



First Quarter 2016 Progress Report 60

GM CET – Bedford Facility
105 GM Drive
Bedford, Indiana
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1. Introduction

This Progress Report is submitted by General Motors LLC (GM) in accordance with the GM Bedford Castings, Engines, Transmissions (CET) Facility Resource Conservation and Recovery Act (RCRA) Administrative Order on Consent (AOC – United States Environmental Protection Agency [U.S. EPA] Docket No. RCRA 05-2014-0011), executed on August 4, 2014. This report covers the period of the first calendar quarter of 2016 for the RCRA Corrective Action (CA) Project at the GM CET (formerly Powertrain) – Bedford Facility (Facility) and select surrounding properties (Site), Bedford, Indiana.

The next RCRA progress report covering the second quarter of 2016 will be submitted on or before July 15, 2016.

2. List of Completed Activities

The following activities took place and the following documents were prepared and distributed during this quarter:

- Results for samples collected from Spring 018 during the quarter are presented in Table 2.1. Sample results for the monthly sampling were previously emailed to U.S. EPA and Indiana Department of Environmental Management (IDEM) as they became available. As of the end of March 2016 sampling, the 12-month rolling average concentration of polychlorinated biphenyls (PCBs) in the Spring 018 discharge is 0.18 micrograms per liter ($\mu\text{g/L}$). Regular monthly sampling was conducted on January 13, February 10, and March 9, 2016. An opportunistic sample was collected on February 4, 2016 following a rainfall event of greater than 1 inch in 24-hours. The regular samples collected on January 13, and February 10 were non-detect for PCBs. The regular sample collected on March 9, 2016 resulted in an estimated concentration of 0.087J $\mu\text{g/L}$ for PCBs. The opportunistic sample was non-detect for PCBs.
- The 300 gallons per minute (gpm) design capacity (Site Source Control [SSC]) and 2,000 gpm design capacity water treatment plants (WTPs) collected and treated 25,286,000 gallons of water this past quarter. An estimated 0.15 pounds of PCBs were removed during the first quarter of 2016 through collection and treatment of the groundwater and an estimated 0.45 pounds of PCBs in the twelve months inclusive of April 2015. A summary of the volumes and sample results used for this calculation is provided in Table 2.2.
- Concrete filling of Pool #2 upstream of the confluence with Tributary 3 and Spring 018 is delayed pending the issuance of a Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) AOC being prepared to allow GM LLC to conduct remaining creek work in the Spring 018 area. Following the execution of the AOC, the filling will be scheduled as the weather allows.
 - U.S. EPA provided comments on the CERCLA AOC on November 4, 2015.
 - GM responded to U.S. EPA's comments on April 4, 2016 (2nd Quarter of 2016) and has scheduled a meeting on April 27, 2016 to discuss the comments.

- Downstream Parcels Removal Action Construction Certification Addendum No. 1 and Responses to Comments were submitted to U.S. EPA on December 10, 2015.
 - U.S. EPA submitted additional comments on January 14, 2016. Responses were provided to U.S. EPA on January 14, and 27, 2016.
 - The Downstream Parcels Construction Certification Report Revision 1 was submitted to U.S. EPA on January 20, 2016, and U.S. EPA indicated they had no additional comments on the report on February 19, 2016.
 - The Downstream Parcels Monitoring Report was submitted to U.S. EPA on March 4, 2016.
- The revised Additional Soil Investigation for Unsampled Areas Work Plan was approved by U.S. EPA on March 29, 2016.
 - The finalized work plan was submitted on April 1, 2016.
 - GHD is currently in the process of scheduling sampling activities.
- The 2nd Half 2015 Semi-annual Environmental Indicator (EI) CA750 groundwater sampling and groundwater statics summary was submitted on February 23, 2016. Responses and corrections based on U.S. EPA comments were submitted on February 29, 2016.
 - U.S. EPA had specific comments on three locations on February 26, 2016.
 - All responses were provided to U.S. EPA by March 25, 2016.
- GHD is currently revising the Post Closure Plan, and Vault Certification based on the U.S. EPA approved responses to previous comments.
 - Revision 1 of the 2012 Vault Report was submitted on February 24, 2016.
 - Responses to comments from U.S. EPA on the 2014 Vault Report are currently under GHD Review.
- The first quarter 2016 EI CA750 monitoring of static groundwater levels were completed the week of February 1, 2016. The first half 2016 semi-annual groundwater quality sampling will be completed in the second quarter 2016 (currently scheduled to begin the week of April 25th).
- The Pilot Perimeter Groundwater Collection Trench Study (Pilot Trench) was submitted to the U.S. EPA and IDEM on December 2, 2014.
 - Revision 1 of the IM work plan was submitted on February 19, 2016.
 - SES continued operation of the temporary construction WTP.
 - Batch testing of the treated effluent water from the SES temporary WTP was initiated on November 2015. Table 2.3 presents a summary of the sample results from the batch testing, including effluent results.
 - SES has continued working on piping from the Pilot Trench and SSC sources to the new Groundwater Treatment Plant this past quarter.
 - U.S. EPA and IDEM toured the site on January 28, 2016 to view the Pilot Trench progress.
 - SES has completed cleaning out and placing piping in the north and south sides of the Pilot Trench alignment, and gravel backfill on the north side of the trench alignment.
 - SES is completing placement of the gravel backfill on the south side of the trench alignment.

