl. Attachment A – Semi-Annual Progress Report October 1, 2022 to March 31, 2023)

Copy to: Amanda Armbruster, EGLE (via email)
Nathan Erber, EGLE (via email)
Saginaw Public Library (Public Information Repository)
David Favero, RACER (via email)
Michael Tomka, GHD (via email)

Attachment A

**Semi-Annual Progress Report
October 1, 2022 to March 31, 2023**



Attachment A

Work Performed this Semi-Annual Period

The following work was performed during the semi-annual period October 1, 2022 to March 31, 2023 for the Nodular facility:

- Prepared and submitted semi-annual progress report on October 14, 2022 for the period April 1 to September 30, 2022.
- Prepared and submitted a memorandum re-evaluating the mixing zone GSI determination for ammonia on March 22, 2022 in response to U.S. EPA’s comments on the CMP. U.S. EPA responded with comments on March 28, 2022. Responses were submitted on May 18, 2022 to U.S. EPA and to EGLE on June 2, 2022, including a revised mixing zone determination memorandum. On October 26, 2022 EGLE submitted recommendations for the mixing zone determination which included the request that RACER continue to implement a mixing zone compliance groundwater monitoring program to demonstrate compliance with the mixing zone-based groundwater/surface water interface (GSI) criteria.
- Prepared and submitted scope of work to complete PFAS and 1,4-dioxane sampling on February 14, 2023, in response to U.S EPA’s email dated February 4, 2021, which requested RACER sample and analyze groundwater for PFAS and 1,4-dioxane, and U.S. EPA’s November 14, 2022, letter, which also asked that RACER sample for PFAS at this Site.
- Conducted a mixing zone compliance monitoring event in December 2022 to demonstrate compliance with the mixing zone-based GSI criteria. Prepared and submitted a letter on March 8, 2023 summarizing the 2022 mixing zone compliance monitoring results.

Data Available During this Reporting Period

- Annual mixing zone compliance groundwater monitoring was conducted in December 2022 and was submitted under separate cover to U.S. EPA on March 8, 2023.

Problems Encountered

None.

Summary of Problem Resolution

None.

Estimated Percent Complete and Information Summary for Selected Activities

Task		Estimated % Complete
1.	IU G – Former Nodular Iron Plant OM&M	
	<ul style="list-style-type: none"> – <u>Annual EI Sampling (10-years completed to date by RACER, 2-years completed by MLC, and 3-years completed by GMC).</u> (Estimated percent complete assumes the EI monitoring program is replaced with a revised groundwater monitoring program upon approval of the CMS by U.S. EPA, anticipated to occur in 2021.) – 2011 EI sampling was completed in November 2011 and reporting was submitted to U.S. EPA April 18, 2012. – 2012 EI sampling was completed in November 2012 and reporting was submitted to U.S. EPA March 11, 2013. – 2013 EI Sampling was completed in November 2013 and reporting was submitted to U.S. EPA February 13, 2014. 	100%

