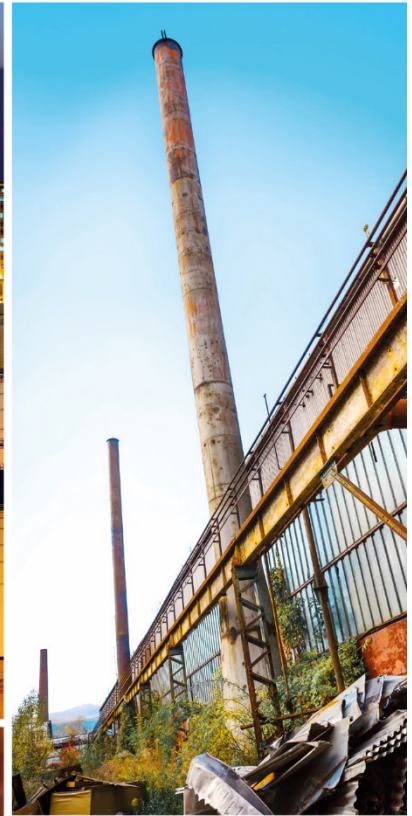




# **Semi-Annual Technical Progress Report January 2019 – June 2019**

RCRA Corrective Action - IND 980 700 801  
2915 Dr. Martin Luther  
King Jr. Boulevard, Anderson, IN  
Revitalizing Auto Communities  
Environmental Response Trust

Indiana Department of  
Environmental Management





## Table of Contents

|     |   |   |
|-----|---|---|
| 1.  | Introduction.....   | 1 |
| 2.  | Summary of RFI, Interim Measures, and Corrective Measures Activities .....                                    | 1 |
| 2.1 | RCRA Facility Investigation/Environmental Indicators Determination .....                                      | 1 |
| 2.2 | Interim Measures .....  | 1 |
| 2.3 | Corrective Measures.....  | 1 |
| 3.  | Summary of Findings .....   | 2 |
| 3.1 | RCRA Facility Investigation/Environmental Indicators Determination .....                                      | 2 |
| 3.2 | Interim Measures .....  | 2 |
| 3.3 | Corrective Measures.....  | 3 |
| 4.  | Summary of Changes to RFI, Interim and/or Corrective Measures.....  | 4 |
| 5.  | Summary of Contacts with Representatives of Local Community, Public Interest Groups, or State Government..... | 4 |
| 6.  | Summary of Problems or Potential Problems .....   | 4 |
| 7.  | Actions Taken To Rectify Problems.....  | 4 |
| 8.  | Changes in Personnel.....   | 4 |
| 9.  | Projected Work for July through December 2019.....  | 4 |
| 10. | Reports and Data .....  | 5 |

## Appendix Index

Appendix A Project Fact Sheet 27 (July 2019)



## **1. Introduction**

GHD, on behalf of the Revitalizing Auto Communities Environmental Response (RACER) Trust, has prepared this Semi-Annual Technical Progress Report for the RACER Trust facility located at 2915 Dr. Martin Luther King Junior Boulevard in Anderson, Indiana (Facility or Site).

This Semi-Annual Technical Progress Report has been prepared to summarize activities related to the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI), Interim Measures (IM) activities, and Corrective Measures (CM) at the Facility for the period of January through June 2019.

## **2. Summary of RFI, Interim Measures, and Corrective Measures Activities**

### **2.1 RCRA Facility Investigation/Environmental Indicators Determination**

There were no RFI activities conducted during this reporting period.

RFI activities are 100 percent complete.

### **2.2 Interim Measures**

Interim measures being conducted at the Site consist of routine groundwater and surface water monitoring and related reporting in accordance with the Site-wide Groundwater Monitoring Plan (AECOM, 2010) and subsequent recommendations made in the 2011 through 2018 Annual Groundwater Monitoring Reports.

On January 31, 2019, GHD submitted the 2018 Annual Groundwater Monitoring Report to IDEM on behalf of RACER Trust to summarize the groundwater and surface water sampling activities performed in 2018 and the results generated therefrom. The findings of the annual groundwater and surface water monitoring activities are presented in Section 3.2.

Semi-annual groundwater and routine surface water monitoring was conducted between April 24 and April 29, 2019 in accordance with the Site-Wide Groundwater Monitoring Plan.

Interim measures are ongoing.

