



April 12, 2019

Peter Ramanauskas
U.S.EPA Region 5
77 West Jackson Blvd.
Chicago, Illinois 60604-3590

Dear Mr. Ramanauskas:

Re: RCRA Corrective Action Administrative Order on Consent (AOC)
Progress Report 72, First Quarter 2019
GM GPS – Bedford Facility, ID 006036099, Docket No. RCRA 05 2017 0011
Bedford, Indiana

This Progress Report is submitted by General Motors LLC (GM) in accordance with the GM Bedford Global Propulsion Systems (GPS) 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 2019 for the RCRA Corrective Action (CA) Project at the GM GPS – Bedford Facility (Facility) and select surrounding properties (Site), Bedford, Indiana.

The next RCRA progress report covering the second quarter of 2019 will be submitted on or before July 15, 2019.

1. List of Completed Activities

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

1. Results for the Spring 018 sample collected during this quarter are presented in Table 1. The first semi-annual sampling for 2019 was conducted on January 9, 2019. The sample was non-detect for polychlorinated biphenyls (PCBs). The 12-month rolling average concentration of (PCBs) in the Spring 018 is 0.10 micrograms per liter ($\mu\text{g/L}$). The next semi-annual sampling event is scheduled to take place in July 2019.
2. The Groundwater Treatment Plant (GWTP) collected and treated approximately 15,777,867 gallons of water from the Pilot Trench, Vault sumps, and wet wells during the first quarter of 2019. An estimated 0.34 pounds of PCBs were removed during the quarter through collection and treatment of the groundwater. A summary of the volumes and sample results used for this calculation is provided in Table 2. Monthly discharge monitoring reports have been submitted to the State of Indiana in conformance with the National Pollutant Discharge



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Elimination System (NPDES) Permit Number IN0064424. Hamtramck Environmental Services (HES) has assumed daily operation of the GWTP from GHD, effective Monday, March 4, 2019.

3. The memorandum presenting results from the Second Half of 2018 EI CA750 sampling event was submitted to U.S. EPA on February 28, 2019. Comments were received from the U.S. EPA on March 4, 2019. Responses to comments were submitted to U.S. EPA on March 22, 2019.
4. The Thermal Field Study began on March 20, 2019 and ended on March 22, 2019.
5. Monthly Pilot Trench and quarterly EI CA750 static groundwater monitoring was completed during the week of February 11, 2019.
6. Responses to comments received on the Pilot Trench Construction Certification Report were submitted to U.S. EPA on March 22, 2019.
7. Responses to U.S. EPA comments and a revised memorandum for Clarifier Area sampling and monitoring well installation was submitted to U.S. EPA on January 9, 2019. Comments in response to the revised memorandum were received from U.S. EPA on February 19, 2019. On March 22, 2019 GM reported to U.S. EPA that there were utility clearance issues prompting GM to terminate completion of the Clarifier Area monitoring well installation. The communication was both verbally and by email.
8. The Dye Trace QAPP was submitted to the U.S. EPA on February 5, 2019. Comments were received from U.S. EPA on February 19, 2019. By email on March 26 U.S. EPA agreed with the wording of the two Problem Statements for the QAPP associated with the Pilot Trench Performance Monitoring Plan.
9. Video inspections of the Vault, Gravel Underdrain System (GUS), and pilot trench cleanouts were completed February 1, 2019.
10. Table 3 summarizes oil removal volumes (based on disposal weights) from the AOI-8 area. Collection from MW- X209Y053 began on March 25, 2019. Approximately 2.5 gallons of oil and an estimated 0.33 pounds of PCBs have been removed. Data from the February 2019 static groundwater monitoring event found oil at well MW-X227Y049. No oil was detected when GHD attempted to recover the oil in March 2019. An estimated 12.38 pounds of PCBs have been removed from CH-5.
11. Solids from the AOI-8 oil collection process was sent for disposal on February 4, 2019.
12. Supplemental soil sampling in Million Gallon Tank (MGT) and Industrial Water Treatment Plant (IWTP) areas was completed on March 13, 2019.
13. Comments on the Resource Conservation and Recovery Act Facility Investigation (RFI) report were received from U.S. EPA on August 16, 2018. Responses to comments were submitted to U.S. EPA and IDEM on February 1, 2019. Additional comments from U.S. EPA were received on February 19, 2019.
14. Conference calls/meetings were held with U.S. EPA and IDEM on February 1, 26, and March 21, 2019 to discuss items related to the project.



