



**Revitalizing Auto Communities
Environmental Response Trust**

Ms. Michelle Kaysen
U.S. Environmental Protection Agency, Region 5
Waste Management Division
77 West Jackson Blvd., DE-9J
Chicago, IL 60604-3590

January 14, 2014

RE: Fourth Quarter 2013 Progress Report
RCRA Corrective Action
Former GM Delco Plant 5, Kokomo, IN
USEPA ID No. IND000806844

Dear Ms. Kaysen:

In accordance with the Performance-based Administrative Order on Consent between the U.S. Environmental Protection Agency Region 5 (USEPA) and Revitalizing Auto Communities Environmental Response (RACER) Trust, please find the attached progress report for the fourth quarter of 2013 (October 1, 2013 through December 31, 2013).

Please let me know if you have any questions about the report.

Sincerely,

Robert W. Hare, P.E., CHMM
Cleanup Manager – (IL, IN, KS, MO, NJ, WI)

Attachment A – Fourth Quarter 2013 Progress Report

C: Glynda Oakes, IDEM Office of Land Quality (E-mail)
Howard County Health Department (CD)
Carey Stranahan, City of Kokomo (CD)
Kokomo Public Library (Public Information Repository) (CD)
Sarah Fisher, ARCADIS (CD)

ATTACHMENT A
FOURTH QUARTER 2013 PROGRESS REPORT
PERFORMANCE-BASED ADMINISTRATIVE ORDER ON CONSENT
RCRA CORRECTIVE ACTION
FORMER GM DELCO PLANT 5, KOKOMO, IN
OCTOBER 1, 2013 TO DECEMBER 31, 2013

WORK PERFORMED THIS QUARTER

- Collected groundwater samples from passive diffusion bag samplers on October 16, 2013.
- Completed the Pilot ISCO Treatment Study field work in November and December 2013.
- Completed and submitted to USEPA on December 10, 2013, a draft Conceptual Site Model (CSM) for the Site. This draft CSM was reviewed with USEPA during a meeting with USEPA in Chicago.

DATA AVAILABLE DURING THIS QUARTER

- Analytical results from the October 2013 groundwater sampling event are included in the enclosed *Semi-Annual Data Report, Second Half 2013*.

PROBLEMS ENCOUNTERED

- None.

SUMMARY OF PROBLEM RESOLUTION

- NA

POTENTIAL PROBLEMS

- Given the saturated conditions observed at the vapor intrusion focus area, soil gas sampling has been problematic at several of the soil gas ports at the Site.

ESTIMATED PERCENT COMPLETE AND INFORMATION SUMMARY FOR SELECTED ACTIVITIES

- DOCC 100%
Summarized available information for the Site and identified 7 Areas of Interest (AOIs), 4 of which require additional investigation. No ecological habitat identified at or in the immediate vicinity of the Site. Due May 15, 2006 and submitted October 10, 2005.
- Public Participation Plan 100%

- RFI Work Plan 100%
(Submitted December 15, 2005)
- RFI Phase I Implementation 100%
Objective was to characterize the hydrogeology, to evaluate potential off-Site groundwater impacts, and to characterize AOIs at the Site. Phase I included installation of 38 soil borings and 20 monitoring wells. Ninety-five (95) soil, 8 borehole water, and 23 groundwater samples were analyzed. Completed in October 2005.
- RFI Data Report (Phase I data) 100%
Major findings included identifying small, isolated zones with perched groundwater, two continuous saturated sand units over the investigation area with shallow groundwater flow generally to the southeast. TCE is primary chemical of concern with source areas identified in AOIs 5 and 7. TCE groundwater impacts extend off-Site but not present in borehole water samples collected approximately 800 feet from the Site. No potable water wells identified in immediate vicinity of the Site. Currently no unacceptable risks to human health have been identified. Submitted January 19, 2006.
- RFI Phase II Implementation 100%
Objective was to further characterize on- and off-Site groundwater impacts and AOIs on Site. Phase II included installation of 29 soil borings and 20 monitoring wells. Seventy-five (75) soil, 2 borehole water, and 20 groundwater samples were analyzed. Completed in March 2006.
- RFI Data Report (updated to include Phase II data) 100%
Major findings included more precise delineation of on- and off-Site TCE groundwater impacts, groundwater flow in the bedrock appears to generally be to the northeast and TCE distribution in bedrock groundwater indicates an upgradient source of TCE to the bedrock groundwater, more precise delineation of source area soil impacts at AOIs 5 and 7, and identification of a possible additional source area in the vicinity of the former south manufacturing building. Currently no unacceptable risks to human health have been identified. Submitted May 26, 2006.
- RFI Phase III Implementation 100%
Objective was to further characterize on- and off-Site groundwater impacts and AOIs on Site. The initial RFI Phase III fieldwork included installation of 6 soil borings and 13 monitoring wells. Fourteen (14) soil, 4 borehole water, and 42 groundwater samples were submitted for analysis. An additional 6 soil borings and 4 monitoring wells were installed, and 16 soil samples and 4 groundwater samples were collected as part of additional “step-out” activities (Phase IIIb) performed based on review of preliminary RFI Phase III soil and borehole water sample analytical data. Following review of the preliminary data from the “step-out” activities (Phase IIIb), two additional monitoring wells were installed (Phase IIIc) to further characterize and delineate the extent of groundwater containing TCE in the S1 unit in the northwestern portion of the Site (MW-0623-S1), and in the S2 unit east of the Site along Lordeman Street (MW-0607-S2). Access was obtained to the adjacent former Midwest

Plating property where three monitoring wells were installed, and soil and groundwater samples were collected. Started on October 9, 2006 and completed in March 2007.