Task		Estimated % Complete
	<ul style="list-style-type: none"> – 2014 EI sampling was completed in November 2014 and reporting was submitted to U.S. EPA February 10, 2015. – 2015 EI sampling was completed in November 2015 and reporting was submitted to U.S. EPA February 10, 2016. – 2016 EI sampling was completed in November 2016 and reporting was submitted to U.S. EPA January 4, 2017. – 2017 EI sampling was completed in May 2017 and reporting was submitted to U.S. EPA December 8, 2017. – 2018 EI sampling was completed in November 2018 and reporting was submitted to U.S. EPA February 15, 2019. – 2019 EI sampling was completed in November 2019 and reporting was submitted to U.S. EPA January 17, 2020. – 2020 EI sampling was completed in October 2020 and reporting was submitted to U.S. EPA January 8, 2021, including a request to terminate the EI sampling program. U.S. EPA responded via email on January 12, 2021 with no comments. 	
	<p><u>Additional delineation of impacts in soil</u></p> <ul style="list-style-type: none"> – Work plan for additional delineation of manganese and PCB impacts in soil in the south portion of IU G submitted to U.S. EPA on February 27, 2015 and approved by U.S. EPA on March 2, 2015. – Additional delineation of manganese and PCB impacts was completed during March and April 2015. A summary of the investigation was submitted to U.S. EPA on May 8, 2015. – Work plan for additional delineation of PCB impacts in soil above 10 mg/kg in the south portion of IU G submitted to U.S. EPA on July 15, 2015 and approved by U.S. EPA on July 30, 2015. – Additional delineation of PCB impacts above 10 mg/kg was completed in August 2015. A summary of the additional investigation of manganese and PCB impacts was submitted to U.S. EPA on February 15, 2017. U.S. EPA approved via a March 8, 2017 email the report and the recommendation to address the PCB impacts through deed restrictions as an interim measure. 	100%
	<p><u>Ammonia concentrations above EGLE Groundwater Surface Water Interface Criteria</u></p> <ul style="list-style-type: none"> – Ammonia in groundwater evaluation was submitted to U.S. EPA on April 6, 2015 and to MDEQ on April 8, 2015. – Updated mixing zone determination was submitted to U.S. EPA on March 22, 2022. U.S. EPA provided comments on March 28, 2022 and responses were submitted on May 18, 2022 to U.S. EPA and on June 2, 2022 to EGLE. EGLE submitted recommendations on October 26, 2022 for the mixing zone determination which included the request that RACER continue to implement a mixing zone compliance groundwater monitoring program to demonstrate compliance with the mixing zone-based groundwater/surface water interface (GSI) criteria. – 2022 mixing zone compliance sampling was completed in December 2022 and reporting was submitted to U.S. EPA March 8, 2023. 	90%
	<p><u>Ecological Screening Assessment – Isolated Wetlands</u></p> <ul style="list-style-type: none"> – Conducted ecological risk assessment on some isolated wetlands formed in the 2012 time period in IU G and submitted the evaluation to U.S. EPA on January 4, 2019. The assessment concluded that there is minimal risk to ecological receptors and no further activity is required. During a conference 	100%

Task		Estimated % Complete
	<p>call with U.S. EPA on the wetland assessment on September 6, 2019. U.S. EPA requested that RACER remove PCB-impacted surface soil.</p> <ul style="list-style-type: none"> – A scope of work for the removal of wetland PCB-impacted soil and associated permitting requirements was provided to U.S. EPA via email on September 13, 2019. U.S. EPA responded on September 19, 2019 via email to proceed with obtaining the necessary permits to complete the removal of wetland PCB-impacted soil. – Submitted a Joint EGLE/USACE permit request as it relates to the removal of PCB-impacted soil from the isolated wetlands in IU G on November 20, 2019. EGLE granted the permit on January 16, 2020. – Submitted a City of Saginaw floodplain permit application for removal of PCB-impacted soil from the isolated wetlands in IU G on June 30, 2020. The City of Saginaw granted the permit on July 27, 2020. – Submitted an Interim Measures (TSCA) Work Plan for PCB-impacted soil removal to U.S. EPA on July 10, 2020 which was subsequently approved on September 2, 2020. – Removal of PCB-impacted soil was completed the week of September 14, 2020 and included setting up access to removal area, removal and off-Site disposal of PCB-impacted soil, placement of clean backfill, and restoration. A report summarizing the removal of PCB-impacted soil from IU G wetland was submitted to U.S. EPA on October 16, 2020. U.S. EPA responded on October 20, 2020 indicating they had no comments on the closure report. 	
2.	IU H – WWTP Closure	
	<ul style="list-style-type: none"> – Secondary Pond – Characterization Study on Secondary Pond completed in June of 2011. – Emergency overflow for secondary pond installed on March 13, 2012. The emergency overflow was lowered approximately 6 feet on June 23, 2016. – MDEQ issued NPDES permit for the Site on August 24, 2012. – MDEQ modified NPDES sampling requirements with most of the requested changes in RACER's January 8, 2015 request. As a result of the lowering of the emergency overflow, the modification to the NPDES sampling requirements were rescinded. – Additional Characterization Studies for Secondary Pond and Lagoon 5 were completed in March 2016, May 2016, August 2016, and September 2017. A summary of the September 2017 investigation results were submitted to U.S. EPA on November 6, 2017. A sediment pore water sampling Work Plan was submitted to U.S. EPA on January 29, 2018 and was approved by U.S. EPA on March 2, 2018. Sampling was conducted on April 17, 2018. The results were presented to U.S. EPA on May 11, 2018 and a memorandum summarizing the results was submitted on June 3, 2018. U.S. EPA provided comments on the pore water sample results on June 13, 2018 and responses to comments were provided to U.S. EPA on July 3, 2018, U.S. EPA provided email approval on September 17, 2018 to proceed with removal of PCBs >50 ppm in Secondary Pond sediments and following the removal, to allow the Secondary Ponds to naturalize, and to implement appropriate institutional controls to prevent hydrologic connection between the pond and on the pond and nearby surface water. – NPDES renewal application was prepared and submitted April 2, 2016. Comments on the application were received and responded to on July 12 and 29, 2016. A modification to the application (addition of new outfall through the eastern portion of the northern Secondary Pond berm, referred to as outfall 24) was submitted December 22, 2016. A draft of the permit was provided on July 14, 2017. Comments on the permit were provided to MDEQ on July 24, 2017. Comments were reviewed with MDEQ and a 	100%