- Construction of the new Groundwater Treatment Plant (GWTP) was completed this quarter. The GWTP will treat water from the Pilot Trench (and other sections of the Groundwater Trench to be designed and installed in the future).
 - A final NPDES permit has been issued by the State, effective February 1, 2016.
 - The new GWTP will be commissioned in April/May 2016.
 - Permanent power is currently being installed to the new GWTP.
- The Area of Interest (AOI) 8 Groundwater Source Collection System Interim Measure was submitted to the U.S. EPA and IDEM on December 31, 2014.
 - Approval of the AOI 8 IM Work Plan with additional U.S. EPA Comments was received on July 1, 2015.
 - Responses to additional comments on the plan were submitted on January 29, 2016.
 - GHD is currently working on the design and finalizing the Work Plan.
- Formal monitoring of the East Plant, West Plant and Vault cover systems for the First Quarter was completed on March 31, 2016.
 - U.S. EPA approved the Revision 1 Construction Certification Report on East Plant Area Cover System on February 19, 2016.
- The Parcel 400 Sampling Plan was approved with modifications by the U.S. EPA.
 - Additional delineation drilling/sampling was completed during this past quarter.
 - A revised excavation plan is currently being developed based on the results of the final delineation sampling.
- The Stormwater Pond Sediment Sampling Plan was provided to the U.S. EPA on March 24, 2016. U.S. EPA requested some clarification on components of the sampling plan, and responses were provided on March 24.
 - Sampling was completed in the week of April 4, 2016.
 - Sediment removal design anticipated to be completed during the second quarter 2016.
- The next Public and Community Liaison Panel meeting to provide an update on the project and address questions and concerns from local residents is scheduled for June 2016.
- Conference calls were held with U.S. EPA and IDEM on January 7, 21, February 4, 18, and March 3, 17, and 29, 2016, to discuss items related to the project.
- With the resumption of daily construction activities related to the construction of a new groundwater treatment plant and construction of the Pilot Trench, on-Site construction meetings for the reporting period have been held informally daily and formally as needed. Formal construction meetings during this quarter were held on January 6, 13, 20, 27, February 3, 10, 17, 24, and March 2, 9, and 16, 23, & 30, 2016.
- The RCRA/CERCLA Quarterly Progress Report #59, covering the fourth quarter of 2015, was submitted to the U.S. EPA and IDEM on January 15, 2016.

3. Summaries of all Problems and Planned Resolutions

Additional concrete sealing is planned for a swallet identified upgradient of Spring 018 in what is known as Pool 2. This work will be scheduled, weather pending, upon completion of the CERCLA AOC. It is thought that a further reduction in surface water infiltration to the epikarst supplying Spring 018 will provide further stabilization of the PCB detections at the spring. Monthly monitoring continues.

4. Summaries of all Changes Made in the Corrective Action (CA) During the Reporting Period

There were no changes made in the CA during the reporting period.

5. Community Relations

The telephone number for public contact is 812-277-8956 (Katie Kamm, GHD, formerly Conestoga-Rovers & Associates [CRA]). Individual meetings can be arranged to discuss project progress with residents as requested.