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15. A revised Bedford QAPP was submitted to U.S. EPA on February 26, 2019. Comments from U.S. EPA followed on February 28, 2019.
16. K&K has been selected to install the balance of the perimeter fence.
17. On-site tailgate meetings for the reporting period were held daily to discuss safety topics related to on-going maintenance activities.
18. RCRA Quarterly Progress Report #71, covering the fourth quarter of 2018, was submitted to the U.S. EPA and IDEM on January 11, 2019.
19. Responses to U.S. EPA comments on the Financial Assurance tables were submitted on January 8, 2019. GM submitted the 2019 Financial Assurance Demonstration on March 21, 2019. U.S. EPA provided a “no-objection” letter to GM dated April 1, 2019.

Although not included in the RCRA CA activities, GM removed sediment accumulated in the Facility’s stormwater pond and added a liner to the stormwater pond. GM also continues to work with U.S. EPA and IDEM for the prescriptive removal of PCB-impacted soil at Parcels 400, 430 and 431. The following activities took place and the following documents were prepared and distributed during this quarter related to this work:

1. Responses to U.S. EPA comments regarding the Disposal Request for Parcels 400, 430 and 431 were submitted to U.S. EPA on February 1, 2019. Additional comments on the request for removal were received from U.S. EPA on February 12, 2019. Responses to U.S. EPA’s comments followed on March 22, 2019.
2. Additional soil samples were collected on March 13, 2019 to complete the horizontal delineation for B-793 in the 0-2 foot lens. Boring B-798 is located approximately halfway between existing locations B-793 and B-795. A sample was collected from 0-2 feet bgs from B-798. Analytical results showed a PCB concentration of 0.614 mg/kg PCBs. This completes the horizontal delineation.
3. Comments were received from IDEM and U.S. EPA on the Parcel 400 Environmental Restrictive Covenant (ERC) on Feb 12, 2019 and Feb 15, 2019, respectively. GM had a conference call with Ms. April Lashbrook of IDEM on March 6, 2019 to resolve the outstanding issues. All of the issues were agreed to with the exception IDEM’s issuance of site identification codes and agreement that the cleanup met industrial/commercial criteria. On March 26, 2019, Ms. Lashbrook sent an email agreeing with these remaining issues, including the issuance of Agency Interest and State Cleanup identification numbers. GM is in the process of implementing the changes and issuing the Access Agreements and ERC to the landowners for review.
4. Final Stormwater Construction Certification Report was submitted to U.S. EPA on March 27, 2019.

2. Summaries of Problems and Planned Resolutions

In January 2019, communication with the vault sumps (as well as the wet wells and lift station) was lost which affects the ability to record the total flow from the vault sumps and wet wells. Flow data is collected at the SWTP PLC and then relayed to the GWTP PLC where GHD recovers the data. On occasion, GM makes improvements/tweaks to the SWTP. When this is done, controls are temporarily shut down. Communications has been reestablished. GM is developing a permanent resolution.



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In implementing the monitoring well installation activities associated with the Clarifier Area work, the well driller encountered a number of below-ground obstructions, including previously unknown or poorly located utilities. The locations were started with an air-knife to mitigate catastrophic consequences associated with hitting an active operations utility. However, on March 22, 2019 GM informed U.S. EPA that it was terminating the drilling activities after numerous obstructions and utility hits, including damage to an active 24" storm sewer. U.S. EPA requested that GM send an email explaining the issue. The email was sent by GM on March 22, 2019. GM and EPA agreed that the drilling activities can be terminated and the remaining data needs, if any, will re-assessed upon issuance of a report on the completed activities.

3. Community Relations

A public meeting is scheduled for June 2019 to update the public on the status of the clean-up efforts. Presentations for the December 6, 2018 meeting and past meetings are posted on the GM website at: www.bedfordpowertraincorrectiveaction.com.

4. Changes in Personnel During the Reporting Period

The operator on record for the GWTP has been changed to Jim Butler.