Task		Estimated % Complete
	<p>revised submission was made on September 20, 2017. MDEQ requested additional information on November 6, 2017, which was provided on November 6 and December 18, 2017. MDEQ requested on February 8, 2018 that a sample of the secondary pond be collected and submitted for analysis. The results were submitted to MDEQ on March 12, 2018. After a public review period, a new NPDES permit was issued and then became effective July 1, 2018. A notice of termination (NOT) request was prepared and submitted to EGLE on April 1, 2020.</p> <ul style="list-style-type: none"> - A Draft Interim Measures Work Plan for the removal of PCB-impacted sediment was submitted to U.S. EPA on December 19, 2018, which was approved in principle by U.S. EPA on February 14, 2019. U.S. EPA requested additional detail on the work once bids had been received from the contractors. An amendment to the draft Work Plan was submitted to U.S. EPA on July 16, 2019 and was approved with comments on August 5, 2019. A final copy of the executed amendment was distributed on August 20, 2019. - Activities associated with the removal of PCB-impacted sediment were completed in November 2019 and included: Site setup (access roads, decontamination pad/staging area setup, trailer), installation of berm to separate the east side of the Secondary Pond from the west, dewatering the western portion of the Secondary Pond, installation of sheet pile, removal of sediment, stabilization of sediment, placement of clean cover, off-Site disposal of sediments from Areas 1 and 2, and demobilization. A report summarizing the removal of PCB-impacted sediment from the Secondary Pond was submitted to U.S. EPA on February 11, 2020. On April 19, 2021, U.S. EPA identified that they had no comments on the completion report. 	
	<p><u>Primary Basins</u></p> <ul style="list-style-type: none"> - Work plan for stabilizing primary settling basins submitted to U.S. EPA on July 31, 2012 and Work Plan approved by U.S. EPA on September 18, 2012. - Primary settling basin stabilization work was completed June 20, 2013. A construction completion report was submitted to U.S. EPA on September 4, 2013. 	100%
	<p><u>North Ditch</u></p> <ul style="list-style-type: none"> - Sampling and Analysis Plan for the North Ditch submitted to U.S. EPA on April 26, 2013 and was approved by U.S. EPA on July 8, 2013. - North Ditch Investigation and additional monitoring completed the week of July 15, 2013. The results of the investigation were submitted to U.S. EPA on October 23, 2013. - Stabilization Alternative Evaluation and Recommendation for the North Ditch was submitted to U.S. EPA on February 26, 2014. - Obtain necessary permits/agreements to perform stabilization work <ul style="list-style-type: none"> • Joint permit was received on August 19, 2015. • Floodplain permit application was prepared and submitted to the City of Saginaw on May 4, 2015. • Other permits needed include: County of Saginaw soil erosion and sedimentation control permit. • Other agreements: access from adjacent property owners. - Conducted ecological risk assessment on the North Ditch consistent with the approach for the Secondary Pond, as an alternative to implementing the 	100%