CLP and public meetings were held at the CRA trailers to update the CLP and public on the status of the clean-up efforts on December 9, 2015. The next neighborhood/public meeting and CLP meeting are scheduled for June 2016. Presentations for past meetings are posted on the GM website at:

www.bedfordpowertraincorrectiveaction.com

The document repository continues to be located at the Bedford Public Library, with relevant project related documents available on compact disc (CD) in PDF format. Information will be updated periodically, as new documents become available. All data located in the Library repository can also be found on the aforementioned website.

6. Changes in Personnel During the Reporting Period

GHD oversight and SES personnel for on-going maintenance operations (e.g., stormwater and SSC water treatment, wet wells, Vault sumps etc.) and construction (e.g., Pilot Trench, GWTP) remain unchanged. On-Site staffing levels are expected to be reduced by the end of the next quarter as the Pilot Trench installation and GWTP commissioning is completed.

7. Projected Work for the Next Reporting Period

Work anticipated for the next reporting period includes:

- Completing the Stormwater Pond sampling and continuing evaluation of the Stormwater Pond dredging (Area of Interest [AOI] 10). Dredging is anticipated to be conducted in 2016.

- Completing the commissioning of the GWTP.
- Completing the installation of the Pilot Trench.
- Completing outstanding responses to comments on documentation and/or finalize reports for the following:
 - Vault Post-Closure Plan
 - Vault Construction Certification Report
 - 2014 Vault Report
 - Construction Certification Report for the West Plant Area IM
 - AOI 8 Groundwater Source Collection System IM
- Continuing monitoring Spring 018 on a monthly basis.
- Scheduling of Unsampled Areas Soil Sampling.
- Completing the second quarter EI CA750 static groundwater levels and first half 2016 groundwater sampling (scheduled to begin the week of April 25).
- Finalizing the proposed CERCLA Administrative Order on Consent for Removal Action (a meeting to resolve comments is currently scheduled for April 27).

8. Copies of Daily Reports, Inspection Reports, Laboratory/Monitoring Data

Table 2.1 presents the quarterly results from Spring 018 sampling. Table 2.2 presents the estimated PCB mass removal for the SSC systems for the past 12 months. Table 2.3 presents the quarterly results from the batch testing of treated effluent water from the SES temporary WTP.

Appendix A includes the field monitoring forms for the cover system inspections and a photographic log:

1. Weeds or clover growth was noted at most Transects in the East Plant Area and the West Plant Area. This is also typically accompanied by some bare patches.
2. Mole holes were identified over much of the East Plant cover system. GHD has contacted the liner companies and the moles do not burrow deep enough to damage the liner and so the vegetation will continue to be monitored, however, there is no immediate risk to the Cover.
3. Possible evidence of a burrowing animal was identified near EV6 during the fourth quarter 2015 inspection. Indiana Department of Natural Resources (IDNR) has been consulted on identifying, and subsequently live trapping and relocating the animal(s), if necessary. Soil and vegetation repairs will be made as necessary.
4. Light erosion was identified along EV4, EV5, and in ES6. These areas will be re-seeded this spring.
5. There are some erosion ruts along the east side of GM Drive, outside the cover system area adjacent to power poles. This does not appear to be due to any on-Site RCRA activities, but could have an impact on the liner system in the ditch. Work is still to be conducted on power

poles in this area by the utility company. Repairs will be addressed after the power pole work is completed.

6. Minor cracks are present along some of the seams in the asphalt cover system. The cracks do not extend the full depth of the asphalt thickness. SES is seeking a contractor that can meet GMs safety requirements to complete the asphalt repairs. Resealing of the asphalt will be completed this spring.
7. In 2014 the Facility repaired two fire hydrants along the far west side of the paved West Plant cover system. The Facility's contractor excavated the soils surrounding the hydrant, repaired the hydrant, backfilled, and SES/O'Mara Paving made the necessary repairs to the asphalt. There are currently signs of differential settlement under the repaved area as the new asphalt has sunk slightly. SES will hire an asphalt contractor to look at this area for recommended repairs.
8. Repairs to portions of the Cover System, including Detention Basin 4, affected by the Pilot Groundwater Collection Trench construction will commence in the second quarter.

Additional packages of analytical data have been, and will continue to be submitted to U.S. EPA as the validated data becomes available.