### **2.3 Corrective Measures**

To support development of a revised Corrective Measures Proposal, the Bedrock Groundwater Investigation Report of Findings (GHD, March 19, 2019) was prepared and submitted to IDEM. The investigation was conducted to delineate the vertical and horizontal extent of bedrock groundwater impacts on-Site, east of Dr. Martin Luther King Junior Blvd. The findings of the investigation are presented in Section 3.3.



Also to support development of a revised Corrective Measures Proposal, the Former Plant 6 and Plant 9 Soil Vapor Investigation Work Plan (GHD, January 22, 2019) was implemented between March 12 and 21, 2019 to investigate the potential for vapor intrusion within the former Plant 6 and Plant 9 buildings. The Former Plant 6 and Plant 9 Soil Vapor Investigation Report of Findings was submitted to IDEM on June 17, 2019 and the findings are presented in Section 3.3.

The Environmental Restrictive Covenant for Tract B (Central) was prepared and submitted to IDEM on April 24, 2019. The purpose of the Environmental Restrictive Covenant is to ensure residual contamination at the Site does not pose an unacceptable risk to future on-Site receptors.

### **3. Summary of Findings**

#### **3.1 RCRA Facility Investigation/Environmental Indicators Determination**

There were no RFI activities conducted during this reporting period.

#### **3.2 Interim Measures**

Groundwater and surface water monitoring activities completed in 2018 were summarized in the 2018 Annual Groundwater Monitoring Report which was submitted to IDEM on January 31, 2019. Conclusions from the 2018 Site-wide groundwater and surface water monitoring are provided below.

1. In October 2018, the extent of the AOC 1 – South Court plume remained defined on the east side with monitoring wells MW 37, MW 46, and MW 84 that were free of detected concentrations of volatile organic compounds (VOCs) (MW 37 and MW 84) or contained very low estimated concentrations of VOCs (MW 46). Vinyl chloride has been detected in east boundary monitoring well MW 16 in the last two annual monitoring events. Monitoring wells MW 29 and MW 59 have not been sampled since 2013 to further define the east boundary of the plume. At the north perimeter boundary of the AOC 1 – South Court plume, Unit 3D monitoring well MW 75 is free of detected VOC concentrations. The Unit 3S monitoring well in this area (MW 76/MW 76R-17) exhibits very low concentrations of cis-1,2-dichloroethene (cis-1,2-DCE). In 2018, MW 49 south of the AOC 1 – South Court area had a detection of TCE above the screening level. Samples from this well have had elevated reporting limits since the October 2014 monitoring event. Downgradient of MW 49 (east-northeast and east), trichloroethene (TCE) was not detected in the sample collected from MW 89-11 and the sample only exhibited very low concentrations of other VOCs consistent with historical monitoring events.
2. In October 2018, the southern and northern extents of the WWTP plume remained defined with perimeter monitoring wells MW-2, MW 56, MW 61, MW 86, MW 88, and MW97R-16 that were free of detected concentrations of VOCs or contained very low concentrations of VOCs.
3. When considering historic data and comparing 2018 results to those from the 2017 evaluation, the observed trends for TCE, cis-1,2-DCE and vinyl chloride concentrations in 2018 were consistent with the assessment conducted in 2017.
4. Groundwater plume stability was assessed considering the most recent results (3 to 5-years). The results from the Mann-Kendall trend test considering the most recent results showed that 13



of the 22 increasing trends identified using the entire monitoring period were observed to be stable (no statistically significant trend) during the recent period. Nine increasing trends observed during the entire monitoring period were also increasing during the recent period. However, five additional increasing trends were observed for the recent period, when considering the entire monitoring period, they were observed to be stable (i.e., cis-1,2-DCE at AOC 1 source monitoring well MW 31R and WWTP margin monitoring well MW 58, and vinyl chloride at WWTP tail monitoring well MW-4, AOC 1 tail monitoring well MW 79, and WWTP margin monitoring well MW 80). Data from the last 3 to 5-years indicates that the majority of TCE, cis-1,2-DCE and vinyl chloride concentrations have no statistically significant increasing trends and therefore have been stable.

5. Results of the preliminary U.S. EPA score sheet screening and the presence of daughter products in the groundwater indicates that natural attenuation of VOCs is occurring at the Site in both the AOC 1 – South Court plume and the former WWTP Area plume.
6. Three surface water sampling events were conducted in 2018 (April, July, and October) at the Pond Intake and Pond North surface water monitoring locations at the Meadowbrook Golf Course central irrigation pond. Cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride were detected at surface water monitoring locations Pond North and Pond Intake during one or more surface water sampling events conducted in 2018. The detected concentrations of vinyl chloride at the Pond North and Pond Intake sampling locations exceeded the relevant screening criteria (i.e., recreator). No other parameters were detected above relevant screening criteria at surface water monitors Pond North or Pond Intake.
7. Based on monitoring at adjacent monitoring well MW 85, the golf course irrigation pond appears to be within the former WWTP Area plume.
8. Based on the 2018 groundwater results from residential well MW 89-11, there is no current unacceptable risk to nearby residents due to groundwater volatilization to indoor air.