Task		Estimated % Complete
	<p>stabilization work, and submitted the evaluation to U.S. EPA on March 14, 2019. The assessment concluded that no further activity was required in the North Ditch, beyond some additional sampling for black carbon. U.S. EPA provided comments on the assessment and agreed that additional sampling should be completed.</p> <ul style="list-style-type: none"> – An Additional North Ditch Sediment Sampling Work Plan was submitted on September 11, 2019 to U.S. EPA. U.S. EPA provided comments on September 19, 2019 to which responses were prepared and submitted on September 26, 2019. A final revised Work Plan was submitted and approved by U.S. EPA on November 6, 2019. – Additional North Ditch sediment sampling was completed in December 2019 and the results, including an update to the ecological risk assessment, were submitted to U.S. EPA on February 12, 2020. U.S. EPA provided their approval of “no further work” required in the North Ditch on February 27, 2020. 	
	<p><u>Additional delineation of impacts in soil</u></p> <ul style="list-style-type: none"> – Work plan for additional delineation of two areas, one with SVOC impacts in soil and another with cyanide impacts in soil in the western portion of IU H submitted to U.S. EPA on March 18, 2021 as part of the response to U.S. EPA comments dated February 4, 2021. U.S. EPA provided comments on the work plan April 21, 2021. The work plan was revised and resubmitted on May 18, 2021 and was subsequently approved by U.S. EPA on June 7, 2021. – Additional IU-H soil sampling was completed in June 2021 and the results were submitted to U.S. EPA on September 2, 2021. U.S. EPA identified in a September 16, 2021 email that they had no further comments on the results letter which concluded that “no further action” was warranted for the two areas. 	100%
3.	IU I- Area Closure	
	<p><u>Classified Sand Pile</u></p> <ul style="list-style-type: none"> – Removed all classified sand pile as part of the primary basin stabilization work in 2013. 	100%
	<p><u>Slag Area</u></p> <ul style="list-style-type: none"> – During a Site inspection in April 2019, two small areas in the southern portion of IU were identified as having slag. On September 19, 2019 a Scope of Work was submitted to U.S. EPA to evaluate potential impacts of slag on surrounding soils in IU I. U.S. EPA provided comments on September 24, 2019. A final revised Work Plan was submitted and approved by U.S. EPA on October 18, 2019. – Conducted incremental soil sampling in December 2019 and submitted the results on March 10, 2020. U.S. EPA responded on March 13, 2020 indicating they had no further comments. 	100%
4.	IU I – Staging Area OM&M	NA
	<ul style="list-style-type: none"> – No activities proposed or pending at this time. 	

Task		Estimated % Complete
5.	Other – RCRA Corrective Action Reporting and Other Related Reporting	
	<u>Administrative Order on Consent</u> – Signed by U.S. EPA and effective September 29, 2011.	100%
	<u>Budget Process</u> – U.S. EPA approved the 2012 EA Budget Authorization Request on December 22, 2011. – U.S. EPA approved the 2012 Annual EA Budget Amendment No. 1 on September 19, 2012. – U.S. EPA approved the 2013 EA Budget Authorization Request on January 3, 2013. – U.S. EPA approved the 2014 EA Budget Authorization Request on November 22, 2013 – U.S. EPA approved the 2015 EA Budget Authorization Request on November 20, 2014 – U.S. EPA approved the 2015 Annual EA Budget Amendment No. 1 on March 20, 2015 – U.S. EPA approved the 2016 EA Budget Authorization Request on November 20, 2015. – U.S. EPA approved the 2016 Annual EA Budget Amendment No. 1 on April 28, 2016. – U.S. EPA approved the 2017 EA Budget Authorization Request on December 7, 2016. – U.S. EPA approved the 2018 EA Budget Authorization Request on December 12, 2017. – U.S. EPA approved the 2019 EA Budget Authorization Request on November 23, 2018. – U.S. EPA approved the 2020 EA Budget Authorization Request on November 7, 2019. – U.S. EPA approved the 2021 EA Budget Authorization Request on December 3, 2020. – U.S. EPA approved the 2022 EA Budget Authorization Request on October 21, 2021. – U.S. EPA approved the 2023 EA Budget Authorization Request on November 30, 2022	On-going
	<u>RCRA Corrective Action Reporting</u> – Submitted CCR documentation to U.S. EPA on November 18, 2011. – Submitted Supplemental RFI Report on September 28, 2012. – A Site soil data evaluation was completed that compared Site soil data to current MDEQ (2013) Part 201 criteria and the DRAFT MDEQ (2017) Part 201 criteria to U.S. EPA. The evaluation was submitted to U.S. EPA on April 20, 2018. U.S. EPA provided comments on August 31, 2018, which were responded to on November 26, 2018. U.S. EPA completed their review of historical data with comments provided on February 4, 2021. An initial response to comments was provided on March 18, 2021. As a follow-up to the response to U.S. EPA comments, a separate memorandum was submitted to U.S. EPA on the potential uses of Per and Polyfluoroalkyl substances April 28, 2021. In response to U.S. EPA comments, additional delineation of impacts in IU H soil was completed as further described above under Section 2 - IU H – WWTP Closure > Additional delineation of impacts in soil. – A Site groundwater data evaluation was completed that compared Site groundwater data to current MDEQ (2013) Part 201 criteria and the DRAFT	65%

