



**QUARTERLY TECHNICAL PROGRESS REPORT  
JULY 2013 – SEPTEMBER 2013  
RCRA CORRECTIVE ACTION  
IND 980 700 801**

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REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL  
RESPONSE TRUST**

**Prepared for: Indiana Department of Environmental  
Management**

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## **Section 1.0 Introduction**

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

This Quarterly 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 July through September 2013.

## **Section 2.0 Summary of RFI, Interim Measures, and Corrective Measures Activities**

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

RFI activities conducted during this reporting period included preparation and submittal of the Wastewater Treatment Plant Source (WWTP) Area Investigation Technical Memorandum (CRA, July 10, 2013), implementation of the Perched Groundwater Investigation Work Plan (CRA, April 3, 2013), and preparation of the revised Site-specific Risk Assessment (SSRA).

The WWTP Source Area Work Plan (CRA, January 4, 2013) was implemented between February 25 and 27, 2013. The objective of the Work Plan was to document the soil quality within the perceived WWTP plume source area to assist in the development of remedial options, if necessary. The results were reported to Indiana Department of Environmental Management (IDEM) in the WWTP Area Investigation Technical Memorandum and a summary of the findings from the investigation is provided in Section 3.0.

The objective of the Perched Groundwater Investigation Work Plan was to delineate metals impacted groundwater found in the surface fill (Unit 1) in the vicinity of the former Bay M26/M27 by installing an overcased Unit 3 monitoring well (MW92-13) in the vicinity of the Unit 1 groundwater exceedances for vertical groundwater delineation and collecting groundwater samples from nearby Unit 3 monitoring wells.

Implementation of the Perched Groundwater Investigation Work Plan included completion of two groundwater sampling events (May and July 2013). The first groundwater sampling event was completed on May 2 and 7, 2013. The second groundwater sampling event was completed on July 2 and 8, 2013. During each monitoring event, groundwater samples were collected from Unit 1 wells MW90-12 and MW91-12, existing Unit 3 wells MW51 and MW76 and the newly installed Unit 3 well

MW92-13 for chemical analysis of select dissolved metals (arsenic, copper, chromium, hexavalent chromium, lead, nickel, zinc) and total and amenable cyanide. A summary of the findings from the investigation is provided in Section 3.0.

CRA's Revised Risk Assessment Interim Deliverable (CRA, August 9, 2013) to IDEM demonstrated CRA's approach to revising the human health risk assessment (HHRA) for the Site to document cleanup criteria protective of human health and the environment that will be used to develop a remedial strategy for the Site. Preparation of the revised SSRA is ongoing and in the review stages.

The RFI activities are considered 95-percent completed.

## **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 2013 Annual Groundwater Monitoring Report.

On July 17, 2013, three surface water samples, including one field duplicate, were collected from the irrigation pond at the Meadowbrook Golf Course in accordance with the Site-Wide Groundwater Monitoring Plan.

## **2.3 Corrective Measures**

No corrective measures activities were conducted during this reporting period.

With the exception of submittal of the draft Corrective Measures Proposal (CRA, March 2008), the corrective measures activities have not commenced and are considered 0-percent complete.

## **Section 3.0 Summary Of Findings**

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

CRA's WWTP Area Investigation Technical Memorandum (CRA, July 10, 2013) summarizes the results of the soil investigation that was conducted within the perceived source area (near MW 68) for the WWTP Area chlorinated volatile organic compound (VOC) groundwater plume. The WWTP Source Area Work Plan (CRA, January 4, 2013) was implemented between February 25 and 27, 2013. The results of the investigation concluded that there were no exceedances above IDEM's Industrial/Commercial Remediation Closure Guide Screening Levels. As such, soil in the vicinity of MW68, upgradient of the former WWTP, are not acting as an ongoing source to VOC groundwater impacts. IDEM agreed with the

conclusions presented in the Technical Memorandum in a letter to RACER Trust dated September 5, 2013.

In May and July 2013, groundwater samples were collected from MW51, MW76, MW90-12, MW91-12, and MW92-13 as part of the Perched Groundwater Investigation Work Plan implementation to delineate the horizontal and vertical extents of perched groundwater metals impacts. The May and July 2013 sampling events confirmed the presence of elevated metals concentrations in Unit 1 (fill) in the vicinity of the former Bay M26/M27 (MW90-12, MW91-12) but not in the underlying Unit 3 aquifer (MW92-13). The results of the groundwater metals and cyanide analyses have been compared to the preliminary Site-Specific Commercial/Industrial Tap Water Use Criteria which is the most applicable exposure pathway to Site groundwater. The comparison indicates that groundwater quality in Unit 1 exceeds the preliminary Site-Specific Commercial/Industrial Tap Water Use Criterion for hexavalent chromium. Site groundwater is not currently used for any purpose. Future restrictions will be placed on title to mitigate this exposure potential (i.e., prohibit groundwater use and implementation of an appropriate health and safety plan).