### **3.3 Corrective Measures**

The results of the Bedrock Groundwater Investigation indicate that shallow bedrock VOC impacts at MW 81 have not migrated deeper in the bedrock unit. The results also indicate that shallow bedrock VOC impacts have been delineated to the east at MW 99-18 and that there is a western gradient across the east portion of the Site that would not allow for shallow bedrock to migrate off-Site towards Madison Avenue.

The results of the Former Plant 6 and Plant 9 Soil Vapor Investigation provided sufficient evidence to support a conclusion that exposure via vapor intrusion at the former Plant 6 and Plant 9 buildings, if occurring at all, does not pose an unacceptable commercial/industrial or residential risk and should not warrant further investigation or remediation.



#### **4. Summary of Changes to RFI, Interim and/or Corrective Measures**

There were no changes to the RFI, Interim Measures and/or Corrective Measures during the reporting period.

#### **5. Summary of Contacts with Representatives of Local Community, Public Interest Groups, or State Government**

The Environmental Restrictive Covenant for Tract B (Central) was submitted to IDEM on April 24, 2019. On May 21, 2019, IDEM approved the Environmental Restrictive Covenant.

On June 10, 2019 IDEM provided comments on the 2018 Annual Monitoring Report RCRA Corrective Action (GHD, January 31, 2019) stating that the 2018 groundwater monitoring program was in compliance with the Site-Wide Groundwater Monitoring Plan and proposing that site sampling shift from semi-annual to every 18-months.

#### **6. Summary of Problems or Potential Problems**

No problems were encountered during this reporting period.

#### **7. Actions Taken To Rectify Problems**

No problems were encountered during this reporting period.

#### **8. Changes in Personnel**

There were no changes to personnel during the reporting period.

#### **9. Projected Work for July through December 2019**

Projected work for July through December 2019 includes the following:

- Response to IDEM's Comments on the 2018 Annual Monitoring Report
- Response to IDEM's Comments on the Bedrock Groundwater Investigation Report of Findings
- Preparation and submittal of the Revised Corrective Measures Proposal
- Disposal of investigative derived waste



## **10. Reports and Data**

The Semi-Annual Technical Progress Report July 2018 – December 2018 was submitted to IDEM on January 31, 2019.

The 2018 Annual Groundwater Monitoring Report was submitted to IDEM on January 31, 2019.

The Bedrock Groundwater Investigation Report of Findings was submitted to IDEM on March 19, 2019.

The Former Plant 6 and Plant 9 Soil Vapor Investigation Report of Findings was submitted to IDEM on June 17, 2019.

An update of the RCRA Corrective Action activities completed at the Facility is presented in Project Fact Sheet 27 (July 2019) submitted with this Semi-Annual Technical Progress Report as Appendix A.

# Appendices

# **Appendix A**

## **Project Fact Sheet 27 (July 2019)**



# Revitalizing Auto Communities Environmental Response Trust

Project Fact Sheet 27 | July 2019 | [www.racertrust.org](http://www.racertrust.org)

## RCRA CORRECTIVE ACTION REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST

2915 Dr. Martin Luther King Jr. Boulevard (Formerly Pendleton Ave.) Anderson, Indiana

### INTRODUCTION

The Revitalizing Auto Communities Environmental Response (RACER) Trust has prepared this Project Fact Sheet to update the local community about environmental activities being conducted at the facility located at 2915 Dr. Martin Luther King Jr. Boulevard (formerly Pendleton Avenue), Anderson, Indiana (Site). These activities are conducted under the oversight of the Indiana Department of Environmental Management (IDEM) and in accordance with an Agreed Order issued for the Site.

The Corrective Action process includes a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) of the soil and groundwater conditions at the Site. Based upon an evaluation of the results obtained during these investigations, appropriate corrective measures will be proposed and implemented.