Task		Estimated % Complete
	<p>MDEQ (2017) Part 201 criteria to U.S. EPA. The evaluation was submitted to U.S. EPA on October 15, 2018. U.S. EPA is reviewing. In accordance with the recommendations in the October 15, 2018 groundwater evaluation. additional groundwater sampling was conducted in November 2018. The results were submitted in the 2019 EI annual sampling results submission on January 17, 2020. U.S. EPA responded via email on January 22, 2020 approving the modification of adding a monitoring well location to the annual Environmental Indicator (EI) groundwater monitoring program and had no further comments on the submittal. On January 8, 2021 the results of the 2020 annual EI groundwater sampling were submitted along with the request to terminate the annual EI monitoring program. U.S. EPA responded on January 12, 2021 indicating no comments.</p> <ul style="list-style-type: none"> – Submit updated RFI Summary Report to U.S. EPA – May not be necessary per discussion with USEPA on January 30, 2020. – Submitted Draft Corrective Measures Proposal to U.S. EPA on April 1, 2013 – Submitted revised Corrective Measures Proposal to U.S. EPA on June 11, 2021. – Submitted Summary of WMU status to U.S. EPA on January 22, 2015 and to MDEQ on January 26, 2015. MDEQ approved the closure of Nodular Iron Oil House RCRA Hazardous Waste Area in a letter dated May 8, 2016. With that closure all historical WMUs have been closed by MDEQ. – Prepare and Record Declaration of Restrictive Covenant – To be determined (TBD). – Prepare Corrective Measures Implementation Plan – TBD. – Prepare Final Remedy Construction Completion Report – TBD. – Prepare Request for RCRA Corrective Action Complete with Controls – TBD. 	
	<p>Other Related Reporting</p> <ul style="list-style-type: none"> – Submit monthly DMRs. – A notice of termination (NOT) request was prepared and submitted to EGLE on April 1, 2020, which was subsequently approved by EGLE on May 11, 2021 identifying an effective termination date of April 23, 2020. 	100%
6.	PFAS and 1,4-Dioxane Initial Site Sampling	
	<ul style="list-style-type: none"> – Submitted scope of work to complete PFAS and 1,4-dioxane sampling on February 14, 2023 in response to U.S. EPA's email dated February 4, 2021, which requested RACER sample and analyze groundwater for PFAS and 1,4-dioxane and U.S. EPA's November 14, 2022, letter, which also asked that RACER sample for PFAS at this Site. 	25%

Summary of Contacts with Interested Parties

- There are periodic discussions with local representatives regarding the status of remediation at the Site and potential redevelopment possibilities and options.

Projected Work for Next Reporting Period (April 1 through September 30, 2023)

- Prepare draft 2023 Annual Environmental Action Budget Request.
- Provide support to U.S. EPA during its preparation of a Statement of Basis and the Final Decision process.
- Review current monitoring well network and prepare proposal for well abandonments.
- Respond to comments from U.S. EPA on the proposed PFAS and 1,4-dioxane scope of work, conduct sampling, and prepare a summary report.