5. Projected Work for the Next Reporting Period

Work anticipated for the next reporting period includes:

1. Continue OMM for the GWTP.
2. Continue GWTP discharge reporting under the NPDES permit.
3. Collect quarterly groundwater static levels.
4. Collect NAPL from the AOI-8 area wells.
5. Install the eastern and northern perimeter fence.
6. Repair cover system as needed.
7. Prepare for and conduct the dye trace study.
8. Install remaining wells proposed for the Pilot Trench Monitoring study.
9. Complete the outstanding responses to comments for the RFI Report, QAPP, Pilot Trench Monitoring Plan, Clarifier Sampling Memo, and Phase II Design Report.
10. Submit a summary memorandum to report results of the First Half 2019 EI CA750 sampling event.
11. Submit a summary memorandum to report results of the video inspection of the cleanouts.
12. Conduct monthly meetings with U.S. EPA.
13. Conduct semi-annual cover system inspection.
14. Conduct public meeting in Bedford, tentatively scheduled for June 12, 2019.



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6. Copies of Inspection Reports and Laboratory/Monitoring Data

Analytical data have been, and will continue to be submitted to U.S. EPA as the validated data becomes available. As noted above, Spring 018 results are provided in Table 2.1.

Please feel free to call me at 313-506-9465 if you have any questions concerning this information or otherwise regarding the Bedford GM LLC Project.

Sincerely,



Ed Peterson
Project Manager, Eco-Restorers
GM Sustainable Workplaces

YD/aj/183

Encl.

cc: Daniel Haag; U.S.EPA
Chris Myer; IDEM
Ryan McDuffee; General Motors
John Maher; General Motors
Katie Kamm; GHD
Julie Luzwick; GHD



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Table 2.1

Spring 018 Sampling Results - First Quarter 2019
GM GPS Bedford Facility
Bedford, Indiana

Area		P015
Sample Location:		Spring 018C
Sample Identification:		SW-015-010919-MC-41012
Sample Date:		1/9/2019
	Units	
PCBs		
Aroclor-1016 (PCB-1016)	ug/L	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U
Total PCBs	ug/L	ND
General Chemistry		
Total suspended solids (TSS)	ug/L	2700

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

ND - Non-Detect for total PCBs

Table 2.2

**GWTP PCB Mass Removal Estimate
GM Bedford GPS Facility
Bedford, Indiana**

	Groundwater Treatment Plant (GWTP) Treated Volume (gallon)	PCB Influent Concentration (µg/L)	Mass PCB Treated (pound)
April 2018	4,000,022	0.99	0.033
May 2018 ¹	1,442,112	2.3	0.028
June 2018 ¹	1,944,773	1.5	0.024
July 2018 ¹	1,205,563	1.55	0.016
August 2018 ¹	1,029,510	1.75	0.015
September 2018	2,765,584	1.6	0.037
October 2018 ¹	1,240,147	1.9	0.020
November 2018 ¹	3,806,472	1.55	0.049
December 2018	4,226,766	1.29	0.046
January 2019	5,467,881	0.71	0.032
February 2019	5,393,116	ND	0.000
March 2019	4,916,870	0.92	0.038
Total Estimated Volume of Water Treated, First Quarter 2019 (gallons)			15,777,867
Total Estimated Mass of PCB Treated, First Quarter 2019 (pounds)			0.07
Total Estimated Mass of PCB Treated, Since April 2018 (pounds)			0.34

Notes:

¹ PCB concentration based on an average of parent and duplicate sample

Table 3

**AOI-8 Oil Removal
GM Bedford GPS Facility
Bedford, Indiana**

Date	Well	Weight (lbs)	PCB Weight (lbs) ¹
1/9/2019	CH-5A	2.22	1.73
1/23/2019	CH-5A	2.16	1.68
2/11/2019	CH-5A	2.3	1.79
2/26/2019	CH-5A	2.33	1.82
3/7/2019	CH-5A	2.18	1.70
3/18/2019	CH-5A	2.29	1.79
4/1/2019	CH-5A	2.39	1.86
Total PCB Removed from CH-5			12.38
3/25/2019	MW-X209Y053 ²	25.02	0.33
3/28/2019	CH-2A ^{2,3}	76.57	1.00

Notes:

¹ PCB weight based on analytical data from April 9, 2014
(CH-5: 780,000 mg/kg; CH-2A: 13,000 mg/kg)

² MW-X209Y053 and CH-2A PCB weight based on DNAPL density of 1.2 g/cc

³ PCB weight from solar sipper is based on an approximate volume of oil removal