### SITE BACKGROUND

The Site is located on the southwest side of Anderson in Madison County, Indiana. Formerly, the facility comprised approximately 3,000,000 square feet of manufacturing area situated on 234 acres. GM operations at the Site began in 1929. Additional plant buildings were constructed and the plants were expanded several times between 1937 and 1989. Demolition of the plant commenced in 2007. Demolition of the main plant buildings and restoration activities were completed in 2009

As a result of General Motors Corporation's (GMC's) 2009 bankruptcy, certain operating assets of GMC were sold on July 10, 2009 to a newly formed company known as General Motors LLC. The remaining unsold assets, including the Site, were retained by GMC, which was renamed Motors Liquidation Company (MLC), in its capacity as debtor-in-possession in the bankruptcy case. In October 2010, the United States Government announced that MLC had agreed to resolve its liabilities at 89 sites relating to liabilities under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), RCRA, and the Clean Air Act through an environmental response trust fund. On March 31, 2011, the RACER Trust became effective and now owns, and conducts, manages, and funds cleanup at the 89 sites formerly owned by MLC, including the Site.



### PROJECT FACT SHEET

Key documents that have been submitted to U.S. EPA and IDEM and are available for review in the public repository. The following documents have been submitted since 2008:

- Corrective Measures Plan, March 31, 2008
- Site-Wide Groundwater Monitoring Plan, March 31, 2008
- Notification to IDEM of a new potential contaminant source area, September 5, 2008
- Progress Reports from 1998 to present
- Annual Groundwater Monitoring Reports for 2008 to 2019
- Vapor Intrusion Study Work Plan, July 2010
- Residential Vapor Intrusion Assessment Work Plan, September 1, 2011
- Investigation Work Plan, September 2, 2011
- Vapor Intrusion Study Work Plan Implementation – Technical Memorandum, November 3, 2011
- Residential Vapor Intrusion Assessment Technical Memorandum, March 7, 2012
- Supplemental RFI Results Technical Memorandum, March 7, 2012
- Soil and Perched Groundwater Delineation Work Plan, June 26, 2012
- Wastewater Treatment Plant Source Area Investigation Work Plan, January 4, 2013
- Perched Groundwater Investigation Work Plan, April 3, 2013
- Revised Risk Assessment Approach Letter, April 26, 2013
- Wastewater Treatment Plant Source Area Investigation Technical Memorandum, July 31, 2013
- Revised Risk Assessment Interim Deliverable, August 9, 2013
- Wastewater Treatment Plant Groundwater Investigation Work Plan, September 27, 2013
- Refined Human Health Risk Assessment and Derivation of Site-Specific Risk-Based Screening Levels, October 2013
- Refined Human Health Risk Assessment - Addendum, May 12, 2014
- Perched Groundwater Investigation Report of Findings, May 12, 2014
- RFI Final Report, June 2014
- Residential Well Sampling Work Plan, October 23, 2014
- Revised South Court Soil Investigation and WWTP Plume Boundary Well Installation Work Plan, November 14, 2014
- Wastewater Treatment Plant Groundwater Investigation Report of Findings, March 26, 2015
- City Beautification of Anderson Parking Lot Memorandum, June 1, 2015
- South Court Soil and WWTP Plume Boundary Investigation Report of Findings, June 4, 2015
- Supplemental Analysis in Support of the CMP, August 12, 2015
- Chromium and Hexavalent Chromium Groundwater Data Memorandum, September 23, 2015
- Refined Human Health Risk Assessment – Addendum 2, February 2, 2016
- Chromium Groundwater Investigation Work Plan, March 9, 2016
- Chromium Groundwater Investigation Report of Findings, August 3, 2016
- Request for Reduction of Progress Reporting, February 24, 2017
- Residential Well Sampling Report of Findings, December 7, 2017
- Bedrock Groundwater Investigation Work Plan, May 8, 2018
- Former Plant 6 and Plant 9 Soil Vapor Investigation Work Plan, January 22, 2019
- Bedrock Groundwater Investigation Report of Findings, March 19, 2019
- Former Plant 6 and Plant 9 Soil Vapor Investigation Report of Findings, June 17, 2019

## RCRA CORRECTIVE ACTION

The RACER Trust is currently conducting Corrective Action activities at the Site. Corrective Action activities are required for all facilities that applied for a permit to store hazardous waste and include an evaluation of whether plant waste management operations have impacted the environment. The program includes a RFI that is designed to identify and address any significant risks to human health or the environment resulting from the release of hazardous waste or hazardous constituents to environmental media such as soil or groundwater. The scope of the RFI and required cleanup work has been and will continue to be reviewed with IDEM. The activities will be conducted according to standards that are protective of human health and the environment.