- RFI Data Report (updated to include Phase III data) 100%

Major findings included more precise delineation of on- and off-Site groundwater impacts, groundwater flow in the bedrock appears to generally be to the south, the source of the cis-1,2-DCE in bedrock groundwater is uncertain, additional characterization of the groundwater in the bedrock is necessary, there are relatively high concentrations of TCE and PCE in the soil at the former Midwest Plating property, and more precise delineation of source area soil impacts at AOIs 5 and the former south manufacturing building. Currently no unacceptable risks to human health have been identified. Submitted June 1, 2007.

- RFI Soil Gas Sampling 100%

Objective is to allow for verifying the appropriateness of the groundwater vapor intrusion criteria that have been used to guide the RFI field investigation at the Site. A work plan addendum was submitted to USEPA on July 10, 2007. A conference call was held with USEPA to discuss the work plan and the work plan was subsequently revised incorporating USEPA's comments and resubmitted to USEPA. Soil gas monitoring ports were installed in the residential area east of the Site on August 7, 2007, and soil gas samples were collected on August 13, 2007. Preliminary soil gas analytical results were submitted to USEPA on August 28, 2007 and a conference call was held to discuss those results on August 30, 2007. Additional soil gas sampling ports were installed on September 4, 2007, and additional soil gas samples were collected on September 17, 2007. The preliminary analytical results from the second sampling event were submitted to USEPA on September 27, 2007. USEPA provided comments on the preliminary data in a letter dated October 2, 2007. The comment letter and results were discussed during an October 16, 2007, conference call. Additional risk evaluation was completed and submitted to USEPA on October 30, 2007, and a conference call to discuss the additional information was held on November 28, 2007. GM's response to USEPA's October 2, 2007 comment letter was submitted to USEPA on December 3, 2007.

- Soil Gas Investigation Data Report 100%

The final soil gas investigation data report was submitted to USEPA on December 21, 2007.

- RFI Phase IV Implementation 100%

Objective is to further characterize on-Site soil impacts in the former south manufacturing building and to characterize the groundwater flow and delineate the horizontal and vertical extent of cis-1,2-DCE in the groundwater in the bedrock.

A total sixty-two (62) soil borings were advanced from August 29, 2007 to September 5, 2007 within and in the vicinity of the former north and south manufacturing buildings, and field screened. Soil samples were collected based on field observations, and in total thirty-one (31) soil samples were submitted for laboratory analysis. An additional 26 soil borings were advanced from November 19, 2007 to November 20, 2007 to delineate TCE within and in the vicinity of the north and south manufacturing buildings. A total of 60 soil samples were submitted for laboratory analysis. An additional fourteen (14) soil borings were

advanced on January 15, 2008 to delineate TCE within and in the vicinity of the north and south manufacturing buildings. A total of fifteen (15) soil samples were submitted for laboratory analysis. Based on review of this data, TCE is adequately delineated.

Installation of the pilot bedrock boring, packer testing, FLUTE testing, discrete low flow vertical groundwater sampling, and isolated groundwater sampling was completed between August 20, 2007 and December 8, 2007. A preliminary report of the results from the pilot bedrock boring was submitted to USEPA on November 16, 2007. An updated report was submitted to USEPA on March 21, 2008. Three additional bedrock monitoring wells were installed in the upper transmissive zone from December 4, 2007 to December 15, 2007. Installation of the additional three deeper bedrock boreholes was completed from April 14, 2008 to May 1, 2008. FLUTE hydraulic profiling of the bedrock boreholes was completed from May 13, 2008 to May 15, 2008. The technical memo with the results of the profiling was submitted to USEPA on July 10, 2008. Discrete depth vertical groundwater sampling (packer sampling) of select intervals in the boreholes was completed in the third quarter 2008. An updated technical memo to summarize the data and provide recommendations for future groundwater sampling was prepared and submitted to USEPA on October 20, 2008. A groundwater sampling event was completed in November 2008 that included collecting depth to water information across the entire monitoring well network, collecting samples from a subset of approximately 30 existing wells, and discrete depth vertical groundwater sampling (packer sampling) of select intervals in the boreholes, all to confirm the characterization of contaminated groundwater on- and off-Site.