### **3.2 Interim Measures**

The surface water samples collected on July 17, 2013 from the irrigation pond on the Meadowbrook Golf Course exhibited detectable concentrations of 1,1-dichloroethane ranging from 0.90 to 1.7 micrograms per liter ( $\mu\text{g/L}$ ), cis-1,2-dichloroethene ranging from 17 to 32  $\mu\text{g/L}$ , trans-1,2-dichloroethene ranging from 0.62 to 1.1  $\mu\text{g/L}$ , and vinyl chloride ranging from 4.8 to 14  $\mu\text{g/L}$ . The results of the surface water analyses have been compared to the preliminary Site-Specific Recreator Criteria which is protective of human direct contact to surface water. With the exception of vinyl chloride, all detected constituents are below the Site-Specific Recreator Criteria. No other analyzed parameters were detected above the associated reporting limits.

Interim groundwater monitoring and reporting is ongoing. The results of the surface water monitoring activities conducted in July 2013 will be submitted with the 2013 Annual Groundwater Monitoring Report due to IDEM on January 31, 2014.

### **3.3 Corrective Measures**

No corrective measures activities were conducted during this reporting period.

## **Section 4.0 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.

## **Section 5.0 Summary of Contacts With Representatives of Local Community, Public Interest Groups, or State Government**

On July 12, 2013, CRA, on behalf of RACER Trust, submitted the Wastewater Treatment Plant (WWTP) Source Area Investigation Technical Memorandum to IDEM.

On July 31, 2013, CRA, on behalf of RACER Trust, submitted the Quarterly Technical Progress Report for April 2013 through June 2013 and Fact Sheet No. 15 to IDEM.

On August 9, 2013, CRA, on behalf of RACER Trust, submitted the Revised Risk Assessment Interim Deliverable to IDEM.

On August 22, 2013, IDEM, RACER, and CRA participated in a conference call to discuss the Revised Risk Assessment Interim Deliverable.

On September 5, 2013, IDEM agreed with the conclusions of the Wastewater Treatment Plant (WWTP) Source Area Investigation Technical Memorandum.

## **Section 6.0 Summary of Problems or Potential Problems**

CRA encountered hexavalent chromium detection limit challenges as IDEM's recent Remediation Closure Guide Screening Level (RCGSL) for residential tap water (0.31 µg/L) and CRA's recently developed non-potable groundwater exposure Site-specific cleanup level (SSCLRCR) (3.19 ug/L) are below the standard laboratory reporting limit of 10 to 20 µg/L using method 7196A. This poses some challenges when interpreting non detect results with detection limits that are in excess of the criteria.

IDEM responded to CRA's concerns over the standard laboratory reporting limit for hexavalent chromium in groundwater in an August 12, 2013 email. IDEM stated that EPA recommends that laboratories use EPA Method 218.7, "Determination of Hexavalent Chromium in Drinking Water by ion Chromatography with Post-Column Derivatization and UV-Visible Spectroscopic Detection". By following EPA Method 218.7, laboratories are capable of attaining a detection limit as low as 0.005 µg/L and can support a reporting limit of 0.03 µg/L (ppb). Any equivalent ion chromatographic system from any manufacturer with comparable hardware that can generate this performance and meet the quality control requirements in Section 9.0 of EPA Method 218.7 may also be used.

## **Section 7.0 Actions Taken To Rectify Problems**

CRA contacted multiple laboratories throughout the United States and found two labs that were capable of using EPA Method 218.7 to analyze for hexavalent chromium in groundwater. Method 218.7 will be

used if necessary, to demonstrate compliance with the RCGSL for residential tap water and the SSCLRCR. However the cost to analyze for hexavalent chromium in groundwater using EPA Method 218.7 ranges between \$85 to \$130 per sample, where as the cost to analyze for hexavalent chromium in groundwater using the standard laboratory method 7196A is \$18 per sample.

## **Section 8.0 Changes in Personnel**

There were no changes to personnel during the reporting period.

## **Section 9.0 Projected Work for October Through December 2013**

Projected work for October through December 2013 includes the following:

- Site-wide hydraulic monitoring, semi-annual groundwater sampling, and fall surface water sampling in accordance with the Site-Wide Groundwater Monitoring Plan
- MNA sampling during the semi-annual groundwater sampling event
- Preparation and submittal of updated Environmental Restrictive Covenants for Lot 1 and former Plant 9
- Preparation and submittal of the Perched Groundwater Investigation Technical Memorandum
- Preparation and submittal of the revised Risk Assessment
- Preparation and implementation of the Wastewater Treatment Plant Groundwater Investigation Work Plan
- Preparation and implementation of the Monitoring Well Decommissioning Work Plan
- Approval of the 2014 Budget Request

## **Section 10.0 Reports and Data**

The Wastewater Treatment Plant (WWTP) Source Area Investigation Technical Memorandum was submitted to IDEM on July 12, 2013.

The Quarterly Technical Progress Report, April 2013 through June 2013, was submitted to IDEM on July 31, 2013.

The Revised Risk Assessment Interim Deliverable was submitted to IDEM on August 9, 2013.