The Corrective Action process uses Environmental Indicators (EIs) to evaluate and report on current site conditions related to potential current human exposure and potential groundwater migration. Under the RCRA program, U.S. EPA's top priority is to make sure that these two Environmental Indicators are satisfied at a given site. MLC submitted reports to IDEM for these two Environmental Indicators to demonstrate that current human exposure and migration of contaminated groundwater are under control. Groundwater monitoring to verify plume stability is ongoing.

IDEM issued a Notice of Corrective Action Complete for Tract B (North) detailing IDEM's Final Decision, stating that RACER Trust has fulfilled its obligations under Indiana's RCRA Corrective Action Program for the parcel of land.

## RCRA FACILITY INVESTIGATION

RFI activities have been completed at the Site. The purpose of an RFI is to investigate any areas of the Site that may need further action and to determine what additional steps might be appropriate. The results of these investigations, including an assessment of potential risk, were documented in reports that have been submitted to IDEM and copies are available for review in the IDEM's virtual file cabinet. A revised Final RFI Report (Conestoga-Rovers & Associates, June 2014) was submitted to IDEM providing details of historical investigations summarized in the previous Final RFI Reports and is amended with details of investigations conducted since that time. The revised and Final RFI Report was approved by IDEM on July 22, 2014.

A Refined Human Health Risk Assessment was prepared to assess the results of investigations conducted to date to determine whether realistic exposure levels of Site constituents have the potential to adversely affect human health on- or off-Site. This report was submitted to IDEM in October 2013 and approved with the exception of the non-default residential and commercial/industrial vapor intrusion groundwater screening levels in November 2013.

On May 12, 2014 an Addendum to the Refined Human Health Risk Assessment was submitted to IDEM detailing that RACER Trust agreed to use IDEM's Remediation Closure Guide generic residential and commercial/industrial groundwater vapor exposure screening

levels. The Refined Human Health Risk Assessment, coupled with the Addendum, was approved by IDEM on May 19, 2014.

RFI activities are 100-percent complete.

## COMPLETED INTERIM MEASURES

Interim Measures (IM) were conducted in the South Court Area in July 2005 to address concentrations of trichloroethene (TCE) in a small area of soil and shallow groundwater that were significantly higher than in the surrounding area.

Soil was excavated to the depth of the perched water table at approximately 8 feet below ground and disposed off-site. Hydrogen-Releasing Compound® (HRC) was mixed into soil at the bottom of the excavation, to enhance degradation of TCE in groundwater. Following placement of the HRC®, the excavation was backfilled and the pavement replaced.

Interim measures were also conducted in 2007 to plug and abandon five former groundwater production wells at the facility. This work was performed according to Indiana Department of Natural Resources guidelines.

The RACER Trust continues to complete interim Site-wide groundwater monitoring in accordance with the Site-wide Groundwater Monitoring Plan.

## CORRECTIVE MEASURES

A draft Corrective Measures Proposal was submitted to IDEM in March 2008. A revised corrective measures proposal is being prepared as necessary incorporating the results of activities completed since the time the initial proposal was submitted, including a revised Human Health Risk Assessment and additional investigations. Environmental Restrictive Covenants for Tract A, Tract B (North), Tracts C to F, Crawford Field, Lot 1 and former Plant 9 have been completed, approved by IDEM and recorded.

## REDEVELOPMENT

RACER Trust is currently marketing portions of the Site for redevelopment. On April 1, 2015, the northern portion of the former main manufacturing building area was sold to GDI Construction. RACER Trust donated Tracts C to F and Crawford Field to the City of Anderson on September 14, 2015. Lot 1 was sold on July 6, 2016 to Tower Anderson, LLC.

## UPCOMING ACTIVITIES

Routine groundwater and surface water monitoring and reporting is ongoing. A revised Corrective Measures Proposal is in the process of being completed.

## **PUBLIC PARTICIPATION**

An information repository has been established where current project related documents are available for public review. The information repository is located at:

### **Anderson Public Library**

111 East 12th Street  
Anderson, IN 46016  
Tel: (765) 641-2450

Project Fact Sheets will be issued periodically during the implementation of the Corrective Action program to keep the community informed of ongoing activities at the Site.

## **CONTACT INFORMATION**

### **IDEM**

**Robert Marshall**

Tel: (317) 232-4534

Toll free: (800) 451-6027

### **RACER Trust**

**Robert (Bob) Hare**

Tel: (313) 486-2908



## about GHD

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

**Robert Catallo**  
Robert.catallo@ghd.com  
905-682-0510

[www.ghd.com](http://www.ghd.com)