- RFI Supplemental Data Report (updated to include Phase IV soil data) 100%
Major findings included more complete characterization of on-Site soil impacts at AOIs 2, 3 and the former north and south manufacturing buildings. In addition, the Phase IV soil results were evaluated relative to the determination included in the CA725 Report for the Former GM Delco Plant 5 Facility in Kokomo, Indiana (ENVIRON 2007) that all current human exposures to “contamination” at or from the Facility are under control, based on soil data collected prior to September 1, 2007. The evaluation of the Phase IV soil data concluded that results do not alter the conclusions presented in the CA725 Report or the “YE” determination for the CA725. Submitted June 27, 2008.
- Groundwater Evaluation 100%
A draft groundwater evaluation was prepared to provide the USEPA with GM’s evaluation of groundwater quality and flow data collected through February 2009. Submitted on April 10, 2009. This evaluation will be included in the RFI Report. A meeting was held with USEPA on May 19, 2009 to discuss the evaluation and proposed additional investigation.
- Additional Groundwater Investigation 100%
Groundwater sampling completed June 17 through 19, 2009.
- Draft RFI Report 100%
(Submitted October 5, 2009)
A meeting was held with USEPA on October 27, 2009, to review the draft report. USEPA provided comments on the human health risk assessment on December 22, 2009. A call was

held with USEPA on February 22, 2010 to discuss USEPA's comments on the RFI risk assessment. Based on that call a revised RFI Report was submitted to USEPA for review on March 18, 2010.

- Final RFI Report 100%

The final RFI Report was submitted to USEPA on May 21, 2010.

- Human Health EI (CA725) Report 100%
(Submitted November 30, 2007)

Minor comments received from USEPA on December 12, 2007, and revisions submitted on December 20, 2007. USEPA approved the determination on January 3, 2008.

- Groundwater Migration EI (CA750) 100%
(Submitted November 30, 2009)

A draft determination was submitted to USEPA on October 30, 2009 and was reviewed with USEPA via teleconference on November 12, 2009. The final determination was submitted to USEPA on November 30, 2009. USEPA approved the determination on December 22, 2009.

- Draft Corrective Measures Proposal 100%

(Originally due June 30, 2010, Revised due date of August 31, 2010, Submitted on August 30, 2010)

MLC requested an extension to submit the CMP on June 22, 2010. USEPA agreed to extend the submittal date for the CMP to August 31, 2010. The draft CMP was submitted to USEPA on August 30, 2010. The draft CMP included proposed corrective measures to mitigate potentially significant future exposures that could result from historic site activities. The draft CMP also included documentation of groundwater modeling performed to support the identification of the area(s) where a groundwater use restriction should be pursued as part of final corrective measures. USEPA and MLC met on November 17, 2010 to discuss the draft CMP. Based on that meeting MLC prepared and submitted additional information to USEPA on December 23, 2010. USEPA provided comments on the draft CMP on January 7, 2011. Based on the comments, additional evaluation was completed and the results of that evaluation were submitted to USEPA. A conference call with USEPA was held on February 18, 2011 to discuss the comments and the results of the additional evaluation. April 30, 2011 was the established due date for revised CMP that addresses USEPA comments.

- Final Corrective Measures Proposal 100%

- CMP Addendum 70%

USEPA reviewed the summary approach for the CMP addendum and approved the budget reallocation for the addendum on June 25, 2013.

- Semi-annual Groundwater Monitoring 14%

The first of the semi-annual groundwater monitoring events was completed on October 28, 2010.

- Vapor Intrusion Conceptual Site Model 80%

A revised version of the CSM was reviewed with USEPA on December 10, 2013. Out of the review, the USEPA and RACER Trust concluded that additional data is needed to finalize the CSM. As such, RACER Trust is developing an approach to further investigate the risk of vapor intrusion associated with Site related groundwater impacts. RACER Trust also informed EPA that the Trust will work with EPA to address public health concerns within the soil gas focus area.

SUMMARY OF CONTACTS WITH INTERESTED PARTIES

- The following documents were placed in the public information repository:
- *Third Quarter 2013 Progress Report*, RCRA Corrective Action, Former GM Delco Plant 5, Kokomo, IN, USEPA ID No. IND000806844, October 15, 2013.

CHANGES IN PERSONNEL

- None.

PROJECTED WORK FOR NEXT REPORTING PERIOD

- Collect soil vapor samples in First Quarter 2014.
- Submit an updated Vapor Intrusion Conceptual Site Model and work with EPA and identify the appropriate approach for additional investigation.
- Prepare and submit a CMP Amendment to summarize information, data, and interpretations since the RFI and CMP were last submitted. Additionally this document will contain a Risk Assessment Addendum which will provide supporting documentation for the Statement of Basis, document the changes to the USEPA toxicity factor, develop risk estimates for a redevelopment worker scenario and document changes to the groundwater to indoor air vapor intrusion screening criteria and soil gas to indoor air vapor intrusion screening criteria.
- Prepare communications plan and initiate communications with resident(s) potentially affected by the soil gas conditions in the focus area.
- Continue to support EPA's preparation of the Statement of Basis and Final Decision, as needed.
- Prepare the First Quarter 2014 Progress Report.
- Submit responses to USEPA's comments on the work plan for the Calcium Oxide Pilot Study and finalize the work plan.
- ARCADIS will evaluate the data from the ISCO pilot test and prepare an implementation work plan based on the conclusions of the pilot test.

- Prepare summaries of meetings, data reviews, or conference calls with USEPA, as appropriate.
